COASTAL RESOURCES MANAGEMENT COUNCIL

SEMI-MONTHLY MEETING

TUESDAY, NOVEMBER 14, 2017

6:00 P.M.

AGENDA

State of Rhode Island and Providence Plantations
Coastal Resources Management Council
Oliver H. Stedman Government Center
4808 Tower Hill Road, Suite 116
Wakefield, RI 02879-1900

(401) 783-3370
Fax (401) 783-3767

AGENDA

Semi-Monthly Meeting – Full Council
Tuesday, November 14, 2017; 5:00 p.m.
Administration Building; Cafeteria
One Capitol Hill, Providence, RI 02908

Approval of the minutes of the previous meeting – October 24, 2017
Subcommittee Reports/Staff Reports

FEDERAL CONSISTENCY FOR CONSIDERATION BY THE COUNCIL:

2016-10-099 **National Grid LNG, LLC (NGLNG):** Construct and maintain a new natural gas liquefaction facility ancillary to the existing liquefied natural gas (LNG) tank and associated vaporization plant and truck station located at 121 Terminal Road, Providence, RI. The proposed natural gas liquefaction facility (Project) will be constructed on a portion of the 42 acre property owned by Narragansett Electric Company (TNEC) d/b/a National Grid, and leased to NGLNG. The Project will be constructed adjacent to National Grid's existing LNG storage tank and vaporization plant. Nine to eleven (9-11) feet of clean fill will be placed on the Project site to elevate the proposed liquefaction facility to an elevation 21 feet (NAVD88) to avert inundation during a 100-year storm event. The fill slope constructed to support the Project will be protected by a riprap slope armoring (revetment). The natural gas supply for the Project will be provided by an existing natural gas pipeline, which runs beneath the Providence River to the site. Liquefied natural gas will be stored in the existing LNG tank that is connected to existing tank fill lines as part of the existing LNG truck station. Stormwater runoff from the Project will be directed to a sand filter for treatment before discharge to the Providence River. A variance is required from CRMP Section 140.B.1 for construction of the proposed revetment protected slope and placement of clean fill material within the 50-foot coastal feature setback.

National Grid LNG, LLC is seeking a federal license, permit or authorization from the Federal Energy Regulatory Commission (FERC) pursuant to Section 7(c) of the Natural Gas Act (U.S. Code 15 § 717). Federal actions, including the issuance of federal licenses, permits or authorizations that are reasonably likely to affect any land or water use or natural resources of a coastal zone must be consistent with the enforceable policies and standards of the federally approved state coastal management plan. While FERC's jurisdiction in this matter preempts state law, it does not impact the CRMC's federal consistency authority and jurisdiction of the Project pursuant to the federal Coastal Zone Management Act (CZMA), 16 USC §§ 1451-1464, and the CZMA's implementing regulations at 15 C.F.R. Part 930 Subpart D – Consistency for Activities Requiring a Federal License or Permit.

Therefore, the Council will not be issuing an Assent for this Project; rather the CRMC will be issuing a determination as to whether the Project is consistent with the enforceable policies and standards of the Rhode Island Coastal Resources Management Program (CRMP) in accordance with the applicable federal regulations of 15 C.F.R. Part 930 Subpart D.

Located at Port of Providence, 121 Terminal Avenue, Providence, RI.

Information on Council Agenda Package

Due to the large volume of information, the agenda package has been organized in chronological order with the oldest information appearing first. However, the staff report has been placed at the top (beginning) of the agenda package. Following the staff report, the oldest information appears first including pre-filing information. (Pre-filing information is information provided to the CRMC prior to the filling of the federal consistency determination request on October 31, 2016). This pre-filing information is then followed by the federal consistency determination request (stamped received October 31, 2016) and supporting "application" materials. Additional materials follow including correspondence and other information filed in support of the federal consistency determination request. This additional information includes agency comments (HPHC), stay agreements, public notices, etc. A large volume of comments and objections received by the CRMC are contained at the end of the agenda package.

Plans – At the request of CRMC Staff, the plans filed in support of the federal consistency determination request have been re-printed by National Grid's consultant and organized in a binder to be distributed to the Council with the standard agenda package. All plans will be provided at a uniform 11" x 17" size with an index. The Council Members are requested to bring the agenda package and plans to all hearings on this matter since they will not be reproduced for each hearing.

CRMC DECISION WORKSHEET
2016-10-099
National Grid LNG, LLC.

Hearing Date:			
Approved as Recommended			
Approved w/additional Stipulations			
Approved but Modified			
Denied		Vote	

APPLICATION INFORMATION

File Number	Town	Project Location	Category	Special Exception	Variance
2016-10-099	Providence	121 Terminal Road (Liquefaction Facility) Plat 101|56 Lot 1|316	Fed Con	☐	☒
		Owner Name and Address			
Date Accepted	11-02-2016	National Grid LNG, LLC. William R. Howard, Jr., CHMM 280 Melrose Street Providence, RI 02907	Work at or Below MHW		☐
Date Completed	10-25-2017		Lease Required		☐

PROJECT DESCRIPTION

Construct and maintain a new natural gas liquefaction facility ancillary to the existing liquefied natural gas (LNG) tank and associated vaporization plant and truck station located at 121 Terminal Road, Providence, RI. The proposed natural gas liquefaction facility (Project) will be constructed on a portion of the 42 acre property owned by Narragansett Electric Company (TNEC) d/b/a National Grid, and leased to NGLNG. The Project will be constructed adjacent to National Grid's existing LNG storage tank and vaporization plant. Nine to eleven (9-11) feet of clean fill will be placed on the Project site to elevate the proposed liquefaction facility to an elevation 21 feet (NAVD88) to avert inundation during a 100-year storm event. The fill slope constructed to support the Project will be protected by a riprap slope armoring (revetment). The natural gas supply for the Project will be provided by an existing natural gas pipeline, which runs beneath the Providence River to the site. Liquefied natural gas will be stored in the existing LNG tank that is connected to existing tank fill lines as part of the existing LNG truck station. Stormwater runoff from the Project will be directed to a sand filter for treatment before discharge to the Providence River. A variance is required from CRMP Section 140.B.1 for construction of the proposed revetment protected slope and placement of clean fill material within the 50-foot coastal feature setback.

National Grid LNG, LLC is seeking a federal license, permit or authorization from the Federal Energy Regulatory Commission (FERC) pursuant to Section 7(c) of the Natural Gas Act (U.S. Code 15 § 717). Federal actions, including the issuance of federal licenses, permits or authorizations that are reasonably likely to affect any land or water use or natural resources of a coastal zone must be consistent with the enforceable policies and standards of the federally approved state coastal management plan. While FERC's jurisdiction in this matter preempts state law, it does not impact the CRMC's federal consistency authority and jurisdiction of the Project pursuant to the federal Coastal Zone Management Act (CZMA), 16 USC §§ 1451-1464, and the CZMA's implementing regulations at 15 C.F.R. Part 930 Subpart D – Consistency for Activities Requiring a Federal License or Permit.

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KEY PROGRAMMATIC ISSUES

Coastal Feature: Riprap revetment; vegetated low coastal bluff

Water Type: Type 6, Industrial Waterfront/Navigation Channels

CRMP: 120; 140; 145; 200.6; 210.5; 210.6; 220; 300.1; 300.2; 300.3; 300.6; 300.7; 300.8

SAMP: MetroBay SAMP

Variances and/or Special Exception Details: a 35' setback variance is required from the minimum 50' setback pursuant to RICRMP Section 140 for the fill slope proposed to support the facility

STAFF RECOMMENDATION(S)

Engineer	**DRG**	Recommendation:	
Biologist	**DSR**	Recommendation:	
Other Staff	**JRB**	Recommendation:	

Engineering Supervisor Sign-Off — 10/25/2017 date

Supervising Biologist Sign-off — 10/25/17 date

Executive Director Sign-Off — 10/25/17 date

Staff Sign off on Hearing Packet (Eng/Bio) — 10/25/17 date

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
COASTAL RESOURCES MANAGEMENT COUNCIL
INTER-OFFICE MEMORANDUM

TO: **Grover J. Fugate**
CRMC Executive Director

DATE: October 25, 2017

FROM: **Dave Reis, Dan Goulet and James Boyd**
CRMC Permitting & Policy Staff

RE: **Staff Report - CRMC File: 2016-10-099**

Applicant's Name: National Grid LNG, LLC (NGLNG)

Project: Construct and maintain a new natural gas liquefaction facility ancillary to the existing liquefied natural gas (LNG) tank and associated vaporization plant and truck station located at 121 Terminal Road, Providence, RI. The proposed natural gas liquefaction facility (Project) will be constructed on a portion of the 42 acre property owned by Narragansett Electric Company (TNEC) d/b/a National Grid, and leased to NGLNG. The Project will be constructed adjacent to National Grid's existing LNG storage tank and vaporization plant. Nine to eleven (9-11) feet of clean fill will be placed on the Project site to elevate the proposed liquefaction facility to an elevation 21 feet (NAVD88) to avert inundation during a 100-year storm event. The fill slope constructed to support the Project will be protected by a riprap slope armoring (revetment). The natural gas supply for the Project will be provided by an existing natural gas pipeline, which runs beneath the Providence River to the site. Liquefied natural gas will be stored in the existing LNG tank that is connected to existing tank fill lines as part of the existing LNG truck station. Stormwater runoff from the Project will be directed to a sand filter for treatment before discharge to the Providence River. A variance is required from CRMP Section 140.B.1 for construction of the proposed revetment protected slope and placement of clean fill material within the 50-foot coastal feature setback.

National Grid LNG, LLC is seeking a federal license, permit or authorization from the Federal Energy Regulatory Commission (FERC) pursuant to Section 7(c) of the Natural Gas Act (U.S. Code 15 § 717). Federal actions, including the issuance of federal licenses, permits or authorizations that are reasonably likely to affect any land or water use or natural resources of a coastal zone must be consistent with the enforceable policies and standards of the federally approved state coastal management plan. While FERC's jurisdiction in this matter preempts state law, it does not impact the CRMC's federal consistency authority and jurisdiction of the Project pursuant to the federal Coastal Zone Management Act (CZMA), 16 USC §§ 1451-1464, and the CZMA's implementing regulations at 15 C.F.R. Part 930 Subpart D – Consistency for Activities Requiring a Federal License or Permit.

Therefore, the Council will not be issuing an Assent for this Project; rather the CRMC will be issuing a determination as to whether the Project is consistent with the enforceable policies and standards of the Rhode Island Coastal Resources Management Program (CRMP) in accordance with the applicable federal regulations of 15 C.F.R. Part 930 Subpart D.

Location: 121 Terminal Ave., Providence

Water Type/Name: Type 6, Industrial Waterfronts and Commercial Navigation Channels, Providence River, Port of Providence

Coastal Feature: Riprap revetment; vegetated low coastal bluff

Signed: _____ **Supervising Environmental Scientist**

Signed: _____ **Staff Engineer**

Signed: _____ **Coastal Policy Analyst**

Staff Summary

The Project is subject to the jurisdiction of the Federal Energy Regulatory Commission (FERC) pursuant to Section 7(c) of the Natural Gas Act (U.S. Code 15 § 717), which preempts state regulatory jurisdiction. Therefore, the Project has been reviewed by CRMC staff in accordance with the federal consistency regulations of 15 C.F.R. Part 930 Subpart D - Consistency for Activities Requiring a Federal License or Permit. The federal consistency regulations require that a project seeking a federal license or permit must be consistent with the enforceable policies and standards of the federally-approved coastal program, in this case the RI Coastal Resources Management Program (CRMP). Construction of the proposed liquefaction facility necessitates a variance from the CRMC setback requirements of CRMP Section 140. To meet the burden of proof for the granting of the variance, the CRMC must find that the Applicant has met the six (6) variance criteria of CRMP Section 120. As detailed herein, CRMC staff believe that the Applicant has provided sufficient evidence to demonstrate that the Project is eligible for a variance to the 50-foot setback standard. In addition, the pertinent CRMP policies and standards have been reviewed by CRMC staff within this report. CRMC Staff believe the Applicant has not provided sufficient details of the physical life of the liquefaction facility beyond NGLNG's reported 25 year design life or decommissioning and removal of the Project after 25 years. Since it is likely that additional information may be presented at the Council hearing(s) that were not available as part of this review, CRMC staff defers to the Council on a final decision as to whether the Project proposal meets all applicable policies and standards of the Coastal Resources Management Program for purposes of federal consistency. Should the Council determine that the Applicant has met its burdens of proof in this matter the CRMC Executive Director will issue a federal consistency concurrence in accordance with the regulations at 15 C.F.R. Part 930 Subpart D.

Staff Report

A. Project purpose and overview: National Grid LNG LLC (NGLNG) is seeking approval from the Federal Energy Regulatory Commission for the construction of a natural gas liquefaction facility to be constructed adjacent to the existing Field's Point LNG facility bordering the Providence River. NGLNG's existing facilities consists of a LNG storage tank constructed in 1974, a tanker truck scale and filling station and a LNG plant that vaporizes the stored LNG for injection into the existing natural gas distribution pipeline infrastructure owned by The Narragansett Electric Company (TNEC).

The liquefaction facility will be constructed on a clean fill platform between 9 and 11 feet above existing grades for purposes of elevating the Project above the 100 year return storm base flood elevation calculated by NGLNG to be 14.9 feet NAVD88. For comparison purposes the water

elevation resulting from the September 1938 hurricane as measured at the NOAA gauge in Providence was 12.67 feet MHHW (approximately 15 feet NAVD88). See https://tidesandcurrents.noaa.gov/stationhome.html?id=8454000. The final Project elevation of 21 feet NAVD88 accounts for the 100 year return storm elevation and future sea level rise (SLR).

The Project will receive natural gas from an existing buried natural gas pipeline that borders the north end of the site. The pipeline sourced natural gas will be cooled by the proposed liquefier to minus 260 degrees Fahrenheit, thereby transforming the natural gas into its liquid form, otherwise known as liquefied natural gas or LNG. The LNG will then be pumped into the existing LNG storage tank for use during times of peak demand, generally during the winter months when gas is used for heating. During the winter heating season when natural gas demand is higher than the existing pipeline "feed" infrastructure can support, the stored LNG will be vaporized and injected into the distribution pipeline system to supplement the natural gas supply to area customers.

Currently, LNG is supplied to the existing Fields Point LNG tank by tanker trucks that pump LNG sourced from other regional distribution affiliates for later use. Most of the tanker truck transported LNG is sourced from the Everett, Massachusetts LNG import terminal that is supplied by overseas sources. NGLNG asserts that this primarily single source LNG supply from overseas sources has resulted in price volatility including supply shortages resulting in higher costs being passed onto natural gas customers during times of peak heating demand. NGLNG indicates that having the ability to liquefy natural gas onsite during periods of less gas demand (non-heating season) for storage as LNG will help reduce local dependency on overseas imported LNG and allow NGLNG to take advantage of domestic natural gas supplies, thereby stabilizing natural gas price volatility. NGLNG further states "Constructing the liquefaction facility will reduce the need to truck LNG to the facility for storage." See NGLNG application filed with CRMC on October 31, 2016, p. 3.

Pursuant to the federal Coastal Zone Management Act (CZMA), 16 USC §§ 1451-1464, and the CZMA's implementing regulations at 15 C.F.R. Part 930 Subpart D – Consistency for Activities Requiring a Federal License or Permit, NGLNG filed a federal consistency determination request with the Coastal Resources Management Council On October 31, 2016. A CRMC public notice for the Project was issued on November 16, 2016 and the public comment period ended on December 23, 2016. The CRMC further extended the public comment period an additional 30 days until January 23, 2017 to accommodate the public review of this Project. The general issues contained in comments received during the public notice period are listed in this report. As provided in 15 C.F.R. § 930.60(b) the CRMC and National Grid mutually agreed to waive the CRMC 6-month review period until June 15, 2017. Subsequently, the CRMC and National Grid agreed to further waive the CRMC 6-month review period until October 31, 2017, and then again until December 31, 2017, to allow sufficient time for National Grid to obtain other needed authorizations or permits to incorporate into the record as part of these proceedings.

B. Project clarification sought through supplemental discussions with NGLNG: On February 8, 2017, CRMC staff met with NGLNG staff and their attorney Robin Main for purposes of seeking additional details about the Project and to discuss public comments received by the CRMC during the public notice period. One of the primary questions asked by CRMC Staff was: Will NGLNG's proposed facility export LNG? Following the meeting, NGLNG provided a supplemental response letter which stated: "No, the proposed liquefier project does not propose to import or export LNG by marine vessels. Moreover, the current facility is neither authorized for nor capable of the

import or export of LNG by marine vessels. LNG will still receive or ship LNG by tanker truck. This is not a change from the current operations at the facility." See March 10, 2017 p. 1.

To further address CRMC Staff's questions and public comments, additional supplemental information was submitted to the CRMC on March 15, 2017. With regard to the question of whether LNG will be exported from the facility, CRMC staff reviewed Draft Resource Report No. 10, dated March 15, 2016, which was filed with NGLNG's FERC application (Docket No. CP16-121). It states: "While it is anticipated that under the proposed operations the customers will continue to take redelivery of some of their stored LNG in vapor form (by natural gas injection into the existing distribution pipeline infrastructure) it is expected that the option to take redelivery of LNG by truck will be used more frequently than in the past" (Emphasis added). Table 10.1-1 indicates that under proposed operations LNG redelivered to transport trucks can potentially be up to 2,286 trucks per year depending on customer needs. In detailing historical LNG operations Table 10.1-1 states: "66 trucks/62,100 Dth was discharged to LNG trucks in 2014. There were no other redeliveries to trucks in the prior 10 year period." The term "redeliveries" in this context means filling or refilling tanker trucks with LNG for export from the site. Therefore, according to the information filed by NGLNG with FERC (Table 10.1-1), only 66 truckloads of LNG have been exported from the site in the 10 years prior to 2014.

The following additional statements are provided in the NGLNG Draft Resource Report No. 10:

- "...the existing LNG plant has the capacity to load or unload 20 LNG truck transports per day."
- "... the LNG storage tank will take approximately 100 days to fill under full capacity of the liquefier. This leaves sufficient time for the NGLNG customers to dispatch some of the liquefier created LNG to their LNG storage facilities in Massachusetts and Rhode Island over the non-heating season."
- "The NGLNG storage tank (at this site) is larger than existing distribution system LNG storage tanks owned by NGLNG affiliates. This provides the NGLNG customers with a measure of flexibility because they can use the proposed liquefier to supply LNG for storage in the NGLNG tank and to supply some of the LNG stored in the customer distribution system storage tanks within Massachusetts and Rhode Island."

Based on the information provided within NGLNG's application with FERC, CRMC staff conclude that the purpose of the proposed facility is twofold: (1) to manufacture LNG for storage in the existing LNG tank as needed to inject natural gas into the local pipeline distribution system to meet seasonal peak heating demands (while reducing the need for LNG truck transport to fill the existing LNG tank); and (2) to develop capability of the facility to also export LNG via transport truck to other locations in Rhode Island and Massachusetts based on customer needs. Accordingly, CRMC staff concludes that the proposed liquefaction facility represents both a new and expanded use of the site, as opposed to a modification of the existing use as represented in NGLNG's filing with CRMC.

CRMC staff again met with NGLNG on May 25, 2017 to further discuss the proposed Project and gain more insight on whether a variance to CRMP Section 140 was indeed necessary. In other words, could the Project be relocated elsewhere on the property to obviate the need for a variance to the setback standard? NGLNG filed additional materials with CRMC on June 15, 2017 to address CRMC staff questions.

C. Assessment of CRMP Section 120 variance request for fill within the 50-foot setback

A variance to CRMP Section 140 is required for the proposed fill within the CRMC 50-foot setback. The variance according to NGLNG is necessary, as there are no alternative locations for the proposed Project on the 42 acre property. An existing riprap revetment and a compacted gravel roadway are located within the 50-foot setback in the location of the Project. A portion of the proposed fill material (including new slope armoring) and the stormwater outfall will be located landward of the existing compacted gravel roadway, but still within the 50-foot setback from the shoreline feature. The new slope armoring will tie into the existing armored dike surrounding the existing LNG tank at the same distance from the coastal feature. However, the liquefaction building, associated structural support and other equipment will be located landward of the 50-foot setback. The purpose of the proposed fill is to elevate the liquefaction facility to protect it from storm surge and sea level rise. NGLNG has indicated it is not possible to avoid fill within the setback due to the size of the fill platform and other site logistics.

CRMP Section 120.A states that "Applicants desiring a variance from a standard shall make such request in writing and address the six criteria listed below in writing. Except as otherwise provided herein, the application shall then be granted a variance only if the Council finds that the following six criteria are met." The six (6) variance criteria of Section 120.A are addressed below.

(1) The proposed alteration conforms with applicable goals and policies of the Coastal Resources Management Program.

The Applicant's response is that the revetment-protected fill platform conforms to the goals and policies of the CRMP. The slope armoring (revetment) has been designed to protect the liquefaction facility during storm events and the design has incorporated the anticipated sea level rise over the design life of the liquefaction facility reported by NGLNG to be 25 years. Additionally, NGLNG indicates that the fill intrusion into the setback is the minimum necessary to acquire the necessary elevation for the Project. Furthermore, there will be no construction within the first 15 feet of the 50-foot setback where an existing roadway, chain link security fence and other utilities exist.

The Project is located on lands adjacent to CRMC designated Type 6 waters and subject to the policies in CRMP Section 200.6.C. The Applicant declared in their October 31, 2016 filing with the CRMC that "The proposed liquefaction facility is consistent with existing industrial activities and will continue to promote the use of the Providence Harbor as an industrial waterfront and will not impede commercial activity within the port related to shipping. This Project will not interfere with or detract from priority uses for port facilities. The liquefaction facility will improve the efficiency of the LNG tank operation by utilizing the existing natural gas line to provide a continuous supply of liquefied natural gas for the tank and by reducing the incoming truck traffic presently used to fill the LNG tank. National Grid's existing storage facility at this waterfront site has operated without incident for more than 40 years and it will not be serviced by marine vessels.

Pursuant to CRMP 200.6.C.1: "The Council's goals for Type 6 waters and adjacent lands under Council jurisdiction are to encourage and support modernization and increased commercial activity related to shipping and commercial fisheries."

CRMC staff concludes that this Project does not have any shipping or commercial fishing components, but nevertheless is within the Councils jurisdiction. Further, it is the opinion of CRMC

Staff that the Project does not encourage and support modernization and increased activity related to shipping and commercial fisheries at the Port of Providence.

Pursuant to CRMP 200.6.C.2: "Highest priority uses of Type 6 waters and adjacent lands under Council jurisdiction are: (a) berthing, loading and unloading, and servicing of commercial vessels; (b) construction and maintenance of port facilities, navigation channels, and berths; and (c) construction and maintenance of facilities required for the support of commercial shipping and fishing activities."

"The Council shall prohibit activities that substantially detract from or interfere with these priority uses." (Emphasis added.)

CRMC staff concludes that this proposal does not have any elements that meet the Council's highest priority use for Type 6 waters. Nevertheless, the current LNG facility has existed on the site for 40 years with approximately 1,400 trucks coming to the site to fill up the tank during the non-heating months. And, although the proposal is not one of the Council's highest priority uses for Type 6 waters, it is the opinion of CRMC staff that the Project (liquefaction and export trucking) does not substantially detract from or interfere with any of the Council's priority uses for Type 6 waters and adjacent lands.

(2) The proposed alteration will not result in significant adverse environmental impacts or use conflicts, including but not limited to, taking into account cumulative impacts.

NGLNG asserts that the proposed Project location was designed to minimize earth work and that the relocation of the Project farther landward to avoid the 50 foot setback would result in more earth work to extend subsurface pipes and ducts and for realignment of the truck scale access road. See: NGLNG June 15, 2017 filing at p. 3. CRMC staff believes the proposed Project will not result in significant adverse environmental impacts or use conflicts since the site is located in an existing land-based industrial area that has minimal habitat value, and there are federal security restrictions which prevent public access to the Project site and adjacent shoreline. CRMC staff has further concluded the project does not substantially detract from or interfere with the Council's priority uses for Type 6 waters (See discussion in report section C(1) above). NGLNG's variance response proclaims that the properly designed slope armoring and stormwater treatment system also serves to minimize environmental impacts.

(3) Due to conditions at the site in question, the applicable standard(s) cannot be met.

The Applicant had stated in their October 2016 filing that the "...location of the liquefaction facility was selected to access to the existing 200psig gas line and available open space not used by the NGLNG for other operations. No other location on the parcel is suitable." The Applicant also stated: "Placement of the liquefaction facility further inland would require additional piping to access the existing gas line and would require reconstruction/relocation of existing infrastructure at the LNG facility such as the existing access road to the truck scale". Additionally: "The site does not have any other open space suitable for the place for the liquefaction facility. The location of the liquefaction facility limits the length of LNG piping needed to reach the storage tank". Based on the October 2016 application filing CRMC staff had concluded that without further details or elaboration it appeared there was the possibility to relocate the Project and avoid the need for a variance to the 50-foot setback requirement. Upon meeting with NGLNG in May 2017 and the subsequent filing with CRMC of further details on June 15 to address this issue, we now learn that FERC siting requirements necessitate the Project to be located as far as possible from the NGLNG property line and residential areas. See NGLNG June 15, 2017 filing at p. 4. Further, NGLNG asserts there are site

limitations due to existing underground utilities, access to the existing 200 psig gas line, and overall lack of available space due to existing operations. Thus, CRMC staff now conclude that given the conditions at the site and the federal siting requirements that the Project appears to meet the variance requirements in accordance with CRMP Section 120.

4) The modification requested by the Applicant is the minimum variance to the applicable standard(s) necessary to allow a reasonable alteration or use of the site.

The Applicant in its June 15 filing states that there will be no changes to the first 20 feet of the 50-foot CRMC setback, and that the installation of slope armoring and stormwater outfall is proposed within the setback. However, CRMC staff review of the Project plans (Sheet 9 of 15 – Typical Revetment Section B) indicates that the slope armoring toe is located within 15 feet of the coastal feature. Thus, a 35 foot variance to the 50-foot setback standard is necessary. As noted above, the liquefaction building, associated structural support and other equipment will be located landward of the 50-foot setback. In this regard, the design layout of the Project appears to be driven by several factors unique to the site. The primary factor appears to be fitting the project between the existing truck scale/loading station to the south, the existing LNG tank to the east and the Providence River shoreline to the north. Additionally, FERC siting requirements necessitate the Project to be located as far as possible from the NGLNG property line and residential areas. Considering these factors and the need to elevate the liquefaction project components above the base flood elevation for the 100 year storm including sea level rise, CRMC staff concludes that the setback variance has been minimized for the Project. This determination is based on the use of steep fill slopes (1.5:1) retaining walls and apparent tight layout of project components on the proposed elevated fill platform proposed to support the Project.

(5) The requested variance to the applicable standard(s) is not due to any prior action of the Applicant or the Applicant's predecessors in title. With respect to subdivisions, the Council will consider the factors as set forth in (B) below in determining the prior action of the Applicant.

NGLNG has replied to this criterion stating: "This proposed Project is not the result of a previous action by NGLNG, The Narragansett Electric Company, or its predecessor in title at the Site. See NGLNG June 15, 2017 filing at p. 5. CRMC staff concurs that prior actions by the property owners or their predecessors have not directly led to the need for a variance. Although the Applicant's desire to locate the liquefier in the immediate vicinity of the existing LNG tank and the truck scale/loading station is stated as a reason for the Applicant's chosen location, an LNG tank constructed in 1974 is not considered by CRMC Staff to be a "prior action" which created the need for the variance. Variance criterion 5 is typically applied to cases where the Applicant or their predecessors in title undertook an activity subject to existing regulatory standards where activities later proposed make it difficult or impossible to meet those same standards. The CRMC regulatory standards upon which the current activity is being evaluated against did not exist in 1974. On that basis, CRMC staff believes this criterion is met.

(6) Due to the conditions of the site in question, the standard(s) will cause the Applicant an undue hardship. In order to receive relief from an undue hardship an Applicant must demonstrate *inter alia* the nature of the hardship and that the hardship is shown to be unique or particular to the site. Mere economic diminution, economic advantage, or inconvenience does not constitute a showing of undue hardship that will support the granting of a variance.

The Applicant in its June 15, 2017 filing states "An undue hardship would be realized if a variance is denied." See June 15 filing at p. 5. As detailed above, CRMC staff have concluded that the Applicant has provided sufficient evidence to demonstrate that they have no other alternative location on the 42-acre parcel to construct the Project, and that they have minimized the variance requested. Further, the Applicant indicates that relocating the Project to avoid the variance would necessitate the "complete replacement of the truck scale/station and realignment of the access roads from the truck scale (which is already governed by the minimum turning radius of the trucks). These alterations to the truck station are not possible due to compliance with existing permits. For these reasons, to enforce the (CRMC setback) standard here would create an undue hardship on the applicant and the community at large if the Project was not constructed as proposed." *Id.* p. 6. CRMC staff note that should the Council grant relief from the setback standard as requested the Applicant is still responsible to comply with all other applicable coastal program requirements pursuant to CRMP Section 120.C.

D. Section 145 Climate Change and Sea Level Rise

The Applicant provided a one paragraph response to address CRMP Section 145 as follows: "NGLNG's anticipated design life for the liquefaction facility is 25 years. Therefore, the slope armoring supporting the liquefaction facility has incorporated anticipated sea lever rise over a 25-year period as well as the wave actions associated with a 100 year design storm. The most recent updates to the Coastal Resources Management Programs' Section 145-Climate Change and Sea Level Rise (effective February 22, 2016) notes that the Council relies upon the most recent NOAA seas level rise data to address planning horizons for infrastructure. As of 2016, NOAA projected the range in sea level rise change to be a maximum of approximately 1.0 foot in 2035, 2.0 feet in 2050 and 7.0 feet in 2100. For the design life of this facility, the anticipated sea level rise for the area over the next 25 years is estimated at 1.5 feet. Details regarding the slope armoring design are included in Appendix B." See Applicant's October 31, 2016 filing p.6.

CRMC staff requested the Applicant to detail how their proposed 25 year design life was deemed appropriate for a more than $100 million dollar (Providence Journal July 15, 2016) liquefaction manufacture and export facility. The facts are that it will take almost two years to construct the Project and the site has an existing LNG tank still in service after 40 years. There is no clear explanation from the Applicant as to the why the 25-year design life is appropriate in the materials filed with the CRMC. The Applicant did not provide any written statements or plans concerning the decommissioning of the Project or removal of the fill material after the 25 year design life expires.

The Applicant provided additional information in their June 15, 2017 filing to address CRMC staff questions concerning the sea level rise (SLR) issue. NGLNG indicates that the elevation of the proposed liquefaction facility platform will be at 21 feet NAVD88, which is considerably higher than the current MHHW elevation (2.37 feet NAVD88 at Providence) and above the projected NOAA maximum SLR for 2100. Importantly, the previous NOAA 2100 SLR maximum projection was 6.6 feet, however, the new NOAA 2017 high elevation is 9 feet and the extreme elevation is over 11 feet by 2100. The Applicant has provided various elevations (referenced in NAVD88) for the Project site. See June 15, 2017 filing at p. 3. CRMC staff agree that the proposed fill elevation of 21 feet NAVD88 is appropriate to avert flood inundation from the 100 year storm event and current NOAA SLR projections for a 25 year design life. Staff also concurs that the rip rap size and configuration shown on the plans and "designed" in Appendix B is appropriate for a 25 year design life. The findings of CRMP Section 145 detail that there is a great deal of uncertainty with SLR estimates and that coastal infrastructure will become increasing susceptible to SLR impacts and flooding. One

significant concern is the flooding impact during a 100 year storm event, both now and in the future due to SLR. Due to the filled area on which the liquefaction facility will sit, it will be a high point surrounded by 6-8 feet deep flood waters making emergency responder access to the Project all but impossible during a significant storm event. Given this initial CRMC staff concern, the Applicant filed additional information to address safety, isolation and emergency protocols. Essentially, NGLNG in advance of a serious storm event (e.g., hurricane) will implement "…a full range of safety systems to ensure that the facility is properly shut down." *Id.* p. 6.

CRMC Staff believe the Applicant has not provided sufficient details in writing of the physical life of the liquefaction facility beyond NGLNG's reported 25 year design life, nor has NGLNG provided an amortization schedule showing whether the cost depreciated over the 25 year life is appropriate. It should also be noted that NGLNG has not provided a suggested decommissioning and removal plan for the Project after 25 years. This is usually not required, but would provide some level of certainty to the Applicant's stated 25 year project life span. Considering that the media has reported this Project is a major investment ($100 Million), it appears that the Project may have a longer physical life than the Applicant's stated design life of 25 years.

NOAA cautions against using any particular SLR scenarios in isolation and urges coastal managers to consider a wide range of data as part of infrastructure decisions. Further, in its 2017 report NOAA states "mid-range projections are typically insufficient for many decisions" and "decision-makers charged with planning for upgrades to existing long-life critical infrastructure (e.g., power plants, military installations), or building new infrastructure, need to consider the risks across a broad range of possible outcomes, including those associated with high-consequence, low-probability situations." See NOAA Technical Report NOS CO-OPS 083 at p. 11 (https://tidesandcurrents.noaa.gov/publications/techrpt83_Global_and_Regional_SLR_Scenarios_for_the_US_final.pdf). The Applicant recently submitted data showing that the NOAA projected high SLR estimate from 2012 of 6.6 feet by the end of the century was considered in their analysis. See June 15, 2017 filing p. 3. Accordingly, it is the opinion of CRMC staff that the Applicant has not provided the necessary level of written information to support the proposed 25 year design life for the Project without addressing decommissioning and removal.

RICRMP Section 200.6 Type 6 Industrial Waterfronts and Commercial Navigation Channels

As noted above in CRMP Section 120 variance section of this report, CRMC staff conclude that the proposed Project does not substantially detract from or interfere with any of the Council's priority uses for Type 6 waters and adjacent lands.

RICRMP Section 220 Areas of Historic and Archaeological Significance

Pursuant to Section 106 of the National Historic Preservation Act, the RI Historical Preservation and Heritage Commission (RIHPHC) conducted a review of the proposed Project and issued its determination dated March 23, 2016 that stated in part "No historic properties will be affected by the proposed undertaking." RIHPHC archaeologists assess the sensitivity of project sites as part of their review process when a CRMC application is filed. Accordingly, the CRMC relies upon the RIHPHC to provide evidence that satisfies the requirements of CRMP Section 220.

Comments of the Mashapaug Nahaganset Tribe concerning the proposed Project were included as Appendix E as part of the No LNG in PVD January 23, 2017 filing with the CRMC. The Tribe indicates that no commercial entity possess any formal contract with the Tribe authorizing

development on its ancestral lands. Further, the Tribe indicates in its comments that it will seek "any and all actions deemed appropriate to safeguard the integrity of its ancestral lands…" Based on this letter from the Tribe, CRMC staff sought further clarification from RIHPHC and as to whether the Tribe's objection would alter the March 23, 2016 RIHPHC determination. RIHPHC staff indicated that the response from the Mashapaug Nahaganset Tribe does not change its determination that there will be no effect on any significant archaeological resources. RIHPHC staff clarified that the Project requires a review under Section 106 of the National Historic Preservation Act (NHPA). RIHPHC staff also indicated that the NHPA does not require that the Mashapaug Nahaganset, a non-federally recognized tribe, be invited to consult under the RIHPHC process. Pursuant to the federal Advisory Council on Historic Preservation (ACHP) regulations at Section 800.2(c)(5), "the Federal agency may invite such groups to participate in consultation based on a demonstrated interest in the undertaking's effects on historic properties." However, the term "Indian tribe" in NHPA refers only to federally recognized Indian tribes. Accordingly, under NHPA and ACHP's regulations, only a federally recognized Indian tribe has the right to participate in Section 106 consultation. Nevertheless, the CRMC staff have considered the Tribe's comments as it would any group of concerned citizens as part of the CRMC review process.

E. Assessment of Section 300.1 - Category B Requirements

The Applicant has addressed all eleven (11) criteria of Section 300.1 between the original CRMC application and the supplemental information submitted on March 15, 2017. While reiterating all eleven criteria and the Applicants responses to these criteria are unnecessary for the purposes of this report, CRMC staff offers the following summary of Section 300.1 as it applies to this Project:

- **300.1(1) Demonstrate the need for the proposed activity or alteration:**

The need for the facility is addressed in the Applicant's supplemental project narrative (dated March 15, 2017). Currently, LNG is trucked to the site during the non-heating season months for storage in the existing LNG tank. The LNG stored in tank is then used to meet peak heating demand during the winter months. When the demand for natural gas exceeds the pipeline supply capacity, LNG is vaporized for injection into the natural gas pipeline distribution system to supply customers. NGLNG states that the need to supplement the natural gas supply by vaporizing LNG has occurred each year during the facility's 43 years of operation. The specific need for the liquefying facility now proposed is to create the capacity to liquefy LNG from the existing natural gas supply pipeline which borders the north end of the site (the pipeline is not shown on the plan for security reasons). The need argument presented by the Applicant indicates LNG has been historically sourced from the LNG import terminal in Everett, Massachusetts. The liquefier will provide the ability to liquefy domestically sourced natural gas to produce lower cost LNG that will not be affected by supply interruptions sometimes associated with imported LNG. The Applicant further states that the ability to produce lower cost LNG to supplement the natural gas supply when natural gas prices are higher during the heating season will result in lower natural gas costs including improved supply reliability. CRMC Staff defers to the Council as to the determination of need for this project where additional evidence and public testimony will be provided during the public hearings scheduled for this application.

- **300.1(2) Demonstrate that all applicable local zoning ordinances, building codes, flood hazard standards, and all safety codes, fire codes, and environmental requirements have or will be met; local approvals are required for activities as specifically prescribed for nontidal portions of a project in Sections 300.2, 300.3, 300.6, 300.8, 300.9, 300.11, 300.13, 300.15 and**

300.17; for projects on state land, the state building official, for the purposes of this section, is the building official;

CRMC staff defers to the Applicant's written response with regard to the satisfaction of other necessary approvals.

- **300.1(3) Describe the boundaries of the coastal waters and land area that are anticipated to be affected;**

The project borders CRMC designated Type 6 waters of the Providence River (Industrial Waterfronts and Commercial Navigation Channels). See Applicant's response for additional detail.

- **300.1(4) Demonstrate that the alteration or activity will not result in significant impacts on erosion and/or deposition processes along the shore and in tidal waters;**

As noted by the Applicant's response, no work is proposed in tidal waters and the stormwater outfall will be protected by a riprap apron/splash pad. What should be further noted is the placement of proposed fill within the setback. This material will be subject to flooding and storm impacts during coastal storms due to its proposed location within a FEMA flood zone. However, as recommended by CRMC Staff when the fill was initially proposed, the seaward face of the fill slope will be protected by a riprap revetment designed to meet the shoreline protection facility standards specified by CRMP Section 300.7. Consequently, the opportunity for the erosion of fill materials and subsequent deposition of sediment in tidal waters and along the shoreline is minimized.

- **300.1(5) Demonstrate that the alteration or activity will not result in significant impacts on the abundance and diversity of plant and animal life;**

CRMC staff conclude that no impacts on the diversity and abundance of plant and animal life will occur in association with the proposed Project. The site has current use as a pre-existing industrial area with minimal existing land-based habitat available and that no work is proposed in adjacent tidal waters except for a treated stormwater runoff discharge.

- **300.1(6) Demonstrate that the alteration will not unreasonably interfere with, impair, or significantly impact existing public access to, or use of, tidal waters and/or the shore;**

Due to the project location within the Port of Providence and since both existing and proposed activities are subject to U.S. Department of Homeland Security requirements, and due to the lack of public access under both existing and proposed conditions, CRMC staff agrees with the Applicant's response that the Project will have no impact on public access or use of the shoreline. Further, no activities are proposed in tidal waters nor are the activities on land expected to impact the use of tidal waters. Furthermore due to the Project being located within the Port of Providence and its status as an energy facility, Section 140.4(d) of the Metro Bay Special Area Management Plan exempts the Project from Coastal Greenway (public shoreline access) requirements.

- **300.1(7) Demonstrate that the alteration will not result in significant impacts to water circulation, flushing, turbidity, and sedimentation;**

Since no work is proposed within tidal waters and erosion and sediment controls are planned as part of this Project, CRMC staff agrees with the Applicant's conclusion that there will be no significant impacts on water circulation, flushing, turbidity and sedimentation. With regard to the stormwater outfall proposed, runoff will be treated in accordance with State standards through filtration in a sand

filter. No impacts to turbidity are expected and the discharge velocity will not be significant enough to impact water circulation.

300.1(8) Demonstrate that there will be no significant deterioration in the quality of the water in the immediate vicinity as defined by DEM;

As proposed, stormwater runoff will be properly treated in accordance with the standards in CRMP 300.6. During construction the site will be managed in accordance with a soil erosion and sediment control plan pursuant to the state RIPDES construction general permit. Further, contaminated soils associated with former site uses will be managed in accordance with a RIDEM approved soil management plan (SMP). The work will result in minimal soil disturbance since the facility is to be built on fill placed over the existing contaminated soils. The Applicant further indicates that a qualified environmental inspector will be on site to assure that best management practices and erosion and sediment controls are implemented during the construction phase. FERC has indicated in correspondence dated April 7, 2017 that NGLNG should file with RIDEM a Short Term Response Action Plan (STRAP) for managing soil disturbance at the Project site. NGLNG filed its STRAP with RIDEM on May 12, 2017 and RIDEM Public Involvement Plan hearings were held in Providence on July 13 and August 9, 2017. CRMC staff anticipate that RIDEM will issue an approval for the NGLNG STRAP in the coming weeks, and that it will provide reliable evidence that the Project will not result in significant deterioration in water quality in the immediate vicinity of the Project. On this basis, CRMC staff conclude the Project is not likely to result in a significant deterioration of water quality.

- **300.1(9) Demonstrate that the alteration or activity will not result in significant impacts to areas of historic and archaeological significance;**

With regard to the proposed Project, the Rhode Island Historical Preservation and Heritage Commission (RIHPHC) determined through a letter issued March 23, 2016 that "No historic properties will be affected by the proposed undertaking."

- **300.1(10) Demonstrate that the alteration or activity will not result in significant conflicts with water-dependent uses and activities such as recreational boating, fishing, swimming, navigation, and commerce, and;**

Due to the project being land-based with no in-water work or activities CRMC staff concludes the project will not interfere with water-dependent activities including recreational boating, swimming or navigation. As stated in the Applicant's response, U.S Department of Homeland Security requirements and existing uses currently prevent such activities from the immediate shoreline. With regard to commerce, please refer to the analysis of the Project's consistency with Type 6 waters as discussed above in this report.

- **300.1(11) Demonstrate that measures have been taken to minimize any adverse scenic impact (See Section 330).**

With regard to potential scenic impact concerns, the Applicant's response describes comparisons to the existing industrial nature of the shoreline at the Port of Providence and Field's Point. The Applicant concludes that the project is in keeping with the existing infrastructure in the "neighborhood". The Applicant further indicates that the elevated height of the project will be no higher than the existing LNG tank or other existing infrastructure. CRMC staff tend to agree with this

conclusion, but we defer to the Council and public hearing process for further assessment of potential scenic impacts.

RICRMP Section 300.2 - Filling, Removing or Grading of Shoreline Features.

The data and information submitted by the Applicant as it pertains to this section was included in the March 15, 2017 submittal. The Applicant addressed all of the policies and standards and it is the opinion of CRMC staff that the proposed Project meets the requirements of CRMP Section 300.2. This opinion presumes that the Council agrees that the Applicant has satisfied the variance criteria of CRMP Section 120 for the proposed fill material.

RICRMP Section 300.3 - Residential, Commercial, Industrial and Recreational Structures.

There are three (3) polices within CRMP Section 300.3 that this Project must be consistent with in order to meet the requirements for a federal consistency certification. CRMP Section 300.3.B.1 states:

"It shall be the policy of the Council to undertake all appropriate actions to prevent, minimize or mitigate the risks of storm damage to property and coastal resources, endangerment of lives and the public burden of post-storm disaster assistance consistent with policies of the State of Rhode Island as contained in the Hazard Mitigation Plan element of the State Guide Plan when considering applications for the construction of residential, commercial, industrial and recreational structures, including utilities such as gas, water and sewer lines, in high hazard areas."

The Applicant intends to elevate the Project to protect the new equipment (liquefaction facility) from flooding, wave action or floating debris that may be caused by flood waters and storm surges. See NGLNG June 15, 2017 filing at p.6. During a significant storm event the area surrounding the Project site will be flooded and the Project with its elevated fill area will be surrounded by floodwaters. The facility could potentially suffer damage that requires emergency response, but it will be difficult to access the site due to the floodwaters. It should also be noted that the existing truck fill station, which is directly connected to the existing LNG tank and the proposed liquefaction facility, will be submerged during a significant storm event and subject to debris impacts that may create a post-storm burden. The Applicant, however, has filed additional information regarding safety and emergency protocols to address these issues. *Id.* Pursuant to the U.S. Department of Homeland Security requirements for similar facilities, much of the Project storm response details are not available for public disclosure due to security reasons. Notwithstanding this issue, CRMC staff conclude that the design elevation and the revetment-protected fill platform supporting the Project combined with the emergency systems protocol that the Applicant plans to implement as specified in their June 15 filing are intended to minimize the risk of storm damage to property and coastal resources.

CRMP Section 300.2.B.2 states "It is the Council's policy to require a public access plan, in accordance with Section 335, as part of any application for a commercial or industrial development or redevelopment project in or impacting coastal resources". This is a secure area that falls under the jurisdiction of the federal Department of Homeland Security. Accordingly, public access is severely restricted for national security matters. There is currently no public access nor is any proposed. CRMC Staff concurs with the Applicant that the proposal does not require public access nor will it impact current pubic use of the area. Thus, it is CRMC staff opinion that due to the federal security restrictions a variance to this policy is not required for the Project.

CRMP Section 300.2.B.3 states "All commercial and industrial structures and operations located within tidal waters shall obtain a structural perimeter limit (SPL). Owners/operators of these facilities may apply to the Council for definition and establishment of this structural perimeter at any time. However, the Council shall establish a structural perimeter limit (SPL) when an application subject to this section is under review". As stated previously this Project does not currently have any in-water facilities nor are any proposed. The Project as proposed does not require the establishment of a CRMC structural perimeter limit.

RICRMP Section 300.6 - Treatment of Sewerage and Stormwater

The Applicant has addressed the requirements of CRMP Section 300.6 within the initial application submittal to the CRMC. This included a narrative that provided a synopsis of the proposed stormwater treatment systems both temporary (soil management plan) and the proposed sand filter with calculations in an appendix. It is the opinion of CRMC staff that the information provided meets the policies and standards for CRMP Section 300.6.

RICRMP Section 300.7 - Construction of Shoreline Protection Facilities

The Applicant was not required to address this section of the RICRMP as part of the application filed with the CRMC since no structural shoreline protection structures are proposed as defined by the coastal program. Structural shoreline protection facilities include revetments, bulkheads, seawalls, groins, breakwaters, jetties and other structures, the purpose of which is to control the erosion of coastal features. The Applicant has proposed only armoring the proposed fill slope and the application states that the "the northern slope of the raised area will be protected from wave action using rip rap slope armoring". Thus, since the proposed fill slope is within the 50-foot setback and not located on a coastal feature CRMP Section 300.7 does not apply to the Project.

F. RICRMP Section 300.8 - Energy-Related Activities and Structures

The prerequisite for energy-related structures pursuant to Section 300.8.B.1 requires the Applicant to "demonstrate that all relevant local zoning ordinances, building codes, flood hazard standards, and all state safety codes, fire codes, and environmental requirements have or will be met." The Applicant has stated in their application that NGLNG "is responsible for complying with all applicable laws, rules, regulations and orders of governmental authorities having jurisdiction over NGLNG and the use of the leased premises, including without limitation securing and maintaining the necessary and applicable state and local permits to permit the installation and operation of LNG facilities and equipment." See October 31, 2016 filing at p.1. Based on the Applicants submittal CRMC staff conclude that the Applicant has or will meet this prerequisite prior to construction of the Project.

Pursuant to Section 300.8.D, Additional Category B Requirements, the Applicant is required to address: "(a) environmental impacts, (b) social impacts, (c) economic impacts, (d) alternative sites, (e) alternative means to fulfill the need for the facility, (f) demonstration of need, and (g) consistency with state and national energy policies. Shorefront sites shall demonstrate the need for access to navigable waters or cooling and/or process water."

The Applicant has previously filed information to address subsections (a), (d), (e), (f), and (g) above as part of its application to CRMC. The demonstration of need (f) and consistency with national energy policies (g) will be determined through the pending FERC process (Docket No. CP16-121). As to subparts (b) social impacts and (c) economic impacts, CRMC staff requested additional

information on these two issues from the Applicant, which was provided in an August 18, 2017 letter from National Grid. The Applicant states that "social and economic impacts of the proposed project have been addressed in Resource Report Number 5 – Socioeconomics that was provided to the Federal Energy regulatory Commission in March 2016." See August 18 Letter at p.1. NGLNG estimates within the federal report that the Project will generate 155 construction-phase jobs (temporary) and up to 5 operational-phase (long-term) jobs. NGLNG anticipates that "Approximately 65% of these workers will come from the local workforce, including local union halls. However, given the small number of permanent workers (up to five permanent workers), the project would not have a significant impact on the permanent population, economy, or employment." See Resource Report Number 5 at 5-4. Additionally, NGLNG states that "the Project's impact on employment is anticipated to be beneficial during the construction phase and minimal during the operational phase. To the extent that construction employees would spend wages within in the primary and secondary socioeconomic areas, the potential impact on employment resulting from construction of the Project would be beneficial." *Id.* NGLNG also anticipates that the Project will have a beneficial impact on local property tax revenues for the City of Providence, and that construction of the Project "will result in short-term, beneficial impacts on payroll and local material purchases." *Id.* at 5-24.

Based on the above information, CRMC staff conclude that the Applicant has satisfactorily addressed the required criteria of CRMP Section 300.8.

G. Applicability of the Providence Harbor Special Area Management Plan

The Providence Harbor Special Area Management Plan (SAMP) was adopted by the CRMC on November 22, 1983. The Providence Harbor SAMP was amended by the Council on October 29, 2003 for purposes of adopting polices and regulatory standards specific only to the Capitol Center District in downtown Providence. CRMC Staff reviewed the Providence Harbor SAMP including the original policies and goals going back to 1983 and have determined that there are no policies, goals or regulatory standards contained in the SAMP that apply to this Project. It is recognized that Harbor Policy13 states: "Facilities for handling, storing or shipping of any fuel, including petroleum, coal or gas (LPG, LNG) shall be given low priority." This policy, however, only applies to situations where any new filling of tidal waters would be proposed to support future port expansion at southern Field's point as detailed in Figure III-2 of the SAMP. Accordingly, since the Project is proposed on existing land at the northern end of the Port of Providence rather than on new filled tidal lands associated with an effort to expand the port in the designated area shown in Figure III-2 of the SAMP, this policy does not apply to the Project.

H. Applicability of the Metro Bay Region Special Area Management Plan

The Metro Bay Region SAMP was adopted on October 10, 2006 to develop policies and regulations specific to the Council's Urban Coastal Greenway Policy. The proposed NGLNG project is specifically exempt from the requirements of the Metro Bay SAMP pursuant to Section 140.4(d), which exempts energy facilities and any other Port related activities that are subject to U.S Department of Homeland Security and U.S. Coast Guard Maritime Security (MARSEC) jurisdiction. Accordingly, the provisions of the Metro Bay SAMP do not apply to this Project.

I. RICRMP Section 335 Protection and Enhancement of Public Access to the Shore

Due to the project location within the Port of Providence and since both the existing and proposed activities are subject to U.S. Department of Homeland Security requirements, and due to the lack of public access under both existing and proposed conditions, CRMC staff agrees with the Applicant's response that the Project will have no impact on public access or use of the shoreline.

J. Federal Energy Regulatory Commission (FERC) and Coastal Zone Management Act (CZMA) jurisdiction

The Project is subject to a federal license from the Federal Energy Regulatory Commission (FERC) pursuant to the Natural Gas Act USC 15 § 717. NGLNG filed its application for Certificate of Public Convenience and Necessity with FERC on or about April 1, 2016, and the application has been assigned Docket Number CP16-121. In accordance with federal law FERC has the exclusive authority to approve or deny an application for the exportation or importation of natural gas and LNG terminals pursuant to U.S. Code 15 § 717b(e)(1).

The Project is subject to the federal consistency review process pursuant to the Coastal Zone Management Act (CZMA), 16 USC §§ 1451-1464, and the CZMA's implementing regulations at 15 C.F.R. Part 930 Subpart D – Consistency for Activities Requiring a Federal License or Permit. While state law is preempted pursuant to U.S. Code 15 § 717, FERC jurisdiction in this matter does not impact the State's authority and jurisdiction and under the Coastal Zone Management Act. As part of its filing with the CRMC on October 31, 2016, NGLNG certified that the Project "will be consistent with Rhode Island's federally approved Coastal Resources Management Program." See October 31, 2016 filing at 1.

K. Applicability of 1978 Energy Amendments

The CRMC Energy Amendments to the Coastal Resources Management Program (CRMP) were adopted by the Council in 1978 and were intended to require a Council permit for the siting, construction, alteration and operation of petroleum processing, transfer or storage facilities regardless of their location within the State of Rhode Island. The term "petroleum products" is defined by the Council to include "natural gas and liquefied natural gas (LNG)" as specified in the Coastal Resources Management Program (CRMP) Glossary. The proposed LNG liquefaction Project is therefore a petroleum processing facility, because the Project will use a petroleum product (natural gas) and process that product into LNG. In addition, the Project will also have the capability to transfer LNG into a storage facility (the existing LNG tank).

Section 610.2-2.A of the CRMC Energy Amendments requires "a Council permit when there is the reasonable probability demonstrated by reliable and probative evidence that the proposal will: (1) conflict with any Council Management Plan or Program; (2) make any area unsuitable for any uses or activities to which it is allocated by a Council Plan or Program; or (3) significantly damage the environment of the coastal region." In this matter, NGLNG has applied for a federal license from FERC as required by the federal Natural Gas Act. Therefore, the Project is subject only to the federal consistency review process pursuant to the Coastal Zone Management Act. Thus, a Council permit is not required, as it is preempted by federal law. However, a federal consistency review must be conducted by the CRMC to determine whether or not the Project is consistent with the enforceable policies and standards of the CRMP. Moreover, notwithstanding the fact that federal law preempts

state law in this matter, the applicability of the Energy Amendments to a proposed petroleum processing, transfer or storage facility project and the requirement of a Council permit would be triggered only if one or more of the three threshold criteria in Section 610.2-2 were met. The threshold questions and CRMC Staff responses regarding these three criteria follow.

1.) Does the Project conflict with any Council Management Plan or Program?

The pre-existing LNG storage tank was constructed in the late 1970's at Field's Point and is recognized as an existing facility in both the CRMC Providence Harbor Special Area Management Plan (See Section 230 Existing Conditions of the Providence Harbor Shore) and the CRMC Energy Amendments (See Section 640.2-1 Findings for Storage and Processing of Liquefied Gases). The proposed Project does not conflict with either of these documents. In addition, as previously detailed within this CRMC Staff report, it appears that the proposed Project does not conflict with CRMP Section 200.6 (Type 6 waters), because the Project would not substantially detract from or interfere with any of the CRMC identified priority uses for Type 6 waters and associated shorelines. Accordingly, the Project does not appear to conflict with any Council Management Plan or Program.

2.) Will the Project make any area unsuitable for any uses or activities to which it is allocated by a Council Plan or Program?

The Project is being located on industrial port facility land that has been highly altered over the decades. The Project will be co-located with an existing LNG tank located along the shoreline. The Project is not being located immediately on the shoreline; rather it will be located landward of the existing LNG tank. In addition, the property where the Project will be located is owned by National Grid and will be part of a secured area that prohibits unauthorized access. Ongoing industrial port activities do not need access through the National Grid site. Thus, the Project if constructed and operated as proposed would not appear to make the area unsuitable for other priority industrial port uses for Type 6 waters.

3.) Will the Project significantly damage the environment of the coastal region?

As previously noted, the Project site is highly altered due to past and present uses. The site presently includes an industrial facility that supports an existing natural gas pipeline, an LNG storage tank and truck fueling station, among other elements. The proposed Project will not involve any fill within tidal waters, will not result in the alteration of any existing coastal buffer zone or natural habitat, and stormwater runoff will be treated in accordance with the requirements of CRMP Section 300.6. The Applicant further indicates the proposed Project will be constructed in compliance with all applicable state and federal standards.

Due to existing historic soil contamination on site, the Applicant has filed a Short Term Response Action Plan (STRAP) with the RI Department of Environmental Management (RIDEM) Division of Waste Management which has jurisdiction in this matter. The STRAP has been posted on the RIDEM website. See: http://www.dem.ri.gov/programs/wastemanagement/site-remediation/Providence-Gas-Co.php. Additionally, the RIDEM has undertaken the review of proposed remediation of the site and potential environmental issues associated with the disturbance of contaminated soils and groundwater. The RIDEM review process included approval of a Public Involvement Plan (PIP) in June 2017. See: (http://www.dem.ri.gov/programs/benviron/waste/Prov-Co/170628pa.pdf).

The RIDEM PIP process included two (2) public hearings that were held on July 13 and August 9, 2017 respectively. In the interim, RIDEM in coordination with the Applicant has been evaluating and

responding to numerous public comments and objections to the Project. It is CRMC Staff understanding that RIDEM intends to issue responses to public comments in the very near future, followed by a STRAP Comment Letter, and the likely issuance of a STRAP approval letter (anticipated in mid-October 2017, pending the Applicant's satisfactory responses to RIDEM's STAP Comments). Consistent with past practice, the CRMC will rely upon the review conducted by the RIDEM to demonstrate that environmental contamination issues are properly addressed through adherence to the rules, practices and procedures established by RIDEM on behalf of the State of Rhode Island. Accordingly, the CRMC relies upon the anticipated issuance of the RIDEM STRAP approval to conclude that the activities associated with site disturbance and remediation would not significantly damage the environment of the coastal region.

In conclusion, due to the existing industrial use of the site, the lack of any alteration of natural habitat, the protection of water quality through proper stormwater management and the impending issuance of a STRAP Approval by the RIDEM, which signifies existing environmental contamination issues will be appropriately addressed during proposed remediation activities at the site, CRMC Staff concludes that the proposed project will not significantly damage the environment of the coastal region. Further, based on the findings herein, CRMC staff conclude that the Project would not trigger any of the three threshold criteria in Section 610.2-2.A of the CRMC Energy Amendments. Therefore, the underlying subsections (B through E) of Section 610.2-2 of the Energy Amendments do not apply in this matter. Nonetheless, a federal consistency review of the Project by the CRMC is required pursuant to 15 C.F.R. Part 930 Subpart D.

Notwithstanding CRMC Staff opinion on applicability of the CRMC Energy Amendments, the Applicant previously filed responses to Section 610.2-2 in their October 31, 2016 CRMC application.

J. Listing of Public Comments and Objections

There have been a significant number of public comments filed with the CRMC regarding this Project and they are included within the Councils package for review. CRMC staff have created the list below of the main issues raised by each of the major objectors/commenters. This list is not a complete listing of each of the public comments, but is a quick synopsis to allow the Council to see the general issues raised by the comments. Many of the comments and objections are not within the purview and jurisdiction of the RICRMP, and therefore not addressed in this staff report.

No LNG in PVD	**Environmental Justice League of Rhode Island**
• Environmental Contamination and release of contaminants from the site • Need for the Project • Sea Level Rise, Climate Change and Storms • Cumulative Impacts • Setback (failure to meet 50' setback) • Variance criteria inconsistency • Type 6 waters inconsistency • Revetment design	• Need for the Project • Federal Consistency Issues • 300.8 and Energy Amendments • Export of LNG • Public Participation and Notice • Risk/High Risk Area • Environmental Racism • Climate Change (contributions) and Storms • Need to reduce Greenhouse gases

• Historic and Archaeological Resources (HPHC, Indian Tribe) • 300.1 Concerns • 300.8 and Energy Amendments • Export of LNG • LNG Storage Tank Risks	• Natural Gas Leaks and Emissions • RI State Energy Plan 2015 • Public Health • Economic Inequality • Project (energy program) Alternatives
Audubon Society of Rhode Island	**Save The Bay**
• Sea Level Rise, Climate Change and Storms • Setback (failure to meet 50' setback • 300.8 and Energy Amendments • Fracking concerns • Providence Harbor SAMP Harbor Policy 2 and Metro Bay SAMP greenway amendments • Ocean SAMP Global Climate Change	• Public Access • Buffer Zone • Sea Level Rise, Climate Change and Operational Life of the Project
Providence Mayor Jorge O. Elorza	**Mashapaug Nahaganset Tribe**
• Sea level Rise, Climate Change and Flooding Risk • Type 6 waters inconsistency • 300.8 and Need for the Project • Need to reduce Greenhouse Gases	• Negative Environmental Impact • Failure to obtain Tribe's Authorization
Sign-on Letter Opposing Fields point LNG Liquefaction Facility	**Misc. Individual Objections (primarily submitted by email)**
• Storms and other Risks • Proximity to Toxic Industrial and Chemical Facilities • Proximity to Hospital and other medical/care facilities • Need for the Project • Electrical Demand for the Project • Flawed Public Outreach • Contributions to Pollution • Need for Renewable Energy	• General Objections to Project • Facility in Urban Area, Residential Neighborhood Proximity • Environmental Risks, Health and Safety Risks • Fire Hazard and Blast Zone • Concentration of Polluting Facilities • Preference for Renewable Energy over Fossil Fuels • Supports Fracking to Supply Gas for Liquefaction • Sea Level Rise, Flooding and Storm Damage • Site Contamination and Release of Contaminants • NGRID Rejection of RIDEM Public Involvement Plan • Economic and Social Impacts • Environmental Justice, Proximity to

	Low Income Communities • Noncompliance with Resilient Rhode Island Act • Facility does not meet current Federal Safety and Siting Standards • Facility is in the Vicinity of Hospitals, Day Care Facilities, School Children • Concerns that FERC process avoids need for State and Local Permits

FEDERAL ENERGY REGULATORY COMMISSION
WASHINGTON D.C. 20426
PJ - 11.4
OFFICIAL BUSINESS
PENALTY FOR PRIVATE USE $300

Docket No.: PF-15-28

Executive Director
Grover Gugate
Rhode Island Coastal Resources Management Council
Stedman Government Center - Suite 3
4808 Tower Hill Road
Wakefield , RI 02879

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MANAGEMENT COUNCIL

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

National Grid LNG, LLC | Docket No. PF15-28-000

NOTICE OF INTENT TO PREPARE AN ENVIRONMENTAL DOCUMENT FOR THE PLANNED **FIELDS POINT LIQUEFACTION PROJECT**, REQUEST FOR COMMENTS ON ENVIRONMENTAL ISSUES, AND NOTICE OF PUBLIC SCOPING MEETING

(September 25, 2015)

The staff of the Federal Energy Regulatory Commission (FERC or Commission) will prepare an environmental document that will discuss the environmental impacts of the Fields Point Liquefaction Project involving construction and operation of facilities by National Grid LNG, LLC (NGLNG) in Providence, Rhode Island. The Commission will use this environmental document in its decision-making process to determine whether the project is in the public convenience and necessity.

This notice announces the opening of the scoping process the Commission will use to gather input from the public and interested agencies on the project. You can make a difference by providing us with your specific comments or concerns about the project. Your comments should focus on the potential environmental effects, reasonable alternatives, and measures to avoid or lessen environmental impacts. Your input will help the Commission staff determine what issues they need to evaluate in the environmental document. To ensure that your comments are timely and properly recorded, please send your comments so that the Commission receives them in Washington, DC **on or before October 26, 2015.**

If you sent comments on this project to the Commission **before** the opening of this docket on June 22, 2015, you will need to file those comments in Docket No. PF15-28-000 to ensure they are considered as part of this proceeding.

This notice is being sent to the Commission's current environmental mailing list for this project. State and local government representatives should notify their constituents of this planned project and encourage them to comment on their areas of concern.

The following libraries will be provided copies of this notice in English and Spanish[1]:

Providence Community Library: Washington Park 1316 Broad Street Providence, RI 02905 401-781-3136	Providence Community Library: Knight Memorial 275 Elmwood Avenue Providence, RI 02907 401-467-2625
Cranston Public Library: William Hall Library 1825 Broad Street Cranston, RI 02905 401-781-2450	Providence Community Library: South Providence 441 Prairie Avenue Providence, RI 02905 401-467-2619
East Providence Library Branch 475 Bullocks Pt. Avenue Riverside, RI 02915 401-433-4877	Providence Public Library Reference Department 150 Empire Street Providence, RI 02903 401-455-8000
Cranston Public Library: Auburn Branch 396 Pontiac Avenue Cranston, RI 02910 401-781-6116	Providence Community Library: Fox Point 90 Ives Street Providence, RI 02906 401-331-0390
Cranston Public Library: Arlington Branch 1069 Cranston Street Cranston, RI 02920 401-944-1662	East Providence Public Library: Weaver 41 Grove Avenue East Providence, RI 02914 401-434-2453

Public Participation

For your convenience, there are four methods you can use to submit your comments to the Commission. The Commission will provide equal consideration to all

[1] Para los lectores de español, por favor refieran a la traducción en español presentada simultáneamente en el expediente de la FERC con esta convocatoria. El expediente de la FERC se encuentra disponible en el sitio web de la FERC (www.ferc.gov) utilizando el enlace a través de la biblioteca electrónica, al hacer clic en "General Search", e introducir el número de expediente excluyendo los últimos tres dígitos en el campo Número de expediente (es decir, PF15-28). Asegúrese de que ha seleccionado un intervalo de fechas adecuado. Además NGLNG puede publicar versiones en español de esta convocatoria en sitios web de noticias en español en el área de Providencia.

comments received, whether filed in written form or provided verbally during a FERC scoping meeting. The Commission encourages electronic filing of comments and has expert staff available to assist you at (202) 502-8258 or efiling@ferc.gov. Please carefully follow these instructions so that your comments are properly recorded.

1) You can file your comments electronically using the eComment feature on the Commission's website (www.ferc.gov) under the link to Documents and Filings. This is an easy method for submitting brief, text-only comments on a project;

2) You can file your comments electronically by using the eFiling feature on the Commission's website (www.ferc.gov) under the link to Documents and Filings. With eFiling, you can provide comments in a variety of formats by attaching them as a file with your submission. New eFiling users must first create an account by clicking on "eRegister." If you are filing a comment on a particular project, please select "Comment on a Filing" as the filing type; or

3) You can file a paper copy of your comments by mailing them to the following address. Be sure to reference the project docket number (PF15-28-000) with your submission:

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street NE, Room 1A
Washington, DC 20426

4) In lieu of sending written or electronic comments, the Commission invites you to attend the public scoping meeting its staff will conduct in the project area, scheduled as follows:

FERC Public Scoping Meeting
Fields Point Liquefaction Project
October 8, 2015, 6:30 p.m.
Juanita Sanchez Educational Complex at the
Providence Academy of International Studies High School
182 Thurbers Avenue
Providence, RI

We will begin our sign up of speakers at 6:00 p.m. The scoping meeting will begin at 6:30 p.m. with a description of our environmental review process by Commission staff, after which speakers will be called. The

meeting will end once all speakers have provided their comments or at 10:30 p.m., whichever comes first. Please note that there may be a time limit of **three minutes** to present comments, and speakers should structure their comments accordingly.

If time limits are implemented, they will be strictly enforced to ensure that as many individuals as possible are given an opportunity to comment. The meetings will be recorded by a court reporter to ensure comments are accurately recorded. Transcripts will be entered into the formal record of the Commission proceeding.

Please note this is not your only public input opportunity; please refer to the review process flow chart in Appendix 1.[2]

Summary of the Planned Project

NGLNG plans to add liquefaction capability at the existing liquefied natural gas (LNG) storage facility located at Fields Point in Providence, Rhode Island. The Project would include one new 20 million standard cubic feet per day gas pretreatment and liquefaction system to convert natural gas into LNG by cooling it to -260 °F.

The storage operation at Fields Point has been in existence for approximately 40 years and does not include any liquefaction equipment. The natural gas delivered to the facility via the existing pipeline would be pre-treated, liquefied, and conveyed to the existing storage tank.

A figure showing the general location of the existing and proposed facilities is shown in Appendix 2. If approved, NGLNG plans to begin construction of the Project in late 2016.

Land Requirements for Construction

The existing facility is in an industrial area along the Providence River at 121 Terminal Road. The total land proposed to be disturbed for construction of this project is reported to be approximately 8.91 acres. The liquefaction system would occupy approximately 1.85 acres within the existing facility's footprint.

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[2] The appendices referenced in this notice will not appear in the Federal Register. Copies of the appendices were sent to all those receiving this notice in the mail and are available at www.ferc.gov using the link called "eLibrary" or from the Commission's Public Reference Room, 888 First Street NE, Washington, DC 20426, or call (202) 502-8371. For instructions on connecting to eLibrary, refer to the last page of this notice.

The Environmental Document Preparation Process

The National Environmental Policy Act (NEPA) requires the Commission to take into account the environmental impacts that could result from an action whenever it considers the issuance of a Certificate of Public Convenience and Necessity. NEPA also requires us[3] to discover and address concerns the public may have about proposals. This process is referred to as scoping. The main goal of the scoping process is to focus the analysis in the environmental document on the important environmental issues. By this notice, the Commission requests public comments on the scope of the issues to address in the environmental document. We will consider all filed comments during the preparation of the environmental document.

In the environmental document, we will discuss impacts that could occur as a result of the construction and operation of the planned project under these general headings:

- geology and soils;
- land use;
- water resources, fisheries, and wetlands;
- cultural resources;
- vegetation and wildlife;
- air quality and noise;
- socioeconomics;
- endangered and threatened species;
- public safety; and
- cumulative impacts.

We will also evaluate possible alternatives to the planned project or portions of the project, and make recommendations on how to lessen or avoid impacts on the various resource areas.

Although no formal application has been filed, we have already initiated our NEPA review under the Commission's pre-filing process. The purpose of the pre-filing process is to encourage early involvement of interested stakeholders and to identify and resolve issues before the FERC receives an application. As part of our pre-filing review, we have begun to contact some federal and state agencies to discuss their involvement in the scoping process and the preparation of the environmental document.

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[3] "We," "us," and "our" refer to the environmental staff of the Commission's Office of Energy Projects.

The environmental document will present our independent analysis of the issues. The environmental document will be available in the public record through eLibrary. Depending on the comments received during the scoping process, we may also publish and distribute the environmental document to the public for an allotted comment period. If the document is published and distributed to the public, we will consider all timely comments on the environmental document before we make our recommendations to the Commission. To ensure we have the opportunity to consider and address your comments, please carefully follow the instructions in the Public Participation section, beginning on page 2.

With this notice, we are asking agencies with jurisdiction by law and/or special expertise with respect to the environmental issues related to this project to formally cooperate with us in the preparation of the environmental document.[4] Agencies that would like to request cooperating agency status should follow the instructions for filing comments provided under the Public Participation section of this notice.

Consultations Under Section 106 of the National Historic Preservation Act

In accordance with the Advisory Council on Historic Preservation's implementing regulations for Section 106 of the National Historic Preservation Act, we are using this notice to initiate consultation with the applicable State Historic Preservation Office(s), and to solicit their views and those of other government agencies, interested Indian tribes, and the public on the project's potential effects on historic properties.[5] We will define the project-specific Area of Potential Effects (APE) in consultation with the SHPO(s) as the project develops. On natural gas facility projects, the APE at a minimum encompasses all areas subject to ground disturbance (examples include construction staging areas, access roads, and the footprint of the planned liquefaction facility). Our environmental document for this project will document our findings on the impacts on historic properties and summarize the status of consultations under Section 106.

Environmental Mailing List

The environmental mailing list includes federal, state, and local government representatives and agencies; elected officials; environmental and public interest groups; Native American Tribes; other interested parties; and local libraries and newspapers.

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[4] The Council on Environmental Quality regulations addressing cooperating agency responsibilities are at Title 40, Code of Federal Regulations, Part 1501.6.

[5] The Advisory Council on Historic Preservation regulations are at Title 36, Code of Federal Regulations, Part 800. Those regulations define historic properties as any prehistoric or historic district, site, building, structure, or object included in or eligible for inclusion in the National Register of Historic Places.

This list also includes all affected landowners (as defined in the Commission's regulations) who are potential right-of-way grantors, whose property may be used temporarily for project purposes, or who own homes within certain distances of aboveground facilities, and anyone who submits comments on the project. We will update the environmental mailing list as the analysis proceeds to ensure that we send the information related to this environmental review to all individuals, organizations, and government entities interested in and/or potentially affected by the planned project.

If we publish and distribute the environmental document, copies of it will be sent to the environmental mailing list for public review and comment. **If you would prefer to receive a paper copy of the document instead of the CD version or would like to remove your name from the mailing list, please return the attached Information Request (Appendix 3).**

Becoming an Intervenor

Once NGLNG files its application with the Commission, you may want to become an "intervenor" which is an official party to the Commission's proceeding. Intervenors play a more formal role in the process and are able to file briefs, appear at hearings, and be heard by the courts if they choose to appeal the Commission's final ruling. An intervenor formally participates in the proceeding by filing a request to intervene. Motions to intervene are more fully described at http://www.ferc.gov/resources/guides/how-to/intervene.asp. Instructions for becoming an intervenor are in the "Document-less Intervention Guide" under the "e-filing" link on the Commission's website. Please note that the Commission will not accept requests for intervenor status at this time. You must wait until the Commission receives a formal application for the project.

Additional Information

Additional information about the project is available from the Commission's Office of External Affairs, at **(866) 208-FERC**, or on the FERC website (www.ferc.gov) using the eLibrary link. Click on the eLibrary link, click on "General Search" and enter the docket number, excluding the last three digits in the Docket Number field (i.e., PF15-28). Be sure you have selected an appropriate date range. For assistance, please contact FERC Online Support at FercOnlineSupport@ferc.gov or toll free at (866) 208-3676, or for TTY, contact (202) 502-8659. The eLibrary link also provides access to the texts of formal documents issued by the Commission, such as orders, notices, and rulemakings.

In addition, the Commission offers a free service called eSubscription which allows you to keep track of all formal issuances and submittals in specific dockets. This can reduce the amount of time you spend researching proceedings by automatically

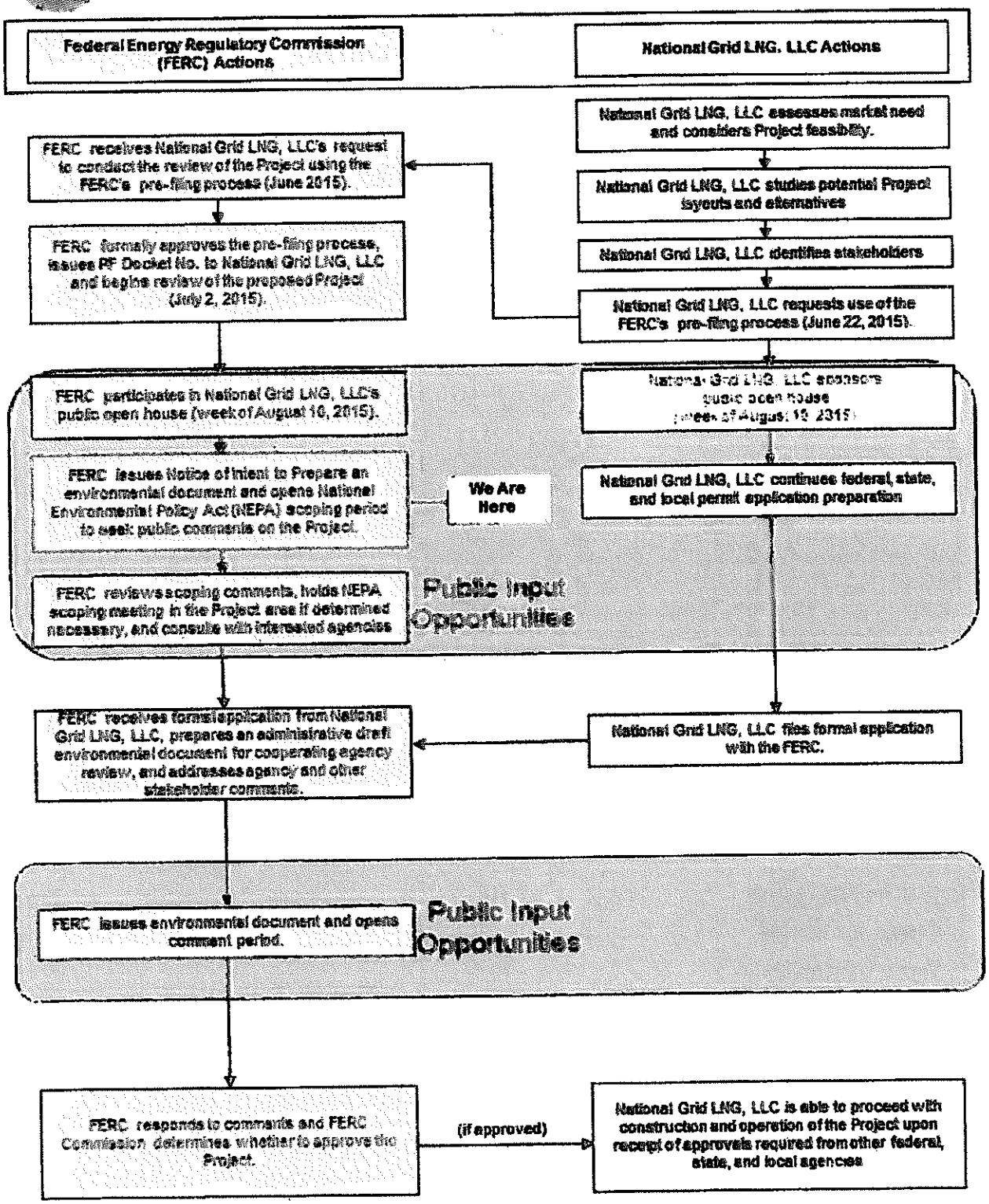
providing you with notification of these filings, document summaries, and direct links to the documents. Go to www.ferc.gov/docs-filing/esubscription.asp.

Finally, public meetings or site visits will be posted on the Commission's calendar located at www.ferc.gov/EventCalendar/EventsList.aspx along with other related information.

Nathaniel J. Davis, Sr.,
Deputy Secretary.

Appendix 1

Fields Point Liquefaction Project (PF15-28-000)
Federal Energy Regulatory Commission Review Process

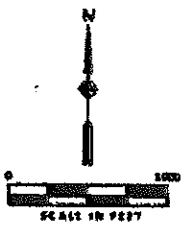


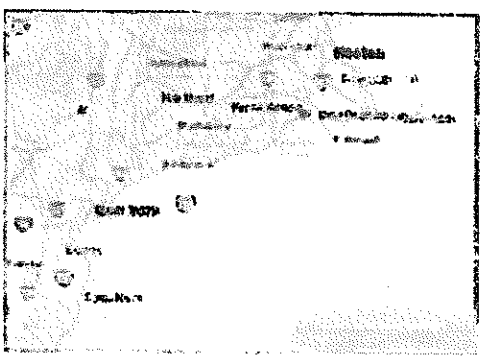
Appendix 2

Fields Point Liquefaction Project
Providence, Rhode Island

Legend

- Proposed Project Boundary
- Proposed Laydown Area
- Proposed Construction Access





Docket No. PF15-28-000

INFORMATION REQUEST

Fields Point Liquefaction Project

Providence, Rhode Island

Name_____

Agency_____

Address_____

City_____ **State**_____ **Zip Code**_____

A CD of the NEPA document will be sent to the address noted above, unless you check one of the two boxes below.

☐ **Please send me a paper copy of the published NEPA document**

☐ **Please remove my name from the mailing list**

FROM_____

_____

_____

_____

ATTN: **OEP - Gas 4, PJ - 11.4**
Federal Energy Regulatory Commission
888 First Street NE
Washington, DC 20426

PF15-28-000 Fields Point Liquefaction Project

Staple or Tape Here

AECOM
250 Apollo Drive
Chelmsford, MA 01824

978-905-2100 tel
978-905-2101 fax

December 9, 2015

Grover Fugate, Executive Director
Rhode Island Coastal Resources Management Council
Stedman Government Center-Suite 3
4808 Tower Hill Road
Wakefield, RI 02879

Subject: National Grid LNG, LLC
NGLNG Bund Wall Project
Providence, Rhode Island

Dear Mr. Fugate,

National Grid LNG, LLC (NGLNG) is proposing to construct an approximately 85-foot tall pre-fabricated concrete bund wall around its existing liquefied natural gas (LNG) storage tank. The project is to provide a safety enhancement above and beyond the current safety requirements for the existing LNG storage tank located in Providence, Rhode Island. This containment enhancement will be constructed inside the existing tank containment area that is created by the current dike wall. This project is independent of the Fields Point Liquefaction Project which is currently in pre-filing with FERC under Docket PF15-28-000 although the two projects are intended to be constructed concurrently to achieve efficiencies and minimize construction impacts on the area.

The bund wall will be located within 200-feet of the Providence River. Enclosed for your review is a USGS location map depicting the proposed project.

NGLNG will file an application with the Federal Energy Regulatory Commission's (FERC) under National Environmental Policy Act (NEPA) for the project.

An Environmental Report (ER) which is required as part of the FERC Section 7c application and review process is currently being prepared for the Project.

The purpose of this letter is to notify the RICRMC of this propsed work and acknowledge that NGLNG will be submitting a consistency determination request with RICRMC for this project in 2016.

If you have any questions or comments regarding the Project, please do not hesitate to contact me via phone at 978-905-2355 or via email at matt.devlin@aecom.com. Thank you.

Yours sincerely,

Matthew Devlin, AECOM
Senior Environmental Scientist

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MANAGEMENT COUNCIL

cc: Jeff Ziskowski, National Grid
William Howard, National Grid
Anthony LaRusso, National Grid
Kathryn Cox, National Grid

Attachment: Project Location Map

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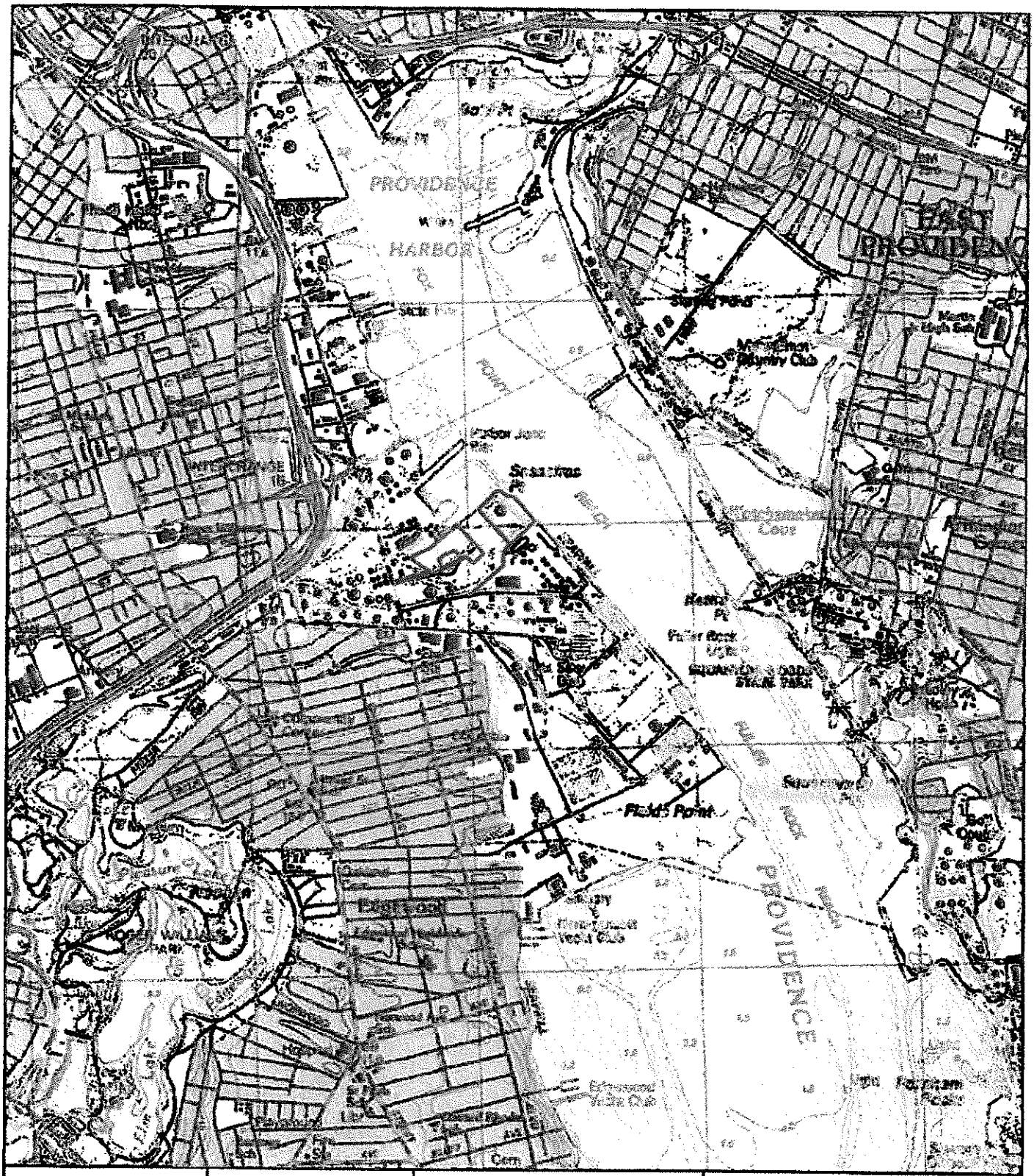
DEC 14 2015
COASTAL RESOURCES
MANAGEMENT COUNCIL

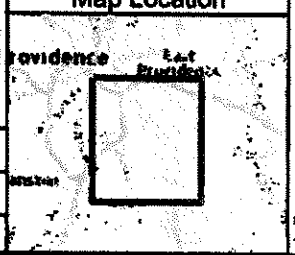


nationalgrid

Drawn:	JM	11/24/2015
Approved:	MD	11/24/2015
Project #:	60308111	

Y:\Projects\NatGrid\Bund Wall Project\Bund_Wall_Project.mxd

Map Location



Legend

Project Boundary

Scale 1:24,000
1 inch = 2,000 feet

0 500 1,000 2,000 Feet

N

FIGURE 1: SITE LOCUS MAP

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NATIONAL GRID LNG LLC
BUND WALL PROJECT
PROVIDENCE, RHODE ISLAND

CONFERENCE CALL NOTES
FIELDS POINT LIQUEFACTION PROJECT

MEETING TOPIC:

PF15-28-000 – Fields Point Liquefaction Project

DATE OF MEETING:

1 February 2016 – Project Bi-Weekly Conference Call

ATTENDEES:

Federal Energy Regulatory Commission
Kenneth Warn
Karla Bathrick
Robert Kopka

ERM, Third-Party Contractor
Christina Hoffman
Steve Holden

Cooperating Agency
Jim Boyd (Rhode Island Coastal Resources Management Council [CRMC])

National Grid LNG, LLC (National Grid) Team
Bill Howard (National Grid)
Tony LaRusso (National Grid)
Dennis Behr (National Grid)
Michael Michel (National Grid)
Kathleen Sullivan (National Grid)
Craig Fonseca (National Grid)
Mark Rielly (National Grid)
Matt Devlin (AECOM)
Andrea Wolfman (Alston & Bird)
Tony Parrack (Kiewit)

MEETING NOTES:

Purpose: Project conference call to discuss the status of the project and key issues.

Notes:

- The call participants discussed FERC's review of the request by National Grid to conduct test piles to measure vibrations to assist with the design of the final piles to be included in the liquefaction project.
- National Grid discussed its spill containment design plans for the liquefaction project.
- National Grid discussed plans for providing an Environmental Inspector during the construction phase of the project.
- The noise study was discussed, including identification of potential additional noise-sensitive areas that could be considered based on their proximity to the site.
- FERC clarified that the noise analysis filed with National Grid's application must account for the noise impact of all existing and planned new equipment at the Fields Point site when operated at full load.
- FERC advised that the application must include a map of the project area illustrating the location of identified noise-sensitive areas out to a distance of one mile from the Fields Point site.
- The schedule for the remainder of the pre-filing period and the application submittal target dates were discussed.

Action Items:

- The FERC will prepare an additional data request addressing Resource Reports 11 and 13.
- CRMC will provide details regarding the mixed residential/commercial development proposed in the vicinity of the project.

James Boyd

From: James Boyd <jboyd@crmc.ri.gov>
Sent: Tuesday, February 02, 2016 11:12 AM
To: 'Christina Hoffman'
Cc: 'James Boyd'
Subject: Fields Point Liquefaction Project Meeting

Hi Christina,

As was discussed during the teleconference call yesterday afternoon, the CRMC has approved 2 mixed-use residential and commercial development projects in East Providence that are located across the Providence River from the National Grid Field's Point LNG site. Village on the Waterfront, CRMC Assent 2010-06-036, has been undergoing site remediation. However, we understand that the applicant now plans to begin construction this year for full build-out. This project is 0.5 miles from the LNG facility. The other project is Kettle Point, CRMC Assent 2013-06-080, and is also presently under construction. This project is farther south from the Village on the Waterfront, but is approximately 0.75 miles from the LNG facility. Both projects are located along the Providence River and in direct line of sight to the LNG facility.

I have attached the CRMC Assent with a locus and site plan for the Village on the Waterfront project. An electronic file for the Kettle Point project is not yet available, but I can forward the assent and site plan if necessary within the next week or so. Please contact me with any questions.

Regards - Jim

James Boyd
Coastal Policy Analyst
RI Coastal Resources Management Council
Oliver Stedman Government Center
4808 Tower Hill Road
Wakefield, RI 02879
jboyd@crmc.ri.gov | 401.783.3370

CRMC_2010-06-...

James Boyd

From: Tony Affigne <affigne@gmail.com>
Sent: Tuesday, July 12, 2016 9:07 PM
To: Grover Fugate
Cc: Sherrie Andre; Aaron Jaehnig; Jeff Willis; jboyd@crmc.ri.gov; Lisa Turner
Subject: Re: Inquiry: Fields Point LNG Facility

Grover, Jeff, and Jim:

Thank you for responding to Sherrie Andre's May 23 and July 12 emails, about the National Grid LNG liquefaction project, on the Providence waterfront adjacent to the Washington Park and South Providence neighborhoods.

Ms. Andre and others in the project's nearby neighborhoods wish to keep abreast of each step in this process. As CRMC's member appointed to represent Providence, a "coastal city over 25,000," I am very concerned that we do everything we can to facilitate effective public engagement. Thus, Ms. Andre has my complete support in her request for public information.

In the interim: May I request, as a Council member, that you provide Ms. Andre with CRMC's and National Grid's most recent pre-filing correspondence? Those documents will help residents understand the project and ensure that everyone is accurately informed. I would appreciate knowing that you've made arrangements for this.

It's no exaggeration to say that CRMC's reputation for ethics, public trust, and transparency may be at stake, with this controversial LNG facility, proposed to sit at the very heart of Rhode Island's urban communities. Let's do it right.

Sincerely,

Tony Affigne
CRMC Member
Providence

On Jul 12, 2016, at 4:23 PM, Grover Fugate <gfugate@crmc.ri.gov> wrote:

Sherrie,

I am sorry if we did not respond to you on this and I will look into this matter, but we have placed this correspondence in a pre-file we are creating for this. We unfortunately do not have a way of automatically tracking and notifying those interested in applications which have not be submitted. Once the application is received, we will transfer pre-filed material to the application file to be made part of the record. The council will have some form of public hearing on this matter and those who are on the mailing list will receive notice. I hope this answers your questions and I am sorry we did not inform you the first time.

Grover J. Fugate
Executive Director
State of Rhode Island

Coastal Resources Management Council
4808 Tower Hill Road, Rm 116
Wakefield, Rhode Island 02879
401-783-3370
www.crmc.ri.gov

From: Sherrie Andre [mailto:lngcampaign@ejlri.org]
Sent: Tuesday, July 05, 2016 10:15 AM
To: gfugate@crmc.ri.gov
Cc: Tony Affigne; Aaron Jaehnig
Subject: Inquiry: Fields Point LNG Facility

Hello - this an email I sent over a month ago (5/23/2016) and have yet to hear a response.

Please let me know if you are not the appropriate official to receive this information from and who I should be redirected to.

Thank you,
Sherrie'Anne Andre
LNG Campaign Coordinator, EJLRI

--
Hello,

I am writing to you in regards to National Grid's proposed Fields Point LNG Facility -- The Environmental Justice League of RI has launched a campaign opposing the Fields Point project and has been contacting the Coastal Resource Management Council's office (the past month) to see if National Grid has submitted the application needed for their permits.

Since we began this campaign we have acquired over 1,000 signatures on our petition and 25 local, regional, and national groups have signed onto our opposition letter.

I am hoping that through this correspondence, I can be kept up to date on whether or not National Grid has submitted their permits (I can continue to call and email weekly) -- but also be notified when the CRMC intends to host public hearings about the project. Please let me know if this is a possibility.

I have attached our sign on letter that we are continuously circulating.

Thank you for your time,
Sherrie'Anne Andre
LNG Campaign Coordinator, EJLRI

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WASHINGTON D.C. 20426
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U.S. POSTAGE PITNEY BOWES
ZIP 20001 $ 001.20⁰
02 1W
0001371363 SEP 26 2015

Docket No.: PF-15-28

Executive Director
Grover Gugate
Rhode Island Coastal Resources Management Council
Stedman Government Center - Suite 3
4808 Tower Hill Road
Wakefield , RI 02879

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COASTAL RESOURCES MANAGEMENT COUNCIL

UNITED STATES OF AMERICA
FEDERAL ENERGY REGULATORY COMMISSION

National Grid LNG, LLC | Docket No. PF15-28-000

NOTICE OF INTENT TO PREPARE AN ENVIRONMENTAL DOCUMENT FOR THE PLANNED **FIELDS POINT LIQUEFACTION PROJECT**, REQUEST FOR COMMENTS ON ENVIRONMENTAL ISSUES, AND NOTICE OF PUBLIC SCOPING MEETING

(September 25, 2015)

The staff of the Federal Energy Regulatory Commission (FERC or Commission) will prepare an environmental document that will discuss the environmental impacts of the Fields Point Liquefaction Project involving construction and operation of facilities by National Grid LNG, LLC (NGLNG) in Providence, Rhode Island. The Commission will use this environmental document in its decision-making process to determine whether the project is in the public convenience and necessity.

This notice announces the opening of the scoping process the Commission will use to gather input from the public and interested agencies on the project. You can make a difference by providing us with your specific comments or concerns about the project. Your comments should focus on the potential environmental effects, reasonable alternatives, and measures to avoid or lessen environmental impacts. Your input will help the Commission staff determine what issues they need to evaluate in the environmental document. To ensure that your comments are timely and properly recorded, please send your comments so that the Commission receives them in Washington, DC **on or before October 26, 2015.**

If you sent comments on this project to the Commission **before** the opening of this docket on June 22, 2015, you will need to file those comments in Docket No. PF15-28-000 to ensure they are considered as part of this proceeding.

This notice is being sent to the Commission's current environmental mailing list for this project. State and local government representatives should notify their constituents of this planned project and encourage them to comment on their areas of concern.

The following libraries will be provided copies of this notice in English and Spanish[1]:

Providence Community Library: Washington Park 1316 Broad Street Providence, RI 02905 401-781-3136	Providence Community Library: Knight Memorial 275 Elmwood Avenue Providence, RI 02907 401-467-2625
Cranston Public Library: William Hall Library 1825 Broad Street Cranston, RI 02905 401-781-2450	Providence Community Library: South Providence 441 Prairie Avenue Providence, RI 02905 401-467-2619
East Providence Library Branch 475 Bullocks Pt. Avenue Riverside, RI 02915 401-433-4877	Providence Public Library Reference Department 150 Empire Street Providence, RI 02903 401-455-8000
Cranston Public Library: Auburn Branch 396 Pontiac Avenue Cranston, RI 02910 401-781-6116	Providence Community Library: Fox Point 90 Ives Street Providence, RI 02906 401-331-0390
Cranston Public Library: Arlington Branch 1069 Cranston Street Cranston, RI 02920 401-944-1662	East Providence Public Library: Weaver 41 Grove Avenue East Providence, RI 02914 401-434-2453

Public Participation

For your convenience, there are four methods you can use to submit your comments to the Commission. The Commission will provide equal consideration to all

[1] Para los lectores de español, por favor refieran a la traducción en español presentada simultáneamente en el expediente de la FERC con esta convocatoria. El expediente de la FERC se encuentra disponible en el sitio web de la FERC (www.ferc.gov) utilizando el enlace a través de la biblioteca electrónica, al hacer clic en "General Search", e introducir el número de expediente excluyendo los últimos tres dígitos en el campo Número de expediente (es decir, PF15-28). Asegúrese de que ha seleccionado un intervalo de fechas adecuado. Además NGLNG puede publicar versiones en español de esta convocatoria en sitios web de noticias en español en el área de Providencia.

comments received, whether filed in written form or provided verbally during a FERC scoping meeting. The Commission encourages electronic filing of comments and has expert staff available to assist you at (202) 502-8258 or efiling@ferc.gov. Please carefully follow these instructions so that your comments are properly recorded.

1) You can file your comments electronically using the eComment feature on the Commission's website (www.ferc.gov) under the link to Documents and Filings. This is an easy method for submitting brief, text-only comments on a project;

2) You can file your comments electronically by using the eFiling feature on the Commission's website (www.ferc.gov) under the link to Documents and Filings. With eFiling, you can provide comments in a variety of formats by attaching them as a file with your submission. New eFiling users must first create an account by clicking on "eRegister." If you are filing a comment on a particular project, please select "Comment on a Filing" as the filing type; or

3) You can file a paper copy of your comments by mailing them to the following address. Be sure to reference the project docket number (PF15-28-000) with your submission:

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street NE, Room 1A
Washington, DC 20426

4) In lieu of sending written or electronic comments, the Commission invites you to attend the public scoping meeting its staff will conduct in the project area, scheduled as follows:

FERC Public Scoping Meeting
Fields Point Liquefaction Project
October 8, 2015, 6:30 p.m.
Juanita Sanchez Educational Complex at the
Providence Academy of International Studies High School
182 Thurbers Avenue
Providence, RI

We will begin our sign up of speakers at 6:00 p.m. The scoping meeting will begin at 6:30 p.m. with a description of our environmental review process by Commission staff, after which speakers will be called. The

meeting will end once all speakers have provided their comments or at 10:30 p.m., whichever comes first. Please note that there may be a time limit of **three minutes** to present comments, and speakers should structure their comments accordingly.

If time limits are implemented, they will be strictly enforced to ensure that as many individuals as possible are given an opportunity to comment. The meetings will be recorded by a court reporter to ensure comments are accurately recorded. Transcripts will be entered into the formal record of the Commission proceeding.

Please note this is not your only public input opportunity; please refer to the review process flow chart in Appendix 1.[2]

Summary of the Planned Project

NGLNG plans to add liquefaction capability at the existing liquefied natural gas (LNG) storage facility located at Fields Point in Providence, Rhode Island. The Project would include one new 20 million standard cubic feet per day gas pretreatment and liquefaction system to convert natural gas into LNG by cooling it to -260 °F.

The storage operation at Fields Point has been in existence for approximately 40 years and does not include any liquefaction equipment. The natural gas delivered to the facility via the existing pipeline would be pre-treated, liquefied, and conveyed to the existing storage tank.

A figure showing the general location of the existing and proposed facilities is shown in Appendix 2. If approved, NGLNG plans to begin construction of the Project in late 2016.

Land Requirements for Construction

The existing facility is in an industrial area along the Providence River at 121 Terminal Road. The total land proposed to be disturbed for construction of this project is reported to be approximately 8.91 acres. The liquefaction system would occupy approximately 1.85 acres within the existing facility's footprint.

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[2] The appendices referenced in this notice will not appear in the Federal Register. Copies of the appendices were sent to all those receiving this notice in the mail and are available at www.ferc.gov using the link called "eLibrary" or from the Commission's Public Reference Room, 888 First Street NE, Washington, DC 20426, or call (202) 502-8371. For instructions on connecting to eLibrary, refer to the last page of this notice.

The Environmental Document Preparation Process

The National Environmental Policy Act (NEPA) requires the Commission to take into account the environmental impacts that could result from an action whenever it considers the issuance of a Certificate of Public Convenience and Necessity. NEPA also requires us[3] to discover and address concerns the public may have about proposals. This process is referred to as scoping. The main goal of the scoping process is to focus the analysis in the environmental document on the important environmental issues. By this notice, the Commission requests public comments on the scope of the issues to address in the environmental document. We will consider all filed comments during the preparation of the environmental document.

In the environmental document, we will discuss impacts that could occur as a result of the construction and operation of the planned project under these general headings:

- geology and soils;
- land use;
- water resources, fisheries, and wetlands;
- cultural resources;
- vegetation and wildlife;
- air quality and noise;
- socioeconomics;
- endangered and threatened species;
- public safety; and
- cumulative impacts.

We will also evaluate possible alternatives to the planned project or portions of the project, and make recommendations on how to lessen or avoid impacts on the various resource areas.

Although no formal application has been filed, we have already initiated our NEPA review under the Commission's pre-filing process. The purpose of the pre-filing process is to encourage early involvement of interested stakeholders and to identify and resolve issues before the FERC receives an application. As part of our pre-filing review, we have begun to contact some federal and state agencies to discuss their involvement in the scoping process and the preparation of the environmental document.

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[3] "We," "us," and "our" refer to the environmental staff of the Commission's Office of Energy Projects.

The environmental document will present our independent analysis of the issues. The environmental document will be available in the public record through eLibrary. Depending on the comments received during the scoping process, we may also publish and distribute the environmental document to the public for an allotted comment period. If the document is published and distributed to the public, we will consider all timely comments on the environmental document before we make our recommendations to the Commission. To ensure we have the opportunity to consider and address your comments, please carefully follow the instructions in the Public Participation section, beginning on page 2.

With this notice, we are asking agencies with jurisdiction by law and/or special expertise with respect to the environmental issues related to this project to formally cooperate with us in the preparation of the environmental document.[4] Agencies that would like to request cooperating agency status should follow the instructions for filing comments provided under the Public Participation section of this notice.

Consultations Under Section 106 of the National Historic Preservation Act

In accordance with the Advisory Council on Historic Preservation's implementing regulations for Section 106 of the National Historic Preservation Act, we are using this notice to initiate consultation with the applicable State Historic Preservation Office(s), and to solicit their views and those of other government agencies, interested Indian tribes, and the public on the project's potential effects on historic properties.[5] We will define the project-specific Area of Potential Effects (APE) in consultation with the SHPO(s) as the project develops. On natural gas facility projects, the APE at a minimum encompasses all areas subject to ground disturbance (examples include construction staging areas, access roads, and the footprint of the planned liquefaction facility). Our environmental document for this project will document our findings on the impacts on historic properties and summarize the status of consultations under Section 106.

Environmental Mailing List

The environmental mailing list includes federal, state, and local government representatives and agencies; elected officials; environmental and public interest groups; Native American Tribes; other interested parties; and local libraries and newspapers.

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[4] The Council on Environmental Quality regulations addressing cooperating agency responsibilities are at Title 40, Code of Federal Regulations, Part 1501.6.

[5] The Advisory Council on Historic Preservation regulations are at Title 36, Code of Federal Regulations, Part 800. Those regulations define historic properties as any prehistoric or historic district, site, building, structure, or object included in or eligible for inclusion in the National Register of Historic Places.

This list also includes all affected landowners (as defined in the Commission's regulations) who are potential right-of-way grantors, whose property may be used temporarily for project purposes, or who own homes within certain distances of aboveground facilities, and anyone who submits comments on the project. We will update the environmental mailing list as the analysis proceeds to ensure that we send the information related to this environmental review to all individuals, organizations, and government entities interested in and/or potentially affected by the planned project.

If we publish and distribute the environmental document, copies of it will be sent to the environmental mailing list for public review and comment. **If you would prefer to receive a paper copy of the document instead of the CD version or would like to remove your name from the mailing list, please return the attached Information Request (Appendix 3).**

Becoming an Intervenor

Once NGLNG files its application with the Commission, you may want to become an "intervenor" which is an official party to the Commission's proceeding. Intervenors play a more formal role in the process and are able to file briefs, appear at hearings, and be heard by the courts if they choose to appeal the Commission's final ruling. An intervenor formally participates in the proceeding by filing a request to intervene. Motions to intervene are more fully described at http://www.ferc.gov/resources/guides/how-to/intervene.asp. Instructions for becoming an intervenor are in the "Document-less Intervention Guide" under the "e-filing" link on the Commission's website. Please note that the Commission will not accept requests for intervenor status at this time. You must wait until the Commission receives a formal application for the project.

Additional Information

Additional information about the project is available from the Commission's Office of External Affairs, at **(866) 208-FERC,** or on the FERC website (www.ferc.gov) using the eLibrary link. Click on the eLibrary link, click on "General Search" and enter the docket number, excluding the last three digits in the Docket Number field (i.e., PF15-28). Be sure you have selected an appropriate date range. For assistance, please contact FERC Online Support at FercOnlineSupport@ferc.gov or toll free at (866) 208-3676, or for TTY, contact (202) 502-8659. The eLibrary link also provides access to the texts of formal documents issued by the Commission, such as orders, notices, and rulemakings.

In addition, the Commission offers a free service called eSubscription which allows you to keep track of all formal issuances and submittals in specific dockets. This can reduce the amount of time you spend researching proceedings by automatically

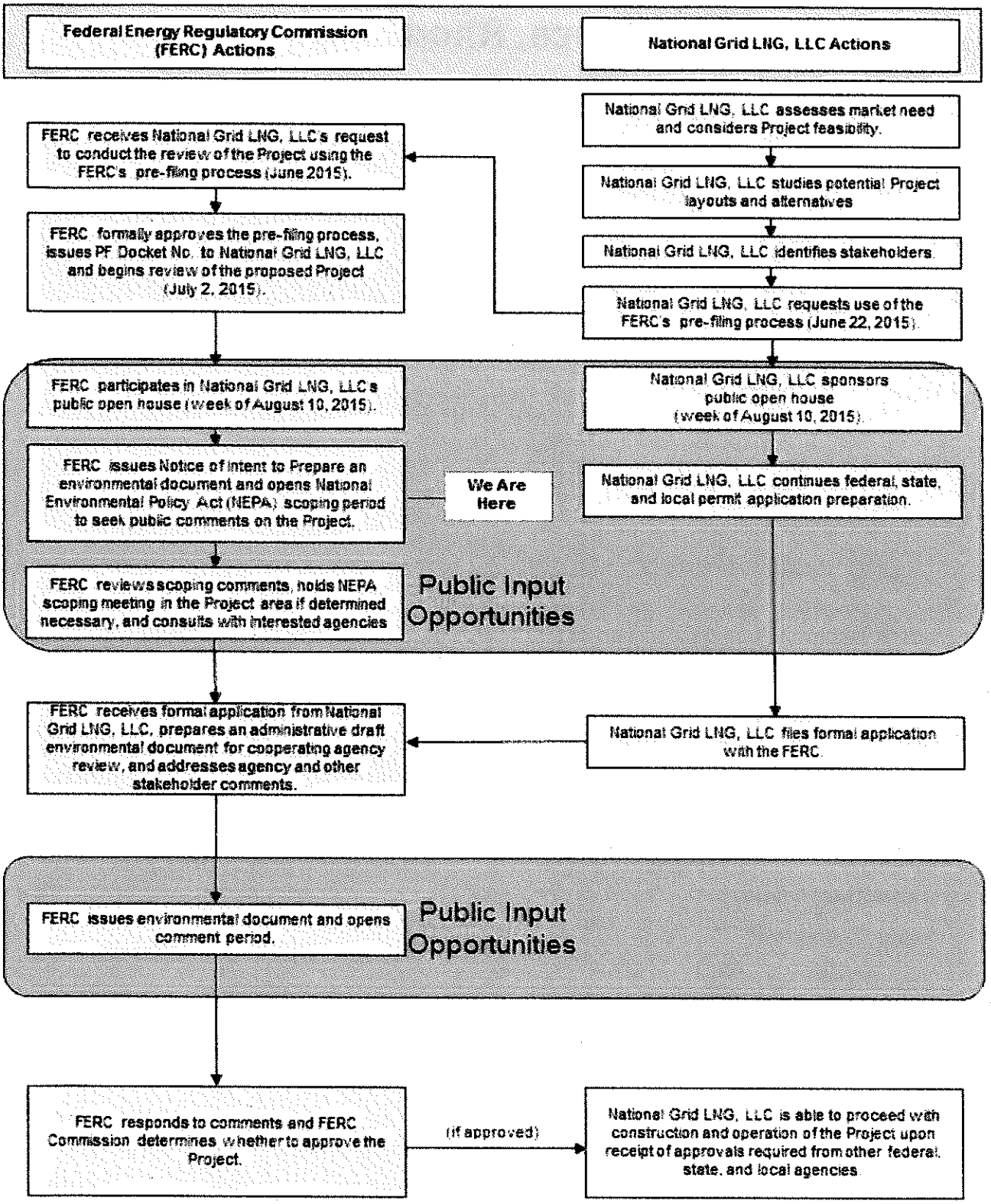
providing you with notification of these filings, document summaries, and direct links to the documents. Go to www.ferc.gov/docs-filing/esubscription.asp.

Finally, public meetings or site visits will be posted on the Commission's calendar located at www.ferc.gov/EventCalendar/EventsList.aspx along with other related information.

Nathaniel J. Davis, Sr.,
Deputy Secretary.

Appendix 1

Fields Point Liquefaction Project (PF15-28-000)
Federal Energy Regulatory Commission Review Process

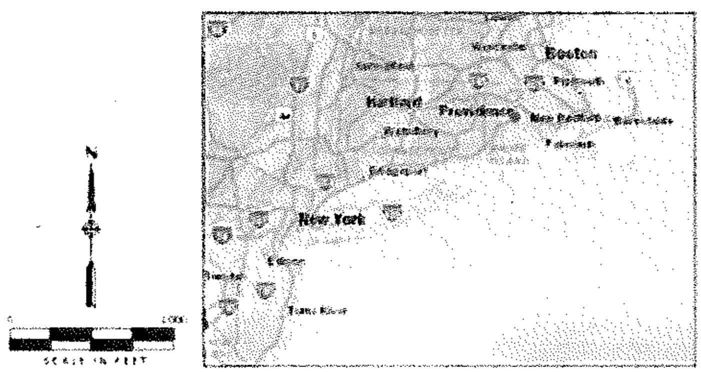


Appendix 2

Fields Point Liquefaction Project
Providence, Rhode Island

Legend

- Proposed Project Boundary
- Proposed Laydown Area
- Proposed Construction Access



Docket No. PF15-28-000

INFORMATION REQUEST

Fields Point Liquefaction Project

Providence, Rhode Island

Name_____

Agency_____

Address_____

City_____ **State**_____ **Zip Code**_____

A CD of the NEPA document will be sent to the address noted above, unless you check one of the two boxes below.

☐ **Please send me a paper copy of the published NEPA document**

☐ **Please remove my name from the mailing list**

FROM_____

_____

_____

_____

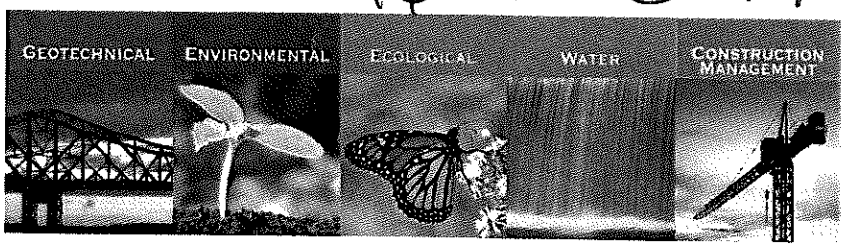
ATTN: OEP - Gas 4, PJ - 11.4
Federal Energy Regulatory Commission
888 First Street NE
Washington, DC 20426

PF15-28-000 Fields Point Liquefaction Project

Staple or Tape Here

2016 10 099

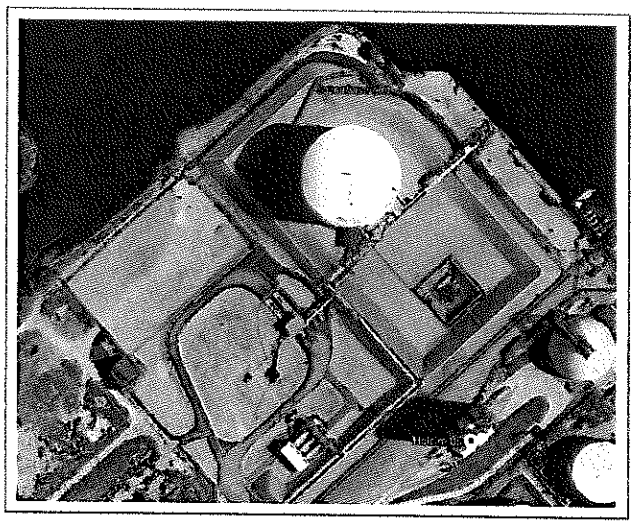
Proactive by Design



Coastal Resources Management Council

CZMA - Federal Consistency Review
Liquefaction Facility
National Grid LNG LLC
121 Terminal Road
Providence, Rhode Island

October 2016
File No. 03.0033554.60



PREPARED FOR:
National Grid LNG LLC
Providence, Rhode Island

GZA GeoEnvironmental, Inc.
530 Broadway | Providence, RI 02909
401-421-41405848

26 Offices Nationwide
www.gza.com

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COASTAL RESOURCES MANAGEMENT COUNCIL

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530 Broadway
Providence, RI 02909
T: 401.421.4140
F: 401.751.8613
www.gza.com

October 27, 2016
File No. 03.033554.60

Mr. Grover J. Fugate
Executive Director
Coastal Resources Management Council
Stedman Government Center – Suite 3
4808 Tower Hill Road
Wakefield, Rhode Island 02879

Re: Application for Liquefaction Facility
Assessor's Plat 56 Lots 316, 5 and Plat 101 Lot 1
121 Terminal Road
Providence, Rhode Island

Dear Mr. Fugate:

On behalf of our Client, National Grid LNG LLC ("NGLNG"), this application for federal consistency review is being submitted by GZA GeoEnvironmental, Inc. (GZA), pursuant to the federal consistency requirements outlined in Section 307 of the Coastal Zone Management Act (CZMA). Specifically, NGLNG is seeking Federal Energy Regulatory Commission ("FERC") approval for the construction of a natural gas liquefaction facility adjacent to its existing liquefied natural gas (LNG) tank along the Providence River. The CZMA and the applicable federal consistency regulations, specifically, 15 CFR § 930 Subpart D, require that construction of this proposed facility be consistent with Rhode Island's federally approved coastal zone management program. As the entity with control over the site, NGLNG must submit a consistency certification to Rhode Island's coastal zone management agency, the Coastal Resource Management Council (CRMC), certifying that the proposed activity will be consistent with Rhode Island's federally approved Coastal Resources Management Program (RICRMP), which CRMC implements. Furthermore, we are concurrently filing a copy of this Consistency Certification with the FERC in accordance with 15 CFR § 930.57.

As described in CRMC's *Federal Consistency Manual*, Rhode Island's coastal zone boundary is a three-tiered system that is dependent on the type and location of the proposed activity. In this case, the proposed liquefaction facility falls within all three tiers. It is:

- within 200 feet inland of a coastal feature (Tier 1),
- within one of Rhode Island's 21 coastal communities (Tier 2), and
- an energy related (generation, transfer, processing, or storage) activity (Tier 3).

The federal consistency review process will follow the requirements of 15 CFR Part 930, Subpart D for activities requiring a federal license or permit. Because the proposed liquefaction facility will require a FERC approval, a copy of the CZMA federal consistency certification with all supporting

information provided to FERC is being filed with the CRMC. Consistent with CRMC's *Federal Consistency Manual* and 15 CFR Part 930.58, the narrative accompanying this cover letter will include:

- A detailed description of the site, nature, and extent of the proposed liquefaction facility, its effects on any coastal use or resource, and the necessary data and information to support certification including maps, diagrams, and technical material;
- An assessment relating to potential coastal zone effects of the proposed project and its associated facilities to the enforceable policies of the RI Coastal Resources Management Plan (RICRMP); and
- An analysis indicating that the proposed liquefaction facility and associated activities are consistent with the RICRMP.

In applying for federal approval from FERC for this activity, pursuant to Section 7 of the Natural Gas Act (15 USC § 717f), NGLNG will not be required to obtain state and local permits such as compliance under local zoning ordinances, and certain environmental permits. However, NGLNG is required to obtain authorization for this activity under two other federal programs: The National Pollutant Discharge Elimination System (NPDES) and Section 401 of the Clean Water Act. RIDEM is the federally delegated authority to administer these programs in Rhode Island, which are commonly referred to as the Rhode Island Pollutant Discharge Elimination System (RIPDES) program and the Water Quality Certification (WQC) program, respectively. Applications for RIPDES and WQC authorization were filed directly with RIDEM on September 14, 2016 (cover letter of that submittal is attached). Additionally, because the liquefaction facility is anticipated to include a small emergency generator, authorization under the Clean Air Act will be needed, which is another federal program delegated to Rhode Island. This will be accomplished by submitting an application to RIDEM's Office of Air Resources under Air Pollution Control Regulation No. 43 (General Permits for Smaller-Scale Electric Generator Facilities).

We trust that the following materials will satisfy the necessary data and information required under 15 CFR § 930.58 and sufficiently detail the proposed activity and its compliance with the enforceable policies of the Coastal Resources Management Program. If you require any additional information, please do not hesitate to contact Igor Runge at (401) 427-2710 or igor.runge@gza.com.

Very truly yours,

GZA GEOENVIRONMENTAL, INC.

Sara Haupt
Project Engineer

Igor Runge, Ph.D., P.H.
Consultant/Reviewer

Margaret S. Kilpatrick P.E.
Associate Principal

Attachments: Narrative and Supporting Documentation
Cc: William Howard, National Grid

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1.0 INTRODUCTION

National Grid LNG LLC ("NGLNG") proposes to construct a natural gas liquefaction facility at its liquefied natural gas (LNG) facility (the "Project"). The construction activities associated with this Project will take place on a portion of the approximately 42-acre property owned by The Narragansett Electric Company d/b/a National Grid ("TNEC"), and leased to NGLNG under a long term lease henceforth referred to as the "Site".[1]

This narrative and supporting information is intended to satisfy the three broad requirements under 15 CFR Part 930, Subpart D:

a) The proposed activity (liquefaction facility) complies with the enforceable policies of Rhode Island's approved Coastal Resource Management Program ("CRMP") and will be conducted in a manner consistent with such program. (reference 15 CFR § 930.57(b))

b) Materials supporting compliance with the CRMP are in subsequent sections of this narrative.

c) A copy of the application for Federal Energy Regulatory Commission ("FERC") approval is found at https://www.ferc.gov/docs-filing/elibrary.asp under docket No. CP16-121-000.

A comprehensive set of figures is attached with this Narrative.

1.1 SITE DESCRIPTION

The Site is located at 121 Terminal Road and is identified in the City of Providence Tax Assessor's Office as Assessors Plat (A.P.) 56, Lots 5, 316, and 317, and as A.P. 101, Lot 1. A Site Locus is provided on Figure 1 of the attached plan set. The Site is bounded to the west by Allens Avenue, to the east by the Providence River, to the south by Terminal Road, and a cove area of the Providence River to the north. This section of the Providence River is listed as Type 6 Industrial Waterfront and Commercial Navigation Channel. The Providence River is currently listed by the Rhode Island Department of Environmental Management ("RIDEM") Office of Water Resources on the State of Rhode Island 2015 303(d) List of Impaired Waters. The Providence River is impaired for fecal coliform, total nitrogen, and dissolved oxygen. The water quality classification of the Providence River adjacent to the Site is SB1{a}. SB1 waters are saline water bodies that are designated for primary and secondary contact recreational activities and fish and wildlife habitat. The Providence River has a partial use designation {a} due to combined sewer overflows that are directed to the river. According to the FEMA Flood Insurance Rate Map for the area (44007C0317J), portions of the Site are mapped as Zone AE flood zones with a base flood elevation ("BFE") of 12 feet. The flood zones are depicted on Figure 2 Existing Conditions Plan.

The Site is listed with the RIDEM Office of Waste Management due to contaminant concentrations present in soil and groundwater that represent Method 1 exceedances (as defined in the Remediation Regulations) as a result of historical operations/activities. The Site is listed as RIDEM Site Remediation File No. SR-28-1152 (formerly Case No. 98-004).

[1] NGLNG has control of the site pursuant to a long term lease with TNEC dated March 31, 1999, as amended, and is responsible for complying with all applicable laws, rules, regulations and orders of governmental authorities having jurisdiction over NGLNG and the use of the leased premises, including without limitation securing and maintaining the necessary and applicable state and local permits to permit the installation and operation of LNG facilities and equipment upon the leased premises.

NGLNG operates the existing LNG facility and TNEC operates two natural gas regulating facilities adjacent to the Site. Currently, LNG is brought onsite by tanker trucks and is loaded into the LNG tank during the non-heating season for storage. Filling the tank requires approximately 2,540 truck deliveries. The LNG brought to the Site is mainly supplied by the Everett Terminal LNG facility in Massachusetts. The LNG stored at the facility is utilized during winter months when the demand for natural gas (for heating purposes) is highest. During peak demand, the LNG is pumped from the LNG tank and is warmed to a gaseous state for injection into the local distribution system through existing pipelines. The LNG tank is located within a diked area of the Site. The diked area drains any residual rain water into a sump pit located within the diked area. Additionally, a 200 pounds per square inch gauge pressure ("psig") gas line enters the Site from East Providence under the Providence River at the river crossing and ends at the 642 Allens Avenue regulating station. The existing gas line runs along the Providence River and cove area on the northern perimeter of the Site. The LNG facility is monitored 24-hours a day 7 days a week for security and safety purposes. The proposed liquefaction facility will allow NGLNG to fill the LNG tank by pipeline in lieu of truck transport by adding capability to liquefy the natural gas from the gas line.

The existing LNG facility is equipped with a revetment wall along the northern perimeter of the Site. This revetment wall will not be impacted as a result of constructing the liquefaction facility. The existing revetment wall is in compliance with Section 300.7 (Construction of Shoreline Protection Facilities) of the Coastal Resources Management Program.

1.2 SITE HISTORY

From 1910 until 1954, a Manufactured Gas Plant ("MGP") occupied the Site. Other occupants included B.P. Clapp in 1910 (ammonia works, including the recycling and sale of ammonia by-products), and in 1918, the United States Government operated a toluene facility at the Site. Portions of the Site included the Sassafras Point Rifle Range, which was a small arms range that operated during the late 1800s. A LNG facility has occupied the eastern/southeastern portion of the Site since 1972, and Holcim (formerly St. Lawrence Cement Company) has occupied the southeastern portion of the Site since 1961. TNEC's Compressed Natural Gas ("CNG") Fueling Area has occupied the southwestern portion of the Site since at least 1995. TNEC's Natural Gas Regulation Facility occupies the remainder of the Site.

The former washer and tar house (also known as the former propane house, refer to Figure 2) is located to the southwest of the Project area. This building was utilized for purification processes during the MGP era of the plant and for propane vaporizing. The former propane house was renovated in 1978 and remains on-Site but is not currently being used.

The former engine/power house, former boiler house, former exhauster house, former storage/battery room, former water gas generator house, and the former coal bin were demolished at some point between 1972 and 1981, during the construction of the present-day LNG tank. It is presumed that foundations associated with these former structures are still present below grade and would likely be encountered during construction activities in this area of the Site.

2.0 PROJECT DESCRIPTION

The proposed liquefaction facility will tie into the existing gas line located adjacent to the Providence River on the northern border of the Site. LNG is natural gas cooled to a temperature of -260 degrees Fahrenheit, turning it into liquid form. This is achieved through a process called liquefaction. Converting natural gas to LNG reduces its volume, making it more convenient to store and transport. There are no harmful chemicals used in the liquefaction process. The only substance

involved is nitrogen, a safe element that makes up approximately 80 percent of the air we breathe. The LNG will then be stored in the existing LNG tank with a connection to the existing tank fill lines associated with the existing truck unloading station. Currently the LNG tank is filled by tanker trucks through this tank fill line. Constructing the liquefaction facility will reduce the need to truck LNG to the facility for storage. Adding the liquefaction facility will improve the stability of the LNG supply to customers during high demand winter months. LNG storage provides needed capacity in gas supply during times of peak use from heating loads of residential and commercial customers. The demand for natural gas worldwide has increased, which has led to more volatility in LNG prices. Adding liquefaction equipment to the existing LNG facility will help to stabilize these prices and costs for National Grid's customers in the New England area.

The liquefaction facility will result in the creation of additional impervious area at the Site. The existing impervious areas are shown on Figure 3 of the attached plan set. The runoff generated from the new impervious areas will be treated in accordance with the *Rhode Island Stormwater Design and Installation Standards Manual* (RISDISM). The layout of the stormwater collection and treatment system is depicted on Figure 10, and the details for the treatment system are depicted on Figure 11 of the attached plan set.

The proposed liquefaction facility area will be raised approximately 9 to 11-feet above existing grade. Raising the area will help to protect the liquefaction facility from damage during storm events. The northern slope of the raised area will be protected from wave action using rip rap slope armoring. The rip rap for the slope armoring has been sized to withstand the 100-year storm event and anticipated 25-year sea level rise (design life of the facility is 25 years). Figures 8 and 9 depict the profile and details of the proposed slope armoring.

The construction of the liquefaction facility will require the use of a temporary laydown area. The temporary laydown area is depicted on Figure 4 of the attached plan set.

2.1 CONSTRUCTION SEQUENCE AND SCHEDULE

Mobilization is expected to begin in early 2017. Mobilization will consist of the following:

- Install sediment and erosion controls around the perimeter of the Site and existing catch basins.
- Install crushed stone over the temporary laydown area.
- Construct the temporary office building, break room building, safety building, and warehouse.

Construction activities are expected to begin in early 2017 following FERC approvals, and will consist of the following:

- Stripping of the existing crushed stone and preparation of the liquefaction area for construction is expected to be complete by approximately March 2017.
- Relocation of the fire suppression water line is expected to be complete by approximately May of 2017.
- Pile driving for the liquefaction area is expected to be complete by approximately September 2017.
- Raising the grade of the liquefaction area will begin in approximately February 2017, and be complete by approximately May 2017.
- The revetment wall will be completed by approximately June 2017.
- Installation of the stormwater collection system will begin in approximately April 2017, and be complete by approximately November 2017.
- The sand filter and sediment forebay treatment system will be completed by approximately August 2018.

- The cast in place concrete foundations for the liquefaction facility equipment are expected to be complete by approximately March 2018.
- The equipment for the liquefaction facility will be installed by approximately March 2018.
- Final Site stabilization including paving access roads and placing crushed stone and gravel at the Site will be complete by approximately November 2018.

Demobilization will begin in approximately December 2018, and will consist of the following:

- Removing the temporary office building, break room building, safety building, and warehouse.
- Removing the erosion and sediment controls.

3.0 COASTAL RESOURCES MANAGEMENT PLAN – ENFORCEABLE POLICIES

This section addresses the requirements of the CRMP.

3.1 SECTION 140 SETBACKS

The proposed liquefaction facility will require construction activities within 50 feet of a coastal feature. Therefore, this application also includes a variance request. Portions of the proposed slope armoring lie within 50 feet of the shoreline, and the outfall for the proposed stormwater system lies within 50 feet of the shoreline.

3.1.1 SECTION 120 VARIANCES

(1) The proposed alteration conforms with applicable goals and policies of the Coastal Resources Management Program.

The slope armoring and stormwater outfall conform to the goals and policies of the CRMP. The slope armoring has been designed to protect the liquefaction facility during storm events and the design has incorporated the anticipated sea level rise over the design life of the liquefaction facility (25 years). The stormwater outfall has been designed in accordance with the *Rhode Island Stormwater Design and Installation Standards Manual.*

(2) The Proposed Alteration will not result in significant adverse environmental impacts or use conflicts, including but not limited to, taking into account cumulative impacts.

The proposed slope armoring will help prevent soil erosion and potential discharge of sediment to the Providence River from the liquefaction facility area. The stormwater outfall will be equipped with rip rap to prevent scouring and soil erosion. The stormwater treatment system will minimize pollutant loading to the Providence River by treating runoff generated at the Site in accordance with the *Rhode Island Stormwater Design and Installation Standards Manual.*

(3) Due to the conditions at the Site, the applicable standard(s) cannot be met.

CRMP requires a minimum distance of 50 feet between a shoreline feature and construction activities (the construction setback). The slope armoring and stormwater outfall must be constructed within the 50-foot

construction setback. The location of the liquefaction facility was selected due to access to the existing 200 psig gas line and available open space not used by the NGLNG for other operations. No other location on the parcel is suitable. The proposed slope armoring is necessary in order to protect the proposed liquefaction facility during flooding and storm events. The slope of the liquefaction facility area must be 1.5:1 in keeping with engineering principles to avoid filling in areas that would increase the loading on the existing buried gas line, and to minimize the footprint of proposed fill and minimize work within the CRMP 50-foot setback area. The stormwater outfall must be located within 50-feet of the shoreline in order for the stormwater conveyance to function properly. The depth of the treatment system is dictated by the level of the groundwater in the area and, in turn, this governs the placement (and slope) of the outfall pipe. In order for the treatment system to function properly, stormwater runoff must be able to pass through the treatment process without eroding or overflowing the treatment system. Moving the stormwater outfall to a different location would impact the slope of the drainage lines and reduce the effectiveness of the stormwater treatment system.

(4) The modification requested by the applicant is the minimum variance to the applicable standard(s) necessary to allow a reasonable alteration or use of the Site.

The installation of slope armoring and the stormwater outfall within 50 feet of the coastal feature requested are minimal variances necessary for the liquefaction facility to operate in accordance with policies of the CRMP and the RISDISM. Placement of the liquefaction facility further inland would require additional piping to access the existing gas line and would require the reconstruction/relocation of existing infrastructure at the LNG facility such as the existing access road to the truck scale. In order to relocate the stormwater outfall to be outside of the 50-foot setback, the outfall invert would have to be raised. This would, in turn, require raising the elevation of the entire stormwater treatment system or risk compromising the effectiveness of the treatment system. Considerable additional filling, grading, and other land disturbance would be required. Locating these structures farther inland, albeit outside of the setback will severely impair the project design and mandate extensive site disturbance activities.

(5) The requested variance to the applicable standard(s) is not due to any prior action of the applicant or the applicant's predecessor in title.

This alteration is not the result of a previous action by NGLNG, TNEC, or its predecessor in title at the Site.

(6) Due to the conditions of the Site in question, the standards will cause the applicant an undue hardship.

The Site does not have any other open space suitable for the placement of the liquefaction facility. The location of the liquefaction facility limits the length of LNG piping needed to reach the storage tank. Relocating the stormwater outfall farther inland would also require additional earthwork/land disturbance and would reduce the efficiency of the stormwater conveyance system.

3.2 SECTION 145 CLIMATE CHANGE AND SEA LEVEL RISE

NGLNG's anticipated design life for the liquefaction facility is 25 years. Therefore, the slope armoring supporting the liquefaction facility has incorporated anticipated sea level rise over a 25-year period as well as the wave action associated with a 100-year design storm. The most recent updates to Coastal Resources Management Program's Section 145 –

Climate Change and Sea Level Rise (effective February 22, 2016) notes that the Council relies upon the most recent NOAA sea level rise data to address planning horizons for infrastructure. As of 2015, the range in sea level rise change is projected by NOAA to be a maximum of approximately 1.0 foot in 2035, 2.0 feet in 2050, and 7.0 feet in 2100. For the design life of this facility, the anticipated sea level rise for the area over the next 25 years is estimated at 1.5 feet. Details regarding the slope armoring design are included in Appendix B.

3.3 SECTION 200.6 TYPE 6 INDUSTRIAL WATERFRONTS AND COMMERCIAL NAVIGATION CHANNELS

The proposed liquefaction facility is consistent with existing industrial activities and will continue to promote the use of the Providence Harbor as an industrial waterfront and will not impede commercial activity within the port related to shipping. This Project will not interfere with or detract from priority uses for port facilities. The liquefaction facility will improve the efficiency of the LNG tank operation by utilizing the existing natural gas line to provide a continuous supply of liquefied natural gas for the tank and by considerably reducing the incoming truck traffic presently used to fill the LNG tank. The facility will not be serviced by marine vessels. National Grid's existing storage facility at this waterfront has operated without incident for more than 40 years. Consistent with the policies of the CRMC, the liquefaction facility will modernize the commercial activity within the Providence Harbor and will incorporate advanced and modern safety designs.

3.4 SECTION 210.6 MANMADE SHORELINES

NGLNG will assure that the existing shoreline protection structures as well as the new shoreline protection/armoring structures associated with the proposed Project are properly maintained. The stormwater outfall and shoreline along the northern perimeter of the Site will be inspected on a monthly basis after construction. When in operation, personnel will monitor the liquefaction facility, which will provide additional opportunities to observe the adjacent shoreline and conduct maintenance if needed. The slope protection/armoring has been designed to withstand the 100-year storm event. With the exception of the placement of rip rap to prevent erosion at the drainage outfall, there are no modifications proposed below mean high water. Therefore, this Project is not anticipated to alter the current erosion-accretion processes occurring within the Project area.

3.5 SECTION 300.1 CATEGORY B REQUIREMENTS

Many Rhode Islanders rely on natural gas for heating and cooking purposes. Natural gas is much cleaner burning than oil or coal and produces no ash particles.

The proposed liquefaction facility capacity has been fully subscribed by customers and enhances the use of the LNG facility and promotes economic growth. The proposed Project will require review and approval by the FERC, and will adhere to all applicable federal building codes, safety codes, and fire codes. The proposed Project does not include any filling or dredging within tidal waters, and will not affect water circulation, flushing, erosion, or deposition processes along the shoreline. The entire project Site is currently developed, and the addition of the liquefaction facility will not impact plant and animal life in the area. The LNG facility is a secure facility, and there is no public access to the shoreline at the Site. The LNG facility is secured with primary and secondary fencing around the entire perimeter of the facility. Security guards perform regular perimeter inspections, and the facility is staffed and monitored 24-hours per day. Stormwater runoff emanating from the new impervious areas will be treated in accordance with the *Rhode Island Stormwater Design and Installation Standards Manual*. Required applicable federal permits and authorizations will be obtained prior to

construction of the new stormwater treatment system. Details regarding the stormwater management system are included in the attached Stormwater Management Plan (SWMP).

3.6 SECTION 300.2 FILLING, REMOVING, OR GRADING OF SHORELINE FEATURES

The Project will include filling in an upland section of the Site for the proposed liquefaction facility. Under the current conditions the area for the proposed liquefaction facility is located within a FEMA AE flood zone – areas subject to inundation by the 100-year storm event. The area will be raised approximately 9-11 feet above the existing grade. In order to raise the area for the liquefaction facility, the northern slope of the project area will be equipped with rip rap slope armoring. The equipment in the Project area will also be supported by a series of piles, to provide additional stability under load and therefore an additional factor of safety for the equipment. The base of the rip rap slope armoring begins at the access road along the cove area. Due to an existing underground gas line located underneath the access road, there will be no filling on the northern shoreline of the Site. Additional details of the slope armoring, specifically addressing compliance with CRMC policy 300.7 are discussed in Section 3.9.

A Site-specific Soil Erosion and Sediment Control Plan (SESC) will be prepared and implemented in accordance with the most recent edition of the *Rhode Island Soil Erosion and Sediment Control Handbook*. Erosion and sediment controls consisting of fiber rolls or Filtrexx Soxxs and crushed stone will be installed prior to the start of construction and will be maintained until final site stabilization has been achieved. The laydown area will be covered with crushed stone to prevent migration of sediment. Work areas that involve land disturbance or material management (i.e. the liquefaction work area) will be equipped with Filtrexx Soxx to prevent migration of sediment. Soil stockpiles will be covered with polyethylene/plastic sheeting to eliminate the migration of sediments during rainfall events. Entrance pads will be employed to reduce off-site tracking of sediment (anti-tracking pads). The liquefaction facility will be stabilized with crushed stone, rip rap, and asphalt pavement as final surface stabilization treatments.

All excavated material will be managed in accordance with the Site specific SESC and the Soil Management Plan (SMP) that was developed and submitted to RIDEM in September 2012 for all earthwork activities that occur at the Site. Any imported material will be tested and/or certified as clean prior to being brought on Site in accordance with the SMP. Import testing analysis includes sampling for Volatile Organic Compounds, Total Petroleum Hydrocarbons, Polynuclear Aromatic Hydrocarbons, arsenic, and lead. All excavated material will be disposed of in accordance with the Soil Management Plan. The Project does not propose any fill within tidal waters.

3.7 SECTION 300.3 RESIDENTIAL, COMMERCIAL, INDUSTRIAL AND RECREATIONAL STRUCTURES

The area for the liquefaction facility will be raised between 9-11 feet above existing grade. The proposed slope armoring has been designed to protect the fill material used to elevate the new liquefaction facility and protect it from potential storm surge damage. Raising the liquefaction facility to elevation 21-feet (NAVD88) will also help protect the facility throughout its 25-year design life from the expected sea level rise. Public access will not be impacted since the LNG facility is currently a secure facility that does not allow public access due to safety concerns. The liquefaction facility will be additionally secured with two rows of fencing, intrusion detection, and other measures. There are no industrial or commercial activities proposed within tidal waters. The liquefaction facility will be raised such that it is not located within a potential flood inundation area. The Project will adhere to the federal building requirements in accordance with FERC and the environmental and safety regulations promulgated by the U.S. Department of Transportation's Pipeline and Hazardous Materials Safety Administration.

3.8 SECTION 300.6 TREATMENT OF SEWAGE AND STORMWATER

The proposed Project does not involve any new sanitary sewage connections or onsite wastewater treatment. Stormwater runoff emanating from the new impervious surfaces will be managed in accordance with the RISDISM. The ground cover at the Site is approximately 47% impervious, and the proposed Project will disturb more than 10,000 square feet of existing impervious area. Therefore, the Project meets the definition of a redevelopment pursuant to Section 3.2.6 of the RISDISM. Accordingly, the Project will adhere to Standards 2, 3, and 7-11 of the RISDISM. The Project will obtain a Water Quality Certification issued by the RIDEM pursuant to Section 402 of the Clean Water Act. A copy of the Water Quality Certification request letter that was submitted to RIDEM on September 14, 2016 is attached as Appendix A.

3.8.1 EXISTING STORMWATER MANAGEMENT

Under existing conditions (with no stormwater treatment), precipitation falling on the proposed Project area infiltrates through the crushed stone without any treatment. Under the proposed Project, there will be better stormwater management and treatment to improve water quality from the Site. See discussion in Section 3.8.2 below.

3.8.2 PROPOSED STORMWATER MANAGEMENT

Under the proposed conditions, stormwater runoff emanating from the Project area will be collected by a series of catch basins and directed to a new stormwater treatment system consisting of a sediment forebay pretreatment system and a lined sand filter before it is discharged to the Providence River. The proposed treatment system has been sized to treat 100% of runoff generated by new impervious surfaces, and 50% of runoff generated by existing impervious surfaces that will remain impervious. The total water quality volume for the liquefaction facility is 4,880 cubic feet. The proposed treatment system will provide treatment for 6,121 cubic feet. Water quality volume calculations are included in Appendix C. The stormwater management system has been oversized to accommodate all of the runoff generated by the liquefaction facility and an additional 25% of runoff to further improve water quality from the Site. The sand filter has been designed in accordance with Section 5.5 Filtering Systems, of the RISDISM. The sediment forebay has been designed in accordance with Section 6.4 Sediment Forebay of the RISDISM. The stormwater treatment system for the proposed liquefaction facility complies with the standards in the RISDISM.

3.9 SECTION 300.8 ENERGY RELATED ACTIVITIES AND STRUCTURES

The proposed Project is required to adhere to federal building codes and fire codes. The entire Site is zoned by the City of Providence as W-3 Port/Maritime Industrial Waterfront District. The proposed liquefaction facility is consistent with the designated local zoning for the Site. Flood hazards in the area will be mitigated by elevating the liquefaction facility as described above and impacts of wave action will be mitigated by the proposed slope armoring. Incorporating anticipated sea level rise, the 100-year still water level flood elevation for the Site is 13.5-feet (NAVD88), and the anticipated wave height for the 100-year storm event is 2.9 feet.

3.10 CRMP 1978 ENERGY AMENDMENT

In accordance with Section 610.2 Siting of Energy Facilities of the 1978 Energy Amendments to the CRMP, the proposed liquefaction facility will support and maintain the public welfare and the state's economy. The construction of the liquefaction facility is not anticipated to impact future development at the Site or in the surrounding area. Considering the already built-up nature of the waterfront in the area, the liquefaction facility will not impact or detract from the existing scenic quality of the area – an industrial waterfront as defined in Section 200.6 of the CRMP. The proposed liquefaction facility does not conflict with the Providence Harbor Special Area Management Plan. The liquefaction facility will help to improve utilization of the shoreline within Providence Harbor. Constructing the liquefaction facility in an alternative location would require additional pipelines and land disturbance. The operation of the liquefaction facility is not anticipated to adversely impact water quality in the Providence River. The operation of the liquefaction facility will not result in the production of hazardous wastes at the facility. The construction and operation of the liquefaction facility will create in-state employment opportunities. As a fuel storage facility rather than a power generation facility, the addition of the liquefaction facility is not anticipated to result in significant air emissions once operational. The liquefaction facility will not result in any new petroleum transfer facilities, but rather will improve efficiency at the existing LNG facility by reducing the need to truck in LNG.

Although the liquefaction facility alone is not considered a liquefied gas storage facility, the existing LNG tank is considered a liquefied gas storage facility and therefore the project will comply with Section 640.2 Storage and Processing of Liquefied Gases in the CRMC 1978 Energy Amendments. In accordance with Section 640.2 the liquefaction facility will be equipped with dikes or berms capable of containing spills, automatic and continuous monitoring alarms/shutdown devices will be installed, an emergency generator will be installed for essential operating equipment, and a fire suppression system will be installed. The entire existing LNG facility is already equipped with safety and security measures including the secondary containment dike around the existing tank and 24-hour monitoring for potential leaks or equipment malfunctions.

3.11 SECTION 400 FEDERAL CONSISTENCY REVIEW

This Project requires approval from the FERC pursuant to Section 7 of the Natural Gas Act and therefore requires a Federal Consistency Review by the CRMC in accordance with 15 CFR § 930 Subpart D. Specific requirements are presented in Section 1 of this narrative.

Summary and Conclusions

- Construction activities associated with installation of the proposed liquefaction facility have the potential to directly impact the coastal zone. The majority of these potential impacts would be temporary and, without proper protection, would take the form of erosion of shoreline features and migration of sediment into waters of the state. However, these temporary impacts will be effectively mitigated by implementing a site-specific Soil Erosion and Sediment Control Plan during construction activities. This plan will follow all guidelines presented in the most recent edition of the *Rhode Island Soil Erosion and Sediment Control Handbook*. The best management practices proposed to be implemented will include perimeter fiber rolls, anti-tracking pads, and covering of temporary soil storage areas until the project site is fully stabilized.

- The construction and operation of the proposed liquefaction facility will not alter the use of the Providence River. This Project will not result in secondary (indirect) impacts to coastal use or coastal resources. The Site is currently

fully developed with little vegetation or wildlife. The addition of the liquefaction facility will not reduce or alter wildlife habitat. Operation of the liquefaction facility will improve how the existing LNG tank is filled during the low-demand summer months, as filling of the tank by truck will be virtually eliminated. The location of the proposed liquefaction facility was chosen to reduce impacts by minimizing the need for additional pipelines and land disturbance.

- The proposed Project has many benefits. Changing the way the existing LNG storage tank is filled from tanker trucks to onsite liquefaction using the existing gas pipeline will result in long-term benefits in reliability and pricing. Demand for LNG has increased around the world, creating volatility in pricing and supply. Unforeseen events can also place the reliability of imported LNG deliveries at risk. This Project will allow customers to avoid worldwide market price fluctuations related to the international LNG trade, providing more stable, predictable natural gas costs for customers in the years to come.

The proposed liquefaction facility complies with the enforceable policies of Rhode Island's approved Coastal Resources Management Program, as detailed above, and will be conducted in a manner consistent with such program.

FIGURES

APPENDIX A

WATER QUALITY CERTIFICATION LETTER

GZA
Proactive by Design

Geotechnical
Environmental
Ecological
Water
Construction Management

530 Broadway
Providence, RI 02909
T: 401.421.4140
F: 401.751.8613
www.gza.com

September 12, 2016
File No. 03.0033554.60

Mr. Neal Personeus
Office of Water Resources
Rhode Island Department of Environmental Management
235 Promenade Street
Providence, RI 02908

Re: Water Quality Certification and RIPDES Construction General Permit Application
Liquefaction Plant
Providence, Rhode Island

Dear Mr. Personeus:

On behalf of our Client, The Narragansett Electric Company, dba National Grid, this application is being submitted under the coordinated stormwater permitting process by GZA GeoEnvironmental, Inc. (GZA), pursuant to the *Water Quality Regulations* (amended December 2010), and the Rhode Island Pollutant Discharge Elimination System (RIPDES) Program.

The proposed project involves constructing a natural gas liquefaction plant at the existing Liquefied Natural Gas (LNG) facility in Providence, Rhode Island. The liquefaction plant will tie into the existing high pressure gas line that enters the Site from the east (Providence River). The liquefaction plant will be used to fill the existing LNG tank during low-demand summer months, so that there is a stable and sufficient supply of natural gas for heating during high-demand winter months. The project will result in the creation of more than 10,000 square feet of impervious area and will include a new storm water outfall into the Providence River. The new outfall will direct treated stormwater runoff from the Site onto an energy dissipation pad and into the River. This will trigger the need for a Water Quality Certification (WQC) from RIDEM. This project will also disturb more than 1-acre during construction, and will be defined as a Redevelopment Project under the *Rhode Island Stormwater Design and Installation Standards Manual* dated 2015 (RISDISM). Therefore, this project will also require a Construction General Permit (CGP) under the RIPDES program.

The stormwater management system for the proposed project has been designed in accordance with the RISDISM. A Stormwater Management Plan (SWMP) and Sediment and Erosion Control Plan (SESC) have been prepared for the project and are enclosed with this application. The plans provide an estimate of anticipated runoff volumes during various storm events, detail the design of the collection and treatment system (lined sand filter) and outlines the best management practices that will be used during construction activities to minimize migration of sediment to the waters of the State.

An Equal Opportunity Employer M/F/V/H

We trust that this application will satisfactorily address the requirements for the WQC and RIPDES CGP. If you have any questions or require any additional information regarding this application, please contact Igor Runge at igor.runge@gza.com or (401)427-2710.

Very truly yours,

GZA GEOENVIRONMENTAL, INC.

Sara Haupt, EIT
Project Engineer

Igor Runge, Ph.D., P.H.
Consultant/Reviewer

Margaret Kilpatrick, P.E.
Associate Principal

Attachments: Water Quality Certification Application Form
Application Fee $400.00
Stormwater Management Plan

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APPENDIX B

REVETMENT WALL DESIGN MEMO

Proactive by Design

GEOTECHNICAL
ENVIRONMENTAL
ECOLOGICAL
WATER
CONSTRUCTION MANAGEMENT

MEMORANDUM

To: William Howard (National Grid)

Cc: Igor Runge, Margaret Kilpatrick (GZA)

From: Matthew Page, P.E., Russell J. Morgan P.E. (GZA)

Date: April 18, 2016

File No.: 03.0033554.60
Re: Rip Rap Revetment Design – REV1
Proposed Liquefaction Facility
642 Allens Avenue
Providence, Rhode Island

GZA is pleased to provide you with this revised memorandum pertaining to the design of the riprap revetment for the proposed Liquefaction Facility located at 642 Allens Avenue in Providence, Rhode Island. The primary objectives of our work were to perform a preliminary assessment and design of the proposed riprap revetment slope, prepare documents for the Coastal Resources Management Council (CRMC) assent application package, and prepare a summary of our findings and recommendations presented herein.

BACKGROUND

A 166,000 square-foot Liquefaction Facility is proposed to be constructed along the northwest portion of the existing LNG facility. The project site area is bordered to the north by an existing riprap revetment and access roadway, to the east by the LNG tank containment dike, to the south by the LNG processing area, and to the east by 642 Allens Ave. The existing riprap revetment provides slope protection from storm water runoff and wave action from the Providence River.

It is GZA's understanding that the construction of the proposed Liquefaction Facility will require an increase in elevation between 9 and 11 feet across the project site area. A 1.5H:1V slope along the northern limits of the site is proposed to be constructed from existing grade (approximate elevation (El.) +10 feet) to meet final grade (approximate El. +21 feet). The new slope is within the limits of the CRMC 200-foot contiguous area. Additionally, the slope will be constructed within the FEMA 1% annual chance (100-year) still water level (SWL) and may be subjected to wave action during an event of this magnitude. As a result, the new slope will require riprap slope protection. Per the request of CRMC and National Grid, GZA developed a preliminary design of the revetment system. Refer to the attached drawings illustrating existing and proposed conditions.

Summary of Design Parameters

Based on correspondence with National Grid, the revetment is to be designed for the 1% annual chance (100-year) storm and a design life of 25 years. The 1% annual chance SWL for the site is El. +12 feet (NAVD88)[1].

A site specific wave study performed by VHB[2] resulted in a wave height of 2.9 feet with an associated wave period of 2.2 seconds for a 100-year storm. The sea level rise presented in the VHB report is considered outdated by CRMC and has been updated for this design. The range of sea level rise change is projected to be a maximum of approximately 1.0 foot in 2035, 2.0 feet in 2050 and 7.0 feet in 2100, based on CRMC "Red Book" Section 145[3]. This prediction results in an approximate sea level rise of 1.5 feet for the anticipated 25-year design life of the structure. For the purposes of design of the riprap revetment, it was assumed that the SWL was equal to the 1% annual chance SWL plus the 25-year sea level rise, or El. +13.5 feet, and the 1% annual chance significant wave height was equal to 2.9 feet.

The riprap revetment system was designed in accordance with the Coastal Engineering Manual (CEM)[4]. Wave run-up and overtopping were assessed for the proposed revetment (upper slope).

Summary of Findings and Recommendations

The following summarizes our findings and recommendations for construction of the proposed revetment (upper slope).

Proposed Revetment (Upper Slope)

Based on the design parameters stated above, the riprap revetment along the proposed fill area (upper slope) should have a minimum of a 3-foot thick armor layer, a 12-inch thick intermediate layer and a 6-inch thick bedding layer. The armor layer should have a minimum of 2 layers of stone and should be comprised of stones with an equivalent diameter for the 50-percent less than gradation (D_{50}) of 1.2 feet which corresponds to a weight (W_{50}) of 310 pounds (lbs), and an equivalent diameter for the 100-percent less than gradation (D_{100}) of 2 feet which corresponds to a weight (W_{100}) of 1240 lbs. The RIDOT riprap gradation "R-6" (Section M.10.03.2[5]) was selected as the primary armor layer based on the above design parameters and its availability. The intermediate layer should be comprised of stones that meet the gradation requirements for the RIDOT stone size "R-2". The bedding layer should be comprised of ¾-inch crushed stone wrapped in a geotextile that is a minimum of Mirafi 600X, or equivalent.

For a 25-year facility design life, and a 100-year storm event, wave overtopping of the structure was not indicated. Scouring of the upland area (above El. 19 feet) is not anticipated. However, scouring of the new access roadway along the northern portion of the Site will likely occur during a 100-year event due to wave run-up and overtopping. GZA recommends that the roadway is designed to prevent significant erosion or a contingency is made for repairing the roadway post-storm events.

Design Considerations

The design provided herein is preliminary and is for permitting purposes only. The revetment was evaluated for the purpose of providing erosion protection from wave action and flooding. Additional design (by others) should include an analysis of the slope stability of the proposed and existing slopes as a result of the addition of the riprap revetment and fill area. The presence of organic silt on the site may result in low factors of safety for slope stability. It is GZA's understanding that pre-design explorations (by others) are continuing to be performed to gain additional information and that the proposed structures may be supported on deep foundation systems. The use of the deep foundations systems may mitigate any slope stability issues; however, it should be analyzed as part of the future design to be conducted by others.

The proposed revetment (upper slope) was designed for the 100-year storm event. Should National Grid decide to design the site for the 500-year storm event it is anticipated that wave run-up and overtopping of the revetment structure will occur and will result in scour and erosion of the upland area. If the site is to be designed for the 500-year storm event, additional scour protection will be required.

It is anticipated that during a 100-year storm event, the existing revetment (lower slope) will not provide adequate protection. During a storm event it is likely that stones will be displaced and erosion and scour of the existing revetment will occur. The predicted erosion and scour will likely result in undermining of and damage to the existing roadway. Damage to the existing revetment; however, will likely not result in the undermining of the proposed revetment (upper slope). GZA recommends the following options for the existing revetment (lower slope):

1. National Grid may choose to supplement the existing revetment stone in order to provide adequate protection for a 100-year storm event. This would likely require leaving the existing stones in place to act as an intermediate riprap layer and installing an approximately 2.5 foot thick armor layer over the existing stones. The new stones for the armor layer should meet the minimum requirements for the RIDOT riprap gradation "R-6", in accordance with Section M.10.03.2[5].

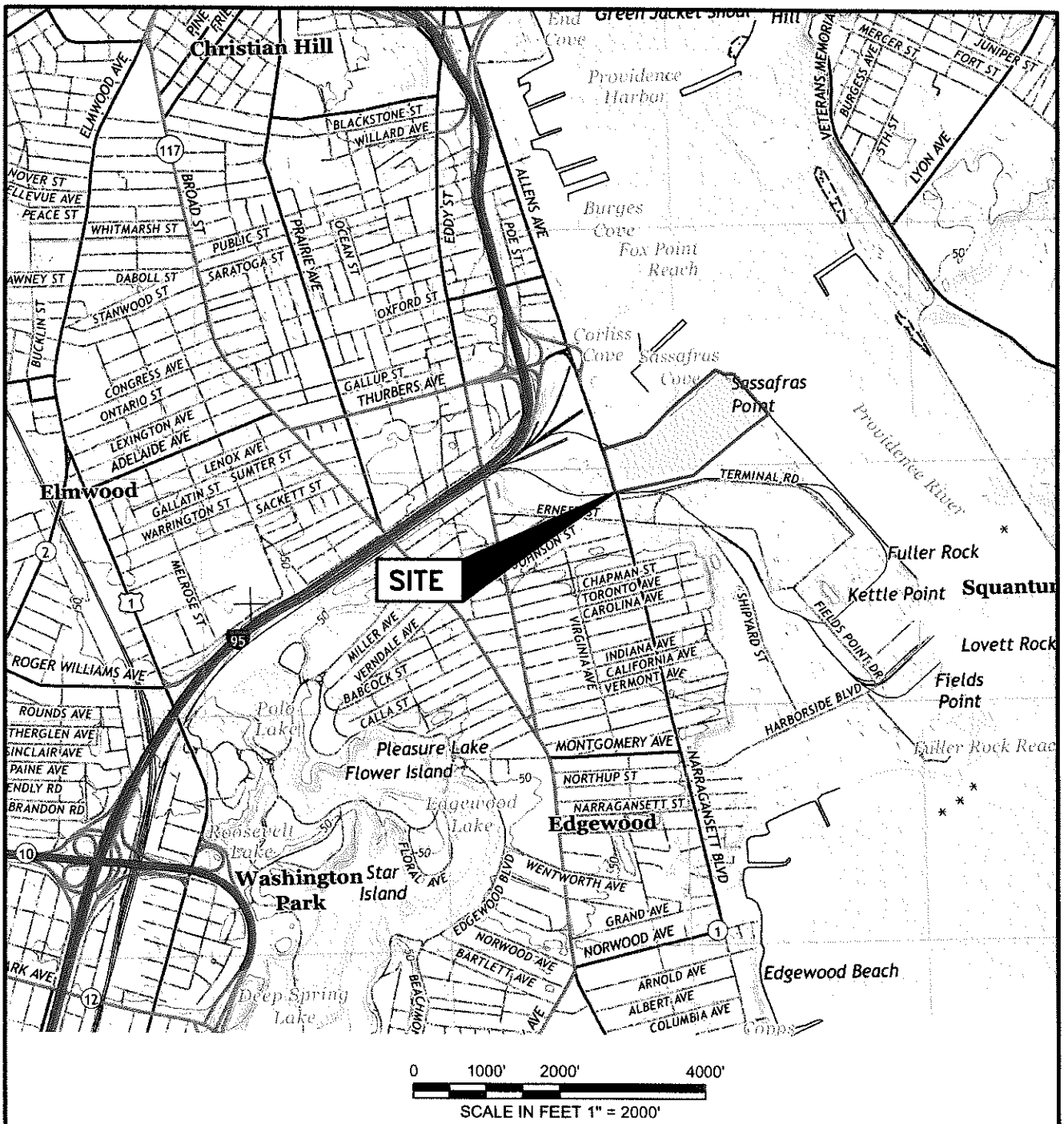
2. Alternatively, National Grid can choose to carry a contingency to repair the damage to the existing revetment and roadway post-storm events.

Based on recent discussions with National Grid, they have decided to repair damage to the existing revetment and roadway post-storm events. As a result, Figure 2 presents construction of the new revetment (upper slope) and does not reflect improvements to the lower slope.

We trust that this memo meets the current needs of the project at this time. If you have any questions, please call us at (401) 421-4140.

Attachments:	Figures:	Figure 1 – Locus Plan
		Figure 2 – Liquefaction Work Area – Proposed Revetment and Cross Sections
	Appendix A:	Limitations
	Appendix B:	References

FIGURES



RHODE ISLAND

QUADRANGLE LOCATION

SOURCE:

BASE MAP FROM THE FOLLOWING USGS QUADRANGLE MAP: PROVIDENCE, RHODE ISLAND (2015)

DIGITAL TOPOGRAPHIC MAPS PROVIDED BY USGSSTORE.GOV.

CONTOUR ELEVATIONS REFERENCE NAVD 88,
CONTOURS ARE SHOWN IN FEET AT 10' INTERVALS

N W E S

THE INFORMATION SHOWN ON THE DRAWING IS SOLELY FOR USE BY NATIONAL GRID OR THE NATIONAL GRID'S DESIGNATED REPRESENTATIVE FOR THE SPECIFIC PROJECT AND LOCATION IDENTIFIED ON THE DRAWING. THE DRAWING SHALL NOT BE TRANSFERRED, REUSED, COPIED, OR ALTERED IN ANY MANNER FOR USE AT ANY OTHER LOCATION OR FOR ANY OTHER PURPOSE WITHOUT THE PRIOR WRITTEN CONSENT OF GZA AND NATIONAL GRID. ANY TRANSFER, REUSE, OR MODIFICATION TO THE DRAWING BY OTHERS, WITHOUT THE PRIOR WRITTEN EXPRESS CONSENT OF GZA AND NATIONAL GRID, WILL BE AT THE USER'S SOLE RISK AND WITHOUT ANY RISK OR LIABILITY TO GZA AND NATIONAL GRID.

LIQUEFACTION FACILITY
642 ALLENS AVENUE
PROVIDENCE, RHODE ISLAND

PREPARED BY:
GZA GeoEnvironmental, Inc.
Engineers and Scientists
www.gza.com

PREPARED FOR:
nationalgrid

LOCUS PLAN

PROJ MGR: MSK	REVIEWED BY: MJP	CHECKED BY: MEA	FIGURE 1
DESIGNED BY: SMF	DRAWN BY: LDT	SCALE: AS NOTED	
DATE: OCTOBER 2016	PROJECT NO. 33554.60	REVISION NO. 0	SHEET NO. 1 OF 2

2016 – GZA GeoEnvironmental, Inc. GZA-J:\ENV\33554.80.MSK\FIGURES\CAD\DWGS\33554.80_LOCUS_REVETMENT WALL.DWG LOCUS JUNE 12, 2014 LISA THERIAULT

APPENDIX A

LIMITATIONS

LIMITATIONS

1. This Rip Rap Revetment Design Memorandum report has been prepared on behalf of and for the exclusive use of National Grid (National Grid), solely for the Liquefaction Facility in Providence, Rhode Island ("Site"). This report and the findings contained herein shall not, in whole or in part, be disseminated or conveyed to any other party, nor used by any other party in whole or in part, without the prior written consent of GZA GeoEnvironmental of Providence, Rhode Island, or National Grid.

2. GZA's work was performed in accordance with generally accepted practices of other consultants undertaking similar studies at the same time and in the same geographical area, and GZA observed that degree of care and skill generally exercised by other consultants under similar circumstances and conditions. GZA's findings and conclusions must be considered not as scientific certainties, but rather as our professional opinion concerning the significance of the limited data gathered during the course of the study. No other warranty, express or implied is made. Specifically, GZA does not and cannot represent that the Site contains no hazardous material, oil, or other latent condition beyond that observed by GZA during the work described herein.

3. In preparing this report, GZA relied on certain information provided by the Client, state and local officials, and other parties referenced therein which were made available to GZA at the time of our evaluation. GZA did not attempt to independently verify the accuracy or completeness of all information reviewed or received during the course of this evaluation

4. The observations described in this report were made under the conditions stated therein. The conclusions presented in the report were based upon services performed and observations made by GZA.

5. In the event that National Grid or others authorized to use this report obtain information on environmental or hazardous waste issues at the Site not contained in this report, such information shall be brought to GZA's attention forthwith. GZA will evaluate such information and, on the basis of this evaluation, may modify the conclusions stated in this report.

6. The conclusions and recommendations contained in this report are based in part upon the data obtained from samples obtained from relatively widely spread subsurface explorations. The nature and extent of variations between these explorations may not become evident until further exploration. If variations or other latent conditions then appear evident, it will be necessary to reevaluate the conclusions and recommendations of this report.

7. We used reasonable care in identifying and interpreting applicable codes and regulations. These codes and regulations are subject to various, and possibly contradictory, interpretations. Compliance with codes and regulations by other parties is beyond our control.

APPENDIX B

REFERENCES

REFERENCES

1. FEMA Flood Insurance Study (FIS) No. 44007CV001C for Providence County, Rhode Island.
2. Technical Report "National Grid LNG Facility Coastal and Hydraulic Modeling Analysis" prepared by Vanasse Hangen Brustlin, Inc. dated October 2013.
3. Section 145 – Climate Change and Sea Level Rise of The State of Rhode Island Coastal Resources Management Program, As Amended, dated February 22, 2016.
4. Coastal Engineering Manual (CEM), Part VI – Design of Coastal Project Elements, dated April 30, 2002, amended September 28, 2011.
5. Section M.10.03.2 - Rhode Island Department of Transportation Standard Specifications for Road and Bridge Construction.

APPENDIX C

WATER QAULITY VOLUME CALCULATIONS

Water Quality Volume for liquefaction plant

Redevelopment Areas (treat 50% of stormwater)	
Liquefaction plant[1] (impervious over existing impervious)	8,219 ft^2
Total	8,219 ft^2
WQ_v	**343 ft^3**

New Impervious Areas (treat 100% of stormwater)	
Liquefaction Plant	54,454 ft^2
Total	54,454 ft^2
WQ_v	**4,538 ft^3**

Total WQ_v = 4,881 ft^3

Sediment Forebay (25% WQ_v)	
Volume Required	1220.25 ft^3
Depth	3.25 ft
Area	376 ft^2
Inner Dimensions	11 ft x 60 ft
Outer Dimensions	12 ft x 61 ft
Volume provided	**2145 ft^3**

Sand Filter (50% WQ_v)	
Volume Required	2,440.5 ft^3
Depths	
Ponding	0.75 ft
Topsoil/vegetation	0.5 ft
sand	1 ft
drainage	1 ft
Effective Depth	1.575 ft
Area	1,550 ft^2
Inner Dimension	49.5ft x 51 ft
Outer Dimension	54 ft x 60 ft
Volume Provided	**3,976 ft^3**

[1] Areas provided by Kiewit on 8/01/2016

2016 10 099

Soil Erosion and Sediment Control Plan

For: National Grid LNG, LLC

Liquefaction Plant

642 Allens Avenue

Providence, RI, 02905

Plat 56 Lots 5, 273, 316, 317 and Plat 101 Lot 1

Owner:	National Grid LNG, LLC William R. Howard 40 Sylvan Road Waltham, MA 401-784-7490 william.howard@nationalgrid.com
Operator: *TO BE DETERMINED UPON CONTRACT AWARD*	Kiewit Name Address City, State, Zip Code Telephone Number Email Address
Estimated Project Dates:	Start Date: January 2017 Completion Date: November 2018
SESC Plan Prepared By:	GZA GeoEnvironmental Igor Runge 530 Broadway Providence, RI, 02909 401-421-4140 Igor.runge@gza.com
SESC Plan Preparation Date:	September 2016

RECEIVED
OCT 31 2016
COASTAL RESOURCES MANAGEMENT COUNCIL

SESC Plan Revision
Date:

OWNER CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under the direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete.

I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. I am aware that it is the responsibility of the site owner and operator to implement and amend the Soil Erosion and Sediment Control Plan as appropriate in accordance with the requirements of the RIPDES Construction General Permit.

Owner Signature: Date

Owner Name: William R. Howard

Owner Title: Environmental Manager

Company Name: National Grid LNG, LLC

Address: 40 Sylvan Road Waltham, MA

Phone Number: 401-784-7490

Email Address: william.howard@nationalgrid.com

OPERATOR CERTIFICATION

Upon contract award, the OPERATOR must sign this certification statement before construction may begin.

I certify under penalty of law that this document and all attachments were prepared under the direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete.

I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. I am aware that it is the responsibility of the owner/operator to implement and amend the Soil Erosion and Sediment Control Plan as appropriate in accordance with the requirements of the RIPDES Construction General Permit.

Operator Signature: Date

Contractor Representative: Name

Contractor Title: Title

Contractor Company Name: Company Name (if applicable)

Address: Mailing Address

Phone Number: Phone Number

Email Address: Email

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INTRODUCTION

This Construction Site Soil Erosion and Sediment Control Plan (SESC Plan) has been prepared for National Grid LNG, LLC (NG LNG) for the construction of the liquefaction plant at 642 Allens Avenue in Providence, RI. In accordance with the RIDEM Rhode Island Pollutant Discharge Elimination System (RIPDES) General Permit for Stormwater Discharge Associated with Construction Activity (RIPDES Construction General Permit ("CGP")), projects that disturb one (1) or more acres require the preparation of a SESC Plan. This SESC Plan provides guidance for complying with the terms and conditions of the RIPDES Construction General Permit and Minimum Standard 10 of the RI Stormwater Design and Installation Standards Manual. In addition, this SESC Plan is also consistent with Part D of the *RI SESC Handbook* entitled "Soil Erosion and Sediment Control Plans". This document does not negate or eliminate the need to understand and adhere to all applicable RIPDES regulations.

The purpose of erosion, runoff, and sedimentation control measures is to prevent pollutants from leaving the construction site and entering waterways or environmentally sensitive areas during and after construction. This SESC Plan has been prepared prior to the initiation of construction activities to address anticipated worksite conditions. The control measures depicted on the site plan and described in this narrative should be considered the minimum measures required to control erosion, sedimentation, and stormwater runoff at the site. Since construction is a dynamic process with changing site conditions, it is the operator's / contractor's responsibility to manage the site during each construction phase so as to prevent pollutants from leaving the site. This may require the operator to revise and amend the SESC Plan during construction to address varying site and/or weather conditions, such as by adding or realigning erosion or sediment controls to ensure the SESC Plan remains compliant with the RIPDES Construction General Permit. Records of these changes must be added to the amendment log attached to the SESC Plan, and to the site plans as "red-lined" drawings. Please Note: **Even if practices are correctly installed on a site according to the approved plan, the site is only in compliance when erosion, runoff, and sedimentation are effectively controlled throughout the entire site.**

It is the responsibility of the site owner and the site operator to maintain the SESC Plan at the site, including all attachments, amendments and inspection records, and to make all records available for inspection by RIDEM during and after construction. (RIPDES CGP - Part III.G)

The site owner, the site operator, and the designated site inspector are required to review the SESC Plan and sign the Party Certification pages (Section 8). The primary contractor (if different) and all subcontractors (if applicable) involved in earthwork or exterior construction activities are also required to review the SESC Plan and sign the certification pages before construction begins.

ADDITIONAL RESOURCES

Rhode Island Department of Environmental Management
Office of Water Resources
235 Promenade Street
Providence, RI 02908-5767
phone: 401-222-4700
email: water@dem.ri.gov

RIDEM *RI Stormwater Design and Installation Standards Manual* (RISDISM) (as amended)
http://www.dem.state.ri.us/programs/benviron/water/permits/ripdes/stwater/t4guide/desman.htm

RI Soil Erosion and Sediment Control Handbook
http://www.dem.state.ri.us/soilerosion2014final.pdf

RIDEM 2013 RIPDES Construction General Permit
http://www.dem.ri.gov/pubs/regs/regs/water/ripdesca.pdf

Rhode Island Department of Transportation *Standard Specifications for Road and Bridge Design and Other Specifications* and *Standard Details*
http://www.dot.ri.gov/business/bluebook.php

RIDEM Office of Water Resources Coordinated Stormwater Permitting website
http://www.dem.state.ri.us/programs/benviron/water/permits/swcoord/index.htm

RIDEM RIPDES Stormwater website
http://www.dem.state.ri.us/programs/benviron/water/permits/ripdes/stwater/index.htm

RIDEM Water Quality website (for 303(d) and TMDL listings)
http://www.dem.ri.gov/programs/benviron/water/quality/index.htm

RIDEM Rhode Island Natural Heritage Program
http://www.dem.ri.gov/programs/bpoladm/plandev/heritage/index.htm

RIDEM Geographic Data Viewer – Environmental Resource Map
http://www.dem.ri.gov/maps/index.htm

Natural Resources Conservation Service - Rhode Island Soil Survey Program
http://www.ri.nrcs.usda.gov/technical/soils.html

EPA NPDES – Stormwater Discharges from Construction Activities webpage:
http://water.epa.gov/polwaste/npdes/stormwater/Stormwater-Discharges-From-Construction-Activities.cfm

EPA Construction Site Stormwater Runoff Control BMP Menu
http://water.epa.gov/polwaste/npdes/swbmp/Construction-Site-Stormwater-Run-Off-Control.cfm

SECTION 1: SITE DESCRIPTION

1.1 Project/Site Information

Project/Site Name: Liquefaction Plant

The Site is located at 642 Allens Avenue in the City of Providence, Rhode Island. The Site is identified as Plat 56, Lots 5, 316 and 317, and Plat 101, Lot 1. The area comprising the Site consists of approximately 42 acres of land with frontage on Allens Avenue to the west, and bounded to the east by the Providence River (Tidally influenced water body). It is adjoined to the northwest by Motiva Enterprises, LLC, and to the south by Terminal Road, the former Sun Oil/Providence Port facility, and New England Bituminous Terminal Corporation. Currently, active natural gas regulation and distribution, a compressed natural gas (CNG) fueling station, (LNG) storage and distribution, and cement storage and distribution activities are conducted at the 642 Allens Avenue property.

The property is located in zoning district W3, which is a waterfront development district in the Port of Providence with no lot size limits. The Site is entirely enclosed and secured by chain-link fencing and barbed wire. The soil generally consists of urban fill underlain by organic silt, glacial outwash and glacial till. The depth to bedrock is typically more than 100 feet below ground surface (bgs). Groundwater underlying the Site is classified as GB or not suitable for drinking water use without treatment. Groundwater flow is generally towards the Providence River.

From 1910 until 1954 a manufactured gas plant (MGP) occupied the Site. Other occupants included B.P. Clapp in 1910 (ammonia works, including the recycling and sale of ammonia by-products), and in 1918, the United States Government operated a toluene facility. Portions of the Site included the Sassafras Point Rifle Range which was a small arms range that operated during the late 1800s. The LNG facility has occupied the eastern/southeastern portion of the Site since 1972, and Holcim (formerly St. Lawrence Cement Company) has occupied the southeastern portion of the Site since 1961. National Grid's Natural Gas Regulation Facility occupies the remainder of the Site. As part of the facility, National Grid also operates a Compressed Natural Gas (CNG) fueling station.

The Site is listed with the Rhode Island Department of Environmental Management (RIDEM) due to contaminants present in soil and groundwater at concentrations that represent Method 1 exceedances as defined in the Remediation Regulations as a result of MGP waste residuals and/or historical industrial activities. The liquefaction plant construction will be conducted in accordance with the Soil Management Plan (SMP) that was submitted to RIDEM in September 2012. In addition, an evaluation of the applicability of Air Pollution Control Regulation No. 9 will be submitted to RIDEM's Office of Air Resources, as well as an application for a Temporary Groundwater Discharge Approval from RIDEM's Office of Waste Management under Rule 13 of the October 2014 Rules for the Discharge of Non-Sanitary Wastewater and Other Fluid to or Below the Ground Surface.

The proposed liquefaction plant will tie into the high pressure gas line located along the Providence River on the northern border of the Site. The liquefaction plant will cool and compress the natural gas into a liquid. The LNG will then be pumped to the existing LNG tank for storage.

<u>Sequence and Schedule</u>

Mobilization (Construction Phase 1) is expected to begin in January 2017 and be complete by the end of February 2017. Mobilization will consist of the following:

- Install sediment and erosion controls around the perimeter of the Site and existing catch basins.
- Install crushed stone over the temporary laydown area.
- Construct the temporary office building, break room building, safety building, and warehouse.

Liquefaction plant construction activities (Construction Phase 2) are expected to begin in February 2017, and will consist of the following:

- Stripping the existing crushed stone and preparing the liquefaction area for construction is expected to be complete by March 2017.

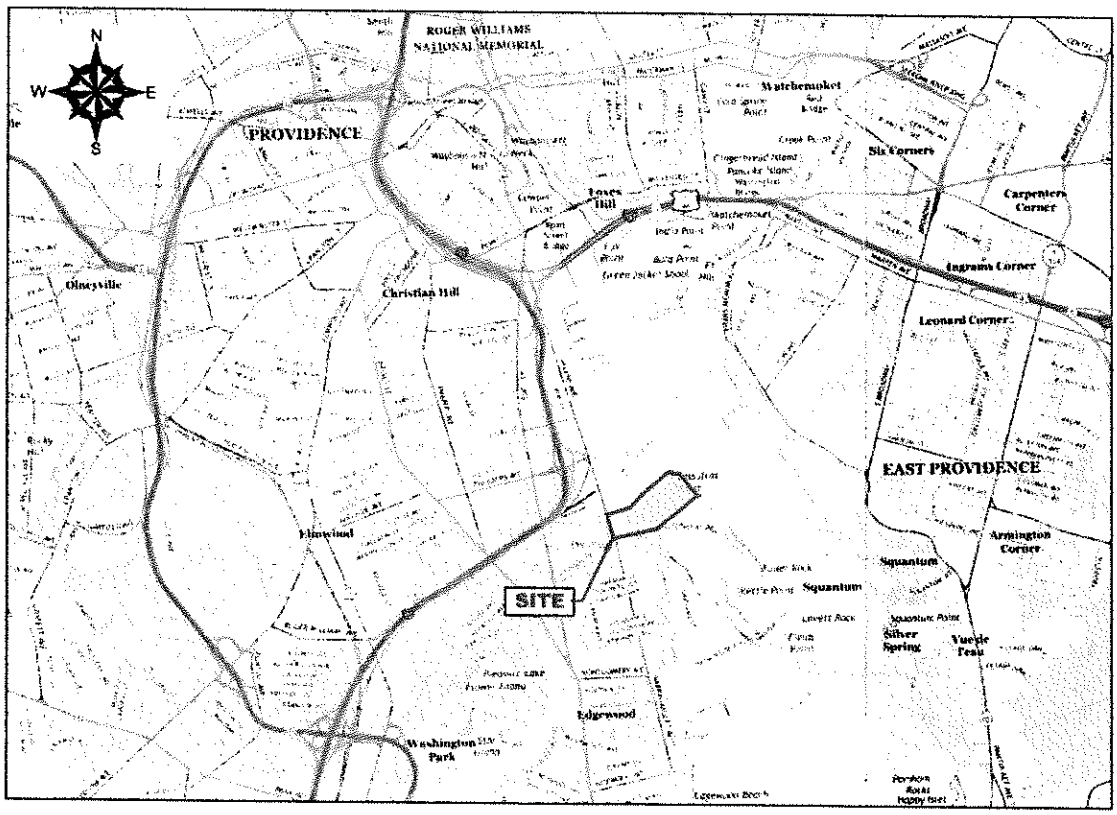
- Relocating the fire suppression water line is expected to be complete by May of 2017.
- Pile driving for the liquefaction area is expected to be complete by September 2017.
- Raising the grade of the liquefaction area will begin in February 2017, and be complete by May 2017.
- The revetment wall will be completed by June 2017.
- Installation of the stormwater collection system will begin in April 2017, and be complete by November 2017.
- The sand filter and sediment forebay treatment system will be completed by June 2018.
- The cast in place concrete foundations for the liquefaction plant equipment are expected to be complete by March 2018.
- The equipment for the liquefaction plant will be installed by March 2018.
- The final Site stabilization including paving access roads and placing crushed stone and gravel at the Site will be complete by November 2018.

Demobilization (Construction Phase 3) will begin in December 2018, and will consist of the following:

- Removing the temporary office building, break room building, safety building, and warehouse.
- Removing the erosion and sediment controls.

Project Street/Location:

- 642 Allens Ave, Providence, RI 02905



The following are estimates of the construction site area:

- Total Property Area — 42 acres
- Total Limit of Work During Construction — 13.5 acres
- Total Project Area to be Disturbed — 3.11 acres
  - New Asphalt Paving/Equipment (Impervious) — 1.30 acres

1.2 Receiving Waters

RIPDES CGP - Parts IV.A.7 & IV.A.8

- Under the existing conditions, site stormwater from the liquefaction plant area ponds in various depressions located within the site area and ultimately infiltrates through the onsite soils.
- As part of the site redevelopment, a stormwater management system will be constructed to collect and treat stormwater runoff from the proposed liquefaction plant area. The system will treat the water quality volume (WQV) generated by the proposed new impervious areas using the following water quality treatment devices: concrete forebay (total solids removal); and a sand filter (total solids, oil and sheen removal). Stormwater runoff generated at the liquefaction plant will be directed to the treatment system via a series of catch basins.

Description of receiving waters that may be impacted during construction:

- The section of the Providence River (water body ID RI0007020E-01B) that abuts the Site is considered to be impaired due to fecal coliform, total nitrogen, and dissolved oxygen and is classified as a SB1{a} water body.

Are any of the receiving waters in the vicinity of the proposed construction project listed as being impaired or subject to a TMDL?

☒ Yes ☐ No

If yes, List/provide description of 303(d)/TMDL waters and applicable TMDL requirements that must be addressed during construction:

- A TMDL has not yet been established for any of the above listed contaminants.

1.3 Natural Heritage Area Information

RIPDES CGP - Part III.H

Are there any Natural Heritage Areas being disturbed by the construction activity or will discharges be directed to the Natural Heritage Area as a result of the construction activity?

☐ Yes ☒ No

If yes, describe or refer to documentation which determines the likelihood of an impact on this area and the steps that will be taken to address any impacts.

- N/A

1.4 Historic Preservation/Cultural Resources

Are there any historic properties, historic cemeteries or cultural resources on or near the construction site?

☐ Yes ☒ No

Describe how this determination was made and summarize state or tribal review comments:

- Based on historic mapping and documented property use within the Project area, the property has been utilized for industrial activities since the late 1800s.

If yes, describe or refer to documentation which determines the likelihood of an impact on this historic property, historic cemetery or cultural resource and the steps taken to address that impact including any conditions or mitigation measures that were approved by other parties.

- N/A

1.5 Site Features and Constraints

List All Site Constraints and Sensitive Areas that require avoidance and protection through the implementation of control measures:

- No site constraints or sensitive areas are present on the site.

SECTION 2: EROSION, RUNOFF, AND SEDIMENT CONTROL

RIPDES Construction General Permit – Part III.J.1

The purpose of erosion controls is to prevent sediment from being detached and moved by wind or the action of raindrop, sheet, rill, gully, and channel erosion. Properly installed and maintained erosion controls are the primary defense against sediment pollution.

Runoff controls are used to slow the velocity of concentrated water flows. By intercepting and diverting stormwater runoff to a stabilized outlet or treatment practice or by converting concentrated flows to sheet flow erosion and sedimentation are reduced.

Sediment controls are the last line of defense against moving sediment. The purpose is to prevent sediment from leaving the construction site and entering environmentally sensitive areas.

This section describes the set of control measures that will be installed before and during the construction project to avoid, mitigate, and reduce impacts associated with construction activity. Specific control measures and their applicability are contained in Section Four: Erosion Control Measures, Section Five: Runoff Control Measures, and Section Six: Sediment Control Measures of the *RI SESC Handbook*. The *RI SESC Handbook* can be found at the following address:

http://www.dem.ri.gov/soilerosion2014final.pdf.

2.1 Avoid and Protect Sensitive Areas and Natural Features

Areas of existing and remaining vegetation and areas that are to be protected are shown on the attached Figures. Prior to any land disturbance activities commencing on the site, the Contractor shall physically mark limits of disturbance (LOD) on the site and any areas to be protected within the site, so that workers can clearly identify the areas to be protected.

Filtrexx Soxx™ or an approved equivalent will be installed along the site perimeter in areas where there is potential for sediment to be carried off site. Filtrexx Soxx, when properly used, serve to both control and filter runoff. Large debris in runoff is easily caught and retained, and a portion of the smaller suspended solids may be filtered out. Filtrexx Soxxs will be placed in a single row, lengthwise on the contour, with ends of adjacent wattles overlapping. Filtrexx Soxxs will be installed in accordance with manufacturer's specifications and will be securely anchored by at least two stakes driven through the middle of the sediment control device at a maximum of 6-8 feet on center. In the event that staking is not possible (i.e., when the

sediment controls are installed on pavement), heavy concrete blocks will be used behind the sediment control device to help stabilize during rainfall/runoff events.

Filtrexx Soxxs will be installed as indicated on the attached Plan Set and around the perimeter of temporary stockpiles. Filtrexx Soxx details are included on the attached Plan Set

Silt sacks will be installed in catch basins within the limits of the site disturbance. A silt sack is a sediment control device used to prevent silt and sediment from entering drainage systems by catching the silt and sediment while allowing water to pass through freely. They must be maintained on a regular basis to function properly.

Silt sacks will be installed in catch basins by removing the grate and placing the sack in the opening. Six inches of the sack and the sack handles will extend outside the frame. This is the area of the lifting straps. The sack is held in place by the weight of catch basin grate. Silt sack details are included on the attached Plan Set.

Feature Requiring Protection	Construction Phase #	Method of Protection	Plan Set #
Catch Basins	1	Silt Sacks	5
Off Site Vegetated Areas	1	Filtrexx Soxx	4 & 7
Proposed Sand Filter	2	Will be constructed last	7

2.2 *Minimize Area of Disturbance*

Will >5 acres be disturbed in order to complete this project?

☒ Yes ☐ No

Will <5 acres be disturbed at one time or will disturbance activities be completed within a six (6) month window?

☒ Yes ☐ No

Based on the answers to the above questions will phasing be required for this project?

☐ Yes ☒ No

PHASING PLAN

Construction phasing is not required for this project.

2.3 *Minimize the Disturbance of Steep Slopes*

Are steep slopes (>15%) present within the proposed project area?

☒ Yes ☐ No

Slopes will be protected using erosion blankets as needed.

2.4 Preserve Topsoil

Site owners and operators must preserve existing topsoil on the construction site to the maximum extent feasible and as necessary to support healthy vegetation, promote soil stabilization, and increase stormwater infiltration rates in the post-construction phase of the project.

Will existing topsoil be preserved at the site?

☐ Yes ☒ No

The site is currently covered with crushed stone, asphalt pavement, and urban fill. Very little top soil is present within the limits of work for the site. In addition, this project will be performed in accordance with a Soil Management Plan (SMP) that was submitted to RIDEM in September 2012. In accordance with the Remediation Regulations, existing surface soils cannot be reused to construct the proposed remedial caps except as subgrade material underneath final remedial caps.

2.5 Stabilize Soils

Upon completion and acceptance of site preparation and initial installation of erosion, runoff, and sediment controls and temporary pollution prevention measures, the operator shall initiate appropriate temporary or permanent stabilization practices during all phases of construction on all disturbed areas as soon as possible, but not more than fourteen (14) days after the construction activity in that area has temporarily or permanently ceased or in accordance with construction specifications, whichever is more stringent.

Any disturbed areas that will not have active construction activity occurring within 14 days must be stabilized using the control measures depicted in the SESC Site Plans, in accordance with the *RI SESC Handbook*, and per manufacturer product specifications.

Only areas that can be reasonably expected to have active construction work being performed within 14 days of disturbance will be cleared/grubbed at any one time. It is NOT acceptable to clear and grub the entire construction site if portions will not be active within the 14-day time frame. Proper phasing of clearing and grubbing activities shall include temporary stabilization techniques for areas cleared and grubbed that will not be active within the 14-day time frame.

All disturbed soils exposed prior to October 15 of any calendar year shall be seeded by that date if vegetative measures are the intended soil stabilization method. Any such areas that do not have adequate vegetative stabilization, as determined by the site operator or designated inspector, by November 15, must be stabilized through the use of non-vegetative erosion control measures. If work continues within any of these areas during the period from October 15 through April 15, care must be taken to ensure that only the area required for that day's work is exposed, and all erodible soil must be restabilized within 5 working days. In limited circumstances, stabilization may not be required if the intended function of a specific area of the site necessitates that it remain disturbed.

The majority of the site area will be covered with asphalt pavement or crushed stone at the completion of construction activities. Temporary erosion controls will not be utilized in these areas.

<u>Temporary Vegetative Control Measures</u>

- Temporary vegetative erosion control measures will not be utilized on this site.

<u>Temporary Non-Vegetative Control Measures</u>

- Crushed stone will be placed over the laydown area to protect contractors from onsite soils and to prevent soil erosion and offsite tracking of sediment during construction.

- Erosion-control blankets are used to help limit erosion on slopes and in ditches where conventional seeding and/or structural methods would be inadequate. By reducing the negative effects of rainfall impact and runoff, erosion-control blankets provide slopes and ditches with a temporary, stable

environment. Temporary erosion-control blankets are constructed of a variety of materials, including straw, wood excelsior, coconut or some combination thereof. These materials usually are stitched or glued to some type of synthetic or natural fiber netting, which is either biodegradable or photodegradable.

The blanket should be anchored into a 6-inch deep by 6-inch wide trench. The anchor trench should be backfilled and compacted after stapling the blanket with staples or stakes located no further than 12 inches apart. The blanket should then be rolled out in the direction of flow. The ends and side seams should overlap by a minimum of 12 inches if additional rolls are needed. The upstream roll should be placed on top of the new roll and stapled with a double row of staples staggered 4 inches apart. The terminal end of the blankets must be anchored as stated above. In all cases, temporary erosion control netting shall be installed in accordance with the manufactures installation guidelines and the project specific construction specifications.

Temporary erosion netting will be inspected after every storm event or daily during long-duration storm events. It must be replaced when it has become too damaged to function properly. The ends should be checked to ensure that they are still properly anchored and the overlaps checked to determine that they are still properly stapled. Ripped or torn sections of the blanket should be removed and replaced.

Permanent Vegetative Control Measures

- Permanent vegetative erosion control measures will not be utilized on this site.

Permanent Non-Vegetative Control Measures

- Approximately 1.30 acres of the liquefaction plant work area will be covered with new asphalt pavement or concrete equipment foundations. The remainder of the liquefaction area will be covered with crushed stone. Presently this area is unpaved and contains environmental monitoring wells. The limits of paving are shown on the attached Figure 7. The liquefaction area will be raised by 9 to 11 feet. The imported fill used for raising the area will be certified clean in accordance with the SMP. Areas that will not be raised will be finished with a remedial soil cap. Approved remedial cap sections will consist of compacted geotechnically suitable site soils overlain by either four inches of asphalt pavement, concrete equipment foundations, 12 inches of clean fill over geotextile fabric, or two feet of clean fill. In certain areas where a geomembrane liner will be installed, a minimum of 8 inches of processed gravel will be placed between the liner and the asphalt pavement.
- The laydown area (approximately 9.41 acres) will be covered with crushed stone. Presently this area is covered with vegetation in poor condition. The limits of the crushed stone and riprap areas are shown on the attached Figure 4. The crushed stone will also help to protect contractors from exposure to onsite soils during construction, and will prevent soil erosion and offsite tracking of sediment during construction.

2.6 Protect Storm Drain Outlets

Temporary or permanent outlet protection must be used to prevent scour and erosion at discharge points through the protection of the soil surface, reduction in discharge velocities, and through the promotion of infiltration. Outlets often have high velocity, high volume flows, and require strong materials that will withstand the forces of stormwater. Storm drain outlet control measures also offer a last line of protection against sediment entering environmentally sensitive areas.

All stormwater outlets that may discharge sediment-laden stormwater flow from the construction site must be protected using the control practices depicted on the approved plan set and in accordance with the *RI SESC Handbook*.

Will temporary or permanent point source discharges be generated at the site as the result of construction of sediment traps or basins, diversions, and conveyance channels?

☒ Yes ☐ No

Upon project completion stormwater that has passed through the sand filter and overflow from the concrete forebay will be discharged to the Providence River through a new outfall. The outfall will be equipped with a rip-rap apron to prevent erosion.

2.7 Establish Temporary Controls for the Protection of Post-Construction Storm Water Treatment Practices

Temporary measures shall be installed to protect permanent or long-term stormwater control and treatment measures as they are installed and throughout the construction phase of the project so that they will function properly when they are brought online.

Stormwater runoff generated from the proposed site redevelopment (paved areas and equipment) will be collected by catch basins installed at grade. The series of catch basins that will collect stormwater runoff will be protected during construction with silt sacks. During construction activities stormwater runoff will be directed to the concrete forebay where sediment will be allowed to settle out before the stormwater is discharged. Once construction is complete the concrete forebay and catch basins will be cleaned with a vactor truck to remove any accumulated sediment before the sand filter is brought online.

Will long-term stormwater treatment practices be installed at the site?

☒ Yes ☐ No

The proposed stormwater management system consist of the following components:

- Concrete Forebay: The design intent of the concrete forebay is to provide pretreatment of stormwater runoff prior to discharging to the proposed sand filter. The forebay has a total storage volume of 2,145 cubic feet, which is greater than the required minimum storage volume of 1,220.5 cubic feet (25% of the total water quality volume). A weir will be installed to meter the WQV to the sand filter. An upward facing 24-inch diameter HDPE 90-degree fitting will be installed in the forebay as an overflow weir to convey stormwater to the outfall.

- Sand Filter: The sand filter has been hydraulically sized to treat the first inch of runoff (WQV) generated by the proposed liquefaction plant and runoff from potential future development in accordance with Section 5.5 of the Design Manual. The water quality elevation has been designed at elevation 9.35 feet (NAVD88), therefore the filter area will flood with approximately 9 inches of standing water before the system overflows to the bypass drain line. The filter will be constructed with an 18-inch thick layer of C33 filter sand.

- Proposed Stormwater Overflow Protection: The stormwater management systems overflow protection will be provided by an upward facing 24-inch diameter HDPE 90-degree fitting which will hydraulically function as a weir. The overflow will be installed in the forebay system directly adjacent to the sand filter. The overflow will discharge to the Providence River through a new outfall. The overflow bypass line has the capacity to safely convey the peak stormwater runoff rate generated by the 10-year design event.

2.8 Divert or Manage Run-on from Up-gradient Areas

Is stormwater from off-site areas anticipated to flow onto the project area or onto areas where soils will be disturbed?

☐ Yes ☒ No

Post Construction sub-watershed maps are included in the Stormwater Management Plan (SWMP) submittal.

2.9 Retain Sediment Onsite through Structural and Non-Structural Practices

SEDIMENT BARRIERS must be installed along the perimeter areas of the site that will receive stormwater from disturbed areas. This also may include the use of sediment barriers along the contour of disturbed slopes to maintain sheet flow and minimize rill and gully erosion during construction. Installation and maintenance of sediment barriers must be completed in accordance with the maintenance requirements specified by the product manufacturer or the *RI SESC Handbook*.

Will sediment barriers be utilized at the toe of slopes and other downgradient areas subject to stormwater impacts and erosion during construction?

☒ Yes ☐ No

Filtrexx Soxx™ or an approved equivalent will be installed along the site perimeter in areas where there is potential for sediment to migrate off site and along slopes within the work zone. Filtrexx Soxx, when properly used, serve to both control and filter runoff. Large debris in runoff is easily caught and retained, and a portion of the smaller suspended solids may be filtered out. Filtrexx Soxxs will be placed in a single row, lengthwise on the contour, with ends of adjacent wattles overlapping. Filtrexx Soxxs will be installed in accordance with manufacturer's specifications and will be securely anchored by at least two stakes driven through the middle of the sediment control device at a maximum of 6-8 feet on center. In the event that staking is not possible (i.e., when the sediment controls are installed on pavement), heavy concrete blocks will be used behind the sediment control device to help stabilize during rainfall/runoff events.

Filtrexx Soxxs will be installed around the perimeter of temporary stockpiles and the work limit. Filtrexx Soxx details and alignment are shown on the attached construction drawings.

Will sediment barriers be utilized along the contour of slopes to maintain sheet flow and minimize rill and gully erosion during construction?

☒ Yes ☐ No

There will be no slopes longer than 40 feet in length that will not be paved as part of construction activities. Sediment barriers will not be necessary to stabilize these areas.

SEDIMENT BARRIERS			
Construction Phase #	Sediment Barrier Type	Sediment Barrier is Labeled on Sheet #	Detail is on Sheet #
1	Filtrexx Soxx	4 & 7	5

INLET PROTECTION will be utilized to prevent soil and debris from entering storm drain inlets. These measures are usually temporary and are implemented before a site is disturbed. ALL stormwater inlets and/or catch basins that are operational during construction and have the potential to receive sediment-

laden stormwater flow from the construction site must be protected using control measures outlined in the *RI SESC Handbook*.

For more information on inlet protection refer to the *RI SESC Handbook*, Inlet Protection control measure.

Silt sacks will be installed in catch basins within the limits of the site disturbance. A silt sack is a sediment control device used to prevent silt and sediment from entering drainage systems by catching the silt and sediment while allowing water to pass through freely. They must be maintained on a regular basis to function properly.

Silt sacks will be installed in catch basins by removing the grate and placing the sack in the opening. Six inches of the sack and the sack handles will extend outside the frame. This is the area of the lifting straps. The sack is held in place by the weight of catch basin grate.

Maintenance

The operator must clean, or remove and replace the inlet protection measures as sediment accumulates, the filter becomes clogged, and/or as performance is compromised. Accumulated sediment adjacent to the inlet protection measures should be removed by the end of the same work day in which it is found or by the end of the following work day if removal by the same work day is not feasible. Silt sacks should be cleaned or replaced when the total sediment accumulation depth is greater than 8 inches.

Do inlets exist adjacent to or within the project area that require temporary protection?

☒ Yes ☐ No

The following lists the proposed storm drain inlet types selected from Section Six of the *RI SESC Handbook*. Each row is unique for each phase and inlet protection type.

INLET PROTECTION			
Construction Phase #	Inlet Protection Type	Inlet Protection is labeled on Sheet #	Detail(s) is/are on Sheet #
1 & 2	Silt Sack	7	5

CONSTRUCTION ENTRANCES/EXITS will be used in conjunction with the stabilization of construction roads to reduce the amount of sediment tracking off the project. This project has avoided placing construction entrances on poorly drained soils where possible. Where poorly drained soils could not be eliminated, the detail includes subsurface drainage.

Any construction site access point must employ the control measures as shown on the construction drawings and described in the construction specifications and in accordance with the *RI SESC Handbook*. Stabilized construction entrances/exits shall be used in conjunction with the stabilization and regular cleaning of construction roads to reduce the amount of mud picked up by construction vehicles. All construction access roads shall be constructed prior to any roadway accepting routine construction traffic.

The site owner and operator must:

1. Restrict construction vehicle use to properly designated exit points, as shown on the attached Figure 4.

2. Use properly designed and constructed construction entrances at all points that exit onto paved roads so that sediment removal occurs prior to vehicle exit. Construction entrance details are shown on the attached Figure 5

3. When and where necessary, as directed by the construction inspector use additional controls to remove sediment from vehicle tires prior to exit (i.e. wheel washing racks, rumble strips, and rattle plates).

4. Where sediment has been tracked out from the construction site onto the surface of off-site streets, other paved areas, and sidewalks, the deposited sediment must be removed by the end of the same work day in which the track out occurs. Track-out must be removed by sweeping, shoveling, or vacuuming these surfaces, or by using other similarly effective means of sediment removal.

Will construction entrances be utilized at the proposed construction site?

☒ Yes ☐ No

CONSTRUCTION ENTRANCE			
Construction Phase #	Soil Type at the Entrance	Entrance is located on Sheet #	Detail is on Sheet #
1	Crushed Stone	4	5

As indicated on Figure 4, tracking pads will be installed at each entrance to the site to mitigate the transmission of on-site soils beyond the limits of work. The tracking pads will consist of crushed stone as indicated on the details included in the Plan Set. If sediment is tracked off site, the sediment must be removed by sweeping, shoveling, or vacuuming by the end of the work day.

At the conclusion of the construction activities or whenever heavy equipment or tools leave the site, they shall be clean of visual soil residuals. At a minimum, soil shall be brushed from the equipment and re-used as backfill or placed in stockpiles to be managed as described herein. Vehicles are not to leave the site with visible soil residues on the exterior.

STOCKPILE CONTAINMENT will be used on site to minimize or eliminate the discharge of soil, topsoil, base material or rubble, from entering drainage systems or surface waters. All stockpiles must be located within the limit of disturbance, protected from run-on with the use of temporary sediment barriers and provided with cover or stabilization to avoid contact with precipitation and wind where and when practical.

Stockpile management consists of procedures and practices designed to minimize or eliminate the discharge of stockpiled material (soil, topsoil, base material, rubble) from entering drainage systems or surface waters.

For any stockpiles or land clearing debris composed, in whole or in part, of sediment or soil, you must comply with the following requirements:

1. Locate piles within the designated limits of disturbance.

2. Protect from contact with stormwater (including run-on) using a temporary perimeter sediment barrier.

3. Provide cover or appropriate temporary vegetative or structural stabilization to avoid direct contact with precipitation or to minimize sediment discharge.

4. NEVER hose down or sweep soil or sediment accumulated on pavement or other impervious surfaces into any stormwater conveyance, storm drain inlet, or surface water.

5. To the maximum extent practicable, contain and securely protect from wind.

Excavated materials will be stockpiled with the soil storage area shown on attached Figures 4 and 5. Stockpiles will be equipped with appropriate perimeter erosion and sediment controls to limit soil migration resulting from stormwater erosion. These controls will include the installation of Filtrexx Soxx surrounding

the perimeter of the stockpiles. Stockpiles will be inspected daily by Site personnel. Should the perimeter erosion controls be damaged or sediment has accumulated to more than 1/2 the height of the erosion control device, repairs to the erosion controls and or sediment removal will be made as soon as practical. These inspections will be documented in daily field reports. If windblown dust is generated from the piles, the piles will be covered with 6 mil polyethylene to prevent stockpile soil loss.

STOCKPILE CONTAINMENT				
Construction Phase #	Run-on measures necessary? (yes/no)	Stabilization or Cover Type	Stockpile Containment Measure	Sheet #
1	Yes	6 Mil Polyethylene	Filtrexx Soxx	4 & 5

2.10 Erosion, Runoff, and Sediment Control Measure List

It is expected that this table and corresponding Inspection Reports will be amended as needed throughout the construction project as control measures are added or modified.

Location/Station	Control Measure Description/Reference	Maintenance Requirement
Site Perimeter Locations and Soil Stockpiles	Filtrexx Soxx - Section Six: Sediment Control Measures, Straw Wattles, Compost Tubes and Fiber Rolls - *RI SESC Handbook.*	Inspection should be made after each storm event or 1/week and repair or replacement should be made promptly as needed. Cleanout of accumulated sediment behind the Filtrexx Soxx if sediment accumulates to at least ½ the distance between the top of Soxx and ground surface.
Laydown area Construction Entrance	Stone Stabilized Pad - Section Six: Sediment Control Measures – Construction Entrances –*RI SESC Handbook.*	The entrance shall be maintained in a condition which will prevent tracking or flowing of sediment onto paved surfaces. Provide periodic top dressing with additional stone or additional length as conditions demand. Roads adjacent to entrance shall be clean at the end of each day. If maintenance alone is not enough to prevent excessive track out, increase length of entrance, modify construction access road surface, or install wash rack or mud rack.
Providence River Outfall Rip rap apron	Turbidity Curtains - Section Six: Sediment Control Measures – Turbidity Curtains –*RI SESC Handbook.*	The silt curtain shall be inspected daily and repaired or replaced immediately. If the curtain is oriented in a manner that faces the prevailing winds, frequent checks of the anchorage shall be made. It is not normally necessary to remove sediment deposited behind the curtain; but, when necessary, removal is usually done by hand prior to removal of the barrier. All removed silt is

		stabilized away from the waterbody. Sediment removal will be at the direction of the regulatory agency. The barrier shall be removed by carefully pulling it toward the construction site to minimize the release of attached sediment. Any floating construction or natural debris shall be immediately removed to prevent damage to the curtain.
Catch Basins Located within the liquefaction plant work area Silt Sacks	Manufactured Inlets - Section Six: Sediment Control Measures – Inlet Protection –*RI SESC Handbook*.	Inspection should be made after each storm event or 1/week and repair or replacement should be made promptly as needed. Lift internal inlet filters carefully from the drainage structure. Remove any accumulated sediment and reinsert device into the drain opening. Replace damaged silt sacks.
Vegetated Areas on northern Border Filtrexx Soxx	Filtrexx Soxx - Section Six: Sediment Control Measures, Straw Wattles, Compost Tubes and Fiber Rolls - *RI SESC Handbook*.	Inspection should be made after each storm event or 1/week and repair or replacement should be made promptly as needed. Cleanout of accumulated sediment behind the Filtrexx Soxx if sediment accumulates to at least ½ the distance between the top of Soxx and ground surface.

SECTION 3: CONSTRUCTION ACTIVITY POLLUTION PREVENTION

The purpose of construction activity pollution prevention is to prevent day to day construction activities from causing pollution.

This section describes the key pollution prevention measures that must be implemented to avoid and reduce the discharge of pollutants in stormwater. Example control measures include the proper management of waste, material handling and storage, and equipment/vehicle fueling/washing/maintenance operations.

3.1 Existing Data of Known Discharges from Site

Are there known discharges from the project area?

☒ Yes ☐ No

Describe how this determination was made:

- Site visits determined that there are existing catch basins at the Site and two sump pits that ultimately discharge stormwater to the Providence River.

If yes, list discharges and locations:

- The existing series of catch basins is located on the western portion of the Site.
- One of the sump pits is located within the diked area on the eastern portion of the Site.

- The second sump pit is located next to the truck scales south of the proposed Liquefaction Plant in the center of the Site.

Is there existing data on the quality of the known discharges?

☐ Yes ☒ No

If yes, provide data:

- N/A

3.2 Prohibited Discharges

The following discharges are prohibited at the construction site:

- Contaminated groundwater, unless specifically authorized by RIDEM.
- Wastewater from washout of concrete, unless the discharge is contained and managed by appropriate control measures.
- Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds, and other construction materials.
- Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance. Proper storage and spill prevention practices must be utilized at all construction sites.
- Soaps or solvents used in vehicle and equipment washing.
- Toxic or hazardous substances from a spill or other release.

All types of waste generated at the site shall be disposed of in a manner consistent with State Law and/or regulations and in accordance with the construction specifications.

Will any of the above listed prohibited discharges be generated at the site?

☐ Yes ☒ No

During construction if dewatering is required, the contaminated groundwater will be containerized for either off-site transport and disposal or treatment and discharge to the ground surface. Under the on-site discharge option, the contaminated groundwater will be treated in accordance with a Temporary Groundwater Discharge Permit, and will be allowed to infiltrate in a non-erosive manner.

3.3 Proper Waste Disposal

Building materials and other construction site wastes must be properly managed and disposed of in a manner consistent with State Law and/or regulations.

- A waste collection area shall be designated on the site that does not receive a substantial amount of runoff from upland areas and does not drain directly to a waterbody or storm drain.
- All waste containers shall be covered to avoid contact with wind and precipitation.
- Waste collection shall be scheduled frequently enough to prevent containers from overfilling.
- All construction site wastes shall be collected, removed, and disposed of in accordance with applicable regulatory requirements and only at authorized disposal sites.
- Equipment and containers shall be checked for leaks, corrosion, support or foundation failure, or other signs of deterioration. Those that are found to be defective shall be immediately repaired or replaced.

Is waste disposal a significant element of the proposed project?

☐ Yes ☒ No

Wastes generated on-site during the construction process, including building materials and other construction wastes, will be disposed off-site according to applicable regulations. Waste containers will be covered to avoid contact with wind and precipitation and collection of containers will be scheduled frequently enough to prevent containers from overfilling. Following waste pickup, and at least once per week, all waste containers will be checked for leaks, corrosion, support or foundation failure, and other signs of deterioration. Any containers found to be defective will be immediately repaired or replaced.

3.4 Spill Prevention and Control

All chemicals and/or hazardous waste material must be stored properly and legally in covered areas, with containment systems constructed in or around the storage areas. Areas must be designated for materials delivery and storage. All areas where potential spills can occur and their accompanying drainage points must be described. The owner and operator must establish spill prevention and control measures to reduce the chance of spills, stop the source of spills, contain and clean-up spills, and dispose of materials contaminated by spills. The operator must establish and make highly visible location(s) for the storage of spill prevention and control equipment and provide training for personnel responsible for spill prevention and control on the construction site.

Are spill prevention and control measures required for this particular project?

☐ Yes ☒ No

3.5 Control of Allowable Non-Stormwater Discharges

Are there allowable non-Stormwater discharges present on or near the project area?

☒ Yes ☐ No

List of allowable non-stormwater discharge(s) and the associated control measure(s):

Allowable Non-Stormwater Discharge	Occur on-Site?
Vehicle wash-down/no detergents	YES
External building wash-down/no detergents	NO
Dust control/water truck	YES
Firefighting activities	NO
Fire hydrant flushing	NO
Natural springs	NO
Uncontaminated groundwater	NO
Lawn watering	NO
Potable water sources/waterline flushing	NO
Irrigation drainage	NO
Pavement wash water	NO
Uncontaminated foundation/footing drains	NO

Are there any known or proposed contaminated discharges, including anticipated contaminated dewatering operations, planned on or near the project area?

☒ Yes ☐ No

If yes, list the discharge types and the RIPDES individual permit number(s) or RIPDES Remediation General Permit Authorization number(s) associated with these discharges.

- Discharge Type and RIPDES Individual Permit number : N/A
- Discharge Type and RIPDES Remediation General Permit Authorization number: N/A
- A Temporary Groundwater Discharge Permit will be obtained from RIDEM if dewatering is necessary. Management of dewatering water will be performed in accordance with the Temporary Groundwater Discharge Permit. Dewatering water will be containerized in a fractionation tank (or equivalent) to allow settling of sediment, then passed through a bag filter and granular activated carbon filter for treatment, and then discharged to an infiltration basin where the water will be allowed to infiltrate non-erosively. The Temporary Groundwater Discharge Permit will be maintained with this plan as Attachment E.

3.6 Control Dewatering Practices

Site owners and operators are prohibited from discharging groundwater or accumulated stormwater that is removed from excavations, trenches, foundations, vaults, or other similar points of accumulation, unless such waters are first effectively managed by appropriate control measures.

Examples of appropriate control measures include, but are not limited to, temporary sediment basins or sediment traps, sediment socks, dewatering tanks and bags, or filtration systems (e.g. bag or sand filters) that are designed to remove sediment. Uncontaminated, non-turbid dewatering water can be discharged without being routed to a control.

At a minimum the following discharge requirements must be met for dewatering activities:

1. Do not discharge visible floating solids or foam.
2. To the extent feasible, utilize vegetated, upland areas of the site to infiltrate dewatering water before discharge. In no case will surface waters be considered part of the treatment area.
3. At all points where dewatering water is discharged, utilize velocity dissipation devices.
4. With filter backwash water, either haul it away for disposal or return it to the beginning of the treatment process.
5. Replace and clean the filter media used in dewatering devices when the pressure differential equals or exceeds the manufacturer's specifications.
6. Dewatering practices must involve the implementation of appropriate control measures as applicable (i.e. containment areas for dewatering earth materials, portable sediment tanks and bags, pumping settling basins, and pump intake protection.)

Is it at all likely that the site operator will need to implement construction dewatering in order to complete the proposed project?

☒ Yes ☐ No

Review of existing groundwater data suggest that dewatering may be required during construction activities. If excess groundwater is encountered during excavation, a dewatering system will be implemented. Construction dewatering will consist of using a sump pump to remove water from the excavation. The sump pump will discharge to frac tanks and groundwater will either be disposed of at a properly licensed off-site disposal facility or treated in accordance with the Temporary Groundwater Discharge Permit and allowed to infiltrate onsite. Approval from RIDEM may be sought to infiltrate dewatering discharge on-site if the total dewatering volume is too large to store in containers.

3.7 Establish Proper Building Material Staging Areas

All construction materials that have the potential to contaminate stormwater must be stored properly and legally in covered areas, with containment systems constructed in or around the storage areas. Areas must be designated for materials delivery and storage. Designated areas shall be approved by the site owner/engineer. Minimization of exposure is not required in cases where the exposure to precipitation and to stormwater will not result in the discharge of pollutants, or where exposure of a specific material or product poses little risk of stormwater contamination (such as final products and materials intended for outdoor use).

Any building materials (i.e. cement, paints, and/or solvents) stored on site will be stored such that they are not exposed to precipitation. This project does not anticipate storing materials that have the potential to contaminate stormwater.

3.8 Minimize Dust

Dust control procedures and practices shall be used to suppress dust on a construction site during the construction process, as applicable. Precipitation, temperature, humidity, wind velocity and direction will determine amount and frequency of applications. However, the best method of controlling dust is to prevent dust production. This can best be accomplished by limiting the amount of bare soil exposed at one time. Dust Control measures outlined in the *RI SESC Handbook* shall be followed. Other dust control methods include watering, chemical application, surface roughening, wind barriers, walls, and covers.

Dust control measures will be employed to mitigate the release of airborne particulate matter beyond the limits of the Site. Methods of dust control will consist of sprinkling the ground surface with water, covering of temporary stockpiles, mulching, or similar methods.

Dust controls will be implemented when visible dust in the air is observed. If excessive dust generation occurs and cannot be reasonably controlled, the job shall be shut down until control is achieved.

3.9 Designate Washout Areas

At no time shall any material (concrete, paint, chemicals) be washed into storm drains, open ditches, streets, streams, wetlands, or any environmentally sensitive area. The site operator must ensure that construction waste is properly disposed of, to avoid exposure to precipitation, at the end of each working day.

Will washout areas be required for the proposed project?

☒ Yes ☐ No

Concrete washout water cannot be discharged off-site without treatment. Concrete washouts shall be managed to contain all liquid and concrete waste generated by washout operations.

3.10 Establish Proper Equipment/Vehicle Fueling and Maintenance Practices

Vehicle fueling shall not take place within regulated wetlands or buffer zone areas, or within 50-feet of the storm drain system. Designated areas shall be depicted on the SESC drawings, or shall be approved by the site owner.

Vehicle maintenance and washing shall occur off-site, or in designated areas depicted on the SESC drawings or approved of by the site owner. Maintenance or washing areas shall not be within regulated wetlands or buffer zone areas, or within 50-feet of the storm drain system. Maintenance areas shall be clearly designated, and barriers shall be used around the perimeter of the maintenance area to prevent stormwater contamination.

Construction vehicles shall be inspected frequently for leaks and repairs shall take place immediately. Disposal of all used oil, antifreeze, solvents and other automotive-related chemicals shall be according to applicable regulations; at no time shall any material be washed down the storm drain or in to any environmentally sensitive area.

Storage of fuel on-site shall be in covered areas. A spill kit will be maintained in the refueling area. No significant maintenance of vehicles or equipment shall be performed off-site.

3.11 Chemical Treatment for Erosion and Sediment Control

Chemical stabilizers, polymers, and flocculants are readily available on the market and can be easily applied to construction sites for the purposes of enhancing the control of erosion, runoff, and sedimentation. The following guidelines should be adhered to for construction sites that plan to use treatment chemicals as part of their overall erosion, runoff, and sedimentation control strategy.

The U.S. Environmental Protection Agency has conducted research into the relative toxicity of chemicals commonly used for the treatment of construction stormwater discharges. The research conducted by the EPA focused on different formulations of chitosan, a cationic compound, and both cationic and anionic polyacrylamide (PAM). In summary, the studies found significant toxicity resulting from the use of chitosan and cationic PAM in laboratory conditions, and significantly less toxicity associated with using anionic PAM. EPA's research has led to the conclusion that the use of treatment chemicals for erosion, runoff, and sedimentation control requires proper operator training and appropriate usage to avoid risk to aquatic species. I n the case of cationic treatment chemicals additional safeguards may be necessary.

Application/Installation Minimum Requirements

If a site operator plans to use polymers, flocculants, or other treatment chemicals during construction the SESC plan must address the following:

1. Treatment chemicals shall not be applied directly to or within 100 feet of any surface water body, wetland, or storm drain inlet.

2. Use conventional erosion, runoff, and sedimentation controls prior to and after the application of treatment chemicals. Use conventional erosion, runoff, and sedimentation controls prior to chemical addition to ensure effective treatment. Chemicals may only be applied where treated stormwater is directed to a sediment control (e.g. temporary sediment basin, temporary sediment trap or sediment barrier) prior to discharge.

3. Sites shall be stabilized as soon as possible using conventional measures to minimize the need to use chemical treatment.

4. Select appropriate treatment chemicals. Chemicals must be selected that are appropriately suited to the types of soils likely to be exposed during construction and to the expected turbidity, pH, and flow rate of stormwater flowing into the chemical treatment system or treatment area. **Soil testing is essential. Using the wrong form of chemical treatment will result in some form of performance failure and unnecessary environmental risk.**

5. Minimize discharge risk from stored chemicals. Store all treatment chemicals in leak-proof containers that are kept under storm-resistant cover and surrounded by secondary containment structures (e.g., spill berms, decks, spill containment pallets), or provide equivalent measures, designed and maintained to minimize the potential discharge of treatment chemicals in stormwater or by any other means (e.g., storing chemicals in covered areas or having a spill kit available on site).

6. Use chemicals in accordance with good engineering practices and specifications of the chemical provider/supplier. You must also use treatment chemicals and chemical treatment systems in accordance with good engineering practices, and with dosing specifications and sediment removal

design specifications provided by the supplier of the applicable chemicals, or document specific departures from these practices or specifications and how they reflect good engineering practice.

Will chemical stabilizers, polymers, flocculants or other treatment chemicals be utilized on the proposed construction project?

☐ Yes ☒ No

3.12 Construction Activity Pollution Prevention Control Measure List

It is expected that this table will be amended as needed throughout the construction project.

Location/Station	Control Measure Description/Reference	Maintenance Requirement
Soil Stockpiles - Sheet No. 6	Temporary Soil Stockpile - Section Three: Pollution Prevention and Good Housekeeping, *RI SESC Handbook.*	Inspect and verify that activity–based measures are in place prior to the commencement of associated activities. While activities associated with the measure are under way, inspect daily during the rainy season and of two-week intervals in the non-rainy season to verify continued measure implementation. Repair and/or replace perimeter controls and covers as needed to keep them functioning properly. After the stockpile has been removed, the site should be graded and permanently stabilized.
Concrete Washout Area	Prefabricated Concrete Washout Container with Ramp. Used to contain concrete washout during concrete pouring operations - Section Three: Pollution Prevention and Good Housekeeping, Concrete Washouts, *RI SESC Handbook.*	Verify that concrete washout container(s) are in place prior to pouring concrete. Inspect daily to verify continued proper performance. Check remaining capacity during pouring operations. Check for leaks periodically.
Waste Management Area	Waste Management Area - Section Three: Pollution Prevention and Good Housekeeping, Waste Management, *RI SESC Handbook.*	All waste containers will be covered to avoid contact with wind and precipitation. Waste collection will be scheduled frequently enough to prevent containers from overfilling. All construction site wastes will be collected, removed, and disposed of in accordance with applicable regulatory requirements and only at authorized disposal sites.

		Inspect storage and use areas and identify containers or equipment that could malfunction and cause leaks or spills. Check equipment and containers for leaks, corrosion, support or foundation failure, or other signs of deterioration, and test them for soundness. Repair or replace any that are found to be defective as soon as practical.

SECTION 4: CONTROL MEASURE INSTALLATION, INSPECTION, and MAINTENANCE

4.1 Installation

Complete the installation of temporary erosion, runoff, sediment, and pollution prevention control measures by the time each phase of earth-disturbance has begun. All stormwater control measures must be installed in accordance with good judgment, including applicable design and manufacturer specifications. Installation techniques and maintenance requirements may be found in manufacturer specifications and/or the *RI SESC Handbook*, in the project construction specifications and on the attached construction drawings.

4.2 Monitoring Weather Conditions

Anticipating Weather Events - Care will be taken to the best of the operator's ability to avoid disturbing large areas prior to anticipated precipitation events. Weather forecasts must be routinely checked, and in the case of an expected precipitation event of over 0.25-inches over a 24-hour period, it is highly recommended that all control measures should be evaluated and maintained as necessary, prior to the weather event. In the case of an extreme weather forecast (greater than one-inch of rain over a 24-hour period), additional erosion/sediment controls may need to be installed.

Storm Event Monitoring For Inspections - At a minimum, storm events must be monitored and tracked in order to determine when post-storm event inspections must be conducted. Inspections must be conducted and documented at least once every seven (7) calendar days and within twenty-four (24) hours after any storm event, which generates at least 0.25 inches of rainfall per twenty-four (24) hour period and/or after a significant amount of runoff or snowmelt.

The weather gauge station and website that will be utilized to monitor weather conditions on the construction site is as follows:

College Hill, Providence, RI, www.wunderground.com,

4.3 Inspections

Minimum Frequency - Each of the following areas must be inspected by or under the supervision of the owner and operator at least once every seven (7) calendar days and within twenty-four (24) hours after any storm event, which generates at least 0.25 inches of rainfall per twenty-four (24) hour period and/or after a significant amount of runoff or snowmelt:

a. All areas that have been cleared, graded, or excavated and where permanent stabilization has not been achieved;

b. All stormwater erosion, runoff, and sediment control measures (including pollution prevention control measures) installed at the site;

c. Construction material, unstabilized soil stockpiles, waste, borrow, or equipment storage, and maintenance areas that are covered by this permit and are exposed to precipitation;

d. All areas where stormwater typically flows within the site, including temporary drainage ways designed to divert, convey, and/or treat stormwater ;

e. All points of discharge from the site;

f. All locations where temporary soil stabilization measures have been implemented; and

g. All locations where vehicles enter or exit the site.

Reductions in Inspection Frequency - If earth disturbing activities are suspended due to frozen conditions, inspections may be reduced to a frequency of once per month. The owner and operator must document the beginning and ending dates of these periods in an inspection report.

Qualified Personnel – The site owner and operator are responsible for designating personnel to conduct inspections and for ensuring that the personnel who are responsible for conducting the inspections are "qualified" to do so. A "qualified person" is a person knowledgeable in the principles and practices of erosion, runoff, sediment, and pollution prevention controls, who possesses the skills to assess conditions at the construction site that could impact stormwater quality, and the skills to assess the effectiveness of any stormwater controls selected and installed to meet the requirements of the permit.

Recordkeeping Requirements - All records of inspections, including records of maintenance and corrective actions must be maintained with the SESC Plan. Inspection records must include the date and time of the inspection, and the inspector's name, signature, and contact information.

General Notes

- A separate inspection report will be prepared for each inspection.
- The Inspection Reference Number shall be a combination of the RIPDES Construction General Permit No - consecutively numbered inspections. ex/ Inspection reference number for the **4th** inspection of a project would be: RIR10#####-**4**
- Each report will be signed and dated by the Inspector and must be kept onsite.
- Each report will be signed and dated by the Site Operator.
- The corrective action log contained in each inspection report must be completed, signed, and dated by the site operator once all necessary repairs have been completed.
- It is the responsibility of the site operator to maintain a copy of the SESC Plan, copies of all completed inspection reports, and amendments as part of the SESC Plan documentation at the site during construction.

Failure to make and provide documentation of inspections and corrective actions under this part constitutes a violation of your permit and enforcement actions under 46-12 of R.I. General Laws may result.

4.4 Maintenance

Maintenance procedures for erosion and sedimentation controls and stormwater management structures/facilities are described on the SESC drawings and in the *RI SESC Handbook*.

Site owners and operators must ensure that all erosion, runoff, sediment, and pollution prevention controls remain in effective operating condition and are protected from activities that would reduce their effectiveness. Erosion, runoff, sedimentation, and pollution prevention control measures must be maintained throughout the course of the project.

4.5 Corrective Actions

If, in the opinion of the designated site inspector, corrective action is required, the inspector shall note it on the inspection report and shall inform the site operator that corrective action is necessary. The site operator must make all necessary repairs whenever maintenance of any of the control measures instituted at the site is required.

In accordance with the *RI SESC Handbook*, the site operator shall initiate work to fix the problem immediately after its discovery, and complete such work by the close of the next work day, if the problem does not require significant repair or replacement, or if the problem can be corrected through routine maintenance.

When installation of a new control or a significant repair is needed, site owners and operators must ensure that the new or modified control measure is installed and made operational by no later than seven (7) calendar days from the time of discovery where feasible. If it is infeasible to complete the installation or repair within seven (7) calendar days, the reasons why it is infeasible must be documented in the SESC Plan along with the schedule for installing the control measures and making it operational as soon as practicable after the 7-day timeframe. Such documentation of these maintenance procedures and timeframes should be described in the inspection report in which the issue was first documented. If these actions result in changes to any of the control measures outlined in the SESC Plan, site owners and operators must also modify the SESC Plan accordingly within seven (7) calendar days of completing this work.

SECTION 5: AMENDMENTS

This SESC Plan is intended to be a working document. It is expected that amendments will be required throughout the active construction phase of the project. **NOTE: Even if practices are installed on a site according to the approved plan, the site is only in compliance when erosion, runoff, and sedimentation are effectively controlled throughout the entire site for the entire duration of the project.**

The SESC Plan shall be amended within seven (7) days whenever there is a change in design, construction, operation, maintenance or other procedure which has a significant effect on the potential for the discharge of pollutants, or if the SESC Plan proves to be ineffective in achieving its objectives (i.e. the selected control measures are not effective in controlling erosion or sedimentation).

In addition, the SESC Plan shall be amended to identify any new operator that will implement a component of the SESC Plan.

All revisions must be recorded in the Record of Amendments Log Sheet, which is contained in Attachment D of this SESC Plan, and dated red-lined drawings and/or a detailed written description must be appended to the SESC Plan. Inspection Forms must be revised to reflect all amendments. Update the Revision Date and the Version # in the footer of the Report to reflect amendments made.

All SESC Plan Amendments, except minor non-technical revisions, must be approved by the site owner and operator. Any amendments to control measures that involve the practice of engineering must be reviewed, signed, and stamped by a Professional Engineer registered in the State of RI.

The amended SESC plan must be kept on file at the site while construction is ongoing and any modifications must be documented.

SECTION 6: RECORDKEEPING

RIPDES Construction General Permit – Parts III.D, III.G, III.J.3.b.iii, & V.O

It is the site owner and site operator's responsibility to have the following documents available at the construction site and immediately available for RIDEM review upon request:

- A copy of the fully signed and dated SESC Plan, which includes:
  - A copy of Site Plans and Construction Specifications
    INCLUDED AS ATTACHMENT A
  - A copy of the RIPDES Construction General Permit
    INCLUDED AS ATTACHMENT B
  - Completed Inspection Reports w/Completed Corrective Action Logs
    INCLUDED AS ATTACHMENT C
  - SESC Plan Amendment Log
    INCLUDED AS ATTACHMENT D
  - A copy of any regulatory permits (CRMC Federal Consistency Review, RIDEM Water Quality Certification, RIDEM Groundwater Discharge Permit, RIPDES Construction General Permit authorization letter, etc.)
    INCLUDED AS ATTACHMENT E

SECTION 7: PARTY CERTIFICATIONS

RIPDES Construction General Permit – Part V.G

All parties working at the project site are required to comply with the Soil Erosion and Sediment Control Plan (SESC Plan including SESC Site Plans) for any work that is performed on-site. The site owner, site operator, contractors and sub-contractors are encouraged to advise all employees working on this project of the requirements of the SESC Plan. A copy of the SESC Plan is available for your review at the following location: Project Construction Trailer, or may be obtained by contacting the site owner or site operator.

The site owner and site operator and each subcontractor engaged in activities at the construction site that could impact stormwater must be identified and sign the following certification statement.

I acknowledge that I have read and understand the terms and conditions of the Soil Erosion and Sediment Control (SESC) Plan for the above designated project and agree to follow the control measures described in the SESC Plan and SESC Site Plans.

Site Owner:

National Grid LNG, LLC
William Howard
40 Sylvan Road
Waltham, MA

_____
signature/date

Site Operator: To be Determined

Insert Company or Organization Name
Insert Name & Title
Insert Address
Insert City, State, Zip Code
Insert Telephone Number, Insert Fax/Email

_____
signature/date

Designated Site Inspector:
GZA GeoEnvironmental
530 Broadway
Providence, RI 02909
401-421-4140,

_____
signature/date

Subcontractor SESC Plan Contact:
Insert Company or Organization Name
Insert Name & Title
Insert Address
Insert City, State, Zip Code
Insert Telephone Number, Insert Fax/Email

_____
signature/date

LIST OF ATTACHMENTS

Attachment A - Site Plans

Attachment B - Copy of RIPDES Construction General Permit and Authorization to Discharge

Attachment C - Inspection Reports w/ Corrective Action Log

Attachment D - SESC Plan Amendment Log

Attachment E - Copy of Other Regulatory Permits

RIPDES Permit No. RIR1#####

AUTHORIZATION TO DISCHARGE UNDER THE RHODE ISLAND POLLUTANT DISCHARGE ELIMINATION SYSTEM

GENERAL PERMIT FOR STORMWATER DISCHARGE ASSOCIATED WITH CONSTRUCTION ACTIVITY

In compliance with the provisions of Chapter 46-12 of the Rhode Island general Laws, as amended, except as provided in Part I.B.3 of the permit, operators of stormwater discharges associated with construction activity located in the State of Rhode Island are authorized to discharge in accordance with the conditions and requirements set forth herein.

Operators of stormwater discharges associated with construction activity within Rhode Island who intend to be authorized by this general permit must meet the application requirements outlined in Part I.D.1 of the permit. Authorization to discharge shall be granted in accordance with Part I.D of this permit.

This general permit shall become effective on September 26, 2013.

The general permit and the authorization to discharge expire at midnight, five years from the effective date, or September 25, 2018.

Signed this 24th day of September, 2013.

Angelo S. Liberti

Angelo S. Liberti, PE
Chief of Surface Water Protection
Office of Water Resources
Rhode Island Department of Environmental Management
Providence, Rhode Island

General Permit
Rhode Island Pollutant Discharge Elimination System
Stormwater Discharge Associated with Construction Activity

Effective Date: September 26, 2013

Valid ONLY in accordance with Part I.D.

Expiration Date: September 25, 2018

Rhode Island Department of Environmental Management
Office of Water Resources
Permitting Section
RIPDES Program

GENERAL PERMIT
RHODE ISLAND POLLUTANT DISCHARGE ELIMINATION SYSTEM
STORMWATER DISCHARGE ASSOCIATED WITH CONSTRUCTION ACTIVITY

PLEASE READ THIS PERMIT CAREFULLY!

The RIPDES Program of the Office of Water Resources realizes that effective regulatory mechanisms to control erosion and sedimentation are currently required by the RIDEM Freshwater Wetland Program, the RIDEM Water Quality Certification Program, the RIDEM UIC/Ground Permit Program, the RI Coastal Resources Management Council (CRMC); and in those towns/cities which have a Qualifying Local Program (QLP) that has been formally approved by the Department (see RIPDES Rule 15.01(i) for the definition of Qualifying State, or Local Programs). **Regardless of the means of obtaining approval, the permittee is still responsible for complying with all terms and conditions of this permit and any other applicable State, local and/or federal regulations. The Department will be held harmless for any failure of the permittee to comply with this permit.**

I. GENERAL COVERAGE UNDER THIS PERMIT

A. Permit Area. This permit applies to all areas of the State of Rhode Island.

B. Eligibility

1. Allowable Stormwater Discharges. Subject to compliance with the terms and conditions of this permit, you are authorized to discharge the following:

a. All new and existing stormwater discharges associated with construction, including, but not limited to, clearing, grading, excavation, and filling, where total land disturbance is equal to or greater than one (1) acres including construction activities involving soil disturbance`s of less than one (1) acre of disturbance if that construction is part of a larger common plan of development or sale that would disturb one (1) or more acre, and the discharge is composed entirely of stormwater. A discharge shall be considered composed entirely of stormwater if there is adequate access to sample the stormwater discharge covered under this permit prior to mixing with a discharge which is authorized and in compliance with an existing RIPDES permit or the discharge is listed in Part I.B.2. below.

b. Stormwater Discharges from support activities (e.g., concrete or asphalt batch plants, equipment staging areas, material storage areas, excavated material disposal areas, borrow areas) provided:

i. The support activity is directly related to the construction site required to have a RIPDES permit coverage for discharges of stormwater associated with construction activity;

ii. The support activity is not a commercial operation serving multiple unrelated construction projects by different operators, and does not operate beyond the completion of the construction at the last construction project it supports; and

iii. Appropriate controls and measures are identified in a Soil Erosion

and Sediment Control Plan covering the discharges from the support activity areas; and

c. Discharges composed of allowable discharges listed in Part I.B.2 of this permit commingled with a discharge authorized by a different RIPDES permit and/or discharge that does not require a RIPDES permit authorization.

2. Allowable Non-Stormwater Discharges. Allowable non-stormwater discharges under this permit are limited to discharges from the following:

a. washing of vehicles provided chemicals, soaps, detergents, steam, or heated water are not used; cleaning is restricted to the outside of the vehicle (e.g., no engines, transmissions, undercarriages, or truckbeds); or washing is not used to remove accumulated industrial materials, paint residues, heavy metals or any other potentially hazardous materials from surfaces;

b. the use of water to control dust;

c. fire fighting activities;

d. fire hydrant flushings;

e. natural springs; uncontaminated groundwater;

f. lawn watering;

g. potable water sources including waterline flushings; irrigation drainage;

h. pavement wash waters where spills or leaks of toxic or hazardous materials have not occurred (unless all spilled materials have been removed) and where detergents are not used;

i. foundation or footing drains where flows are not contaminated with process materials such as solvents, or contaminated by contact with soils where spills or leaks of toxic or hazardous materials has occurred.

If any of these discharges may reasonably be expected to be present and to be mixed with stormwater discharges, they must be specifically identified in the site's Soil Erosion and Sediment Control Plan as described in Part III of this permit.

3. Limitations of Coverage. The following discharges associated with construction are not authorized by this permit.

a. Stormwater discharges associated with construction that the Director of the Department of Environmental Management has found to be or may reasonably be expected to be contributing to a violation of water quality standards, or to be a significant contributor of pollutants;

b. Stormwater discharges associated with construction, allowable non-

stormwater discharges and discharge related activities that adversely affect a listed, or a proposed to be listed, endangered or threatened species or its critical habitat;

c. Stormwater associated with construction discharging into any water for which a Total Maximum Daily Load (TMDL) has been either established or approved by the EPA or other water quality determination unless the Stormwater Management Plan incorporates measures or controls that meet the requirements of this permit and are consistent with the assumptions and requirements of the TMDL and Minimum Standard 3: Water Quality of the RIDISM or the project was authorized and has maintained coverage under the 2008 permit (e.g. timely re-application to RIPDES or a RIDEM Freshwater Wetlands Permit, RIDEM Water Quality Certification, RIDEM UIC/Ground Permit, CRMC Assent or QLP approval remains in effect). If the EPA approved or established TMDL or other water quality determination specifically prohibits the discharges, the discharges are not eligible for coverage under this permit.

d. Stormwater associated with construction discharging into any Impaired water listed on the latest State of Rhode Island 303(d) List of Impaired Waters, unless the Stormwater Management Plan incorporates measures or controls that meet the requirements of this permit and address the pollutant(s) of concern as required by Standard 3: Water Quality of the RISDISM or if the project was authorized and has maintained coverage under the 2008 permit (e.g. timely re-application to RIPDES or a RIDEM Freshwater Wetlands Permit, RIDEM Water Quality Certification, RIDEM UIC/Ground Permit, CRMC Assent or QLP approval remains in effect).

e. Post-construction discharges that originate from the site after construction activities have been completed and the site has achieved final stabilization, including any temporary support activity. Post-construction stormwater from industrial sites may need to be covered by a separate RIPDES individual permit or may need to obtain authorization to discharge under the RIPDES Multi-Sector General Permit for Stormwater Discharge Associated with Industrial Activity. Guidance for managing discharges from industrial sites can be found in Part II.C of this permit.

C. <u>Definition of "Owner" & "Operator":</u>

1. For the purposes of this permit, the "owner" of a property is the person, as defined by Rule 3 of the RIPDES Regulations, holding the title, deed, or legal document to the regulated property, facility, or activity, including a party working under an easement on the property.

2. The "operator" is defined as the person who has operational control over plans and specifications, or the person who has day-to-day supervision and control of activities occurring at the site. Further, for purposes of this permit, the operator is the owner if that person is performing all work related to complying with this permit.

Where a new operator is selected after the submittal of an NOI and that new

operator is directly responsible for performing the work necessary to comply with this permit, prior to performing any work at the site the new operator must sign and certify within the Soil Erosion and Sediment Control Plan document that they are the operator of the site as defined above.

D. Authorization. To be covered under this general permit, owners or operators of stormwater discharges associated with construction activities that disturb one (1) or more acres or less than one (1) acre if that construction is part of a larger common plan of development or sale that would disturb one (1) or more acre, must comply with the applicable sections below.

1. Application Requirements

a. Sites Previously Authorized under the 2008 Construction Activity General Permit– Only those owners/operators listed below are required to submit a complete NOI form.

i. Construction activities that disturb greater than one (1) acre that did not obtain a RIDEM Freshwater Wetlands Permit, RIDEM Water Quality Certification, RIDEM UIC/Ground Permit, CRMC Assent or QLP approval.

b. New Applications – Submittal of a NOI is only required for construction activities that disturb greater than one (1) acre that are not required to obtain a RIDEM Freshwater Wetlands Permit, RIDEM Water Quality Certification, RIDEM UIC/Ground Permit, CRMC Assent or QLP approval. Specific application requirements are as follows:

i. Construction activities that disturb an area equal to or greater than five (5) acres are required to submit a complete NOI form and supporting documentation required in Part IV of this permit.

ii. Construction activities that disturb an area equal to or greater than one (1) acre and less than five (5) acres are required to submit a complete NOI form, project narrative and site plan/map showing flow paths, discharges, and receiving waters.

2. Deadlines for Requesting Authorization

a. For stormwater discharges associated with construction activities which were authorized under the 2008 Construction Activity General Permit which are expected to continue beyond the effective date of this permit and the owner is required to reapply, an NOI must be submitted within sixty (60) days of the effective date of this permit to maintain permit coverage in accordance with Part I.D.3 of this permit.

b. For stormwater discharges associated with construction activities which commence after the effective date of this permit, and are required to submit an NOI in accordance with Part I.D.1.b of this permit, an NOI must be submitted at least thirty (30) days prior to the commencement of land disturbing activities.

3. Granting of Authorization

a. Owners and operators previously authorized under the 2008 Construction Activity General Permit with an active RIDEM Freshwater Wetlands Permit, RIDEM Water Quality Certification, RIDEM UIC/Ground Permit, CRMC Assent or QLP approval will be authorized upon the effective date of this permit. Previously authorized projects must modify their existing Stormwater Management Plan to comply with Part II.B of this permit within sixty (60) days of the effective date in order to maintain permit coverage.

b. Owners and operators previously authorized under the 2008 Construction Activity General Permit and required to resubmit a NOI under Part I.D.1.a.i will be authorized upon resubmittal of the NOI. Previously authorized projects must modify their existing Stormwater Management Plan to comply with Part II.B of this permit within sixty (60) days of the effective date in order to maintain permit coverage.

c. Construction activities that disturb an area equal to or greater than one (1) acre that are required to obtain a RIDEM Freshwater Wetlands permit, RIDEM Water Quality Certification, RIDEM UIC/Ground Permit, CRMC Assent or QLP approval are authorized to discharge stormwater from construction activities under the terms and conditions of this permit upon receipt of all of the applicable permits listed here.

d. For construction activities that disturb an area equal to or greater than five (5) acres and are not required to obtain one of the approvals listed above in Part I.D.3.c, authorization to discharge will only be granted upon notification from the Director after review of the NOI and Stormwater Management Plan.

e. For construction activities that disturb an area equal to or greater than one (1) acre and less than five (5) acres and are not required to obtain one of the approvals listed in Part I.D.3.c automatic authorization to discharge will be granted upon receipt of the information required in Part I.D.1.b.ii unless notified to the contrary by the Director.

E. Termination of Coverage. Upon achieving final site stabilization, owners and operators of stormwater discharges associated with construction must submit to the DEM a completed Notice of Termination (NOT). At a minimum, the following information is required to terminate coverage under this permit:

1. The owner's name, mailing address, email address, and telephone number,
2. The operator's name, mailing address, email address, and telephone number
3. The name and location of the facility,
4. The RIPDES Construction General Permit authorization number,
5. A signed certification by the owner and operator that the stormwater discharge associated with construction activity no longer exists at the site.

Upon DEM receipt of the completed NOT coverage under this permit is terminated.

F. Failure to Notify. Owners or operators who fail to notify the Director of their intent to be covered under a general permit, and discharge pollutants to the waters of the State or to a separate storm sewer system without a RIPDES permit, are in violation of Chapter 46-12 of Rhode Island General Laws and the Clean Water Act (CWA).

II. PERMIT LIMITS AND CONDITIONS

If your project was previously authorized under the 2008 Construction General Permit your Stormwater Management Plan must only be revised as necessary to comply with Part II.B of this permit. The Stormwater Management Plan shall be modified to comply with Part II.B within sixty (60) days of the effective date of this permit. A Stormwater Pollution Prevention Plan (SWPPP) developed under the previous (2008) construction general permit may serve to satisfy Part III of this permit, provided it adequately addresses all new requirements.

To be covered under this permit you must develop a Stormwater Management Plan prior to submitting your NOI or your application for RIDEM Freshwater Wetlands Permit, RIDEM Water Quality Certification, RIDEM UIC/Ground Permit, CRMC Assent or QLP approval. In accordance with the *Rhode Island Stormwater Design and Installation Standards Manual* (RISDISM), the Stormwater Management Plan must include the following major elements, which serve to satisfy the eleven Minimum Standards outlined in the RISDISM, as well as comply with specific criteria for the site planning process, groundwater recharge, water quality, channel protection, and peak flow control requirements:

A. **Stormwater Site Planning, Analysis, and Design** – This element of the Stormwater Management Plan must address the following Minimum Standards and include supporting documentation and calculations:

1. Minimum Standard 1: LID Site Planning and Design Strategies
2. Minimum Standard 2: Groundwater Recharge,
3. Minimum Standard 3: Water Quality,
4. Minimum Standard 4: Conveyance and Natural Channel Protection,
5. Minimum Standard 5: Overbank Flood Protection,
6. Minimum Standard 6: Redevelopment and Infill Projects.
7. Minimum Standard 8: Land Uses with Higher Potential Pollutant Loads (LUHPPLs)
8. Minimum Standard 9: Illicit Discharges

In addition, the following Appendices from the RISDISM provide additional guidance on how to comply with the above listed standards:

1. Appendix B: Vegetation Guidelines and Planting List
2. Appendix C: Guidance for Retrofitting Existing Development for Stormwater Management
3. Appendix F: Guidance on BMP Construction Specifications
4. Appendix I: Rhode Island River and Stream Order
5. Appendix K: Hydrologic and Hydraulic Modeling Guidance

B. **Soil Erosion, Runoff, and Sediment Control** – In order to comply with this permit a component of the Stormwater Management Plan must address two sources of stormwater pollution: (1) pollution caused by soil erosion, runoff, and sedimentation during construction and (2) stormwater pollution generated as a direct result of the construction activity itself (i.e. stormwater contaminated by construction wastes and practices). The Stormwater

Management Plan must satisfy Part III of this permit and Minimum Standard 10 of the RISDISM – Construction Erosion and Sedimentation Control. In order to facilitate an expeditious DEM review and make it easier for the site owner and operator to comply with applicable soil erosion and sediment control requirements, it is recommended that a Soil Erosion and Sediment Control Plan be developed as a stand alone document.

C. **Post Construction Operation and Maintenance** – The Stormwater Management Plan must address *Minimum Standard 11: Stormwater Management System Operation and Maintenance* of the RISDISM to ensure that the stormwater management system constructed will continue to function as designed. The Plan must address the O&M requirements for each stormwater management practice in Chapter 5 of the RISDISM. Additional guidance on developing O&M plans can be found in Appendix E of the RISDISM. In addition the Plan must address *Minimum Standard 7: Pollution Prevention* of the RISDISM by incorporating source control and pollution prevention measures to minimize the impact that the land use may have on stormwater runoff quality after the construction development activities have been completed and the site is fully stabilized. Additional guidance can be found in Appendix G of the RISDISM. In order to facilitate an expeditious DEM review and make it easier for the site owner(s) to comply with applicable Operation and Maintenance requirements, it is recommended that an Operation and Maintenance Plan be developed as a stand alone document.

The facility may be required to obtain authorization to discharge under the RIPDES Multi-Sector General Permit for Stormwater Discharge Associated with Industrial Activity depending on the Standard Industrial Classification that will be applicable to the site when construction is complete. In these cases the Stormwater Management Plan should address the requirements of the RIPDES Multi-Sector General Permit for Stormwater Discharge Associated with Industrial Activity.

III. SOIL EROSION AND SEDIMENT CONTROL (SESC) PLAN REQUIREMENTS

A. The Soil Erosion and Sediment Control (SESC) Plan shall describe and ensure the implementation of stormwater control measures which are to be used to reduce or eliminate pollutants in stormwater discharge(s) from the site and assure compliance with the terms and conditions of this permit. Control practice selection shall include an evaluation of the effectiveness of available practices and be made with proper references.

B. Soil erosion, runoff, sediment, and pollution prevention control measures must be designed, implemented, and maintained in accordance with the requirements of this permit and in accordance with the design specifications and guidance contained in the *Rhode Island Soil Erosion and Sediment Control (RISESC) Handbook* (as amended) and the *Rhode Island Stormwater Design and Installation Standards Manual (RISDISM)* (as amended).

C. The SESC Plan shall be stamped and signed by a Registered Professional Engineer, a Certified Professional in Erosion and Sediment Control (CPESC), a Certified Professional in Stormwater Quality (CPSWQ), or a Registered Landscape Architect certifying that the SESC Plan meets all requirements of this permit. SESC Plans which require the practice of engineering must be stamped and signed by a Registered Professional Engineer.

D. If the SESC Plan is not required to be submitted along with the NOI (see Part I.D of this permit), then the owner, operator, or other designated person under the supervision of the

owner or operator shall make it available to the Department upon request.

E. If the SESC Plan is requested and reviewed by the Director, he or she may notify the permittee at any time that it does not meet one or more of the minimum requirements of this permit. After such notification from the Director, the permittee shall amend the SESC Plan and shall submit to the Director, within seven (7) days of the notification, a written certification that the required changes have been made.

F. The owner and operator shall amend the SESC Plan within seven (7) days whenever there is a change in design, construction, operation, maintenance or other procedure which has a significant effect on the potential for the discharge of pollutants, or if the SESC Plan proves to be ineffective in achieving its objectives. In addition, the SESC Plan shall be amended to identify any new operator that will implement a component of the SESC Plan. The amended SESC Plan must be kept on file at the construction site and any SESC Plan modifications must be documented. Any amendments to control measures which involved the practice of engineering, must first be reviewed, signed, and stamped by a Professional Engineer registered in the State of Rhode Island. The DEM reserves the right to review any SESC Plan amendments in the same manner as described in paragraph III.E (above).

G. A copy of the SESC Plan including site plans, amendments to the SESC Plan and site plans, records of inspections, maintenance, and corrective actions, a copy of the NOI, and any regulatory permits granted must be kept on site at all times during the extent of coverage under this permit. The site operator as defined by Part I.C.2 of this permit must maintain a copy of the SESC Plan at a central location on-site for the use of all those identified as having responsibilities under the SESC Plan whenever they are on the construction site. If an on-site location is unavailable to store the SESC Plan and associated records when no personnel are present, notice of the SESC Plan's location must be posted near the main entrance of the construction site.

H. Each project authorized under this permit must determine if the site is within or directly discharges to a Natural Heritage Area (NHA). DEM Natural Heritage Areas include known occurrences of state and federal rare, threatened and endangered species. Review DEM NHA maps to determine if there are natural heritage areas on or near the construction site.

I. List and provide existing data (if available) on the quality of known discharges from the site. The SESC Plan must identify any stormwater discharge associated with industrial activity other than construction if applicable.

J. Soil Erosion and Sediment Control Plans: Required Contents

1. **Erosion, Runoff, and Sediment Control Requirements** – Owners and Operators must design, install, and maintain effective erosion, runoff, and sediment controls that address the nature of stormwater run-on and runoff at the site, including factors such as expected flow from impervious surfaces, slopes, and site drainage features. If stormwater flow will be channelized at the site, site owners and operators must design temporary stormwater controls that will control peak flow rates and total stormwater volume, to minimize channel and stream bank erosion in the immediate vicinity of discharge points. These controls must be designed to address the range of soil particle sizes expected to be present, site soils, slope, and the expected amount, frequency, intensity, and duration of precipitation. At a minimum the following must be addressed:

a. Phase Construction Activity – describe the intended construction sequencing and timing of major activities, including grading activities, road and utility installation, and building phases. The estimated timetable and sequence of construction activities must address the following key activities:

   i. Installation of erosion, runoff, and sediment controls and temporary pollution prevention measures.

   ii. Protection of planned infiltration sites and qualifying pervious areas from compaction.

   iii. Inspection and maintenance of erosion, runoff, sediment controls and other temporary pollution prevention measures.

   iv. Final site stabilization and removal of temporary erosion, runoff, and sediment controls and temporary pollution prevention measures.

b. Control Stormwater Flowing Onto and Through the Project – Describe controls that will be used to divert flows from exposed soils, retain or detain flows, or otherwise limit runoff and the discharge of pollutants from exposed areas of the site. A description of controls, including design specifications and details must be provided.

c. Stabilize Soils – Describe controls that will be used to stabilize soils throughout the entire duration of the construction project, including phased clearing/grubbing, initiating stabilization practices, and maintaining stabilization practices. Soil stabilization of disturbed areas must, at a minimum be initiated immediately whenever any clearing, grading, excavating or other earth disturbance activities have permanently ceased on any portion of the site, or temporarily ceased on any portion of the site and will not resume for a period exceeding fourteen (14) calendar days. Stabilization must be completed using vegetative stabilization measures or using alternative measures whenever vegetative measures are deemed impracticable or during periods of drought.

d. Protect Storm Drain Inlets – Describe controls, including design specifications and details, that will be used to prevent soil and debris from entering storm drain inlets. If stormwater discharges from the construction site have the potential to enter storm drain inlets that then discharge to a surface water, the site owner and operator must:

   i. *Installation Requirements:* Install inlet protection practices that remove sediment from the discharge prior to entry into the storm drain inlet.

   ii. *Maintenance Requirements:* Clean, or remove and replace, the protection practices as sediment accumulates, the filter becomes clogged, and/or performance is compromised.

Accumulated sediment adjacent to the inlet protection measures should be removed by the end of the same work day in which it is found or by the end of the following work day if removal by the same work day is not feasible.

e. Protect Storm Drain Outlets - Describe controls, including design specifications and details, to be used to protect outlets discharging stormwater from the project. Outfall protection must be used to prevent scour or severe erosion at discharge points. The function of the specified controls must be to protect the soil surface, reduce velocity, and promote infiltration.

f. Establish Perimeter Controls and Sediment Barriers – Describe controls, including selection criteria and details, to be used to prevent soil erosion, filter, and trap sediment before it leaves the construction site.

i. *Installation Requirements*: Sediment controls must be installed along those perimeter areas of the site that will receive stormwater from earth disturbing activities.

ii. *Maintenance Requirements*: Maintenance of perimeter controls and sediment barriers must be completed in accordance with the maintenance requirements specified in the RISESC Handbook (as amended).

g. Establish Temporary Controls For The Protection of Post Construction Stormwater Practices – Identify the temporary practices that will be installed to protect permanent or long-term stormwater practices as they are installed and throughout the construction phase of the project so that they will function properly when they are brought online. Examples of long-term practices that may require protection include: infiltration basins, open vegetated swales and natural depressions, vegetated buffer strips, and permanent detention/retention structures. Examples of temporary control measures that can be used to protect permanent stormwater control measures include: establishing temporary sedimentation barriers around infiltrating practices, ensuring proper material staging areas and equipment routing (i.e. do not allow construction equipment to compact areas where infiltrating practices will be installed), and by conducting final cleaning of structural long term practices after construction is completed.

h. Temporary Sediment Trapping and Temporary Stormwater Conveyance Practices – Describe the need for temporary sediment trapping and temporary stormwater conveyance practices, and if required include design specifications and details which demonstrate that they comply with Minimum Standard 10 of the RISDISM.

i. Utilize Surface Outlets – To the maximum extent practicable, outlet structures must be utilized that withdraw water from the surface of temporary sedimentation basins, in order to minimize the discharge of pollutants. Exceptions may include periods of extended cold weather, where alternate outlets are required during frozen periods. If such a device

is infeasible for portions of or the entire construction period justification must be made in the SESC Plan.

j. Properly Use Treatment Chemicals - If the owner and/or operator plans to utilize polymers, flocculants, or other treatment chemicals at the construction site (e.g. dewatering, temporary sediment traps, stormwater conveyance practices, soil stabilization), the use of such chemicals must be managed in accordance with current best management practices and in accordance with the requirements of the *Rhode Island Soil Erosion and Sediment Control (RISESC) Handbook* (as amended).

2. **Construction Activity Pollution Prevention Requirements** – The purpose of pollution prevention is to prevent daily construction activities from causing pollution. The owner and operator must design, install, implement, and maintain effective pollution prevention practices to minimize the discharge of pollutants. Pollution prevention practices must be described that will serve to control pollutants used at the site. At a minimum pollution prevention measures must address the following:

a. Prohibited Discharges - The following discharges are prohibited at the construction site:

i. Contaminated groundwater, unless specifically authorized by the DEM. These types of discharges may only be authorized under a separate DEM RIPDES permit.

ii. Wastewater from washout of concrete, unless the discharge is contained and managed by appropriate controls.

iii. Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds, and other construction materials.

iv. Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance. Proper storage and spill prevention practices must be utilized at all construction sites.

v. Soaps or solvents used in vehicle and equipment washing.

vi. Toxic or hazardous substances from a spill or other release.

b. Minimize Off-Site Tracking of Sediments – Describe the location(s) of vehicle entrance(s) and exit(s), and stabilization practices used to prevent sediment from being tracked off-site. Sediment track-out must be minimized onto off-site streets, other paved areas, and sidewalks from vehicles exiting the construction site. Site owners and operators must:

i. Restrict vehicle use to properly designated exit points.

ii. Use properly designed and constructed construction entrances at all points that exit onto paved roads so that sediment removal occurs prior to vehicle exit.

iii. When and where necessary, use additional controls to remove sediment from vehicle tires prior to exit (i.e. wheel washing racks, rumble strips, and rattle plates).

iv. Where sediment has been tracked out from the construction site onto the surface of off-site streets, other paved areas, and sidewalks, the deposited sediment must be removed by the end of the same work day in which the trackout occurs. Track-out must be removed by sweeping, shoveling, or vacuuming these surfaces, or by using other similarly effective means of sediment removal. Operators are prohibited from hosing or sweeping tracked-out sediment into any stormwater conveyance, storm drain inlet, or surface water.

c. Proper Waste Disposal – Identify potential building materials and other construction wastes and document how these wastes will be properly managed and disposed of at the construction site. All types of wastes generated at the site must be disposed of in a manner consistent with State Law and/or regulations.

d. Spill Prevention and Control – All chemicals and/or hazardous waste material must be stored properly and legally in covered areas, with containment systems constructed in or around the storage areas. Areas must be designated for materials delivery and storage. All areas where potential spills can occur, and their accompanying drainage points must be described. The owner and operator must establish spill prevention and control measures to reduce the chance of spills, stop the source of spills, contain and clean-up spills, and dispose of materials contaminated by spills. The operator must establish and make highly visible location(s) for the storage of spill prevention and control equipment and provide training for personnel responsible for spill prevention and control on the construction site.

e. Control of Allowable Non-Stormwater Discharges – Allowable non-stormwater discharges as established in Part I.B.2 of this permit should be kept separate from stormwater flow through the use of appropriate control measures. The owner and operator must identify all allowable non-stormwater discharges associated with construction activity and describe the controls and measures that will be implemented at those locations to minimize pollutant contamination where applicable.

f. Control Dewatering Practices – Describe dewatering practices that will be implemented if water must be removed from an area so that construction activity can continue. Site owners and operators are prohibited from discharging groundwater or accumulated stormwater that is removed from excavations, trenches, foundations, vaults, or other similar points of accumulation, unless such waters are first effectively managed by appropriated control measures. Examples of appropriate control measures include, but are not limited to, temporary sediment basins or sediment

traps, sediment socks, dewatering tanks and bags, or filtration systems (e.g. bag or sand filters) that are designed to remove sediment. Uncontaminated, non-turbid dewatering water can be discharged without being routed to a control. At a minimum the following discharge requirements must be met for dewatering activities:

i. Do not discharge visible floating solids or foam.

ii. To the extent feasible, utilize vegetated, upland areas of the site to infiltrate dewatering water before discharge. In no case will surface waters be considered part of the treatment area.

iii. At all points where dewatering water is discharged utilize velocity dissipation devices.

iv. With filter backwash water, either haul it away for disposal or return it to the beginning of the treatment process.

v. Replace and clean the filter media used in dewatering devices when the pressure differential equals or exceeds the manufacturer's specifications.

vi. Dewatering practices must involve the implementation of appropriate control measures as applicable (i.e. containment areas for dewatering earth materials, portable sediment tanks and bags, pumping settling basins, and pump intake protection).

g. Establish Proper Building Material Staging Areas - Describe construction materials expected to be stored on-site and procedures for storage of materials to minimize exposure of the materials to stormwater. Minimization of exposure is not required in cases where the exposure to precipitation and to stormwater will not result in a discharge of pollutants, or where exposure of a specific material or product poses little risk of stormwater contamination (such as final products and materials intended for outdoor use).

h. Control Discharges from Stockpiled Sediment or Soil - Stockpile management consists of procedures and practices designed to minimize or eliminate the discharge of stockpiled material (soil, topsoil, base material, rubble) from entering drainage systems or surface waters. For any stockpiles or land clearing debris composed, in whole or in part, of sediment or soil, you must comply with the following requirements:

i. Locate piles within the designated limits of disturbance.

ii. Protect from contact with stormwater (including run-on) using a temporary perimeter sediment barrier.

iii. Where practicable provide cover or appropriate temporary

vegetative or structural stabilization to avoid direct contact with precipitation or to minimize the discharge of sediments.

iv. Do not hose down or sweep soil or sediment accumulated on pavement or other impervious surfaces into any stormwater conveyance, storm drain inlet, or surface water.

v. To the maximum extent practicable, contain and securely protect from wind.

i. Minimize Dust – describe dust control procedures and practices that will be used to suppress dust and limit its generation (i.e. applying water, limiting the amount of bare soil exposed at one time etc.).

j. Designate Washout Areas – describe the controls that will be used to minimize the discharge of pollutants from equipment and vehicle washing, wheel wash water, washout areas for concrete mixers, paint, stucco, etc. The recommended location(s) of washout areas should be identified, or at a minimum the locations where these washout areas should not be sited should be called out.

k. Establish Proper Equipment/Vehicle Fueling and Maintenance Practices – Describe equipment/vehicle fueling and maintenance practices that will be implemented to prevent pollutants from mixing with stormwater (e.g. secondary containment, drip pans, spill kits, etc.). Provide recommended location(s) of fueling/maintenance areas, or, at minimum, locations where fueling/maintenance should be avoided.

3. **Control Practice Installation, Inspection, and Maintenance Requirements**

a. Installation Requirements - Complete the installation of temporary erosion, runoff, sediment, and pollution prevention control measures by the time each phase of earth-disturbance has begun. All stormwater controls must be installed in accordance with good engineering practices, including applicable design specifications. Design specifications may be found in manufacturer specifications and/or the *Rhode Island Soil Erosion and Sediment Control (RISESC) Handbook* (as amended). Any departures from such specifications must be provided and demonstrated to reflect good engineering practices.

b. Inspection Requirements

i. *Minimum Frequency* - Each of the following areas must be inspected by or under the supervision of the owner and operator at least once every seven (7) calendar days and within twenty-four (24) hours after any storm event which generates at least 0.25 inches of rainfall per twenty-four (24) hour period and/or after a significant amount of runoff:

a. All areas that have been cleared, graded, or excavated and that have not yet completed

stabilization;

b. All stormwater erosion, runoff, and sediment control measures (including pollution prevention practices) installed at the site to comply with this permit;

c. Construction material, unstabilized soil stockpiles, waste, borrow, or equipment storage, and maintenance areas that are covered by this permit and are exposed to precipitation;

d. All areas where stormwater typically flows within the site, including temporary drainage ways designed to divert, convey, and/or treat stormwater;

e. All points of discharge from the site;

f. All locations where temporary or permanent soil stabilization measures have been implemented.

g. All locations where vehicles enter or exit the site.

ii. *Qualified Personnel* – The site owner and operator are responsible for designating personnel to conduct inspections and for ensuring that the personnel who are responsible for conducting the inspections are "qualified" to do so. A "qualified person" is a person knowledgeable in the principles and practices of erosion, runoff, sediment, and pollution prevention controls, who possesses the skills to assess conditions at the construction site that could impact stormwater quality, and the skills to assess the effectiveness of any stormwater controls selected and installed to meet the requirements of this permit.

iii. *Recordkeeping Requirements* - All records of inspections, including records of maintenance and corrective actions must be maintained with the SESC Plan. Inspection records must include the date and time of the inspection, and the inspector's name, signature, and contact information.

iv. *Reductions in Inspection Frequency* - If earth disturbing activities are suspended due to frozen conditions, inspections may be reduced to a frequency of once per month. The owner and operator must document the beginning and ending dates of these periods in the SESC Plan.

v. Failure to make and provide documentation of inspections under

this part constitutes a violation of this permit and enforcement actions under 46-12 of R.I. General Laws may result.

c. Maintenance Requirements – Site owners and operators must ensure that all erosion, runoff, sediment, and pollution prevention controls remain in effective operating condition and are protected from activities that would reduce their effectiveness. Site owners and operators must ensure that all erosion, runoff, sediment, and pollution prevention controls are inspected at the frequency established in Part III.J.3.b of this permit. If the designated site inspector finds a problem (i.e. erosion, runoff, sediment or pollution prevention controls require replacement, repair, or maintenance), the owner and operator must ensure that the necessary repairs or modifications are made in accordance with the following:

i. Initiate work to fix the problem immediately after discovering the problem, and complete such work by the close of the next work day, if the problem does not require significant repair or replacement, or if the problem can be corrected through routine maintenance.

ii. When installation of a new control or a significant repair is needed, site owners and operators must ensure that the new or modified control practice is installed and made operational by no later than seven (7) calendar days from the time of discovery where feasible. If it is infeasible to complete the installation or repair within seven (7) calendar days, the reasons why it is infeasible must be documented in the SESC Plan along with the schedule for installing the stormwater control(s) and making it operational as soon as practicable after the 7-day timeframe. Where these actions result in changes to any of the stormwater control measures outlined in the SESC Plan, site owners and operators must modify the SESC Plan accordingly within seven (7) calendar days of completing this work in accordance with Part III.F.

iii. If corrective actions are required, the site owner and operator must ensure that all corrective actions are documented on the inspection report in which the problem was first discovered. These corrective actions must be documented, signed, and dated by the site operator once all necessary repairs have been completed.

4. **Site Plan Requirements** – Site Plans must depict all of the control measures required to meet the SESC Plan requirements of this permit. Depending on the complexity, the SESC Plan may reference the complete construction plan set prepared as part of the overall Stormwater Management Plan, and/or may have a specific SESC Plan Set developed. The SESC Plan should indicate the plan type (General, Drainage & Utility, SESC Plan, etc.) and sheet numbers where the following required information can be found:

a. Title & Date of Plan Set(s).

b. Total Project Area, including all grading and/or excavation, and a defined Limit of Disturbance.

c. Pre- and post-development drainage patterns.

d. The location and name of the receiving waters and/or separate storm sewer system and the ultimate receiving waters that may be impacted during construction.

e. Location of environmentally sensitive features and areas to be preserved and/or protected.

f. Locations where stormwater discharges to a surface water or wetland.

g. Location of all existing and proposed impervious surfaces/structures.

h. Locations of potential sources of pollution that may reasonably be expected to affect the quality of stormwater discharges from the site (i.e. exposed, unstabilized soil stockpiles and construction material and waste collection areas).

i. Locations and timing of stabilization practices including phased clearing and grubbing based on scheduled activities.

j. The location of all erosion, runoff, sediment, and pollution prevention control measures, including the location of temporary sediment basins, diversions, or other water quality, peak discharge, and volume control structures

k. Areas within the project limits which are unsuitable for material storage areas, equipment storage areas, designated concrete washout collection areas, dumpsters, stockpiles, fueling locations, etc. (i.e. locations where these activities shall not occur, and recommendations of where they may occur).

l. The location of spill prevention and response equipment.

m. The location of all proposed post-construction best management practices including locations of infiltrating practices and prohibited traffic areas.

IV. NOTICE OF INTENT REQUIREMENTS

A. Contents of the Notice of Intent:

1. The owner's name, mailing address, telephone number, email address, contact person, and billing address.

2. The operator's name, mailing address, telephone number, email address, and contact information.

3. Construction site information, including the street address, latitude and longitude, nearest utility pole number, and Assessors plat and lot.

4. Information for construction sites that are part of a larger common plan of development or sale, including the name of the larger common plan of development and total disturbed area of the larger common plan.

5. The projected or actual construction commencement date and the projected construction completion date.

6. The total area of the site and total disturbed acres.

7. The name of the receiving water(s), or if the discharge is through a separate storm sewer system, the name of the operator of the separate storm sewer system and the ultimate receiving water(s), including the water body ID number, and whether the water body is a cold or warm water fishery.

8. Indicate whether or not the water body is considered impaired, provide the list of impairments if applicable, indicate whether or not the water body is an SRPW or if a TMDL has been completed for the receiving water body.

9. Indicate whether or not the proposed project is associated with a DEM Office of Waste Management (OWM) site?

10. Indicate whether or not the proposed project is associated with a previously submitted permit application or DEM enforcement action.

11. Identify whether or not the project meets the criteria for a Land Use with Higher Potential Pollutant Loads (LUHPPL) as defined by the *Rhode Island Stormwater Design and Installation Standards Manual* (as amended).

12. Will the site require a separate permit for the proposed industrial activity under Rule 31(b)15 of the RIPDES Regulations? If yes, describe.

13. Is the site within or directly discharging to a Natural Heritage Area (NHA)?

14. A signed certification by the Owner and Operator that the NOI and all attachments were prepared under the direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. That the information submitted on the NOI and all attachments is true, accurate, and complete. In addition, the Owner and Operator indicate that a stormwater permit is contingent upon approval from the reviewing agency and that there are significant penalties for submitting false information including the possibility of fine and imprisonment for knowing violations. The Owner and Operator must also certify that they are aware that it is their responsibility to implement and amend the Soil Erosion and Sediment Control Plan as appropriate in accordance with the requirements of this permit.

15. A signed certification by a Registered Professional Engineer, a Certified Professional in Erosion and Sediment Control (CPESC), a Certified Professional in Stormwater Quality (CPSWQ), or a Registered Landscape Architect certifying that the construction activity is located completely outside of and does not discharge directly to a Natural Heritage Area found on RIDEM's web site [under Maps, Environmental Resource Map, Regulatory Overlays, Natural Heritage Area – Rare Species]. For projects that propose a stormwater or allowable non-stormwater discharge to a Natural Heritage Area, or has discharge related activities that potentially affect a listed or proposed to be listed endangered or threatened species or its critical habitat, the owner must submit a map showing the location of the construction site, including the street, nearest utility pole number, Assessors plat and lot, total area of the site, and the limits of disturbance.

16. A signed certification by a Registered Professional Engineer, a Certified Professional in Erosion and Sediment Control (CPESC), a Certified Professional in Stormwater Quality (CPSWQ), or a Registered Landscape Architect, that the SESC Plan has been developed in accordance to the requirements of this permit as well as all applicable guidelines of the *Rhode Island Soil Erosion and Sediment Control Handbook* (as amended) and the *Rhode Island Stormwater Design and Installation Standards Manual* (as amended). If the SESC Plan requires the practice of engineering, the NOI must be signed by a Registered Professional Engineer.

17. For construction activities that disturb an area greater than or equal to five (5) acres and are not required to obtain a RIDEM Freshwater Wetlands Permit, RIDEM Water Quality Certification, RIDEM UIC/Ground Permit, CRMC Assent or QLP, the NOI must include a completed Stormwater Management Checklist as provided in Appendix A of the *Rhode Island Stormwater Design and Installation Standards Manual* (as amended) and a copy of the Stormwater Management Plan.

18. After review of the NOI, additional information may be required by this office to determine whether or not to authorize the discharge under this permit.

B. Where to Submit. A completed and signed NOI must be submitted to:

R.I. Department of Environmental Management
Office of Water Resources
RIPDES Permitting Program
235 Promenade Street
Providence, RI 02908

C. Additional Notification. Construction sites discharging stormwater must submit a copy of the NOI to the applicable Town or City Department in which the construction activity and the point of discharge is located.

D. Deficient If the NOI does not meet one or more of the minimum requirements of this permit, then the applicant will be notified as such by a deficiency letter at any point during the review period. It is the responsibility of the applicant to make all required changes in the plan and resubmit the application. The review period will recommence upon the departmental receipt of the revised application.

V. GENERAL REQUIREMENTS

A. Duty to Comply. The permittee must comply with all conditions of this permit and any other applicable State, local and/or federal regulations. Any permit noncompliance constitutes a violation of Chapter 46-12 of the Rhode Island General Laws and the CWA and is grounds for enforcement action which may include, permit termination, revocation and reissuance, modification, or for the denial of a permit renewal application and the imposition of penalties.

1. The permittee shall comply with effluent standards or prohibitions established under Section 307(a) of the CWA for toxic pollutants within the time provided in the regulations that establish these standards or prohibitions, even if the permit has not yet been modified to incorporate this requirement.

2. Section 309 of the CWA provides significant penalties for any person who violates a permit condition implementing Sections 301, 302, 306, 307, 308, 318, or 405 of the CWA or any permit condition or limitation implementing any such sections in a permit issued under Section 402 of the CWA. Any person who violates any condition of this permit is subject to a civil penalty of up to $25,000 per day of such violation, as well as any other appropriate sanctions provided by Section 309 of the CWA. Section 309(c)(4) of the CWA provides that any person who knowingly makes any false material statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including reports of compliance or noncompliance shall, upon conviction, be punished by a fine of up to $10,000 or by imprisonment of not more than two (2) years, or by both.

3. Chapter 46-12 of the R.I. General Laws provides that any person who violates a permit condition is subject to a civil penalty of not more than $25,000 per day of such violation. Any person who willfully or negligently violates a permit condition is subject to a criminal penalty of not more than $25,000 per day of such violation and imprisonment for not more than five (5) years, or both. Any person who knowingly makes any false statement in connection with the permit is subject to a criminal penalty of not more than $5,000 for each instance of violation or by imprisonment for not more than thirty (30) days, or both.

B. Continuation of the Expired General Permit. Provided the permittee has reapplied in accordance with paragraph C. below, an expired general permit continues in force and effect until a new general permit is issued. Only those construction sites previously authorized to discharge under the expired permit are covered by the continued permit.

C. Duty to Reapply. If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain coverage under a new permit. The permittee shall submit a complete Notice of Intent at least thirty (30) days before the expiration date of the existing permit, unless permission for a later date has been granted by the Director.

D. Need to Halt or Reduce Activity Not a Defense. It shall not be a defense for the permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

E. Duty to Mitigate. The permittee shall take all reasonable steps to minimize or prevent any

discharge in violation of this permit, which has a reasonable likelihood of adversely affecting human health or the environment.

F. Duty to Provide Information. The permittee shall furnish to the Department, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit, or to determine compliance with this permit. The permittee shall furnish to the Director any documents that are required to be kept as part of this permit.

G. Signatory Requirements. All Notices of Intent, Stormwater Management Plans, Soil Erosion and Sediment Control Plans, inspection reports, certifications, or other information submitted to the Director, or that this permit requires be maintained by the permittee shall be signed and certified in accordance with Rule 12 of the RIPDES regulations. R.I. General Laws, Chapter 46-12 provides that any person who knowingly makes any false statements, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be punished by a fine of not more than $5,000 per violation, or by imprisonment for not more than thirty (30) days per violation, or by both.

H. Oil and Hazardous Substance Liability. Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under Section 311 of the CWA.

I. Release in Excess of Reportable Quantities. If a release in excess of a reportable quantity occurs, this office must be notified immediately. This permit does not relieve the permittee of the reporting requirements of 40 CFR 117 and 40 CFR 302. The discharge of hazardous substances in the stormwater discharge(s) from a facility shall be minimized in accordance with the applicable stormwater management plan for the facility, and in no case, during any twenty four (24) hour period, shall the discharge(s) contain a hazardous substance equal to or in excess of reportable quantities.

J. Property Rights. The issuance of this permit does not convey any property rights of any sort, nor any exclusive privileges, nor does it authorize any injury to private property nor any invasion of personal rights, nor any infringement of Federal, State, or local laws or regulations.

K. Severability. The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances and the remainder of this permit shall not be affected thereby.

L. Transfers. This permit is not transferable to any person except after notice to the Director. The Director may require the owner and operator to apply for and obtain an individual RIPDES permit as stated in Part V.T. of this permit.

M. State Laws. Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable State law.

N. Proper Operations and Maintenance. The permit shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the requirements of this permit.

O. Record Keeping

1. The permittee shall retain records of all inspections and reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least five (5) years from the date of the report or application. The records must be kept at the construction site at all times. If an on-site location is deemed impractical, notice of the location of the required records must be posted near the main entrance to the construction site. Once the construction project is complete and the permit has been terminated, records must be kept at either the completed project location or the records must be maintained by the owner of record at the time that the construction project was active. This period may be extended by request of the Director at any time.

P. Bypass of Stormwater Control

1. *Anticipated Bypass.* If the permittee knows in advance of the need for a bypass, he or she shall notify this Department in writing at least ten (10) days prior to the date of the bypass. Such notice shall include the anticipated quantity and the anticipated effect of the bypass.

2. *Unanticipated Bypass.* The permittee shall submit notice of an unanticipated bypass. Any information regarding the unanticipated bypass shall be provided orally within twenty four (24) hours from the time the permittee became aware of the circumstances. A written submission shall also be provided within five (5) days of the time the permittee became aware of the bypass. The written submission shall contain a description of the bypass and its cause; the period of the bypass; including exact dates and times, and if the bypass has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate and prevent reoccurrence of the bypass.

3. *Prohibition of Bypass.*

a. Bypass is prohibited and enforcement action against the permittee may be taken for the bypass unless:

i. The bypass was unavoidable to prevent loss of life, personal injury or severe property damage;

ii. The permittee submitted notices as required in paragraphs P.1. and P.2. above.

b. The Director may approve an unanticipated bypass after considering its adverse effects, if the Director determines that it will meet the two conditions in paragraph P.3.a. above.

Q. Upset Conditions

1. An upset constitutes an affirmative defense to an action brought for non-compliance with technology based permit limitations if the requirements of paragraph 2 below are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

2. A permittee who wishes to establish an affirmative defense of an upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence, that:

   a. An upset occurred and the permittee can identify the specific causes(s) of the upset;
   b. The permittee facility was at the time being properly operated;
   c. The permittee submitted notice of the upset as required in Rule 14.08 of the RIPDES Regulations; and
   d. The permittee complied with any remedial measures required under Rule 14.05 of the RIPDES Regulations.

3. In any enforcement proceeding the permittee seeking to establish the occurrence of an upset has the burden of proof.

R. Inspection and Entry. The permittee shall allow the Director, upon the presentation of credentials and other documents as may be required by law, to:

1. Enter upon the permittee's premises where a regulated activity is conducted, or where records must be kept under the conditions of this permit;
2. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
3. Inspect at reasonable times any equipment, practices, or operations regulated or required under this permit; and
4. Sample or monitor any substances or parameters at any location, at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the CWA or R.I. law.

S. Permit Actions. This permit may be modified, revoked and reissued, or terminated for cause, including but not limited to: violation of any terms or conditions of this permit; obtaining this permit by misrepresentation or failure to disclose all relevant facts; or a change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

T. Requiring an Individual Permit or an Alternative General Permit

1. The Director of the Department of Environmental Management (DEM) may require any owner or operator authorized to discharge stormwater under this permit to apply for and obtain either an individual or an alternative RIPDES general permit. Any interested person may petition the Director to take action under this paragraph. The Director may determine at his or her own discretion that an individual or an alternative general permit is required (see RIPDES Rule 32 for reasons why an

alternative permit may be required).

2. Any owner or operator authorized to discharge stormwater by this permit may request to be excluded from coverage of this permit by applying for coverage under an individual permit or an alternative general permit. The request shall be granted by the issuance of an individual permit only if the reasons cited by the owner or operator are adequate to support the request. The Director shall notify the permittee within a timely fashion as to whether or not the request has been granted.

3. If a facility requests or is required to obtain coverage under an individual or an alternative general permit, then authorization to discharge stormwater under this permit shall automatically be terminated on the date of issuance of the individual or the alternative general permit. Until such time as an alternative permit is issued, the existing general permit remains fully in force.

U. Reopener Clause

1. If there is evidence indicating potential or realized impacts on water quality due to any stormwater discharge associated with construction covered by this permit, the owner or operator of such discharge may be required to obtain an individual permit or alternative general permit in accordance with Part V.T. of this permit or the permit may be modified to include different limitations and/or requirements.

2. Permit modification or revocation will be conducted in accordance with 40 CFR 122.62, 122.63, 122.64 and 124.5.

V. Availability of Reports. Except for data determined to be confidential under Part W.1. below, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the DEM at 235 Promenade Street, Providence, Rhode Island. As required by the CWA, effluent data shall not be considered confidential. Knowingly making any false statement on any such report may result in the imposition of criminal penalties as provided for in Section 309 of the CWA and under Chapter 46-12-14 of the Rhode Island General Laws.

W. Confidentiality of Information

1. Any information submitted to DEM pursuant to these regulations may be claimed as confidential by the submitter, consistent with Rhode Island General Law 38-2-2. Any such claim must be asserted at the time of the submission in the manner prescribed on the application form or instructions or, in the case of other submissions, by stamping the words "confidential business information" on each page containing such information. If no claim is made at the time of submission, DEM may make the information available to the public without further notice.

2. Claims of confidentiality for the following information will be denied:

   a. The name and address of any permit application or permittee;
   b. Permit applications, permits and any attachments thereto; and
   c. RIPDES effluent data.

X. Right to Appeal. Within thirty (30) days of receipt of notice of final authorization, the permittee or any interested person may submit a request to the Director for an adjudicatory hearing to reconsider or contest that decision. The request for a hearing must conform to the requirements of Rule 49 of the RIPDES Regulations.

SUMMARY OF SIGNIFICANT CHANGES TO THE RIPDES CONSTRUCTION GENERAL PERMIT

Several significant changes from the previous (2008) General Permit for Construction Activities have been incorporated into the draft 2013 Permit. The Permit has been amended to be consistent with the 2010 *Rhode Island Stormwater Design and Installation Standards Manual* (RISDISM), to incorporate the 2009 EPA Federal effluent limitation guidelines (ELGs) and new source performance standards (NSPS) for the Construction and Development Point Source Category, and to streamline the permit application and authorization process. This document is not a comprehensive list of all edits and changes that have been made to the 2008 permit in the 2013 permit. Please carefully review the actual documents for this level of detail. The most significant changes are listed below:

1. Part I.B.1.a the following language was deleted If a construction site is within the jurisdiction of a Qualifying Local Program (QLP), and the operator of the construction activity is not required to obtain a RIDEM Freshwater Wetlands Permit, Coastal Resources Management Council (CRMC) permit, or a RIDEM Water Quality Certification, the operator must apply for QLP approval unless the operator is a Federal or State agency that has obtained RIPDES permit authorization from the Department. For sites requiring QLP approval, all conditions of this permit apply, with the exception of Parts V.L. and V.T. This permit does not pre-empt or supersede or expand the authority of local agencies to prohibit, restrict, or control discharges of storm-water to storm drains or other water courses within their jurisdiction;

2. Part I.B.2 Allowable non-stormwater discharges was amended to be consistent with allowable non-stormwater discharges in the RIPDES MSGP and MS4 permits.

3. Part I.B.3.c Limitations on Coverage has been modified and Part 1.B.3.d was added to reflect the requirements applicable to discharges to impaired waterbodies with or without a TMDL as specified in RISDISM Minimum Standard 3: Water Quality.

4. Part I.C. was amended to add a definition of owner/operator.

5. In order to align the permit requirements with the 2010 RISDISM which became effective in December 2010:

    a. Part I.D. *Authorization* was amended to reflect application and permit streamlining in the Office of Water Resources and CRMC permitting programs since the issuance of the RISDISM.

The revised permit reduces the need for multiple applications to State Agencies by adding the Underground Injection Control (UIC) and Ground Permit to the list of permits that also serve as RIPDES permits and eliminates the requirement for activities in CRMC and WQC jurisdiction to submit an application to RIPDES.

This section was also re-organized to have separate sections for application requirements, deadlines to request authorization and a clear description of how and when projects will obtain authorization.

Owners and operators of construction activities that disturb greater than one (1) acre whose projects were previously authorized under the 2008 Construction Activity General Permit that obtained a RIDEM Freshwater Wetlands Permit, RIDEM Water Quality Certification, RIDEM UIC/Ground Permit, RI CRMC Assent or QLP approval are not required to re-apply in order to continue to be authorized under this permit. Owners and operators of construction activities that disturb greater than one (1) acre whose projects were previously authorized under the 2008 Construction Activity General Permit that did not obtain one of the above-mentioned permits are required to submit a NOI to continue to be authorized.

If your project was previously authorized under the 2008 Construction General Permit your Stormwater Management Plan must only be revised as necessary to comply with Part II.B of this permit. The Stormwater Management Plan shall be modified to comply with Part II.B within sixty (60) days of the effective date of this permit. A Stormwater Pollution Prevention Plan (SWPPP) developed under the previous (2008) construction general permit may serve to satisfy Part III of this permit, provided it adequately addresses all new requirements.

For new applications, submittal of a NOI is only required for construction activities that disturb greater than one (1) acre that are not required to obtain a RIDEM Freshwater Wetlands Permit, RIDEM Water Quality Certification, RIDEM UIC/Ground Permit, CRMC Assent or QLP approval.

Application requirements for Construction activities that disturb an area equal to or greater than one (1) acre and less than five (5) acres were amended to include a project narrative and site plan/map showing flow paths, discharges, and receiving waters with the a complete NOI form.

b. Part II. *Permit Limits and Conditions*, Part A. was amended to clarify that a Stormwater Management Plan consistent with the RISDISM must be developed for each construction project seeking coverage under this permit and provides an outline of the three (3) elements of a Stormwater Management Plan: 1) Stormwater Site Planning, Analysis, and Design, 2) Soil Erosion, Runoff, and Sediment Control, and 3) Post Construction Operation and

Maintenance. In cases where a project was previously authorized under the 2008 Construction General Permit the Stormwater Management Plan only has to be revised as necessary to comply with Part II.B (Soil Erosion, Runoff, and Sediment Control) within 60 days of the effective date of this permit. A Stormwater Pollution Prevention Plan (SWPPP) developed under the previous (2008) construction general permit may serve to satisfy Part III (Soil Erosion and Sediment Control Plan Requirements) of this permit, provided it adequately addresses all new requirements.

c. Part II *Permit Limit and Conditions* has also been amended to refer to Minimum Standard 10 – Construction Erosion and Sedimentation Control and Minimum Standard 11: Operation and Maintenance and Minimum Standard 7: Pollution Prevention of the RISDISM.

d. Part III. *SOIL EROSION AND SEDIMENT CONTROL (SESC) PLAN REQUIREMENTS* has been amended to change the name of the plan required to address pollution associated with construction activity from a Stormwater Pollution Prevention Plan to a Soil Erosion and Sediment Control Plan. This name change has been made to better align the permit with the requirements of the RISDISM. Part III B requires measures to be designed, implemented and maintained in accordance with the RI Soil Erosion and Sediment Control (RISESC) Handbook in order to be consistent with Standard 10 of the RISDISM which also contains this requirement.

6. The Soil Erosion and Sediment Control Plan (SESC Plan) (formerly known as a Stormwater Pollution Prevention Plan) has undergone some minor enhancements to be consistent with the RISDISM and the RISESC Handbook. The SESC Plan as required by Part III of the general permit must address :

a. The required elements of SESC Plans are specifically listed in Part III.J of the permit and additional guidance has been included to better clarify the intent of these required elements.

b. More prescriptive installation and maintenance requirements have been established for storm drain inlets and perimeter controls and sediment barriers (see Part III.J.1.d and f, respectively).

c. Clearer maintenance requirements have been established in the draft permit to ensure that work is initiated to fix a problem immediately after it is discovered, and that the owner/operator complete such work by the close of the next work day, if the control practice problem does not require significant repair or replacement, or if the problem can be corrected through routine maintenance.

d. The requirements for pollution prevention and good housekeeping have been re-organized in Part III.J.2 of the permit entitled "Construction Activity Pollution Prevention Requirements".

7. On December 1, 2009, EPA published in the Federal Register (74 FR 62995) effluent limitation guidelines (ELGs) and new source performance standards (NSPS) for the Construction and Development Point Source category. These requirements are referred to as "the C&D rule". The required narrative standards contained in the C&D rule have been incorporated into this draft permit either directly as specific permit requirements or by reference to relevant design and guidance documents already in existence. Rule 15 of the RI Water Quality Regulations addresses procedures for the review of applications, and states that in consideration of an application the Department may use but is not limited to, a variety of design documents including: the *Rhode Island Soil Erosion and Sediment Control (RISESC) Handbook* (as amended) and the *Rhode Island Stormwater Design and Installation Standards Manual* (RISDISM) (as amended). In addition, a specific permit requirement has been added which requires control measures to be designed, implemented, and maintained in accordance with these two design documents. Listed below in *italics* are each of the C&D rule narrative requirements and a description of how these requirements have been addressed in the draft permit:

a. *Erosion and Sediment Controls. Design, install and maintain effective erosion controls and sediment controls to minimize the discharge of pollutants. At a minimum, such controls must be designed, installed and maintained to:*

   i. *Control stormwater volume and velocity within the site to minimize soil erosion in order to minimize pollutant discharges.* This narrative requirement is addressed through required compliance with in RISDISM Minimum Standard 10 – Construction Erosion and Sedimentation Control.

   ii. *Control stormwater discharges, including both peak flowrates and total stormwater volume, to minimize channel and streambank erosion in the immediate vicinity of discharge points.* This narrative requirement is addressed through required compliance with RISDISM Minimum Standard 10 – Construction Erosion and Sedimentation Control.

   iii. *Minimize the amount of soil exposed during construction activity.* This narrative requirement is addressed through required compliance with RISDISM Minimum Standard 1, Low Impact Development Site Planning and Design Strategies, Section 3.3.1.3, Appendix A Checklist 1.D. Locating Sites in Less Sensitive Areas, and Section 4.5.1 that require that land disturbance be minimized.

   iv. *Minimize the disturbance of steep slopes.* This narrative requirement is addressed through required compliance with RISDISM Minimum Standard 1, Low Impact Development Site Planning and Design Strategies, Section 3.3.1.3 and Appendix A Checklist 1.D Locating Sites

in Less Sensitive Areas, and Section 4.5.1 Avoid the Impacts which requires that development on steep slopes be avoided to the maximum extent practicable.

v. *Minimize sediment discharges from the site. The design, installation, and maintenance of erosion and sediment controls must address factors such as the amount, frequency, intensity and duration of precipitation, the nature of resulting stormwater runoff, and soil characteristics, including the range of soil particle sizes expected to be present on the site.* This narrative requirement is addressed through required compliance with RISDISM Minimum Standard 10 – Construction Erosion and Sedimentation Control.

vi. *Provide and maintain natural buffers around waters of the United States, direct stormwater to vegetated areas and maximize stormwater infiltration to reduce pollutant discharges, unless infeasible.* This narrative requirement is addressed through the DEM Freshwater Wetlands regulations and Coastal Resources Management Council regulations for inland and coastal buffers. These Regulations also require compliance with RISDISM Minimum Standard 1, Low Impact Development (LID) Site Planning and Design Strategies and Section 4.5 LID Site Planning and Design Criteria which requires applicants to maximize the protection of natural drainage areas, streams, surface waters, and jurisdictional wetland buffers. Section 4.5.1 Avoid the Impacts, also requires the preservation of buffers and floodplains by delineating and preserving naturally vegetated riparian buffers and floodplains and implementing measures to ensure that buffers and native vegetation are protected throughout planning, design, construction, and occupancy.

vii. *Minimize soil compaction. Minimizing soil compaction is not required where the intended function of a specific area of the site dictates that it can be compacted. Unless infeasible, preserve topsoil. Preserving topsoil is not required where the intended function of a specific area of the site dictates that the topsoil be disturbed or removed.* These narrative requirements are addressed through required compliance with RISDISM Minimum Standard 1, LID Site Planning and Design Strategies. Section 3.3.1 LID Site Planning and Design Criteria requires the minimization of soil compaction and restoration of soils compacted as a result of construction activities or prior development. In addition, Appendix B of the RISDISM, General Planting Guidance for LID Practices specifically requires that whenever possible, topsoil should be spread to a depth of four inches (two inch minimum) over the entire area to be planted.

b. <u>Soil Stabilization.</u> *Stabilization of disturbed areas must, at a minimum, be*

initiated immediately whenever any clearing, grading, excavating, or other earth disturbing activities have permanently ceased on any portion of the site, or temporarily ceased on any portion of the site and will not resume for a period exceeding 14 calendar days. In arid, semiarid, and drought-stricken areas where initiating vegetative stabilization measures immediately is infeasible, alternative stabilization measures must be employed as specified by the permitting authority. Stabilization must be completed within a period of time determined by the permitting authority. In limited circumstances, stabilization may not be required if the intended function of a specific area of the site necessitates that it remain disturbed. This narrative requirement is addressed directly by a specific permit requirement in Part III.J.1.c.

c. <u>Dewatering.</u> *Discharges from dewatering activities, including discharges from dewatering of trenches and excavations, are prohibited unless managed by appropriate controls.* This narrative requirement is addressed directly by a specific permit requirement in Part III.J.2.f of the Soil Erosion and Sediment Control Plan requirements.

d. <u>Pollution Prevention Measures.</u> *Design, install, implement, and maintain effective pollution prevention measures to minimize the discharge of pollutants. At a minimum, such measures must be designed, installed, implemented and maintained to:*

   i. *Minimize the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other wash waters. Wash waters must be treated in a sediment basin or alternative control that provide equivalent or better treatment prior to discharge;*

   ii. *Minimize the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste and other materials present on the site to precipitation and stormwater. Minimization of exposure is not required in cases where the exposure to precipitation and to stormwater will not result in a discharge of pollutants, or where exposure of a specific material or product poses little risk of stormwater contamination (such as final products and materials intended for outdoor use).*

   iii. *Minimize the discharge of pollutants from spills and leaks and implement chemical spill and leak prevention and response procedures.*

These narrative requirements are addressed directly by specific permit requirements in Part III.J.2.c & d of the Soil Erosion and Sediment Control Plan requirements entitled: Construction Activity Pollution Prevention Requirements, <u>Proper Waste Disposal</u> and <u>Spill Prevention and Control</u>, respectively.

e. *Prohibited Discharges. The following discharges are prohibited:*

iv. *Wastewater from washout of concrete, unless managed by an appropriate control;*

v. *Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds and other construction materials;*

vi. *Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance; and*

vii. *Soaps or solvents used in vehicle and equipment washing*

These narrative requirements are addressed directly by specific permit requirements in Part III.J.2.a of the Soil Erosion and Sediment Control Plan requirements, Prohibited Discharges.

f. *Surface Outlets. When discharging from basins and impoundments, utilize outlet structures that withdraw water from the surface, unless infeasible.* This narrative requirement is addressed directly by specific permit requirements in Part III.J.1.i of the Soil Erosion and Sediment Control Plan requirements.

FACT SHEET
RHODE ISLAND POLLUTANT DISCHARGE ELIMINATION SYSTEM
STORMWATER DISCHARGE ASSOCIATED WITH CONSTRUCTION ACTIVITY
(Revised September 2013)

BACKGROUND

In 1987, amendments to the CWA added Section 402(p), which set up the framework to regulate stormwater under the National Pollutant Discharge Elimination System (NPDES) program. In 1990, EPA issued final regulations that established application requirements for stormwater permits. These regulations require owners or operators of specific categories of industrial activities (see 40 CFR 122.26(b)(14)), which discharge stormwater directly to the waters of the United States, or indirectly through a separate storm sewer system, via a point source conveyance to obtain a NPDES stormwater permit. Construction activities that disturb at least five acres of land and have point source discharges to waters of the United States are included as an "industrial activity (see 40 CFR 122.26(b)(14)(x)). On December 8, 1999, EPA issued the Phase II final regulations, which require permit applications for point source stormwater discharges from small construction activities resulting from land disturbances greater than or equal to one acre and less than five acres (small construction activity is defined in 40 CFR 122.26(b)(15)(i)).

As an EPA delegated state, Rhode Island is authorized to issue individual or general permits under the Rhode Island Pollutant Discharge Elimination System (RIPDES) to cover discharges of industrial stormwater and small construction activity. In 1993, RIDEM's Office of Water Resources (OWR) developed a state wide General Permit to cover stormwater discharges from construction sites, which disturb five acres or more of land. The Department reissued this general permit on September 9, 2003, with changes to authorize stormwater discharges from construction sites which disturb one or more acres of land. Again in September 2008 the Department reissued this general permit in order to continue to be able to issue authorizations to discharge stormwater from construction sites which disturb one or more acres of land.

At this time the Department is proposing to reissue a draft General Permit to continue authorization of stormwater discharges from construction sites which disturb one or more acres of land. The requirements set forth in this permit are from the State's Water Quality Regulations and the State's Regulations for the Rhode Island Pollutant Discharge Elimination System, both filed pursuant to RIGL Chapter 46-12, as amended. The Office has determined that all permit limitations are consistent with the Rhode Island Antidegradation policy. The final effluent limitations, permit conditions, monitoring and reporting requirements may be found in the permit. The general and specific conditions of the permit are based on the RIPDES regulations as well as 40 CFR Parts 122 through 125 and consist primarily of management requirements common to all permits.

On December 1, 2009, EPA published in the Federal Register (74 FR 62995) effluent limitation guidelines (ELGs) and new source performance standards (NSPS) for the Construction and Development Point Source category. These requirements are referred to as "the C&D rule".

States, including Rhode Island, are required to incorporate requirements consistent with the new EPA C&D rule requirements, or narrative standards, into any reissued NPDES construction stormwater permits. The required narrative standards contained in the C&D rule have been incorporated into this draft permit either directly as specific permit requirements or by reference to relevant design and guidance documents already in existence. Rule 15 of the RI Water Quality Regulations addresses procedures for the review of applications, and states that in consideration of an application the Department may use but is not limited to, a variety of design documents including: the *Rhode Island Soil Erosion and Sediment Control (RISESC) Handbook* (as amended) and the *Rhode Island Stormwater Design and Installation Standards Manual* (RISDISM) (as amended). In addition, a specific permit requirement has been added which requires control measures to be designed, implemented, and maintained in accordance with these two design documents.

The draft permit proposed will be effective for a five year period, the maximum allowable under Federal NPDES Rules

For all construction activities required to submit a Notice of Intent (NOI) to RIPDES (see Part I.D of the Permit), the owner and/or operator must fill out and submit a standardized NOI form to:

RI Department of Environmental Management
Office of Water Resources – RIPDES Permitting Program
235 Promenade Street
Providence, RI 02908

To terminate coverage under this Permit at the end of a project, an owner and/or operator must submit a completed standardized Notice of Termination (NOT) form to the same address in accordance with Part I.E of the permit. Upon DEM receipt of the completed NOT, coverage under this general permit is terminated.

AUTHORIZATION (Part I.D.)

For Construction Activities that were authorized under the 2008 General Permit that are expected to continue beyond the expiration date of the 2008 permit, only activities that did not obtain a RIDEM Freshwater Wetlands Permit, RIDEM Water Quality Certification, RIDEM UIC/Ground Permit, CRMC Assent or QLP approval must submit an NOI within sixty (60) days of the effective date of this Permit to continue coverage and will be authorized upon re-submittal of the NOI.

Construction Activities previously authorized under the 2008 Construction Activity General Permit that are expected to continue beyond the expiration date of the 2008 permit that have an active RIDEM Freshwater Wetlands Permit, RIDEM Water Quality Certification, RIDEM UIC/Ground Permit, CRMC Assent or QLP approval are not required to re-submit a NOI and will be authorized upon the effective date of the permit.

All previously authorized projects must modify their existing Stormwater Management Plan to comply with Part II.B *Soil Erosion, Runoff, and Sediment Control* of this permit within sixty (60)

days of the effective date in order to maintain permit coverage.

All previously authorized projects that discharge to impaired waters with or without an approved TMDL or other water quality determination and have maintained coverage under the 2008 permit (e.g. timely re-application to RIPDES or a RIDEM Freshwater Wetlands Permit, RIDEM Water Quality Certification, RIDEM UIC/Ground Permit, CRMC Assent or QLP approval that remains in effect), are eligible for coverage and are not required to modify their existing Stormwater Management Plan except as mentioned above.

For construction activities that commence after the effective date of this Permit and are required to submit an NOI to RIPDES (see Part I.D of the Permit), the NOI must be submitted at least thirty (30) days prior to the commencement of land disturbing activities. Authorization will be granted in accordance with Part I.D.3.

Regardless of the means of obtaining approval, the permittee is still responsible for complying with all terms and conditions of this permit and any other applicable State, local and/or federal regulations. The Department will be held harmless for any failure of the permittee to comply with this Permit. Regardless of whether or not the NOI is reviewed by this Office, the permittee is responsible for complying with all terms and conditions of this permit and any other applicable State or federal regulations.

PERMIT LIMITS AND CONDITIONS (Part II)

Water Quality Based Effluent Limits:

Part I.B.3.c. and d. of the Permit requires that in order to be eligible for authorization, activities that discharge Stormwater associated with construction to impaired waters identified in the latest State of Rhode Island 303(d) List of Impaired Waters, must implement a Stormwater Management Plan in accordance with the RISWDISM that addresses the Stormwater Management Standards applicable to new and redevelopment and the pollutant(s) of concern. If the site will discharge into any water for which there is an EPA approved or established Total Maximum Daily Load (TMDL) or other water quality determination, the Stormwater Management Plan must incorporate measures or controls that are consistent with the assumptions and requirements of the TMDL.

2009 effluent limitation guidelines (ELGs) and new source performance standards (NSPS):

The Permit has been amended to incorporate the 2009 EPA Federal effluent limitation guidelines (ELGs) and new source performance standards (NSPS) for the Construction and Development Point Source Category.

Listed below in *italics* are each of the C&D rule narrative requirements and a description of how these requirements have been addressed in the draft permit:

a. <u>Erosion and Sediment Controls.</u> *Design, install and maintain effective erosion controls and sediment controls to minimize the discharge of pollutants. At a minimum, such controls must be designed, installed and maintained to:*

i. *Control stormwater volume and velocity within the site to minimize soil erosion in order to minimize pollutant discharges.* This narrative requirement is addressed through compliance with RISDISM Minimum Standard 10 – Construction Erosion and Sedimentation Control.

ii. *Control stormwater discharges, including both peak flowrates and total stormwater volume, to minimize channel and streambank erosion in the immediate vicinity of discharge points.* This narrative requirement is addressed through compliance with RISDISM Minimum Standard 10 – Construction Erosion and Sedimentation Control.

iii. *Minimize the amount of soil exposed during construction activity.* This narrative requirement is addressed through compliance with RISDISM Minimum Standard 1, Low Impact Development Site Planning and Design Strategies, Section 3.3.1.3., Appendix A Checklist 1.D. Locating Sites in Less Sensitive Areas and Section 4.5.1 that require that land disturbance be minimized.

iv. *Minimize the disturbance of steep slopes.* This narrative requirement is addressed through compliance with RISDISM Minimum Standard 1, Low Impact Development Site Planning and Design Strategies, Section 3.3.1.3 and Appendix A Checklist 1.D. Locating Sites in Less Sensitive Areas, and Section 4.5.1 Avoid the Impacts that require that Development on Steep Slopes avoided to the maximum extent practicable.

v. *Minimize sediment discharges from the site. The design, installation, and maintenance of erosion and sediment controls must address factors such as the amount, frequency, intensity and duration of precipitation, the nature of resulting stormwater runoff, and soil characteristics, including the range of soil particle sizes expected to be present on the site.* This narrative requirement is addressed through compliance with RISDISM Minimum Standard 10 – Construction Erosion and Sedimentation Control.

vi. *Provide and maintain natural buffers around waters of the United States, direct stormwater to vegetated areas and maximize stormwater infiltration to reduce pollutant discharges, unless infeasible.* This narrative requirement is addressed through the DEM Freshwater Wetlands regulations and Coastal Resources Management Council regulations for inland and coastal buffers. These Regulations also require compliance with RISDISM Minimum Standard 1, Low Impact Development (LID) Site Planning and Design Strategies and Section 4.5 LID Site Planning and Design Criteria which requires applicants to maximize the protection of natural drainage areas, streams, surface waters,

and jurisdictional wetland buffers. Section 4.5.1 Avoid the Impacts, also requires the preservation of buffers and floodplains by delineating and preserving naturally vegetated riparian buffers and floodplains and implementing measures to ensure that buffers and native vegetation are protected throughout planning, design, construction, and occupancy.

vii. *Minimize soil compaction. Minimizing soil compaction is not required where the intended function of a specific area of the site dictates that it can be compacted. Unless infeasible, preserve topsoil. Preserving topsoil is not required where the intended function of a specific area of the site dictates that the topsoil be disturbed or removed.* These narrative requirements are addressed through compliance with RISDISM. Minimum Standard 1, LID Site Planning and Design Strategies, Section 3.3.1.4 LID Site Planning and Design Criteria that requires the minimization of soil compaction and restoration of soils compacted as a result of construction activities or prior development. In addition, Appendix B of the RISDISM, General Planting Guidance for LID Practices specifically requires that whenever possible, topsoil should be spread to a depth of four inches (two inch minimum) over the entire area to be planted.

b. *Soil Stabilization. Stabilization of disturbed areas must, at a minimum, be initiated immediately whenever any clearing, grading, excavating, or other earth disturbing activities have permanently ceased on any portion of the site, or temporarily ceased on any portion of the site and will not resume for a period exceeding 14 calendar days. In arid, semiarid, and drought-stricken areas where initiating vegetative stabilization measures immediately is infeasible, alternative stabilization measures must be employed as specified by the permitting authority. Stabilization must be completed within a period of time determined by the permitting authority. In limited circumstances, stabilization may not be required if the intended function of a specific area of the site necessitates that it remain disturbed.* This narrative requirement is addressed directly by a specific permit requirement in Part III.J.1.c.

c. *Dewatering. Discharges from dewatering activities, including discharges from dewatering of trenches and excavations, are prohibited unless managed by appropriate controls.* This narrative requirement is addressed directly by a specific permit requirement in Part III.J.2.f of the Soil Erosion and Sediment Control Plan requirements.

d. *Pollution Prevention Measures. Design, install, implement, and maintain effective pollution prevention measures to minimize the discharge of pollutants. At a minimum, such measures must be designed, installed, implemented and maintained to:*

i. *Minimize the discharge of pollutants from equipment and vehicle washing, wheel wash water, and other wash waters. Wash waters must be treated in a sediment basin or alternative control that provide equivalent or better treatment prior to discharge;*

ii. *Minimize the exposure of building materials, building products, construction wastes, trash, landscape materials, fertilizers, pesticides, herbicides, detergents, sanitary waste and other materials present on the site to precipitation and stormwater. Minimization of exposure is not required in cases where the exposure to precipitation and to stormwater will not result in a discharge of pollutants, or where exposure of a specific material or product poses little risk of stormwater contamination (such as final products and materials intended for outdoor use).*

iii. *Minimize the discharge of pollutants from spills and leaks and implement chemical spill and leak prevention and response procedures.*

These narrative requirements are addressed directly by specific permit requirements in Part III.J.2.c&d of the Soil Erosion and Sediment Control Plan requirements entitled: Construction Activity Pollution Prevention Requirements, Proper Waste Disposal and Spill Prevention and Control respectively.

e. *Prohibited Discharges. The following discharges are prohibited:*

iv. *Wastewater from washout of concrete, unless managed by an appropriate control;*

v. *Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds and other construction materials;*

vi. *Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance; and*

vii. *Soaps or solvents used in vehicle and equipment washing*

These narrative requirements are addressed directly by specific permit requirements in Part III.J.2.a of the Soil Erosion and Sediment Control Plan requirements, Prohibited Discharges .

f. *Surface Outlets. When discharging from basins and impoundments, utilize outlet structures that withdraw water from the surface, unless infeasible.* This narrative requirement is addressed directly by specific permit requirements in Part III.J.1.i of the Soil Erosion and Sediment Control Plan requirements.

SOIL EROSION AND SEDIMENT CONTROL (SESC) PLAN REQUIREMENTS (Part III)

The Soil Erosion and Sediment Control (SESC) Plan shall describe and ensure the implementation of stormwater control measures which are to be used to reduce or eliminate pollutants in stormwater discharge(s) from the site and assure compliance with the terms and conditions of this permit. Control practice selection shall include an evaluation of the effectiveness of available practices and be made with proper references.

Soil erosion, runoff, sediment, and pollution prevention control measures must be designed, implemented, and maintained in accordance with the requirements of this permit and in accordance with the design specifications and guidance contained in the *Rhode Island Soil Erosion and Sediment Control (RISESC) Handbook* (as amended) and the *Rhode Island Stormwater Design and Installation Standards Manual (RISDISM)* (as amended).

Part III. J. 1. contains the following Erosion, Runoff, and Sediment Control Requirements:

1) Phase Construction Activity
2) Control Stormwater Flowing Onto and Through the Project
3) Stabilize Soils
4) Protect Storm Drain Inlets
5) Protect Storm Drain Outlets
6) Establish Perimeter Controls and Sediment Barriers
7) Establish Temporary Controls For The Protection of Post Construction Stormwater Practices
8) Temporary Sediment Trapping and Temporary Stormwater Conveyance Practices
9) Utilize Surface Outlets
10) Properly Use Treatment Chemicals

Part III. J. 2. contains the following Construction Activity Pollution Prevention Requirements:

1) Prohibited Discharges
2) Minimize Off-Site Tracking of Sediments
3) Proper Waste Disposal
4) Spill Prevention and Control
5) Control of Allowable Non-Stormwater Discharges
6) Control Dewatering Practices
7) Establish Proper Building Material Staging Areas
8) Control Discharges from Stockpiled Sediment or Soil
9) Minimize Dust
10) Designate Washout Areas
11) Establish Proper Equipment/Vehicle Fueling and Maintenance Practices

Part III.J.3 contains the following Control Practice Installation, Inspection, and Maintenance Requirements:

1) Installation Requirements - Complete the installation of temporary erosion, runoff, sediment, and pollution prevention control measures by the time each phase of earth-disturbance has begun. All stormwater controls must be installed in accordance with good engineering practices, including applicable design specifications. Design specifications may be found in manufacturer specifications and/or the *Rhode Island Soil Erosion and Sediment Control (RISESC) Handbook* (as amended).
2) Inspection Requirements : Sites must be inspected by or under the supervision of

the owner and operator at least once every seven (7) calendar days and within twenty-four (24) hours after any storm event which generates at least 0.25 inches of rainfall per twenty-four (24) hour period and/or after a significant amount of runoff.

3) Maintenance Requirements – Site owners and operators must ensure that all erosion, runoff, sediment, and pollution prevention controls remain in effective operating condition and are protected from activities that would reduce their effectiveness.

Part III.J.4 outlines the contents of Site Plan Requirements

Part IV. outlines the Notice of Intent Requirements

CHANGES IN THIS PERMIT

The Permit has been amended to be consistent with the 2010 *Rhode Island Stormwater Design and Installation Standards Manual* (RISDISM), to incorporate the 2009 EPA effluent limitation guidelines (ELGs) and new source performance standards (NSPS), and to streamline the Application and Authorization process. A detailed summary of changes can be found on RIDEM's website at http://www.dem.ri.gov/programs/benviron/water/permits/ripdes/index.htm

COMMENT PERIOD, HEARING REQUESTS, AND PROCEDURES FOR FINAL DECISIONS

All persons, including applicants, who believe any condition of the draft permit is inappropriate must raise all issues and submit all available arguments and all supporting material for their arguments in full by the close of the public comment period no later than 4:00 pm on September 13, 2013, to the Rhode Island Department of Environmental Management, Office of Water Resources, 235 Promenade Street, Providence, Rhode Island, 02908-5767. Commenters may request a longer comment period if necessary to provide a reasonable opportunity to comply with these requirements. Comments should be directed to Rhode Island Department of Environmental Management, RIPDES Program Permitting Section - Office of Water Resources, 235 Promenade Street, Providence, RI 02908-5767. In reaching a final decision on the draft permit the Director will respond to all significant comments and make these responses available to the public at DEM's Providence Office.

Pursuant to Chapter 42-17.4 of the Rhode Island General Laws a public hearing has been scheduled to consider these permits **if requested**. Requests for a Public Hearing must be submitted in writing to the attention of Brian D. Lafaille at the address indicated above. Notice should be taken that **if DEM receives a request** from twenty-five (25) people, a governmental agency or subdivision, or an association having no less than twenty-five (25) members on or before 4:00 p.m., September 9, 2013, a public hearing will be held at the following time and place:

September 12, 2013 at 5:00 p.m.
Room 280

235 Promenade Street
Providence, Rhode Island 02908

Interested persons should contact DEM to confirm if a hearing will be held at the time and location noted above.
Following the close of the comment period, and after a public hearing, **if such hearing is held**, the Director will issue a final permit decision and forward a copy of the final decision to the applicant and each person who has submitted written comments or requested notice. Within thirty (30) days following the notice of the final permit decision any interested person may submit a request for a formal hearing to reconsider or contest the final decision. Requests for formal hearings must satisfy the requirements of Rule 49 of the Regulations for the Rhode Island Pollutant Discharge Elimination System.

DEM CONTACTS

Additional information concerning the General Permit may be obtained by contacting Brian Lafaille, PE Senior Sanitary Engineer via email at brian.lafaille@dem.ri.gov or by telephone at (401) 222-4700 ext. 7731, between the hours of 8:30 a.m. and 4:00 p.m., Monday through Friday, excluding holidays, or by writing to the Office at:

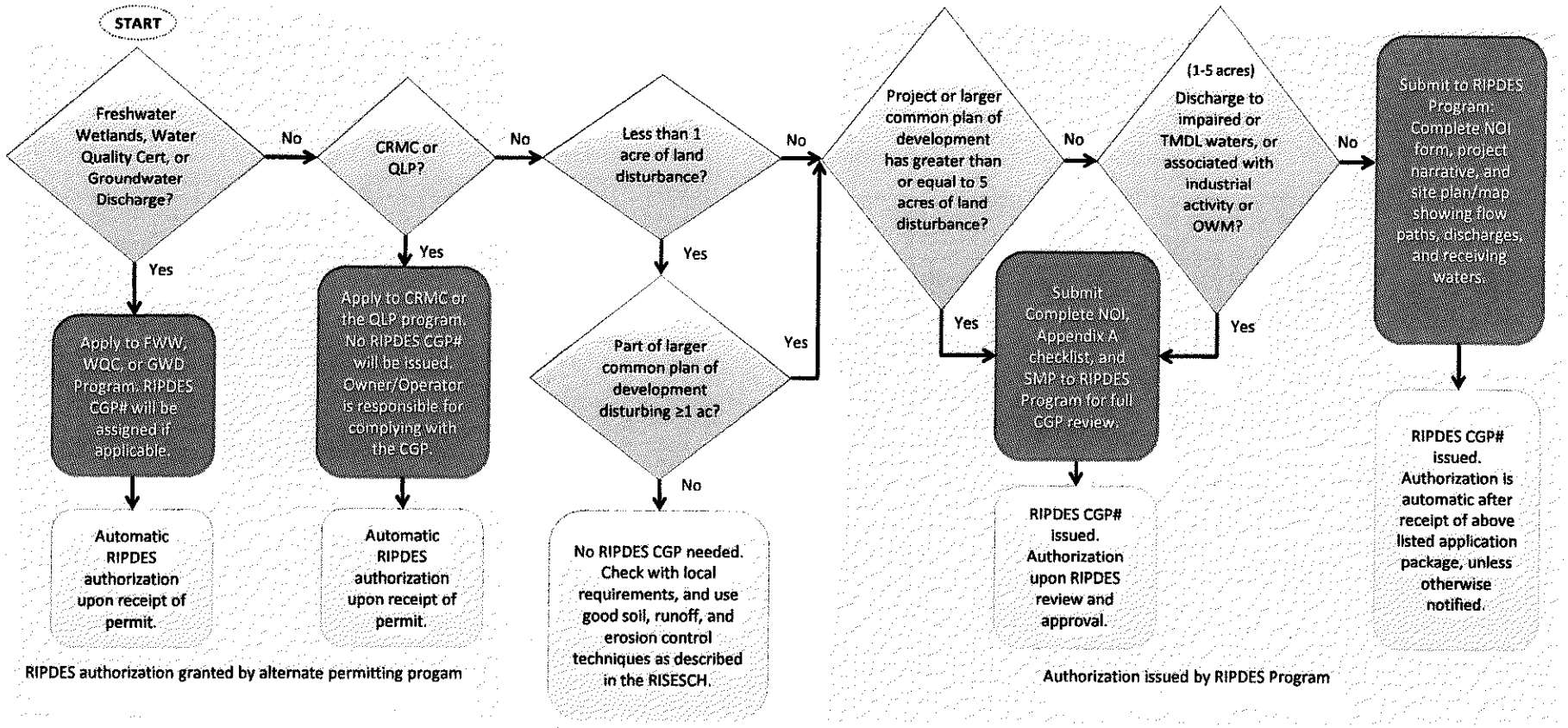
RI Department of Environmental Management
Office of Water Resources – RIPDES Permitting Program
235 Promenade Street
Providence, RI 02908

9/24/13
Date

for Eric A. Beck, PE
Supervising Sanitary Engineer
Permitting Section
Office of Water Resources
Department of Environmental Management

Rhode Island Pollutant Discharge Elimination System (RIPDES)
2013 Construction General Permit (CGP)
APPLICATION GUIDANCE

To whom and what to submit to obtain authorization from RIPDES to discharge stormwater associated with construction activity.



ACRONYMS AND ABBREVIATIONS:

CGP - Construction General Permit (RIPDES)
CRMC - Coastal Resources Management Council
FWW - Freshwater Wetlands Program
GWD - Groundwater Discharge Program (includes UIC)
NOI - Notice of Intent (RIPDES permit application form)
NOT - Notice of Termination (RIPDES permit termination form)
OWM - Office of Waste Management (RIDEM)
QLP - Qualified Local Program
RIDEM - Rhode Island Department of Environmental Management
RIPDES - Rhode Island Pollutant Discharge Elimination System
RISDISM - *Rhode Island Stormwater Design and Installation Standards Manual*
RISESCH - *Rhode Island Soil Erosion and Sediment Control Handbook*
SMP - Stormwater Management Plan
TMDL - Total Maximum Daily Load
UIC - Underground Injection Control
WQC - Water Quality Certification Program

Permit applications to the RIPDES Program must be submitted at least **thirty (30) days prior** to the commencement of land disturbing activities, per Part I.D.2.b of the CGP entitled "Deadlines for Requesting Authorization."

Regardless of the permit issuing program, owners/operators must submit a **Notice of Termination** (NOT) form to the RIPDES Program upon completion of construction and final stabilization of all permitted project sites.

RI Department of Environmental Management - Office of Water Resources
235 Promenade Street, Providence, RI 02908 | Telephone: (401) 222-4700 | Fax: (401) 222-6177

October 2013

RHODE ISLAND
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
235 Promenade Street, Providence, RI 02908-5767 TDD 401-222-4462

Dear Applicant:

Section 46-12-15(b) of the Rhode Island General laws of 1956, Title 46, Chapter 12 entitled Water Pollution, as amended, prohibits the discharge of pollutants into waters of the State. The only exceptions are discharges in compliance with the terms and conditions of a Rhode Island Pollutant Discharge Elimination System (RIPDES) Permit issued in accordance with State Regulations.

Rule 31 of the RIPDES Regulations, requires permit coverage for construction sites disturbing equal to and greater than one acre, as well as sites less than one acre of total land area that are part of a larger common plan of development or sale if the larger common plan will ultimately disturb equal to or greater than one acre.

To request authorization under the General Permit for Stormwater Discharge Associated with Construction Activity, which was reissued and became effective on September 26, 2013, applicants must follow the submission requirements under Part I.D of the permit. Enclosed with this letter is a copy of the Construction General Permit Notice of Intent (NOI) Application Form. Provided all the required information is submitted and it is determined that a general permit is appropriate for the proposed site, authorization will be granted in accordance with Part I.D. of this permit. The 2013 Construction General Permit expires at midnight September 25, 2018.

A non-refundable application fee is due at the time the NOI is submitted to this office in the form of a check or money order, payable to the General Treasurer of the State of Rhode Island (**note: no fee if only an NOI is required to be submitted, $400 fee if a NOI and a Stormwater Management Plan is required to be submitted**). The review for completeness of the application will not be made until the fee is paid. The check of money order and the attached Application(s) Fee Form must be submitted to:

Department of Environmental Management
Office of Management Services
235 Promenade Street
Providence, RI 02908

Return the completed NOI form to:

Department of Environmental Management
Office of Water Resources
RIPDES Program
235 Promenade Street
Providence, RI 02908

Any questions about the General Permit or the NOI Form should be directed to the RIPDES Program Staff, Permitting Section at (401) 222-4700.

Sincerely,

Eric A. Beck, P.E.
Supervising Sanitary Engineer

RHODE ISLAND POLLUTANT DISCHARGE ELIMINATION SYSTEM (RIPDES)
NOTICE OF INTENT (NOI)
STORMWATER GENERAL PERMIT FOR CONSTRUCTION ACTIVITY
(Revised September 2013)

DEM USE ONLY

Date NOI Received _____

Date Fee Received _____

RIPDES# RIR _____

CHECK ONLY ONE ITEM	☐ New Request for Permit Authorization ☐ Re-Application for RIPDES Authorization No. RIR_____, which expires on September 25, 2013. ☐ Amendment to RIPDES Authorization No. RIR_____.

I. OWNER

Name:			
Mailing Address:			
City:	State:	Zip:	Phone: ( )
Contact Person:	Title:		
Email Address of Contact Person:			
Billing Address (if different than above):			
City:	State:	Zip:	

II. OPERATOR (if different from Owner)

Name:			
Local Mailing Address:			
City:	State:	Zip:	Phone: ( )
Contact Person:	Title:		
Email Address of Contact Person:			

III. CONSTRUCTION SITE INFORMATION

Site's Official or Legal Name:			
Street Address:			
City:	State:	Zip:	Phone:
Latitude (to nearest 15 sec.) _____Deg. _____Min. _____Sec.	Longitude (to nearest 15 sec.) _____Deg. _____Min. _____Sec.		
Nearest Utility Pole Number:	Assessors Plat:	Lot:	

Is the construction site part of a larger common plan of development or sale? ☐ YES ☐ NO

List Name of Larger Common Plan:_____ Total Disturbed Acres of Common Plan _____Acres

Projected or Actual Construction Commencement Date _____
MM/DD/YY

Projected Construction Completion Date _____
MM/DD/YY

Area of Site: Total Acres: _____ Proposed Area of Disturbance in Acres: _____

IV. DISCHARGE LOCATION INFORMATION

Note: If stormwater from the site discharges to a Combined Sewer Overflow a RIPDES authorization for the construction activity is not necessary, please confirm that the discharge will enter a combined sewer system with the appropriate sewer authority.

☐ Separate Storm Sewer System (MS4) Name:_____

☐ **Unnamed stream or wetlands** connected to named receiving water body. Name:_____

☐ Ultimate Receiving Water Body Name:_____ Water Body ID#:_____

Is the receiving water body classified as a Cold or Warm Water Fishery? ☐ Cold Water ☐ Warm Water ☐ Unassessed

Is the receiving water body on the most recent State of RI 303(d) List of Impaired Waters?

☐ YES ☐ NO

If yes, list any applicable impairments:

Is the Receiving Water(s) designated as a Special Resource Protection Water (SRPW)? ☐ YES ☐ NO

Has a TMDL been completed for the receiving water body? ☐ YES ☐ NO

If yes, list any applicable impairments:

Is the project associated with a DEM Office of Waste Management (OWM) site? ☐ YES ☐ NO ;

If yes, please describe and provide a DEM OWM contact:

_____

Is the proposed project associated with a previous permit application or enforcement action? ☐ YES ☐ NO ;

If yes, please describe: _____

Does the project meet the criteria for a Land Use with Higher Potential Pollutant Loads (LUHPPL) as defined by the RI Stormwater Design & Installation Standards Manual (as amended)?

☐ YES ☐ NO If yes, describe:

Will the site require a separate permit for the proposed industrial activity under Rule 31(b)15 of the RIPDES Regulations? ☐ YES ☐ NO

If yes, describe:

Is the site within or directly discharging to a Natural Heritage Area (NHA)?

☐ YES ☐ NO

V. OWNER/OPERATOR CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under the direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that if review of the Stormwater Management Plan is performed by the DEM RIPDES Permitting Program, Freshwater Wetlands Section, Water Quality Certification Program, the UIC/Ground Permit Program, Coastal Resources Management Council, or by a city/town which has adopted a DEM approved Soil Erosion and Sediment Control Ordinance, then a Stormwater Permit from this office is contingent upon approval from the reviewing agency. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. I am aware that it is the responsibility of the owner/operator to implement and amend the Soil Erosion and Sediment Control Plan as appropriate in accordance with the requirements of the General Permit.

Print Owner Name & Company _____

Print Owner Title _____

Signature _____ Date _____

Print Operator Name & Company _____

Print Operator Title _____

Signature _____ Date _____

VI. PROFESSIONAL CERTIFICATION - NATURAL HERITAGE AREAS

I certify under penalty of law that the Natural Heritage Area Information under Section IV of this NOI was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete at the time this application is made. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Print Name of Professional & Company _____

Print Professionals Title* _____

Registration or License Number _____

Signature _____ Date _____

*Must be signed by a Registered Professional Engineer, a Certified Professional in Erosion and Sediment Control (CPESC), a Certified Professional in Storm Water Quality (CPSWQ), or a Registered Landscape Architect.

VII. PROFESSIONAL CERTIFICATION - SOIL EROSION AND SEDIMENT CONTROL PLAN DEVELOPMENT

Note: The purpose of this certification is to document that a site specific Soil Erosion and Sediment Control Plan was prepared consistent with the requirements of the General Permit. This certification by a professional does not alleviate or in any way limit the liability and sole responsibility of the Owner and Operator to properly implement the Soil Erosion and Sediment Control Plan and to amend the Soil Erosion and Sediment Control Plan as site conditions may require, so as to effectively control stormwater discharges leaving the site during the construction period.

I certify under penalty of law that a site specific Soil Erosion and Sediment Control Plan was prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for developing the Soil Erosion and Sediment Control Plan, the Soil Erosion and Sediment Control Plan is, to the best of my knowledge and belief, true, accurate, and complete at the time this certification is made and has been developed in accordance to the requirements of the Permit as well as all applicable guidelines in the *Rhode Island Soil Erosion and Sediment Control (RISESC) Handbook* (as amended) and the *Rhode Island Stormwater Design and Installation Standards Manual* (as amended). I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Print Name of Professional & Company _____

Print Professionals Title* _____

Registration or License Number _____

Signature _____ Date _____

*Must be signed by a Registered Professional Engineer, a Certified Professional in Erosion and Sediment Control (CPESC), a Certified Professional in Stormwater Quality (CPSWQ), or a Registered Landscape Architect. If the Stormwater Management Plan requires the practice of engineering, this must be signed by a Registered Professional Engineer.

Note: Upon completion of the permitted project, the DEM must be notified via the submittal of a completed Notice of Termination. In accordance with Construction Activity General Permit Part V.L., this permit is not transferable to any person or group except after due notice to the Director. If no such notice is given, the named owner will be held liable for all fees and expenses levied to this permit.

RHODE DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

Office of Water Resources

APPLICATION FEE FORM

Please complete the information below and **submit this completed form and your check (payable to "R.I. General Treasurer") for the appropriate fee directly to**:

R.I. Department of Environmental Management
Office of Management Services
235 Promenade Street
Providence, RI 02908

*** FEES ARE NOT REFUNDABLE ***

OWNER

Name:			
Mailing Address:			
City:	State:	Zip:	Phone: ( )
Contact Person:	Title:		
Email Address of Contact Person:			
Billing Address (if different than above):			
City:	State:	Zip:	

CONSTRUCTION SITE INFORMATION

Site's Official or Legal Name:			
Street Address:			
City:	State:	Zip:	Phone:
Latitude (to nearest 15 sec.) _____Deg. _____Min. _____Sec.	Longitude (to nearest 15 sec.) _____Deg. _____Min. _____Sec.		
Nearest Utility Pole Number:	Assessors Plat:	Lot:	

APPLICATION TYPE: **RIPDES Construction General Permit**

NOTE: The application and all accompanying documents should be submitted to the appropriate section of the Office of Water Resources, 235 Promenade Street, Providence, RI 02908-5767. Application review will be initiated only upon receipt of the complete application fee.

FOR OFFICE USE ONLY

OMS Receipt Date: _____

Fee Amount Received: _____

Processor Initials: _____

RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

Office of Water Resources

INSTRUCTIONS FOR THE RI POLLUTANT DISCHARGE ELIMINATION SYSTEM (RIPDES)
NOTICE OF INTENT (NOI) - STORMWATER GENERAL PERMIT FOR CONSTRUCTION ACTIVITY

Who Must File A Notice of Intent (NOI) Form

Discharges of stormwater associated with construction activity to a water body of the State of Rhode Island are prohibited without a Rhode Island Pollutant Discharge Elimination System (RIPDES) permit. The operator of a construction activity that has such a stormwater discharge must obtain coverage under the RIPDES Stormwater General Permit. If you have questions about whether you need a permit under the RIPDES Stormwater program contact the Rhode Island Department of Environmental Management (RIDEM), Office of Water Resources, Permitting Section at (401) 222-4700.

If required to be submitted per Part I.D.1 of the permit, the original NOI form must be sent to:

RIDEM
Office of Water Resources
RIPDES Program
Permitting Section
235 Promenade Street
Providence, RI 02908

Please be sure to keep a copy for your files.

Completing the Form

You must type or print in the appropriate areas only. Abbreviate if necessary to save space.

Section I - Owner Information

Give the legal name of the person, firm, public (municipal) organization, or any other entity that owns the site described in this application (RIPDES Rules 3 & 12). The name of the owner may or may not be the same as the name of the site. Do not use a colloquial name. Enter the complete address and telephone number of the owner. Provide the name and email address of person to be contacted to answer questions on the construction project.

Section II - Operator Information

If the operator is the same as the owner do not complete this section. If the operator is different from the owner, provide the legal name of the person, firm, public (municipal) organization, or any other entity that has legal responsibility for the day-to-day operations of the site described in this application (RIPDES Rules 3 & 12). Enter the complete name, address, telephone number, and email address of the operator.

Section III - Construction Site Information

Enter the site's official or legal name and complete street address and telephone number, if available. Enter the latitude and longitude of the site (see next section, Section IV for a link to the RIDEM ArcGIS map server tutorial which provides instructions on how to quickly obtain this information). Enter the number of the utility pole closest to the site and the assessor's plat and lot numbers of the site. Indicate if the site is part of a larger development by checking yes or no. If yes, please enter the name of the development and total area of disturbance of the larger common plan. Indicate the projected or actual construction commencement date and the projected construction completion date using the 2-digit code format for month/day/year (e.g. 01/31/09 for January 31, 2009). Enter the total area of the site (acres), and the area of disturbed land (acres).

Section IV - Discharge Location Information

An ArcGIS map server has been developed for use by the public to assist in obtaining pertinent regulatory and environmental information. The ArcGIS Environmental Resource Map can be found at the following web address:
http://www.dem.ri.gov/maps/index.htm

In addition, a tutorial with step by step instructions has been developed by the RIPDES Permitting Program to assist in completing this NOI by using the information available at the ArcGIS website. For access to this tutorial please refer to the following website: http://www.dem.ri.gov/programs/benviron/water/permits/ripdes/index.htm

If the stormwater from your site has the potential to discharge to a separate storm sewer system check the box and enter the name of the operator of the storm sewer system and enter the name of the ultimate surface water.

If the site discharges stormwater directly to a surface water body check the box and enter the name of the receiving water. Provide the ultimate receiving water body name and water body ID if different from the one already provided. Determine the water body ID number, if the receiving water body is a cold water or warm water fishery, if it is impaired, and if it is classified as an SRPW, or if is subject to a TMDL.

Identify if the project is associated with a DEM Office of Waste Management site, if yes provide a description and a DEM Office of Waste Management contact person.

If the project is associated with a previously submitted permit application or it is related to a DEM enforcement action please indicate.

Does the project meet the criteria for a Land Use with Higher Potential Pollutant Loads (LUHPPL) as defined by the RI Stormwater Design and Installation Standards Manual (as amended)?
http://www.dem.ri.gov/programs/benviron/water/permits/ripdes/stwater/t4guide/desman.htm
If yes, describe.

Identify whether or not the site will require a separate permit for the proposed industrial activity under Rule 31(b)15 of the RIPDES Regulations by going to the following website:
http://www.dem.ri.gov/pubs/regs/regs/water/ripdes03.pdf

Or by referring to the RIPDES Multi-Sector General Permit for Stormwater Discharge Associated with Industrial Activity which can be found at the following website:
http://www.dem.ri.gov/programs/benviron/water/permits/ripdes/index.htm

Determine if your site is within or directly discharging to a NHA. After obtaining this information from the ArcGIS webpage, check the appropriate box to indicate whether or not your site is within or directly discharging to an NHA.

Certification

State and federal statutes provide for severe penalties for submitting false information on this application form. State and federal regulations require this application to be signed as follows and in accordance with RIPDES Rule 12;

Section V - Owner/Operator Certification

Owner:

For a corporation: by a responsible corporate officer, which means: (i) president, secretary, treasurer, or vice-president of the corporation in charge of a principal business function, or any other person who performs similar policy or decision making functions, or (ii) the manager of one or more manufacturing, production, or operating facilities employing more than 250 persons or having gross annual sales or expenditures exceeding $25 million (in second quarter 1980 dollars), if authority to sign documents has been assigned or delegated to the manager in accordance with corporate procedures;

For a partnership or sole proprietorship: by a general partner or the proprietor;

For a Municipality, State, Federal or other public site: by either a principal executive officer or ranking elected official.

Operator:

This part needs to be filled out by the entity or the individuals that will have an ongoing role in the management and operation of the site during construction.

Section VI – Professional Certification - Natural Heritage Areas

This section must be signed/certified by a Registered Professional Engineer, a Certified Professional in Soil Erosion and Sediment Control (CPESC), or a Certified Professional in Stormwater Quality (CPSWQ), or a Registered Landscape Architect.

Section VII – Professional Certification - Soil Erosion and Sediment Control Plan Development

This section must be signed/certified by a Registered Professional Engineer, a Certified Professional in Soil Erosion and Sediment Control (CPESC), or a Certified Professional in Stormwater Quality (CPSWQ), or a Registered Landscape Architect. The purpose of this certification is to document that a site specific Soil Erosion and Sediment Control Plan was prepared consistent with the requirements of the General Permit prior to filing the NOI. This certification by a professional does not alleviate or in any way limit the liability and sole responsibility of the Owner/Operator to properly implement the Soil Erosion and Sediment Control Plan and to amend the Soil Erosion and Sediment Control Plan as site conditions may require, so as to effectively control stormwater discharges leaving the site during the construction period.

Paperwork Reduction Act Notice

Public burden for this application is estimated to average 0.5 hours per application, including time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. EPA determined this time estimate for the Federal NOI form and although the Rhode Island form requires additional information, it is considered minor and therefore this time estimate is believed to be valid for the State NOI form. Send comments regarding the burden estimate any other aspect of the collection of information, or suggestions for improving this form, including any suggestions which may increase or reduce this burden to: Chief, Information Policy Branch, PM-223, U.S. Environmental Protection Agency, 401 M Street SW, Washington, DC 20460, or Director, Office of Information and Regulatory Affairs, Office of Management and Budget, Washington, DC 20503.

ArcGIS Environmental Resource Map Tutorial

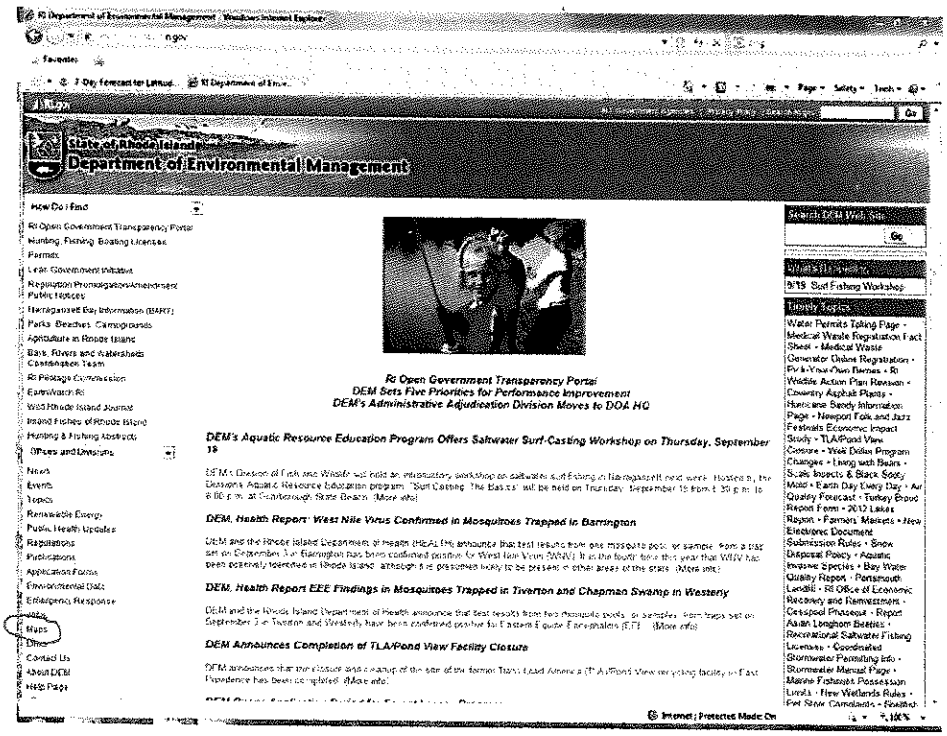
Overview

The RIDEM is providing access to ArcGIS on its website www.dem.ri.gov in order to provide the public with easier access to pertinent regulatory and environmental information. For the purposes of completing a permit application or notice of intent which may be required by the RIDEM RIPDES permitting program ArcGIS is a very useful tool. ArcGIS makes it easy to identify the latitude and longitude of particular location, obtain a wide variety of information regarding the receiving water, watershed name, TMDL status etc.

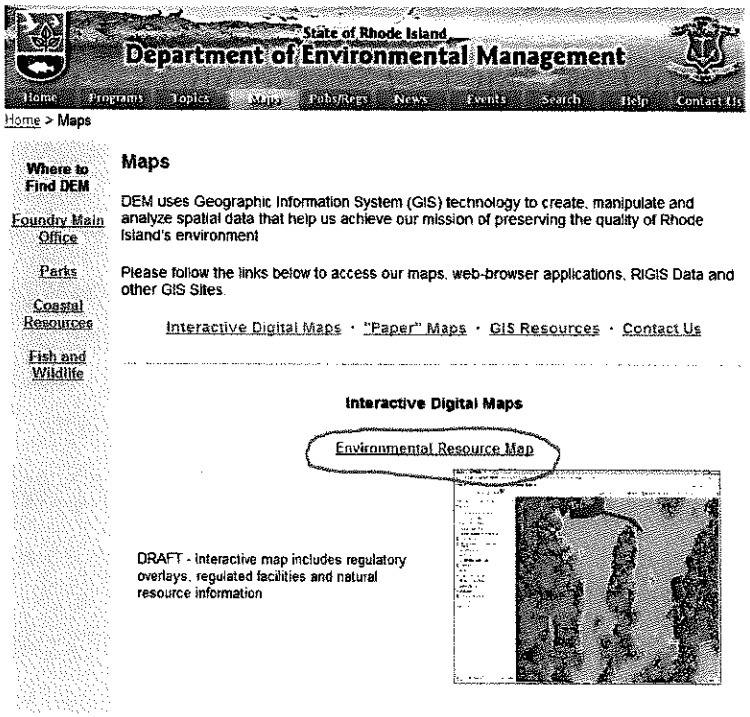
Provided below is a step by step tutorial on how to access the commonly sought after pieces of information that may be required to complete a RIPDES Permit application. For further assistance you may also contact the DEM RIPDES Permitting Program staff directly at Tel. (401) 222-4700.

Getting Started

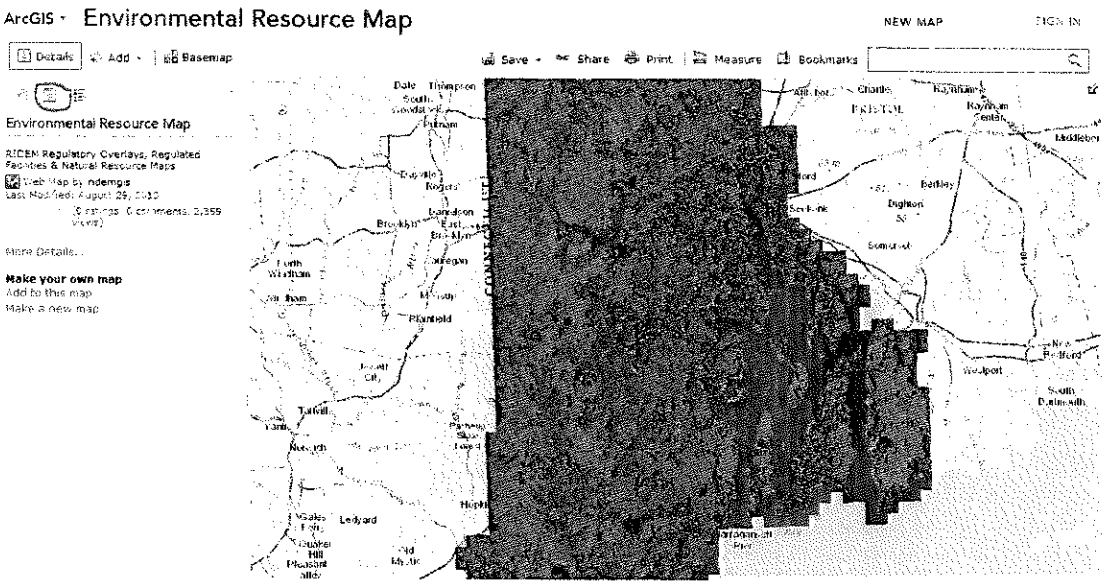
To access the ArcGIS map server click on the "Maps" link which can be found on the RIDEM home page www.dem.ri.gov.



Next click on "Environmental Resource Map"

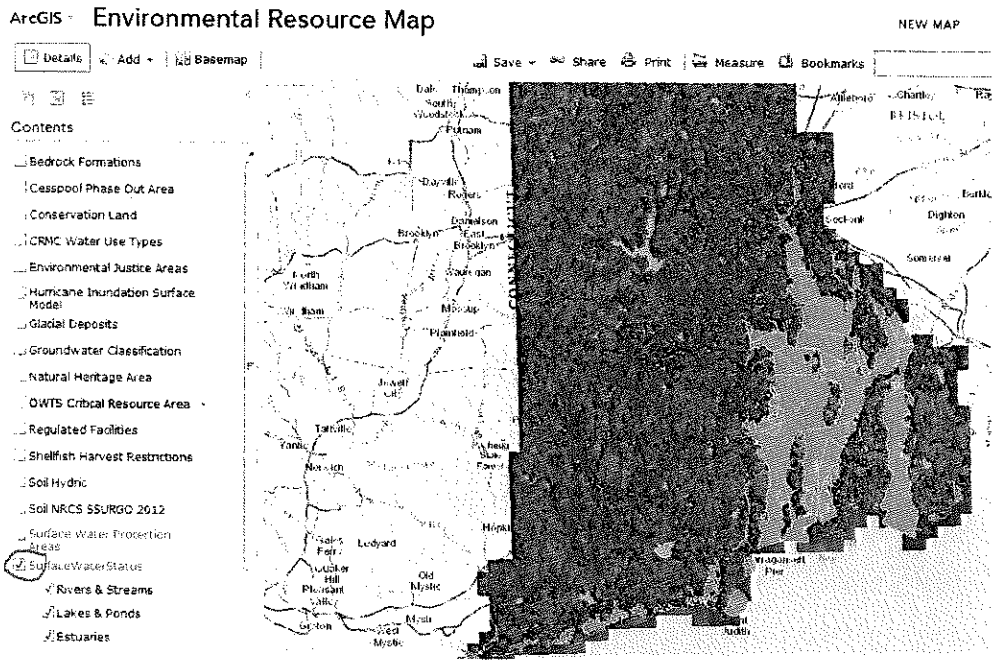


Once the map is open click on the "Show Contents of Map" icon located toward the upper left-hand side of the screen. You will then be able to display various ArcGIS layers provided by RIDEM.

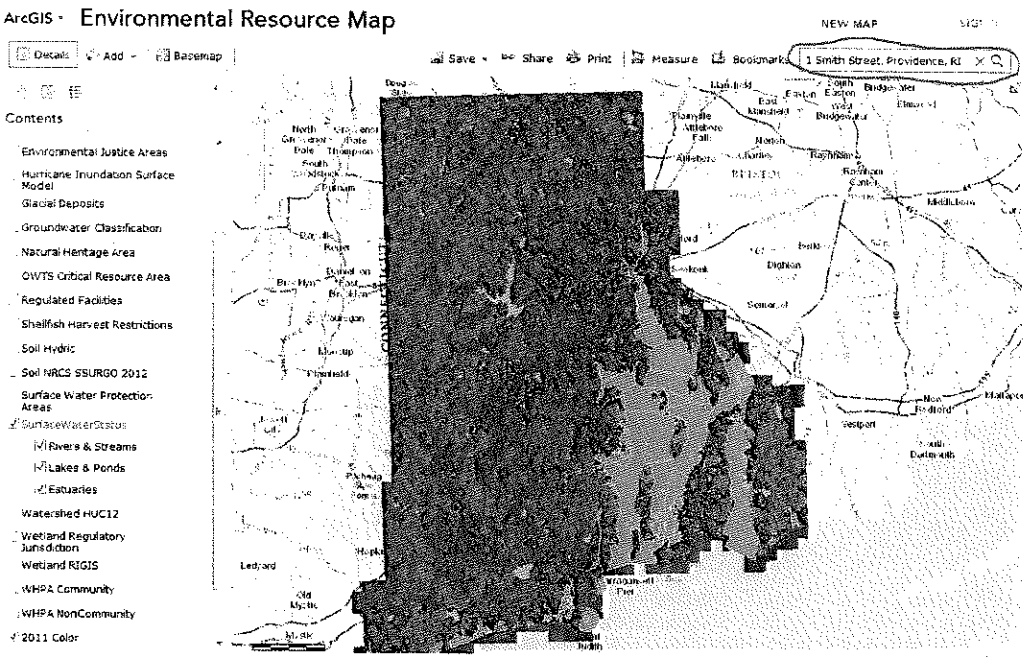


Receiving Water Characteristics

For waterbody specific information such as water body name, water body ID, cold/warm water fishery designation etc. simply activate the "Surface Water Status" layer as shown below.



To locate your site and the receiving waters adjacent to it, type in the site address in the upper right hand corner search box and press enter.

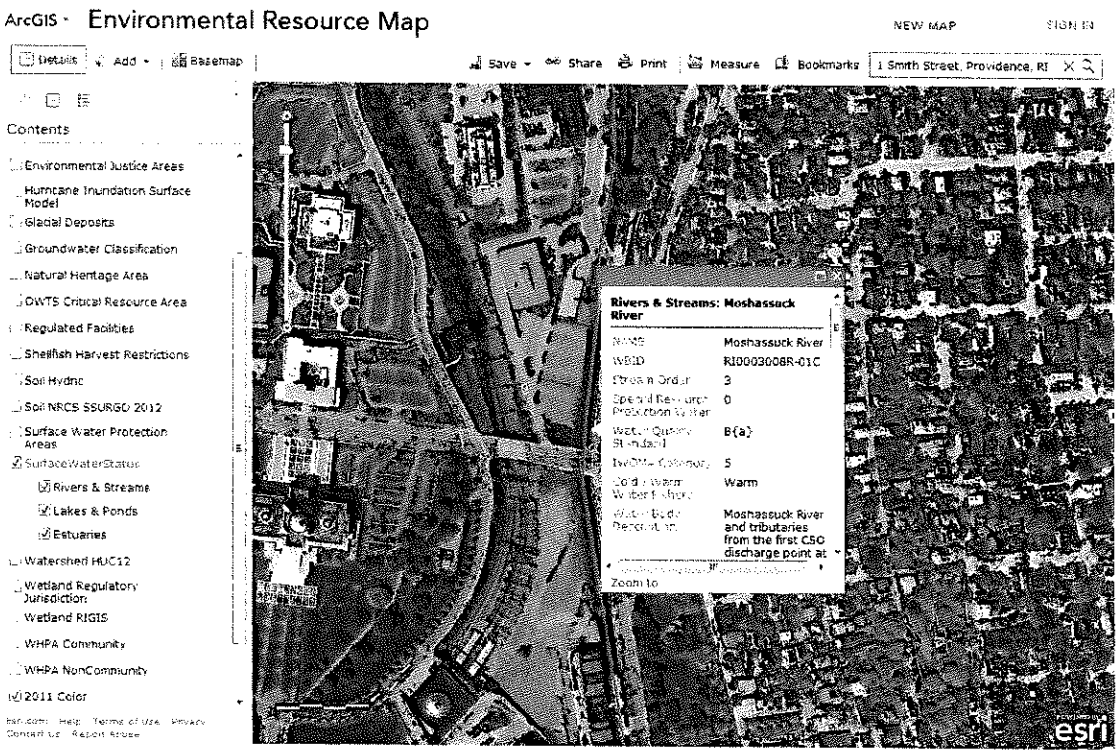


To identify specific information in regard to the water body adjacent to your construction site simply click once on the water body segment applicable to your site and a window will open providing a wide variety of information specific to the selected waterbody (i.e. name of water body, water body identification number (WBID), SRPW designation, impairments, TMDL status etc..)

Determining Water Quality Impairments and Total Maximum Daily Load (TMDL) Status

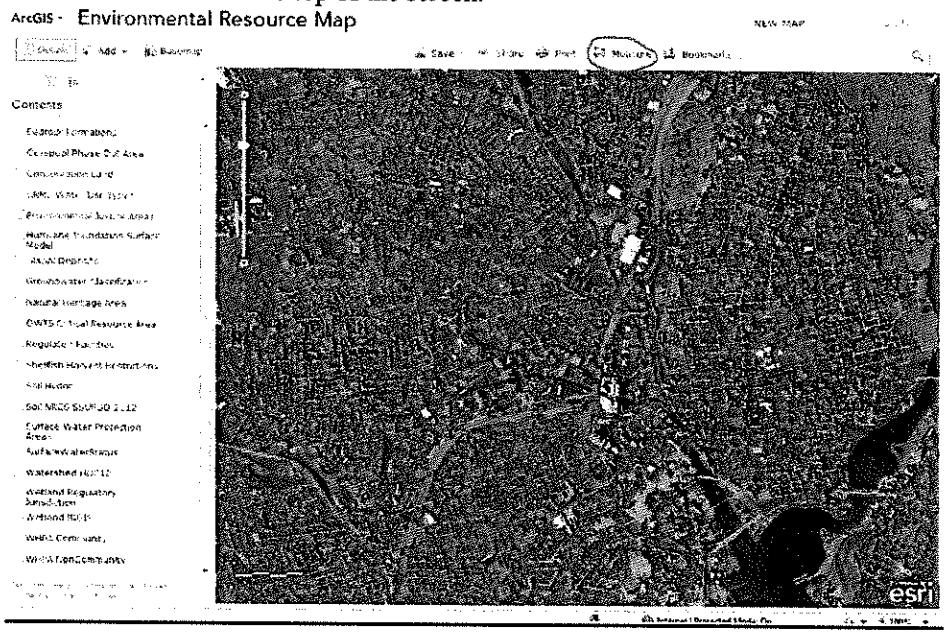
To determine if the receiving water is on the state's most recent 303(d) List of Impaired Waters, refer to the Integrated Water Quality Monitoring and Assessment Report (Integrated Report, IR) Category. The IR Category 5 is the 303(d) List of Impaired Waters. IR Category 5 consists of those water bodies that are impaired and require development of a TMDL. The list of Impairments for which a TMDL must be developed, will be shown for waterbodies in Category 5.

To determine if a TMDL has been completed for a waterbody, a list of Impairments will be shown at the bottom of the box under 'TMDL completed'.

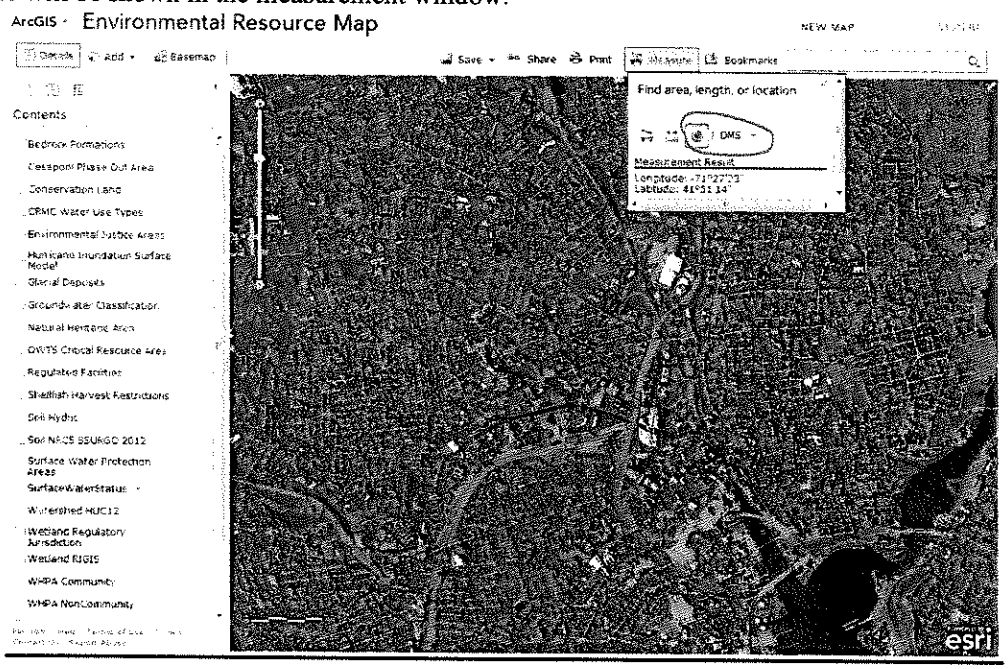


Determining Latitude and Longitude

Begin by zooming in to the location for which you want to identify the latitude and longitude. Next click on the "Measure" tool located at the top of the screen.

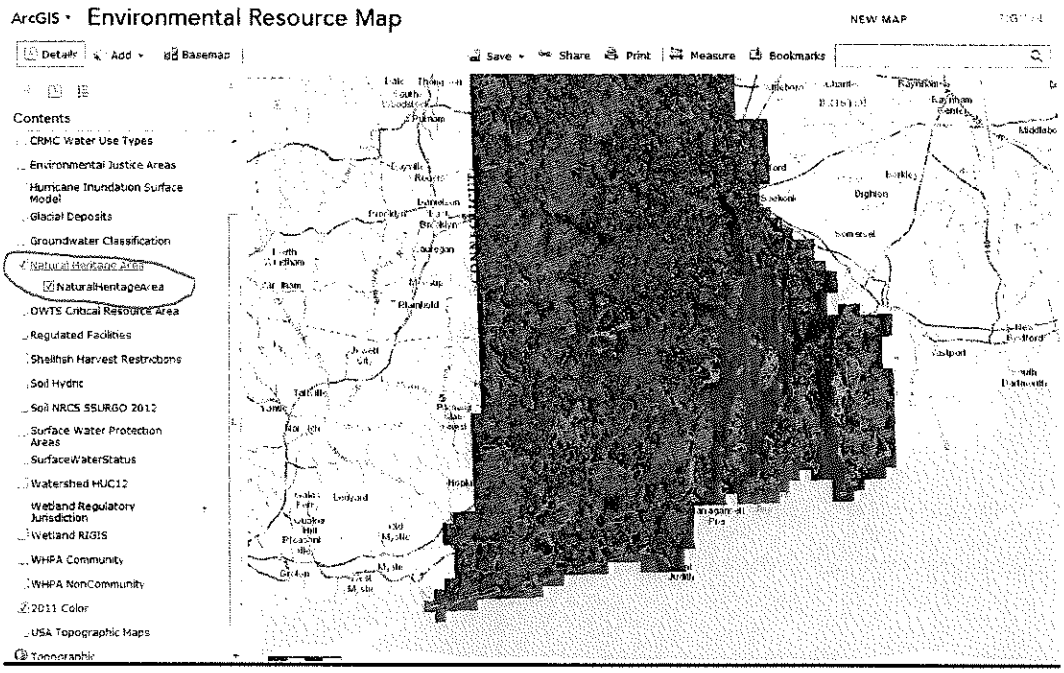


Next select the latitude/longitude icon and activate the units in DMS (degrees, minutes, seconds). Now simply move your cursor over the location in question and click on it. At this point the latitude and longitude will be shown in the measurement window.



Determining whether or not your site is within or discharges directly to a Natural Heritage Area (NHA).

Begin by selecting "Show Contents of Map" Icon, then click on "Natural Heritage Area".



Next zoom in to the location for which you want investigate the NHA status. If you determine based on the information contained in ArcGIS that your construction project is located within or directly discharges to an NHA or has discharge related activities that potentially affect a listed or proposed to be listed endangered or threatened species or its critical habitat your project requires an additional review and approval by the DEM. In order to begin this process, the Stormwater Management Plan must include a specific request for NHA review and approval of the proposed project.

RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
Office of Water Resources

NOTICE OF TERMINATION (NOT)

STORMWATER GENERAL PERMIT
FOR CONSTRUCTION ACTIVITY
(Revised – September 2013)

RIPDES Permit Authorization to be terminated: No. RIR_____

I. OWNER

Name:	Email:		
Mailing Address:			
City:	State:	Zip:	Phone: ( )
Contact Person:	Title:		

II. OPERATOR (if different from Owner)

Name:	Email:		
Mailing Address:			
City:	State:	Zip:	Phone: ( )
Contact Person:	Title:		

III. CONSTRUCTION SITE INFORMATION

Street Address:			
City:	State:	Zip:	Phone:
Nearest Utility Pole Number:	Assessor's Plat:	Lot:	
Date land disturbing activities ceased:			
Date final site stabilization was achieved:			

IV. OWNER & OPERATOR CERTIFICATION

I certify under penalty of law that all disturbed soils at the construction site have been stabilized and temporary erosion and sediment control measures have been removed and all stormwater discharges associated with construction activity from the construction site that are authorized by the General Permit have been eliminated. The burden of operating in compliance with applicable RIPDES Regulations is my responsibility. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

Print Owner Name _____

Print Owner Title _____

Owner Signature _____ Date _____

Print Operator Name _____

Print Operator Title _____

Operator Signature _____ Date _____

SESC Plan Inspection Report

Project Information			
Name			
Location			
DEM Permit No.			
Site Owner	Name	Phone	Email
Site Operator	Name	Phone	Email
Inspection Information			
Inspector Name	Name	Phone	Email
Inspection Date		**Start/End Time**	
Inspection Type ❑ Weekly ❑ Pre-storm event ❑ During storm event ❑ Post-storm event ❑ Other			
Weather Information			
Last Rain Event **Date:** **Duration (hrs):** **Approximate Rainfall (in):**			
Rain Gauge Location & Source:			
Weather at time of this inspection:			

Check statement that applies then sign and date below:

☐ I, as the designated Inspector, certify that this site has been inspected as required by regulation and I have determined that maintenance and corrective actions are not required at this time.

☐ I, as the designated Inspector, certify that this site has been inspected as required by regulation and I have made the determination that the site requires corrective actions. The required corrective actions are noted within this inspection report.

	Print Name	Signature	Date
Inspector:			

The Site Operator acknowledges by his/her signature, the receipt of this SESC Plan inspection report and its findings. He/she acknowledges that all recommended corrective actions must be completed and documentation of all such corrective actions must be made in this inspection report per applicable regulations.

	Print Name	Signature	Date
Operator:			

Site-specific Control Measures

Number the structural and non-structural stormwater control measures identified in the SESC Plan and on the SESC Site Plans and list them below (add as necessary). Bring a copy of this inspection form and any applicable SESC Site Plans with you during your inspections. This list will assist you to inspect all control measures at your site.

FILL THIS TABLE USING THE SESC PLAN TABLES 2.11 & 3.12.

	Location/Station	Control Measure Description	Installed & Operating Properly?	Assoc. Photo/ Figure #	Corrective Action Needed (Yes or No; if 'Yes', please detail action required)
1	Site Perimeter Locations and Temporary Soil Stockpiles Fiber rolls	Fiber rolls Section Six: Sediment Control Measures, Straw Wattles, Compost Tubes and Fiber Rolls - RI SESC Handbook.	❑Yes ❑No		
2	Construction Entrance	Stone Stabilized Pad. Section Six: Sediment Control Measures – Construction Entrances –RI SESC Handbook.	❑Yes ❑No		
3	Exposed slopes Erosion Control blankets	Section Four: Erosion Control Measures – Slope Protection –RI SESC Handbook	❑Yes ❑No		
4			❑Yes ❑No		
5			❑Yes ❑No		
6			❑Yes ❑No		
7			❑Yes ❑No		
8			❑Yes ❑No		
9			❑Yes ❑No		
10			❑Yes ❑No		
11			❑Yes ❑No		
12			❑Yes ❑No		
13			❑Yes ❑No		

General Site Issues

Below are some general site issues that should be assessed during inspections. Please ***customize*** *this list as needed for conditions at the site.*

	Compliance Question		Assoc. Photo/ Figure #	Corrective Action Needed (If 'Yes', please detail action required and include location/station)
1	Have all control measures been installed as specified in the RISESC Handbook and prior to any earth disturbing activities?	❑Yes ❑No ❑ N/A		
2	Are appropriate limits of disturbance (LOD) established?	❑Yes ❑No ❑ N/A		
3	Are controls that limit runoff from exposed soils by diverting, retaining, or detaining flows (such as check dams, sediment basins, etc.) in place?	❑Yes ❑No ❑ N/A		
4	Are all temporary conveyance practices installed correctly and functioning as designed?	❑Yes ❑No ❑ N/A		
5	Has maintenance been performed as required to ensure continued proper function of all temporary conveyances practices?	❑Yes ❑No ❑ N/A		
6	Were all exposed soils seeded by October 15th?	❑Yes ❑No ❑ N/A		
7	Have soils been stabilized where earth disturbance activities have permanently or temporarily ceased on any portion of the site and will not resume for more than 14 days?	❑Yes ❑No ❑ N/A		
8	In instances where adequate vegetative stabilization was not established by November 15th, have non-vegetative erosion control measures must be employed?	❑Yes ❑No ❑ N/A		
9	If work is to continue from October 15th through April 15th, are steps taken to ensure that only the day's work area will be exposed and all erodible soil is stabilized within 5 working days?	❑Yes ❑No ❑ N/A		
10	Have inlet protection measures (such as fabric drop inlet protection, curb drop inlet protection, etc.) been properly installed?	❑Yes ❑No ❑ N/A		
11	Has the operator cleaned and maintained inlet protection measures when needed?	❑Yes ❑No ❑ N/A		
12	Has the operator removed accumulated sediment adjacent to inlet protection measures within 24 hours of detection?	❑Yes ❑No ❑ N/A		

	Compliance Question		**Assoc. Photo/ Figure #**	**Corrective Action Needed (If 'Yes', please detail action required and include location/station)**
13	Has the operator properly installed outlet protection (such as riprap, turf mats, etc.) at all temporary and permanent discharge points?	❑Yes ❑No ❑ N/A		
14	Are all outlet protection measures functioning properly in order to reduce discharge velocity, promote infiltration, and eliminate scour?	❑Yes ❑No ❑ N/A		
15	Have all discharge points been inspected to ensure the prevention of scouring and channel erosion?	❑Yes ❑No ❑ N/A		
16	Have sediment controls been installed along perimeter areas that will receive stormwater from earth disturbing activities?	❑Yes ❑No ❑ N/A		
17	Is the operator maintaining sediment controls in accordance with the requirements in the *RI SESC Handbook*?	❑Yes ❑No ❑ N/A		
18	Have temporary sediment barriers been installed around permanent infiltration areas (such as bioretention areas, infiltration basins, etc.)?	❑Yes ❑No ❑ N/A		
19	Have staging areas and equipment routing been implemented to avoid compaction where permanent infiltration areas will be located?	❑Yes ❑No ❑ N/A		
20	Are surface outlet structures (such as skimmers, siphons, etc.) installed for each temporary sediment basin? [Exception: frozen conditions]	❑Yes ❑No ❑ N/A		
21	Have all temporary sediment basins or traps been inspected and maintained as required to ensure proper function?	❑Yes ❑No ❑ N/A		
22	Does the project include the use of polymers, flocculants, or other chemicals to control erosion, sedimentation, or runoff from the site?	❑Yes ❑No ❑ N/A		
23	Are all chemicals being managed in accordance with Appendix J of the *RISESC Handbook* and current best management practices?	❑Yes ❑No ❑ N/A		
24	Has the site operator taken steps to **prohibit** the following pollutant discharges on the site?			
a	Contaminated groundwater.	❑Yes ❑No ❑ N/A		

	Compliance Question		Assoc. Photo/ Figure #	Corrective Action Needed (If 'Yes', please detail action required and include location/station)
b	Wastewater from washout of concrete; unless properly contained, managed, and disposed of.	❑Yes ❑No ❑ N/A		
c	Wastewater from washout and cleanout of stucco, paint, form release oils, curing compounds, and other construction products.	❑Yes ❑No ❑ N/A		
d	Fuels, oils, or other pollutants used in vehicle and equipment operation and maintenance.	❑Yes ❑No ❑ N/A		
e	Soaps or solvents used in vehicle and equipment washing.	❑Yes ❑No ❑ N/A		
f	Toxic or hazardous substances from a spill or other release.	❑Yes ❑No ❑ N/A		
25	Is the operator using properly constructed entrances/exits to the site so sediment removal occurs prior to vehicles exiting?	❑Yes ❑No ❑ N/A		
26	If needed, are additional controls (such as rumble strips, rattle plates, etc.) in place to remove sediment from tires prior to exiting?	❑Yes ❑No ❑ N/A		
27	Is sediment track-out being removed by the end of the same workday in which it occurs (via sweeping, shoveling, or vacuuming)?	❑Yes ❑No ❑ N/A		
28	Are all wastes generated at the site being managed and properly disposed of by the end of each workday?	❑Yes ❑No ❑ N/A		
29	Are all chemicals and hazardous waste materials stored properly in covered areas and surrounded by containment control systems?	❑Yes ❑No ❑ N/A		
30	Has the operator established highly visible locations for the storage of spill prevention and control equipment on the construction site?	❑Yes ❑No ❑ N/A		
31	Are allowable non-stormwater discharges being managed properly with adequate controls?	❑Yes ❑No ❑ N/A		
32	Is the site operator properly managing groundwater or stormwater that is removed from excavations, trenches, or similar points of accumulation?	❑Yes ❑No ❑ N/A		
33	Are proper procedures and controls in place for the storage of materials that may discharge pollutants if	❑Yes ❑No ❑ N/A		

	Compliance Question		Assoc. Photo/ Figure #	Corrective Action Needed (If 'Yes', please detail action required and include location/station)
	exposed to stormwater?			
	Are stockpiles located within the limits of disturbance?	❑Yes ❑No ❑ N/A		
	Are stockpiles being protected from contact with stormwater using a temporary sediment barrier?	❑Yes ❑No ❑ N/A		
	Where needed, has cover or appropriate temporary vegetative or structural stabilization been utilized for stockpiles?	❑Yes ❑No ❑ N/A		
	Is the operator effectively managing the generation of dust through the use of water, chemicals, or minimization of exposed soil?	❑Yes ❑No ❑ N/A		
	Are designated washout areas (such as wheel washing stations, washout for concrete, paint, stucco, etc.) clearly marked on the site?	❑Yes ❑No ❑ N/A		
	Are vehicle fueling and maintenance areas properly located to prevent pollutants from impacting stormwater and sensitive receptors?	❑Yes ❑No ❑ N/A		

General Field Comments:

Photos:
(Associated photos – each photo should be dated and have a unique identification # and written description indicating where it is located within the project area. If a close up photo is required, it should be preceded with a photo including both the detail area and some type of visible fixed reference point. Photos should be annotated with Station numbers and other identifying information where needed.)

Photo #:	Station:
(insert Photo here)	Description:

Photo #:	Station:
(insert Photo here)	Description:

Photo #:	Station:
(insert Photo here)	Description:

Photo #:	Station:
(insert Photo here)	Description:

Photo #:	Station:
(insert Photo here)	Description:

Photo #:	Station:
(insert Photo here)	Description:

(add more as necessary)

Corrective Action Log

TO BE FILLED OUT BY SITE OPERATOR

Describe repair, replacement, and maintenance of control measures, actions taken, date completed, and note the person that completed the work.

	Location/Station	Corrective Action	Date Completed	Person Responsible
Operator Signature:			**Date:**	

PROJECT:

Amendment Log

TO BE FILLED OUT BY SITE OPERATOR

Describe amendment(s) to be made to the SESC Plan, the date, and the person/title making the amendment. ALL amendments must be approved by the Site Owner.

#	Date	Description of Amendment	Amended by: Person/Title	Site Owner Must Initial
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				

Add more lines/pages as necessary

Dan Goulet

From: James Boyd <jboyd@crmc.ri.gov>
Sent: Thursday, November 03, 2016 10:40 AM
To: Igor.Runge@gza.com; 'Sara Haupt'
Cc: 'Dave Reis'; 'Dan Goulet'
Subject: RE: NGrid Field's Point Federal Consistency Review

Hi Igor and Sara,

As a follow up to the request below, can you also please address the following issues with your submittal.

The project description is very thin and needs details of the construction. Section 3.2 proposes a design life of 25 years and in the very next Section 3.3 it is stated that the facility has been operated for 40 years. This call out of 25 years does not seem to match past practice and needs to be explained and why 25 years is appropriate.

In Section 3.0 it states that the location was chosen to limit the piping and potential land disturbance. This does not seem to agree with the variance criteria and the need to avoid first. They need to show some alternatives and why they need to be here only if it's a matter of existing pipes. There are no alternatives detailed.

Thanks

Jim

From: James Boyd [mailto:jboyd@crmc.ri.gov]
Sent: Thursday, November 03, 2016 9:40 AM
To: Igor.Runge@gza.com; 'Sara Haupt'
Cc: 'Dave Reis'
Subject: NGrid Field's Point Federal Consistency Review

Hi Igor and Sara,

After further review of Section 2.0 Project Description in your October 31 filing, it has been noted that a more detailed description of the liquefaction facility needs to be included in the filing. Currently Section 2.0 is quite brief on what the liquefaction facility will entail. Can you please provide some more details on the facility itself? You can send it electronically as a separate file and we'll include it in the current file 2016-10-099. Better yet, send us a draft and we can advise you whether it satisfies the necessary detailed description. Thank you.

Jim

James Boyd
Coastal Policy Analyst
RI Coastal Resources Management Council
Oliver Stedman Government Center
4808 Tower Hill Road
Wakefield, RI 02879
jboyd@crmc.ri.gov | 401.783.3370

RHODE ISLAND
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
235 Promenade Street, Providence, RI 02908-5767 TDD 401-222-4462

31 October 2016

Mr. Charles Willard
National Grid LNG, LLC
280 Melrose Street
Providence, RI 02907

Dear Mr. Willard:

The Department of Environmental Management, Office of Air Resources has reviewed and approved your General Permit application for a natural gas-fired Emergency Generator at your site located at 121 Terminal Road, Providence, RI.

Enclosed is the General Permit issued pursuant to our review of your application (General Permit No. GPEG-279).

Be advised that on May 4, 2016, the U.S. Court of Appeals for the D.C. Circuit vacated the provisions of 40 CFR 60, Subpart JJJJ – "Standards of Performance for Stationary Spark Ignition Internal Combustion Engines", which allow emergency engines to operate for up to 100 hours for emergency demand response when the Reliability Coordinator has declared an Energy Emergency Alert Level 2 or for voltage or frequency deviations of 5 percent or greater below standard voltage or frequency. Specifically, the provisions in 40 CFR 60.4243(d)(2)(ii)-(iii) were vacated. Therefore, if you plan to operate your emergency generator to address voltage or frequency deviations or in emergency demand response, you must apply for a modification to your minor source permits to allow the units to be operated in non-emergency situations.

If there are any questions concerning this permit, please contact me at 401-222-2808, extension 7028 or at aleida.whitney@dem.ri.gov.

Sincerely,

Aleida M. Whitney
Senior Air Quality Specialist
Office of Air Resources

cc: Providence Building Official

30% post-consumer fiber

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ALSTON&BIRD LLP
The Atlantic Building
950 F Street, NW
Washington, DC 20004-1404

202-239-3300
Fax: 202-654-4964
www.alston.com

Andrea Wolfman Direct Dial: 202-239-3943 Email: andrea.wolfman@alston.com

November 7, 2016

The Honorable Kimberly D. Bose
Secretary
Federal Energy Regulatory Commission
888 First St., N.E.
Washington, D.C. 20426

Re: National Grid LNG LLC
Fields Point Liquefaction Project
Docket No. CP16-121-000

Dear Secretary Bose:

In connection with the National Grid LNG LLC ("NGLNG") application for a certificate of public convenience and necessity for its Fields Point Liquefaction Project ("FPLP" or "Project"), enclosed for the record is the Emergency Generator General Permit issued by the Rhode Island Department of Environmental Management, Office of Air Resources on October 31, 2016 with respect to potential air emissions from the emergency generator to be used in the operation of the facility to be constructed.

If you have any questions please do not hesitate to contact me.

Sincerely,

/s/ Andrea Wolfman

Andrea Wolfman

Counsel for National Grid LNG LLC

Enclosure
cc: Service List

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR RESOURCES

GENERAL PERMIT FOR AN EMERGENCY GENERATOR

NATIONAL GRID LNG, LLC

GENERAL PERMIT NO. GPEG-279

Pursuant to the provisions of Air Pollution Control Regulation No. 9, this general permit is issued to:

National Grid LNG, LLC

For installation of the following emergency generator:

Caterpillar, 755 bHP, 500 ekW, natural gas fired emergency generator.

Model No. G3412C

Located at: *121 Terminal Road, Providence, RI*

Liquefaction Area

This general permit shall be effective from the date of its issuance and shall remain in effect until revoked by or surrendered to the Department. This general permit does not relieve *National Grid LNG, LLC* **from compliance with applicable state and federal air pollution control rules and regulations. The design, construction and operation of this equipment shall be subject to the attached permit conditions and emission limitations.**

Douglas L. McVay

Douglas L. McVay, Chief
Office of Air Resources

10/31/16

Date of Issuance

STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
OFFICE OF AIR RESOURCES

Permit Conditions and Emission Limitations

NATIONAL GRID LNG, LLC

GENERAL PERMIT NO. GPEG-279

A. Emission Limitations

1. Sulfur Dioxide

   The sulfur content of any gaseous fuel burned in the emergency generator shall not exceed 10 grains total sulfur per 100 dry standard cubic feet.

2. Carbon Dioxide

   The emission rate of carbon dioxide discharged to the atmosphere from the emergency generator shall not exceed 1900 lbs/MWh.

3. Visible emissions from the emergency generator shall not exceed 10% opacity except for a period or periods aggregating no more than three minutes in any one-hour. This visible emission limitation shall not apply during startup of an emergency generator. Startup shall be defined as the first ten minutes of firing following the initiation of firing.

B. Operating Requirements

1. The maximum firing rate for the emergency generator shall not exceed 5,875 cubic feet per hour.

2. The emergency generator shall not operate more than 500 hours in any 12-month period.

3. The emergency generator shall be used only during emergencies or for maintenance or testing purposes. Emergency means an electric power outage due to a failure of the electrical grid, on-site disaster, local equipment failure, or public service emergencies such as flood, fire, or natural disaster. Emergency shall also mean periods during which ISO New England, or any successor Regional Transmission Organization, directs the implementation of operating procedures for voltage reductions, voluntary load curtailments by customers or automatic or manual load shedding within Rhode Island in response to unusually low frequency, equipment overload, capacity or energy deficiency, unacceptable voltage levels or other such emergency conditions.

4. The emergency generator shall not be operated in conjunction with any voluntary demand-reduction program or any other interruptible power supply arrangement with a utility, other market participant or system operator unless such program is implemented at the same time as ISO New England, or any successor Regional Transmission Organization, directs the implementation of operating procedures for voltage reductions, voluntary load curtailments by customers or automatic or manual load shedding within Rhode Island in response to unusually low frequency, equipment overload, capacity or energy deficiency, unacceptable voltage levels or other such emergency conditions.

C. Continuous Monitoring

1. The emergency generator shall be equipped with a non-resettable elapsed time meter to indicate, in cumulative hours, the elapsed engine operating time for the unit.

D. Record Keeping and Reporting

1. The owner/operator shall, on a monthly basis, no later than 5 days after the first of each month, determine and record the hours of operation for the emergency generator for the previous 12-month period.

2. The owner/operator shall notify the Office of Air Resources, in writing, whenever the hours of operation in any 12-month period exceeds 500 hours for the emergency generator.

3. The owner/operator shall notify the Office of Air Resources of any anticipated noncompliance with the terms of this permit or any other applicable air pollution control rules and regulations.

4. The owner/operator shall notify the Office of Air Resources, in writing, of the date of actual start-up of the emergency generator.

5. The owner/operator shall notify the Office of Air Resources in writing of any planned physical or operational change to this emergency generator that would:

   a. Change the representation of the facility in the application.

   b. Alter the applicability of any state or federal air pollution rules or regulations.

   c. Result in the violation of any terms or conditions of this permit.

   Such notification shall include:

   - Information describing the nature of the change.

- Information describing the effect of the change on the emission of any air contaminant.

- The scheduled completion date of the planned change.

Any such change shall be consistent with the appropriate regulation and have the prior approval of the Director.

6. The owner/operator shall notify the Office of Air Resources, in writing, of any noncompliance with the terms of this permit within 30 calendar days of becoming aware of such occurrence and supply the Director with the following information:

   a. The name and location of the facility;

   b. The subject source(s) that caused the noncompliance with the permit term;

   c. The time and date of first observation of the incident of noncompliance;

   d. The cause and expected duration of the incident of noncompliance;

   e. The estimated rate of emissions (expressed in lbs/hr or lbs/day) during the incident and the operating data and calculations used in estimating the emission rate.

   f. The proposed corrective actions and schedule to correct the conditions causing the incidence of noncompliance.

7. All records required as a condition of this permit shall be maintained for a minimum of five years after the date of each record and shall be made available to representatives of the Office of Air Resources upon request.

E. Other Permit Conditions

1. To the extent consistent with the requirements of this approval and applicable Federal and State laws, the emergency generator shall be designed, constructed and operated in accordance with the representation of the equipment in the permit application.

2. Employees of the Office of Air Resources and its authorized representatives shall be allowed to enter the facility at all times for the purpose of inspecting any air pollution source, investigating any condition it believes may be causing air pollution or examining any records required to be maintained by the Office of Air Resources.

3. At all times, including periods of startup, shutdown and malfunction, the owner/operator shall, to the extent practicable, maintain and operate the emergency generator in a manner consistent with good air pollution control practice for

minimizing emissions. The general duty to minimize emissions does not require you to make any further efforts to reduce emissions if levels required by this permit have been achieved. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Office of Air Resources which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures and inspection of the emergency generator.

4. The owner/operator is subject to the requirements of 40 CFR 60, Subpart A (General Provisions) and Subpart JJJJ (Standards of Performance for Stationary Spark Ignition Internal Combustion Engines). Compliance with all applicable provisions therein is required.

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Document Content(s)

FERC filing transmittal for general permit.PDF.....1-7

State of Rhode Island and Providence Plantations
Coastal Resources Management Council
Oliver H. Stedman Government Center
4808 Tower Hill Road, Suite 3
Wakefield, RI 02879-1900

(401) 783-3370
Fax (401) 783-3767

PUBLIC NOTICE

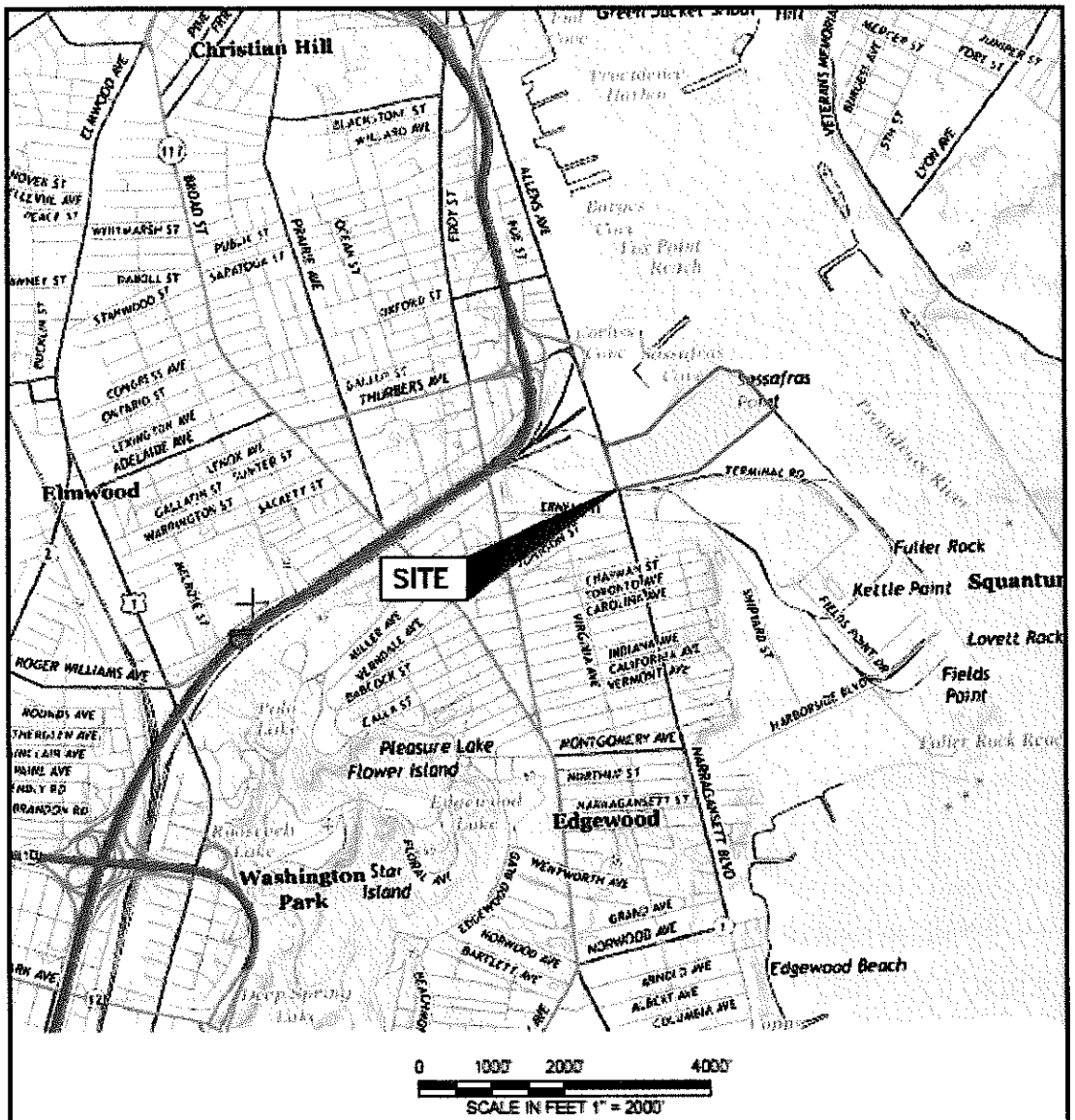
The Coastal Resources Management Council ("CRMC") is in receipt of a federal consistency certification filed by National Grid on October 31, 2016 for the proposed construction of a natural gas liquefaction facility ("project") on Assessor's Plat 56 Lots 316, 5 and Plat 101 Lot 1, located at 121 Terminal Road, Providence. The proposed liquefaction facility will be constructed adjacent to National Grid's existing liquefied natural gas (LNG) tank. The proposed project is subject to CRMC review authority pursuant to the federal Coastal Zone Management Act (CZMA), 16 USC §§ 1451-1464, and the CZMA's implementing regulations at 15 CFR Part 930 Subpart D – Consistency for Activities Requiring a Federal License or Permit.

The CRMC will not be issuing a state permit in this case. Rather, as the State's authorized coastal zone management agency, the CRMC must make a determination as to whether the proposed project is consistent with the enforceable policies of the State's federally approved coastal program. National Grid is seeking a variance to the CRMC minimum 50-foot setback requirement for proposed filling and grading activity on the project site. National Grid's consistency certification and supporting information have been assigned file number **2016-10-099** and can be reviewed at the CRMC office during regular office hours (Monday-Friday 8:30 am to 4:00 pm). In addition, a downloadable PDF file copy of National Grid's consistency certification and supporting information, including site plans, are posted on the CRMC website at www.crmc.ri.gov.

The CRMC is providing public notice on National Grid's consistency certification in accordance with 15 CFR § 930.61 and will scheduled a public hearing in this matter for a date yet to be determined. The CRMC will accept written comments from parties interested in or concerned with the above matter. All comments should be sent to Grover J. Fugate, CRMC Executive Director at the above address **on or before December 23, 2016**. Comments must be specifically directed to the issue as to whether the proposed project is consistent with the enforceable policies of the Rhode Island Coastal Resources Management Program.

Signed this 16th day of November 2016.

Grover J. Fugate, Executive Director
Coastal Resources Management Council



RHODE ISLAND

QUADRANGLE LOCATION

SOURCE:

BASE MAP FROM THE FOLLOWING USGS QUADRANGLE MAP: PROVIDENCE, RHODE ISLAND (2015)

DIGITAL TOPOGRAPHIC MAPS PROVIDED BY USGSSTORE.GOV.

CONTOUR ELEVATIONS REFERENCE NAVD 88,
CONTOURS ARE SHOWN IN FEET AT 10' INTERVALS

N W E S

LIQUEFACTION FACILITY
642 ALLENS AVENUE
PROVIDENCE, RHODE ISLAND

PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com

PREPARED FOR: nationalgrid

LOCUS PLAN

PROJ MGR: MSK	REVIEWED BY: MJP	CHECKED BY: MEA	FIGURE 1
DESIGNED BY: BWP	DRAWN BY: LDT	SCALE: AS NOTED	
DATE: OCTOBER 2016	PROJECT NO. 33554.60	REVISION NO. 0	SHEET NO. 1 OF 2

GZA
Proactive by Design

GEOTECHNICAL
ENVIRONMENTAL
ECOLOGICAL
WATER
CONSTRUCTION MANAGEMENT

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Providence, RI 02909
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December 1, 2016
File No. 03.0033554.60

Mr. Grover Fugate
Executive Director
Coastal Resources Management Council
Stedman Government Center – Suite 3
4808 Tower Hill Road
Wakefield, Rhode Island 02879

Re: Response to CRMC's comments in an email dated November 3, 2016
National Grid Liquefaction Facility – Federal Consistency Review
121 Terminal Road
Providence, Rhode Island

Dear Mr. Fugate;

GZA GeoEnvironmental Inc. (GZA) is pleased to provide you with this response to comments that were submitted by your staff regarding the recent (October 31, 2016) Federal Consistency Review (FCR) application for the proposed National Grid Liquefaction Facility located at 121 Terminal Road, Providence, Rhode Island. Our response comments are intended to supplement the information already provided in the initial FCR application submittal.

To facilitate your review, CRMC's comments are presented in italics and our responses follow in plain text.

Comment 1

Section 3.2 proposes a design life of 25 years and in the very next Section 3.3 it is stated that the facility has been operated for 40 years. This call out of 25 years does not seem to match past practice and needs to be explained and why 25 years is appropriate.

Response to Comment 1

The current operations at the facility consist of the storage of LNG that is transported on-site by tanker truck. The LNG is then vaporized for use in the natural gas distribution network in the greater Providence area. The main component of this operation is the LNG storage tank. Storage tanks when properly maintained have a long design life.

The proposed liquefaction project consists of several major components that include: nitrogen compressor, feed gas booster gas pretreatment equipment, and cold box. The nitrogen compressor and feed gas booster are both rotating equipment. The gas pretreatment and cold box is subject to thermal cycling over the course of their use.

Constructing a costlier facility than is necessary is a crucial consideration. A 25-year design life of the facility is based on industry experience with similar equipment and facilities when properly maintained and operated. Deprecation of the project has been based on a design life of 25-years.

And the initial cost of construction, operation costs, and replacement costs are balanced when choosing the design life of a new project.

Comment 2

After further review of Section 2.0 Project Description in your October 31 filing, it has been noted that a more detailed description of the liquefaction facility needs to be included in the filing. Currently Section 2.0 is quite brief on what the liquefaction facility will entail. Can you please provide some more details on the facility itself?

Response to Comment 2

The existing LNG storage facility does not have liquefaction capability and only receives LNG by truck. The stored LNG is then vaporized for redelivery to customers via pipeline, although there is the capability to redeliver to the customers' trucks. The storage facility is physically connected to the natural gas distribution system in Providence, RI. The proposed liquefaction facility will allow customers the ability to deliver natural gas for storage in vapor form as an alternative to delivering LNG to the storage tank by tanker truck. Customers would also have the ability to receive their LNG via tanker truck.

The project will consist of one new 20 million standard cubic feet per day (MMscfd) gas pretreatment and liquefaction system to convert natural gas delivered by the existing pipeline into LNG by cooling it to -260 degrees Fahrenheit where it takes liquid form. Converting natural gas to LNG reduces its volume, making it more convenient to store and transport. There are no harmful chemicals used in the liquefaction process. The only substance involved is nitrogen, a safe element that makes up approximately 80 percent of the air we breathe. The LNG will then be stored in the existing LNG tank with a connection to the existing tank fill lines associated with the existing truck unloading station. Currently the LNG tank is filled by tanker trucks through this tank fill line. Constructing the liquefaction facility will allow the existing tank to be filled without the need to truck LNG to the facility for storage.

The feed gas provided by the liquefaction customers will be transported to the project via the connection to the existing 12-inch pipeline that is located adjacent to the northern border of the site. After metering and before entering the liquefaction heat exchanger, the gas pressure will be raised by an electric driven booster compressor and the gas will be pre-treated to remove constituents that have lower freezing points than natural gas such as trace water and CO_2. The existing storage capacity will remain unchanged. There will be no change to the existing LNG storage tank and no relocation of the existing cryogenic piping or vaporization equipment.

The liquefaction system will deploy an electric motor driven, closed loop, nitrogen refrigeration cycle process to convert the natural gas into a liquefied state. The cycle was chosen due to its simplicity of operation, safety considerations, and the lack of environmental impact resulting from the use of an inert gas as the refrigerant. The design of the proposed facilities and the layout of the equipment will be within the boundaries of the existing plant property and will not require the relocation of the existing cryogenic piping, storage, or vaporization equipment.

Major Components:

- Feed Gas Metering Package
- Feed Gas Pretreatment
- Molecular Sieve Beds

- Feed Gas Booster Compressor
- Nitrogen Compressor
- Nitrogen Companders
- Cold Box
- Hot Oil Heater
- Air Cooled Heat Exchangers
- Warm and Cold Drain Tanks
- Instrument Air Compressors with Driers
- Nitrogen Tanks and Vaporizers
- Fire Water Booster Pump
- Emergency Generator
- Variable Frequency Drive
- Motor Control Center
- Transformers
- Electrical Switchgear
- Distributed Control System

While the liquefaction process unit will be an independent operation, it will be necessary to provide some integration with the existing systems, utilities, and auxiliaries. The project will not alter or replace any of the existing LNG systems or equipment in use.

Adding the liquefaction facility will improve the stability of the LNG supply to customers during high demand winter months. LNG storage provides needed capacity in gas supply during times of peak use from heating loads of residential and commercial customers. The demand for natural gas worldwide has increased, which has led to more volatility in LNG prices. Adding liquefaction equipment to the existing LNG facility will help to stabilize these prices and costs for National Grid's customers in the New England area.

Comment 3

In Section 3.0 it states that the location was chosen to limit the piping and potential land disturbance. This does not seem to agree with the variance criteria and the need to avoid first. They need to show some alternatives and why they need to be here only if it's a matter of existing pipes. There are no alternatives detailed.

Response to Comment 3

While all structural features of the liquefaction facility itself are landward of the required 50-foot setback from the coastal feature, the stormwater outfall and portions of the slope armoring and access roadway must extend into the setback despite attempts to avoid any encroachment.

The LNG plant does not have any other open space suitable for the placement of the liquefaction facility. The location of the liquefaction facility is limited based on the property lines of the LNG plant, the location of the existing adjacent storage tank, access to the gas feed lines, and access to the take-away gas lines. The selected location on the Site for the liquefaction facility has all three of these critical, necessary requirements in the closest proximity possible. The Site

is also located in close proximity to the interstate highway system. Relocating the stormwater outfall farther inland would require additional earthwork/land disturbance and would reduce the efficiency of the stormwater conveyance system.

NGLNG did consider several alternatives to the proposed project. First was a no action alternative, which would not have provided the customers of NGLNG a way to convert their natural gas vapor to LNG. While alternative sources were reviewed, no unsubscribed capacity of liquefaction services are available within New England currently. NGLNG considered using a mixed refrigerant cooling system and turbines as prime movers for the rotating equipment, and both would have increased the efficiency of the process but required a larger footprint of the liquefaction plant and resulted in increased air emissions. NGLNG also considered transporting high pressure gas from the Manchester Street Gate station, approximately 1.2 miles to the north of the liquefier project, to increase efficiency of the plant and alleviate the need for a pressure boosting compressor. However, this additional construction within the public right of way would have significantly impacted the adjacent communities.

We trust this response summary adequately addresses CRMC's comments. If you need any additional information, please feel free to contact Igor at (401) 421-4140 or by email at igor.runge@gza.com.

Very truly yours,

GZA GEOENVIRONMENTAL, INC.

Sara Haupt
Project Engineer

Igor Runge, Ph.D., P.H.
Consultant/Reviewer

Margaret S. Kilpatrick, P.E.
Associate Principal

Cc: William Howard, National Grid

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February 1, 2017

The Honorable Kimberly D. Bose
Secretary
Federal Energy Regulatory Commission
888 First St., N.E.
Washington, D.C. 20426

Re: National Grid LNG LLC
Fields Point Liquefaction Project
Docket No. CP16-121-000

Dear Secretary Bose:

On November 1, 2016, National Grid LNG LLC ("NGLNG") submitted for the record in this docket its Coastal Zone Management Act Consistency Certification to the Rhode Island Coastal Resources Management Council ("CRMC"). Subsequently, on December 1, 2016, NGLNG submitted to the CRMC additional information in response to CRMC staff questions. That submittal was added to the CRMC public record as an addendum to the original application and a copy of the December 1, 2016 submittal to the CRMC is enclosed for the record in this docket. Also provided for the record in this docket is the public notice issued by the CRMC and the CRMC notice extending the public comment date in that proceeding to January 23, 2017.

As requested by Question 2 in Commission Staff Environmental Data Request 1, issued May 20, 2016, NGLNG is also providing an updated Table 1.6-1 from Resource Report 1 to show the current status of each permit acquisition or when the permit acquisition process will begin.

If you have any questions please do not hesitate to contact me.

Sincerely,

/s/ Andrea Wolfman

Andrea Wolfman

Counsel for National Grid LNG LLC

Enclosures
cc: Service List

ATTACHMENTS

FEDERAL ENERGY REGULATORY COMMISSION
WASHINGTON, D.C. 20426

OFFICE OF ENERGY PROJECTS

In Reply Refer To:
National Grid LNG LLC
Docket No. CP16-121-000

January 17, 2017

Susan Forcier, Esq.
Rhode Island Department of Environmental Management
235 Promenade Street
Providence, RI 02908

Re: October 21, 2016 Letter from the Department of Environmental Management to National Grid LNG LLC

Dear Ms. Forcier:

On November 16, 2016, National Grid LNG LLC (National Grid) filed Supplemental Information Related to Resource Report 7 and the Soil Management Plan for the proposed Fields Point Liquefaction Project. Attachment B to this filing includes your October 21, 2016 letter responding to a memorandum prepared by Robin L. Main on behalf of National Grid. In this letter, you state that the Rhode Island Department of Environmental Management (RIDEM) agrees with National Grid's position that federal law preempts certain statutes, regulations, and processes under RIDEM's purview related to this project. Specifically, National Grid states that the Rhode Island Industrial Property Remediation and Reuse Act (IPRRA),[1] the Remediation Regulations promulgated under the IPRRA, and the Public Involvement Plan (PIP) process are preempted by the FERC regulatory scheme.

Staff believes that it is not clear whether the subject Rhode Island regulations and processes are preempted in this proceeding. State regulation is preempted by the Natural Gas Act when it interferes or conflicts with FERC's regulatory authority over the transportation of natural gas or would unduly delay the construction and operation of

[1] R.I. Gen. Laws § 23-19.14-1 *et seq.*

facilities approved by the Commission.[2] However, the Commission encourages applicants to cooperate with state and local agencies regarding the location of pipeline facilities, environmental mitigation measures, and construction procedures.[3] Given RIDEM's status as a cooperating agency, and its special expertise and experience at the project site, particularly with respect to the collection of information and the development of remediation plans for sites like the one at issue, RIDEM's active participation in this proceeding would assist the Commission in resolving the issues in this proceeding and ensuring that the public interest is protected.[4] In addition, Rhode Island has authority delegated to it under federal statutes including the Clean Water Act, the Coastal Zone Management Act, and the Clean Air Act that may give the state both the ability and the obligation to deal with the environmental issues in this proceeding.

Commission staff would like the opportunity to discuss these issues with RIDEM and other appropriate state agencies. Please contact Ken Warn at 202-502-6859 or Sandra Delude at 202-502-8583 at your earliest convenience to set up a meeting.

Sincerely,

Ann F. Miles
Director
Office of Energy Projects

cc: All Parties
Public File – Docket No. CP16-121-000

---

[2] *Schneidewind v. ANR Pipeline Co.*, 485 U.S. 293, 310 (1988) and *Dominion Transmission, Inc. v. Summers*, 723 F.3d 238, 245 (D.C. Cir. 2013).

[3] *See, e.g., Algonquin Gas Transmission, LLC,* 154 FERC ¶ 61,048, at P 33 (2016).

[4] Should concerns over potential regulatory conflicts arise at any point throughout this proceeding, they can be addressed at that time.

State of Rhode Island and Providence Plantations
Coastal Resources Management Council
Oliver H. Stedman Government Center
4808 Tower Hill Road, Suite 3
Wakefield, RI 02879-1900

(401) 783-3370
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PUBLIC NOTICE

PUBLIC COMMENT PERIOD EXTENDED 30 DAYS

The CRMC issued public notice on November 16, 2016 regarding the federal consistency certification filed by National Grid for the proposed construction of a natural gas liquefaction facility ("project") on Assessor's Plat 56 Lots 316, 5 and Plat 101 Lot 1, located at 121 Terminal Road, Providence. The CRMC public notice requested public comments to be filed with the CRMC by December 23, 2016.

The CRMC is extending the public comment period for an additional 30 days until January 23, 2017. Please note that all comments should be mailed to Grover J. Fugate, CRMC Executive Director at the above address on or before January 23, 2017. **Comments must be specifically directed to the issue as to whether the proposed project is consistent with the enforceable policies of the Rhode Island Coastal Resources Management Program.**

National Grid's consistency certification and supporting information have been assigned file number **2016-10-099** and can be reviewed at the CRMC office during regular office hours (Monday-Friday 8:30 am to 4:00 pm). In addition, a downloadable PDF file copy of National Grid's consistency certification and supporting information, including site plans, are posted on the CRMC website at www.crmc.ri.gov.

The CRMC will schedule a public hearing in this matter for a date yet to be determined.

Signed this 20th day of December 2016.

Grover J. Fugate, Executive Director
Coastal Resources Management Council

/lat

2016-10-099

SOIL MANAGEMENT PLAN
642 ALLENS AVENUE
PROVIDENCE, RHODE ISLAND

PREPARED FOR:
RIDEM
Providence, Rhode Island

ON BEHALF OF:
National Grid
Waltham, Massachusetts

PREPARED BY:
GZA GeoEnvironmental, Inc.
Providence, Rhode Island

September 2012
File No. 33554.00

RECEIVED
FEB - 8 2017
COASTAL RESOURCES MANAGEMENT COUNCIL

GZA
GeoEnvironmental, Inc.

Engineers and Scientists

September 12, 2012
File No. 03.0033554.00-C

Mr. Joseph Martella
Rhode Island Department of Environmental Management
Office of Waste Management
235 Promenade Street
Providence, Rhode Island 02908-5767

530 Broadway
Providence
Rhode Island
02909
401-421-4140
Fax: 401-751-8613
http://www.gza.com

Re: Soil Management Plan
642 Allens Avenue
Providence, Rhode Island

Dear Mr. Martella:

Attached is the most recent version of the *Soil Management Plan* (SMP) for the 642 Allens Avenue Property (Site) in Providence, Rhode Island. The plan was prepared by GZA GeoEnvironmental, Inc., (GZA), on behalf of National Grid, to establish procedures to be followed during the installation of subsurface lines and other construction related activities at the Site that disturbs the subsurface.

Should you have any questions or comments, do not hesitate to call the undersigned at 401-421-4140, or Amy McKinnon, from National Grid, at 781-907-3644.

Very truly yours,

GZA GEOENVIRONMENTAL, INC.

Margaret S. Kilpatrick, P.E.
Senior Project Manager

James J. Clark, P.E.
Principal

MSK/JJC:tja

Attachments: Soil Management Plan

cc: Amy McKinnon, National Grid

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1.00 INTRODUCTION

On behalf of the Narragansett Electric Company d/b/a/ National Grid (National Grid), GZA GeoEnvironmental, Inc., (GZA) has prepared this *Soil Management Plan* (SMP). The SMP serves to provide guidance relating to the excavation, storage, and reuse or disposal of soils from the National Grid-owned property located at 642 Allens Avenue in Providence, Rhode Island (the "Site"). This plan also provides guidance related to the handling and management of groundwater. This SMP is subject to the Limitations provided in Appendix A.

The Site is identified on the Providence Tax Assessor's Map as Assessors Plat (AP), Lots 5, 273, 316, and 317, and as Plat 101, Lot 1. A Site *Locus Plan* is included as Figure 1.

The Site is the location of a former manufactured gas plant (MGP) and prior environmental testing indicated the presence of MGP-related contaminants at concentrations above certain regulatory criteria. The Site is currently occupied by National Grid for use as an active natural gas distribution facility. A tenant Holcim (Canada) Inc., (Holcim), a cement company, occupies the southeastern portion of the Site.

Note that the coastal resource areas of the Site (the Providence River) are subject to regulation by the Coastal Resources Management Council (CRMC), Rhode Island Department of Environmental Management (RIDEM), the U.S. Army Corps of Engineers (ACOE), and the U.S. Coast Guard (USCG). In addition, stormwater management, treatment and discharge may be subject to Narragansett Bay Commission (NBC) or RIDEM Rhode Island Point Discharge Elimination System (RIPDES) jurisdiction. Accordingly, an evaluation of potential regulatory requirements must be evaluated prior to the initiation of projects by National Grid Environmental personnel.

This SMP is based in part on the May 2009 SMP developed by VHB on behalf of National Grid. It has been prepared to establish procedures that will be followed during future construction/maintenance activities at the Site, which require the need to manage soils excavated and groundwater removed from the subsurface.

- Section 1.0 includes this introduction;
- Section 2.0 describes the Site and provides relevant background information;
- Section 3.0 presents a summary of the Site hydrogeologic features;
- Section 4.0 summarizes soil and groundwater quality data;
- Section 5.0 presents soil and groundwater management guidelines; and
- Section 6.0 presents health and safety guidelines.

2.00 SITE DESCRIPTION/BACKGROUND

The following provides a brief description and history of the Site and a summary of relevant past operations. For more detailed information, please refer to the April 2003 *Site Investigation Report* (SIR) submitted to RIDEM.

The Site consists of an approximately 42-acre parcel of land and is bound to the west by Allens Avenue, to the east by the Providence River, to the northwest by the Motiva Terminal property, to the northeast by a water lot owned by Motiva, to the southwest by Terminal Road, and to the south and southeast by UNIVAR (a chemical distributor), the former Sun Oil/ProvPort facility, the LeHigh Cement Distribution Company and the New England Petroleum Terminal Corporation. All surrounding properties are industrial in nature and either historically or currently store(d) petroleum and/or hazardous materials and have the potential to impact the Site. (Refer to Figure 2 for a *Site Plan*).

The Site is comprised of three principal areas and associated operations (as shown on Figure 2):

- National Grid's 642 Allens Avenue facility;
- National Grid's 670 Allens Avenue Compressed Natural Gas (CNG) Fueling Station;
- The Liquefied Natural Gas (LNG) facility operated by National Grid LNG; and
- Holcim's Cement facility.

The MGP occupied portions of all three locations described above. The main entrance to the Site is on Allens Avenue, on the west side of the Site. There are also gated entrances to the National Grid LNG site and Holcim facilities off Terminal Road.

From 1910 until 1954, an MGP operated at the Site producing coal gas, carbureted water gas, and high-BTU oil gas. Gas manufacturing by-products were routinely managed through recovery, storage, recycling, reprocessing, and resale of the by-products. Such by-products included coke, coal tar, ammonia, toluene, and benzene. B.P. Clapp operated an ammonia works at the Site beginning in 1910, and managed the recycling and sale of ammonia by-products. The United States Government operated a toluene facility at the Site for a short period of time during 1918.

In 1952, a liquefied petroleum gas distribution plant began operation at the Site. By 1954, coal gasification operations at the Site had ceased. As indicated previously, a LNG facility has operated on the eastern and southeastern portions of the Site since 1972 and Holcim (formerly, St. Lawrence Cement Company) has leased the southeastern section of the Site since 1961.

3.00 HYDROGEOLOGIC CONDITIONS

Site stratigraphy generally consists of fill materials, underlain by organic deposits/ materials, underlain by a discontinuous layer of sorted sands (outwash deposits) and underlain by glacial till. In general, the shallow fill consists of sands and gravels with cinders, cinder ash, coal fragments, wood chips and bricks. Bedrock is expected to be more than 100 feet below ground surface (bgs). The organic materials, which occurs at various depths ranging from 16.5 to 19 feet bgs is likely to an original tidal mud deposit. The glacial till is very dense, heterogeneous and poorly sorted.

Groundwater is encountered at depths of approximately 2 to 8 feet below the ground surface across the Site and is inferred to flow to the northeast toward the Providence River and to the north towards the cove area. Groundwater is tidally influenced and the groundwater table is predominantly encountered within the fill materials. Groundwater underlying the Site is classified by RIDEM as "GB" or not suitable for potable use without treatment due to known or presumed degradation.

4.00 SUMMARY OF ENVIRONMENTAL IMPACTS

Based on the type of chemical constituents present at the Site, the potential routes of exposure to excavation and/or utility repair workers include inhalation, dermal contact or accidental ingestion of impacted soil and/or groundwater, and the possible introduction of contaminants through broken skin. Utilization of the appropriate personal protective equipment and the general safety guidelines provided herein will serve to minimize the potential for worker exposure to impacted media while performing work.

The following sections present a summary of soil and groundwater quality at the Site. This information was obtained from previous environmental studies of the Site. For further detail, please refer to the following:

- February 1995 *Summary Report Phase 1A Field Characterization Investigations* prepared by Resource Controls (RCA);
- June 1996 *Summary Report Phase 1B Field Characterization Investigations* prepared by RCA; and,
- September 2003 *Site Investigation Report (SIR)* prepared by VHB.

In planning activities that may include disturbance of impacted materials, a qualified environmental consultant[1] shall review this environmental data and develop appropriate project-specific procedures for addressing impacted soil and groundwater disturbance/ management/disposal and worker health and safety consistent with this SMP.

[1] For the purpose of this document, this term is consistent with the definition of "Environmental Consultant" contained in RIDEM's *Rules and Regulations for Underground Storage Facilities Used for Petroleum Products and Hazardous Material* dated April 2011.

4.10 CONSTITUENTS OF CONCERN

Based on the results of the previous investigations described in the above reports, certain constituents of concern (COCs) were detected in soil and groundwater associated with former operations at concentrations that represent Method 1 exceedances of the RIDEM *Rules and Regulations for the Investigation and Remediation of Hazardous Waste Materials* (Remediation Regulations, DEM-DSR-01-93, as amended). Please refer to the 2003 *SIR* for a complete data set.

For the Site, the following exceedances have been documented:

- **Industrial/Commercial Direct Exposure Criteria (I/C DEC):** arsenic, lead, total petroleum hydrocarbons (TPH), and several polynuclear aromatic hydrocarbons (PAHs);
- **GB Leachability Objectives:** TPH, benzene, toluene, ethylbenzene, and xylene;
- **GB Groundwater Objectives:** benzene and naphthalene;
- **Soil Upper Concentration Limits:** TPH, lead, and naphthalene; and
- **Groundwater Upper Concentration Limits:** light non-aqueous phase liquid (LNAPL) and trace amounts of dense non-aqueous phase liquid (DNAPL).

4.20 EXTENT OF CONTAMINATION

The extent of impacted soil associated with the former MGP usage varies throughout the Site. In addition to MGP impacts, much of the Site and its surroundings are filled land and may contain hazardous materials-impacted soils not associated with the former MGP. Based on the above, soil management guidelines are necessary to ensure soils are managed with consideration to the project remedial goals and the Remediation Regulations.

Areas that have been remediated and capped with approximately 2 feet of cover material include the former Compressor Building No. 1 area and the northwestern and southern portions of the National Grid LNG Site (see Areas 1, 2, and 3 on Figure 3, *Remediated Areas*). The former Materials Handling Area has had approximately 6 inches of clean loam applied and has a grass cover established to stabilize the soils.

Subsurface soil exceedances exist throughout the Site, but there appears to be concentrated areas of exceedances in the general vicinity of the former Gasholders No. 18 and No. 21, the former Purifier Area, and the National Grid Regulator Area.

NAPL has been observed in the subsurface throughout the Site, with both LNAPL and dense non-aqueous phase liquid (DNAPL) occurring. LNAPL occurs in trace amounts proximate to the former Gasholders Nos. 18 and 21, trace amounts proximate to the former propane cradles in the central portion of the Site and in thicknesses ranging from approximately trace amounts to 3 feet thick in the eastern portion of the Site (within the LNG facility). DNAPL occurs in the northern portion of the Site, proximate to the cove, in trace amounts only.

4.30 REMEDIAL ACTIONS

Several remedial actions have been completed at the Site.

In June 1999, Environmental Science Services (ESS) supervised the excavation of surface and subsurface soils in preparation for the construction of a vaporizer pad, located to the south of the offload area on the National Grid LNG portion of the Site. Subsurface piping was removed and recovery wells and groundwater flow barriers were installed to aid in the recovery of LNAPL. Areas that were excavated were capped with approximately 2 feet of clean fill or were covered by structures (the vaporizer pad). The area west of the LNG tank sub-impoundment was also excavated as part of these remedial activities. See Area 1 on Figure 3, for the location of this area.

Additional remedial actions were initiated in May 2002 at the Site and were conducted in accordance with the ESS *Remedial Action Work Plan* (RAWP) (as amended), which was approved in 1998 and a Temporary Remedial Action Permit issued by RIDEM in 2002. See Areas 2 and 3 on Figure 3 for the location of the remediated areas. These remedial actions consisted of the removal of MGP waste and impacted soils from subsurface structures and their surroundings and construction of engineered caps in portions of the Site. VHB supervised some of these remedial actions. The Remedial Objectives (ROs) for this project were divided into three categories: surface soil objectives (0-2 feet bgs); subsurface soil objectives (>2 feet bgs) within 100 feet from the shore; and subsurface soil greater than 100 feet from the shore. These ROs were based on the RIDEM DEC (surface soil) and UCLs (subsurface soil). The ROs from the 1998 ESS RAWP are provided in Appendix B.

Based on the industrial nature of the surrounding properties, the documented releases of petroleum hydrocarbons on all surrounding properties, the continued large-capacity storage of petroleum products, and the excavation of source materials within the Site, it was proposed, in the *Site Investigation Report*, to address groundwater impacts through monitoring and passive recovery of non-aqueous phase liquid (NAPL).

5.00 SOIL AND GROUNDWATER MANAGEMENT GUIDELINES

This SMP has been prepared to establish procedures that will be followed should future construction/maintenance activities at the Site require the need to manage soils and groundwater during excavation activities. As previously noted, soils have been detected at the Site exceeding the RIDEM-approved Remedial Objectives, as well as RIDEM Industrial/Commercial DEC, GB Leachability Criteria, and UCLs.

Soils generated from an excavation conducted at the Site may be placed back into its original excavation, based on the discretion of the environmental consultant (refer to Section 5.20). However, so as to maintain known exposure scenarios, every attempt shall be made to backfill the excavation so that the corresponding depth and location of the backfilled soil resembles the depth and location at which the soil originally existed. In certain areas where remedial

actions have been completed, this requirement includes the reinstallation of the geosynthetic barrier and the re-placement of the engineered control cap. Excess materials and/or materials deemed unsuitable for use as backfill shall be managed and disposed of in accordance with this SMP. As described previously, the natural groundwater table is encountered at depths ranging from approximately 2 to 8 feet below grade and has been observed to be tidally influenced, with the groundwater table is generally observed within the fill unit. In addition, NAPL has been observed in certain areas of the Site. Projects involving excavation below the water table and/or disturbance of impacted groundwater will require additional controls and Best Management Practices (BMPs) as described below. As part of any construction activities, soils will need to be stockpiled within the Site area. Specifics regarding stockpiling protocol are outlined in the following sub-sections.

5.10 PRELIMINARY ACTIVITIES

- While formal RIDEM approval of planned utility/construction projects is not a requirement, it is recommended that RIDEM be notified prior to commencing these types of activities.

- Before preparing for any planned activities involving the disturbance of materials beneath any of the engineered controls, this SMP shall be reviewed by a qualified environmental consultant. Project-specific plans shall be prepared in consideration of the Site conditions and soil and groundwater impacts described herein, so as to prevent potential human exposures to or migration of hazardous materials.

- Should any project require the need for dewatering and/or disturbance of impacted groundwater in support of excavation/construction, the qualified environmental consultant shall plan to manage, contain, treat (if necessary) and discharge or dispose of impacted groundwater. In addition, all appropriate regulatory approvals related to the removal, handling, treatment and discharge of impacted groundwater shall be in-place prior to the initiation of the project. Such plans shall, at a minimum, include an evaluation of water quality and the potential presence of NAPL, the method by which water will be treated, contained and/or discharged/disposed and the necessary regulatory approvals, permits, *etc.* Impacted, untreated groundwater shall not be discharged directly to the ground surface, collection utilities or neighboring water bodies.

- Prior to the initiation of soil excavation, the selected contractor or any other personnel performing subsurface work at the Site shall contact DIGSAFE® and appropriate utility companies to identify and mark the location of below grade utilities.

- Prior to performing the proposed work, the selected contractor and/or responsible party shall obtain all applicable federal, state and local permits. As noted, portions of the Site are located within the jurisdictional limits of the CRMC. A jurisdictional determination of the requirements of the CRMC shall be made prior to the implementation of proposed construction projects. If applicable, CRMC approval shall be obtained prior to conducting the work.

- As described further herein, prior to conducting any earthwork/construction activities that involves disturbance of materials, a qualified environmental consultant shall be consulted to determine the appropriate level of health and safety training required by personnel involved with the work, the personal protection equipment required, and general health and safety guidelines. A project-specific Health and Safety Plan (HASP) shall be prepared by a qualified Certified Industrial Hygienist (CIH) and strictly adhered to during all phases of the work.

5.20 SOIL SCREENING/DISPOSAL REQUIREMENTS

- Environmental consultant(s) will be available during earthwork activities to provide guidance regarding the management of potentially impacted soil and groundwater. The environmental consultant will monitor the work areas during soil excavation to conduct observations and for field screening/soil sampling, and will be available on a fulltime or as needed basis. The environmental consultant will summarize all observations and sampling activities in daily field reports that will serve as the Operating Log.

- If unusual observations are made during excavation anywhere in the work area (*e.g.*, NAPL, buried containers, or unusual odors), work in the subject areas shall stop immediately. Workers should not excessively handle the material of interest and will notify the NGRID's construction project supervisor and request further direction. The construction project supervisor will in turn notify NGRID's Environmental Department. Unusual material will be segregated by the contractor and characterized by the environmental consultant per the following bullet.

- The contractors, with guidance from the environmental consultant, will segregate any suspect soil ("suspect soil" includes observations of NAPL or unusual odors) based on visual observations and total volatile organic compounds (TVOC) headspace screening via a photo ionization detector (PID). Any soils which exceed a TVOC concentration of 50 parts per million per volume (ppmv) or which exhibits visual or olfactory evidence of contamination will be segregated for laboratory analysis for comparison to the RIDEM regulatory criteria and disposal parameters. The segregated soil will be stockpiled by placing on two layers of 6 mil polyethylene sheeting, or stored in roll-off type containers or drums. In either case, the material in storage will be covered with secured polyethylene sheeting at the end of each work day, as specified in Section 5.30. All other soil will be considered suitable for reuse on the Site, but must be stockpiled in accordance with Section 5.30. The environmental consultant will sample segregated soil every 1,000 cubic yards for TPH via Method 8100M, semi-volatile organic compounds (SVOCs) via Method 8270, arsenic and lead via Methods 200s/6010/7000s and volatile organic compounds (VOCs) via Method 8260/5035. A determination regarding the potential for such soils to be reused on the Site will be made by comparing the laboratory analytical data to the RIDEM approved surface and subsurface Remedial Objectives per the 1998 RAWP (see Appendix B).

- Should soils with evidence of NAPL be discovered during excavation, these materials and/or soils shall be segregated for disposal at a licensed facility approved by National Grid.

- Soil disposal documentation for non-hazardous soil will be maintained on file by National Grid.

- For soil disposed of as a hazardous waste, disposal documentation (*i.e.*, Hazardous Waste Manifests) will be provided to National Grid for distribution to RIDEM.

- Any soil remaining after the completion of construction activities requiring disposal (based on analytical results) at a licensed and National Grid approved facility will be kept on polyethylene sheeting and covered until it is shipped off-Site.

- **Soils excavated from the Site shall not be re-used at non-permitted locations off-Site.** All excess Non-RCRA Hazardous soils shall be transported to a licensed thermal desorption or other similar type of facility for treatment/recycling. In the event RCRA Hazardous materials are generated, these materials shall be disposed off-Site at a licensed hazardous waste disposal facility. A qualified environmental consultant shall collect samples of the excavated soils (either during excavation or from stockpiles) for laboratory testing. Soil must be sampled at a frequency adequate to support the data requirements of the selected recycling/disposal facility.

- The National Grid Environmental contact will make arrangements for the disposal of the material and will sign as the generator of these materials on all waste profiles and shipping manifests. Copies of these records shall be provided to National Grid.

5.30 SOIL STOCKPILE MANAGEMENT/EROSION CONTROL

- Segregated materials which meet the on-Site re-use requirements, and can be re-used on the Site considering the scope of the active project, will be temporarily stockpiled on 6 mil polyethylene sheeting. Temporary stockpiles may also be created adjacent to excavation areas to accommodate the contractor's work schedule throughout the Site area.

- Excavated materials shall be temporarily staged on two layers of 6-mil polyethylene sheeting in working stockpiles adjacent to excavations. Depending on the volume of material involved in the project, soils shall be either stockpiled on polyethylene sheeting as described herein, or stored in lined roll-off type containers or drums. No excavated materials shall be placed directly on the ground surface. At the end of each work day, all stockpiles shall be covered with 6-mil polyethylene sheeting to control the generation of wind-blown dusts and potential migration of soils with stormwater runoff. Stockpile areas shall be equipped with appropriate controls to limit the loss of the cover and protect against storm water erosion. These controls shall include the installation of hay bales, silt fencing and any other appropriate measures during the

entire duration of the project. Stockpiles shall be inspected daily by site personnel. Should tears or punctures be observed in either the polyethylene sheeting covering or underlying the piles, repairs shall be made immediately. Daily shutdown procedures shall include the covering and securing of all stockpiled material area with polyethylene sheeting and appropriately sized materials to secure the polyethylene sheeting in place.

- All catch basins/storm drains proximate to work areas will also be protected from excessive sediment discharge by placing staked haybales or similar protective devices around its perimeter. All catch basins/storm drains will be protected and inspected daily during the course of the entire project to ensure haybale placement and integrity.

- Stockpiled soils shall be staged and temporarily stored in a designated area of the Site for no more than 90 days. To the extent practical, the storage location shall be selected to limit the unauthorized access to the materials (*i.e.,* away from public roadways/walkways).

- Soil, construction material and/or debris stockpile areas shall not be located on any coastal feature, within 200-feet of the inland edge of the coastal feature or in coastal waters.

5.40 DUST AND ODOR CONTROL

All reasonable precautions must be taken to prevent the excessive generation of dust and/or nuisance odor during soil excavation, stockpiling, loading, and other soil handling activities. At a minimum, the PM_{10} dust concentration, as measured with a real-time dust monitor, shall not exceed 150 ug/m^3 over a 24-hour period. Dust control measures must be implemented, as required, to prevent airborne particulate matter from leaving the Site at all times. Methods of stabilization consisting of sprinkling, mulching, or similar methods shall be employed as soil conditions warrant (*i.e.,* visual evidence of dust). Odor controls such as sprinkling, covering of piles and/or disturbed areas, and use of foams or other techniques shall also be employed as necessary to control odors.

Work at the Site must comply with all applicable federal, state, and local regulations, including the RIDEM's *Air Pollution Control Regulations*, and specifically Regulation No.5 regarding control of fugitive dust. The contractor will conduct dust/odor control measures during and after normal work hours and on weekends as necessary to control dust/odors. All stockpiles shall be inspected on a daily basis to ensure compliance with RIDEM *Air Pollution Control Regulations*.

5.50 CAPPING REQUIREMENTS

Following construction activities, soils will be managed in a manner which ultimately results in these materials being interred in the following manner.

- All excavated soils which meet the re-use criteria (refer to Appendix B – RIDEM approved Remedial Objectives) will be re-interred (if possible).
- Soil meeting the surface soil Remedial Objectives will be used as surface soil or subsurface backfill. Soil passing the subsurface soil Remedial Objectives will be used only as subsurface soil backfill.
- Soil not meeting the subsurface Remedial Objectives or soils that cannot be reused will be disposed at a National Grid approved licensed facility.
- The replacement of the existing surficial cap should consist of either: (1) two feet of clean soil, (2) one foot of clean soil underlain by permeable geosynthetic; (3) asphalt pavement cover; or (4) permanent structures with concrete slab.

5.60 DECONTAMINATION PROTOCOL

Since heavy equipment/hand tools may remain onsite for several days, decontamination need not occur on a daily basis. At the conclusion of the construction activities, heavy equipment and tools will be decontaminated. Soil will be brushed from the equipment and containerized prior to washing the equipment surfaces. The containerized material should be sampled for disposal determination (as required) and then properly disposed at on off-Site facility. All liquid (water) generated as a result of decontamination procedures will be spread over as large an area as possible and allowed to infiltrate the ground surface.

Crushed gravel will be placed at the construction boundary zone to facilitate the removal of excess soil from vehicle tires for vehicles which need to leave the work zone on a daily basis (such as vehicles used to transport soil).

5.70 OTHER SOILS

Any clean fill material brought on-Site is required to meet the RIDEM's Method 1 Residential Direct Exposure Criteria or be designated by a qualified environmental consultant as Non-Jurisdictional under the Remediation Regulations. All clean fill, including sub-grade material and loam, imported to the Site must be sampled prior to delivery and placement. Laboratory analytical results shall be reviewed by a qualified environmental consultant and National Grid prior to acceptance or delivery to the Site. Clean fill and loam shall be sampled for arsenic at a minimum frequency of one sample per 500 cubic yards. One-quarter of the total number of compliance samples of clean fill and loam shall be sampled for total petroleum hydrocarbons (TPH), volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs) and the 13 priority pollutant metals. Any fill determined to be non-jurisdictional will also require the submission of a written certification by a qualified

environmental consultant designating that the fill is not jurisdictional. Any clean fill that is stockpiled on the Site prior to use will be segregated from any stockpiles of excavated soils, although must be stockpiled pursuant to Section 5.30.

5.80 DEWATERING

Laboratory analytical results of Site groundwater samples indicate the detection of hazardous substances that exceed RIDEM GB Groundwater Objectives and possibly sewer or surface water discharge criteria. If dewatering is necessary, all impacted fluids shall either be properly treated on-site for subsequent surface water or Narragansett Bay Commission (NBC) discharge, or containerized for off-Site disposal. Any discharges shall be performed consistent with all applicable regulations and permits. With respect to fluids to be disposed off-site (including NAPL), they shall be properly transferred and containerized to prevent discharges or leaks, characterized per the requirements of the receiving facility, and subsequently transported to a fully licensed/permitted treatment/recycling facility. **Impacted, untreated groundwater shall not be discharged directly to the ground surface, collection utilities or neighboring water bodies.** Open excavations shall be protected when feasible to prevent introduction of stormwater runoff and/or precipitation into the excavation (ie. staked haybales to berm the edge of excavations, etc.) If dewatering is part of the Contractor's scope of work, the cost implication of dewatering, permitting and disposal must be included in the bid costs.

5.90 MANAGEMENT OF NON SOILS

Work area excavations may unearth solid debris and/or refuse materials such as concrete, brick, rubble, pipe, lumber and other building materials. This material should be segregated to the extent feasible and stockpiled separately utilizing the procedures outlined above. Disposal of this material is not the subject of this plan and will be handled by the contractor in a manner consistent with demolition and refuse clearing projects and in accordance with RIDEM *Solid Waste Regulations*, and subject to National Grid approval.

6.00 HEALTH AND SAFETY GUIDELINES

The basic health and safety procedures outlined below are intended as a general guideline for basic short-term excavation activity conducted at the Site and that a project- specific HASP may be warranted for complex or long-duration subsurface work. **The contractor is responsible for developing their own HASP and to provide site safety personnel who will be responsible for ensuring that safety measures are strictly followed.** Prior to starting work, the project-specific HASP must be reviewed by National Grid.

6.10 PERSONNEL PROTECTIVE EQUIPMENT (PPE)

In general, the level of protection which will be used by workers will be determined by the task which the person is performing; however, at a minimum, workers performing excavation

work subject to the SMP are required to wear the following Level D personnel protection equipment (PPE):

- Safety leather steel toe boots;
- Rubber or leather gloves;
- Eye and hearing protection;
- Hard hats; and
- Florescent vests.

6.20 SITE OPERATING PROCEDURES / SAFETY GUIDELINES

Regardless of the level of PPE necessary to complete work, the following general health and safety guidelines shall be followed during the performance of any excavation activities conducted.

- Workers conducting site activities under this SMP should do so with consideration to OSHA Standards including OSHA Standard 29 CFR 19.10-120.

- Site security shall be maintained on a continuous basis. No trespassers will be allowed.

- Work in the LNG portion of the site will be performed in accordance with National Grid's LNG safe practice procedures for that area of the Site.

- A pre-work meeting will be conducted at the start of every workday to discuss the health and safety procedures.

- The location of all utilities in the vicinity of the excavation shall be established prior to beginning work.

- Practice contamination avoidance: never sit or kneel in an excavation; never lay equipment on the ground; avoid obvious sources of contamination; and avoid unnecessary contact with objects in an excavation.

- Be alert to any unusual changes in your physical condition; never ignore warning signs. Notify the responsible employee as to any changed conditions.

- All equipment used in an excavation shall be properly cleaned and maintained in good working order. Equipment shall be inspected for signs of defect and/or contamination before use.

- Eating, drinking, chewing gum, and smoking shall be prohibited in active excavation areas.

- During working hours, workers who stop to drink or eat should leave the active work area, remove PPE, and wash hands thoroughly with soap and water prior to eating or drinking.

- The discovery of any condition that would suggest the existence of a situation more hazardous than anticipated shall result in the evacuation of personnel from the excavation and the re-evaluation of the hazard and the level of protection; and

- At the completion of work, workers are required to wash their hands with soap and water or use pre-moistened wipes (such as Go-Jo wipes) before leaving the Site. All workers' safety boots are required to be brushed with a stiff bristle brush or similar instrument (not by hand) to remove residual soil. Used disposable PPE (such as Go-Jo® wipes, nitrile or latex gloves, boot covers, and Tyvek® suits, if necessary) is required to be disposed according to applicable regulations.

6.30 EMERGENCY PHONE NUMBERS

Emergency telephone numbers and the directions to the nearest hospital are included below. This information shall also be included in the project-specific HASPs developed for the activity and shall be periodically reviewed and updated as needed.

Response Agency	Phone Number
Ambulance	911
Police	911
Fire	911
RIDEM/Office of Compliance & Inspection/Emergency response Program	(401) 222-1360 or (401) 222-3070 (non-business hours)
USEPA/Hazardous Materials Spills	(800) 424-8802
Poison Control Center	(800) 562-8236
DigSafe® (Utility Clearance)	1-888-DIGSAFE
Hospital	
Rhode Island Hospital 593 Eddy Street Providence, RI 02903	401-444-4000
Route to Hospital	
1. Turn RIGHT out of the Site onto ALLENS AVENUE 2. Turn LEFT at the ninth turn onto PUBLIC STREET 3. Turn RIGHT at the first turn onto EDDY STREET 4. End at 593 EDDY STREET	

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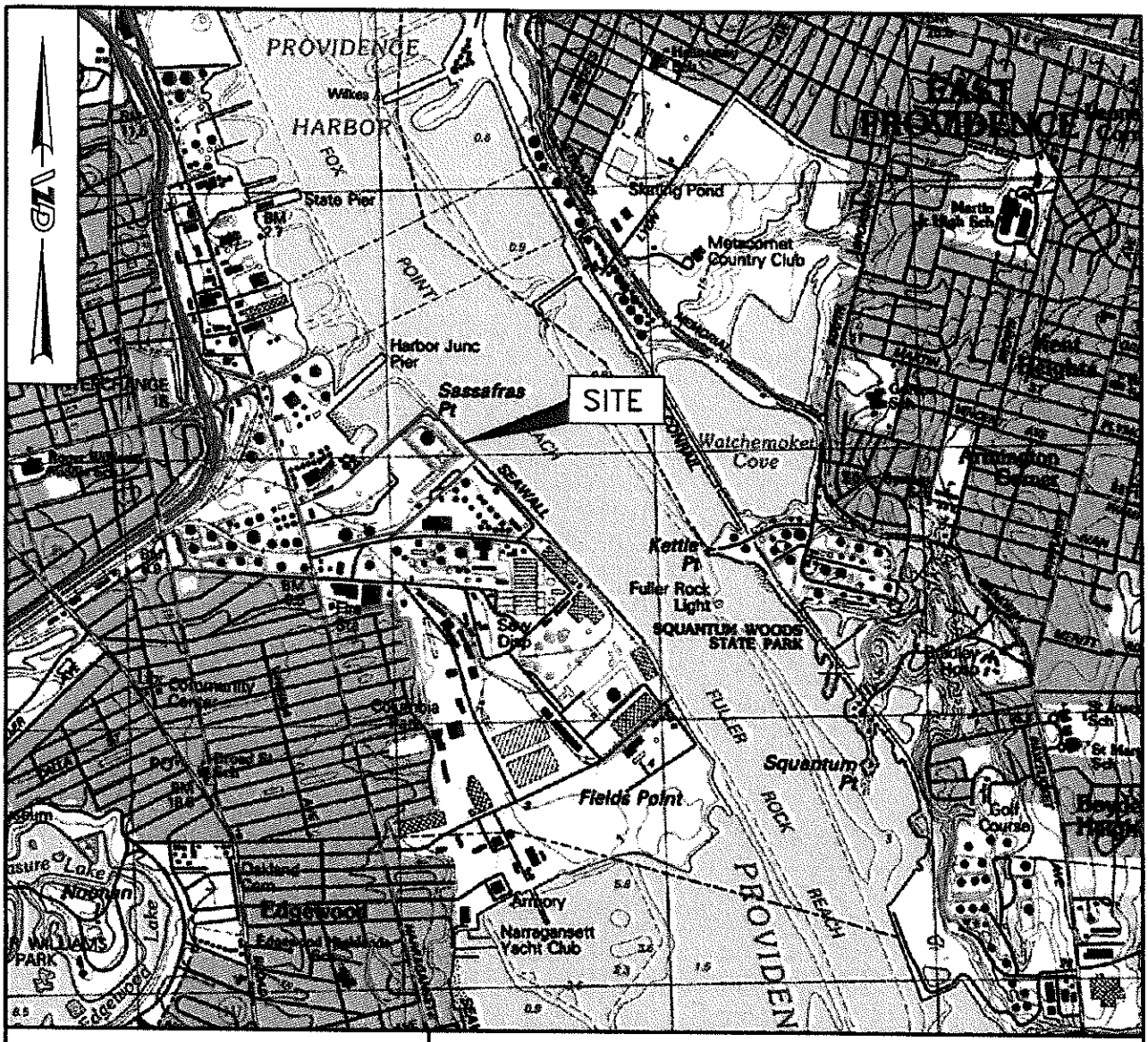
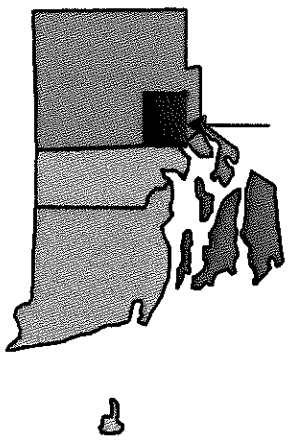
FIGURES





BASE MAP FROM THE FOLLOWING USGS QUADRANGLE MAP: PROVIDENCE, RHODE ISLAND–MASSACHUSETTS (1987)

DIGITAL TOPOGRAPHIC MAPS PROVIDED MY MAPTECH, INC.

CONTOUR ELEVATIONS REFERENCE NGVD 29,
CONTOURS ARE SHOWN IN METERS AT 3 INTERVALS

APPROXIMATE SCALE IN FEET

0' 1000' 2000' 4000'

NATIONAL GRID GAS FACILITY
642 ALLENS AVENUE

PROVIDENCE, RHODE ISLAND

LOCUS PLAN

SEPTEMBER 2012

FIGURE NO. 1

© 2010 – GZA GeoEnvironmental, Inc. GZA–J:\ENV\33554.abu\FIGURES\GZA DWGS\33554.00_F1-2_R0.DWG [LOCUS] September 12, 2012 – 10:03am Sophia.norkiewicz

APPENDIX A

LIMITATIONS

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COASTAL RESOURCES
MANAGEMENT COUNCIL

LIMITATIONS

1. This Soil Management Plan has been prepared on behalf of and for the exclusive use of The Narragansett Electric Company d/b/a National Grid (National Grid), solely for use at the 642 Allens Avenue Providence, Rhode Island ("Site") in documenting the work completed as described herein at the Former Tidewater MGP and Power Plant Site ("Site") under the applicable provisions of the State of Rhode Island Department of Environmental Management Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (Remediation Regulations). This report and the findings contained herein shall not, in whole or in part, be disseminated or conveyed to any other party, nor used by any other party in whole or in part, without the prior written consent of GZA GeoEnvironmental, Inc.(GZA) or National Grid.

2. GZA's work was performed in accordance with generally accepted practices of other consultants undertaking similar studies at the same time and in the same geographical area, and GZA observed that degree of care and skill generally exercised by other consultants under similar circumstances and conditions. GZA's findings and conclusions must be considered not as scientific certainties, but rather as our professional opinion concerning the significance of the limited data gathered during the course of the study. No other warranty, express or implied is made. Specifically, GZA does not and cannot represent that the Site contains no hazardous material, oil, or other latent condition beyond that observed by GZA as described herein.

3. The observations described in this report were made under the conditions stated therein. The conclusions presented in the report were based upon services performed and observations made by GZA.

4. In the event that National Grid or others authorized to use this report obtain information on environmental or hazardous waste issues at the Site not contained in this report, such information shall be brought to GZA's attention forthwith. GZA will evaluate such information and, on the basis of this evaluation, may modify the conclusions stated in this report.

5. The conclusions and recommendations contained in this report are based in part upon the data obtained from environmental samples obtained from relatively widely spread subsurface explorations. The nature and extent of variations between these explorations may not become evident until further exploration. If variations or other latent conditions then appear evident, it will be necessary to reevaluate the conclusions and recommendations of this report.

6. The generalized soil profile described in the text is intended to convey trends in subsurface conditions. The boundaries between strata are approximate and idealized and have been developed by interpretations of widely spaced explorations and samples; actual soil transitions are probably more gradual. For specific information, refer to the boring logs.

7. In the event this work included the collection of water level data, these readings have been made in the test pits, borings and/or observation wells at times and under conditions stated on the exploration logs. These data have been reviewed and interpretations have been made in the text of this report. However, it must be noted that fluctuations in the level of the groundwater may occur due to variations in rainfall and other factors different from those prevailing at the time measurements were made.

8. The conclusions contained in this report are based in part upon various types of chemical data and are contingent upon their validity. These data have been reviewed and interpretations made in the report. Moreover, it should be noted that variations in the types and concentrations of contaminants and variations in their flow paths may occur due to seasonal water table fluctuations, past disposal practices, the passage of time, and other factors. Should additional chemical data become available in the future, these data should be reviewed by GZA and the conclusions and recommendations presented herein modified accordingly.

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APPENDIX B

RIDEM APPROVED REMEDIAL OBJECTIVES

Appendix B
RIDEM-Approved Remedial Objectives
642 Allens Avenue
Providence, Rhode Island

Constituent (mg/kg)	RIDEM			RIDEM Approved Remedial Objectives		
	I/C DEC	GB Leachability Criteria	UCL	Surface Soils	Subsurface Soils <100 feet from shore	Subsurface Soils >100 feet from shore
Metals						
Arsenic	7	NE	10,000	7	-	-
Cyanide	10,000	NE	10,000	10,000	-	-
Lead	500	NE	10,000	500	-	-
PAHs						
2,4-Dimethylphenol	10,000	NE	10,000	10,000	10,000	10,000
2,6-Dinitrotoluene	NE	NE	10,000	10,000	10,000	10,000
2-Methylnaphthalene	10,000	NE	10,000	10,000	10,000	10,000
Acenaphthene	10,000	NE	10,000	10,000	10,000	10,000
Acenaphthylene	10,000	NE	10,000	10,000	10,000	10,000
Anthracene	10,000	NE	10,000	10,000	10,000	10,000
Benzo (a) anthracene	7.8	NE	10,000	7.8	10,000	10,000
Benzo (a) pyrene	0.8	NE	10,000	0.8	10,000	10,000
Benzo (b) fluoranthene	7.8	NE	10,000	7.8	10,000	10,000
Benzo [g,h,i] Perylene	10,000	NE	10,000	10,000	10,000	10,000
Benzo [k] Fluoranthene	78	NE	10,000	78	10,000	10,000
Chrysene	780	NE	10,000	780	10,000	10,000
Dibenzo (a,h) anthracene	0.8	NE	10,000	0.8	10,000	10,000
Fluoranthene	10,000	NE	10,000	10,000	10,000	10,000
Fluorene	10,000	NE	10,000	10,000	10,000	10,000
Indeno [1,2,3-cd] Pyrene	7.8	NE	10,000	7.8	10,000	10,000
Naphthalene	10,000	NE	10,000	10,000	500	5,000
PCBs	10	10	10,000	10	10,000	10,000
Pentachlorophenol	48	NE	10,000	48	10,000	10,000
Phenanthrene	10,000	NE	10,000	10,000	10,000	10,000
Pyrene	10,000	NE	10,000	10,000	10,000	10,000
TPH						
TPH	2,500	2,500	30,000	2,500	15,000	30,000
VOCs						
Benzene	200	4.3	10,000	200	4.3	43
Ethylbenzene	10,000	62	10,000	10,000	62	620
Toulene	10,000	54	10,000	10,000	54	540
Xylenes	NE	NE	10,000	10,000	540	540

NE - Not Established
- No Remedial Objective established for this consistuent

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COASTAL RESOURCES MANAGEMENT COUNCIL

State of Rhode Island and Providence Plantations
Coastal Resources Management Council
Oliver H. Stedman Government Center
4808 Tower Hill Road, Suite 3
Wakefield, RI 02879-1900

(401) 783-3370
Fax (401) 783-2069

AGREEMENT TO STAY SIX MONTH REVIEW PERIOD

Between

The Rhode Island Coastal Resources Management Council

And

National Grid LNG LLC

The Rhode Island Coastal Resources Management Council, hereinafter referred to as the "CRMC," and the National Grid LNG LCC, hereinafter referred to as "National Grid," hereby agree as follows.

National Grid has filed a federal consistency certification with the CRMC for proposed construction of a natural gas liquefaction facility on Assessor's Plat 56 Lots 316, 5 and Plat 101 Lot 1, located at 121 Terminal Road, Providence. The proposed liquefaction facility will be constructed adjacent to National Grid's existing liquefied natural gas (LNG) tank. The proposed project is subject to CRMC review authority pursuant to the federal Coastal Zone Management Act (CZMA), 16 USC §§ 1451-1464, and the CZMA's implementing regulations at 15 CFR Part 930 Subpart D – Consistency for Activities Requiring a Federal License or Permit.

In accordance with 15 CFR § 930.60(b) the CRMC and National Grid mutually agree to the following dates and to stay the CRMC six-month review period as specified herein.

- Date the CRMC 6-month review period commenced: October 31, 2016
- Date the 6-month period was to end: April 29, 2017
- Date during the 6-month review period that the stay begins: March 30, 2017
- Date that the stay ends: May 15, 2017
- Date the CRMC decision is due: June 15, 2017

The CRMC will issue its consistency determination on or before June 15, 2017 unless National Grid and CRMC mutually agree in writing to another later date.

These agreements made and entered by:

Grover J. Fugate
Executive Director, CRMC

Feb. 21, 2017
Date

William R. Howard
Manager-Environmental, National Grid

Feb. 21, 2017
Date

/lat

State of Rhode Island and Providence Plantations
Coastal Resources Management Council
Oliver H. Stedman Government Center
4808 Tower Hill Road, Suite 3
Wakefield, RI 02879-1900

(401) 783-3370
Fax (401) 783-2069

February 28, 2017

The Honorable Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First St., N.E.
Washington, D.C. 20426

Re: National Grid LNG LLC, Fields Point Liquefaction Project, Docket No. CP16-121-000
CRMC File 2016-10-099

Dear Secretary Bose,

National Grid LNG LLC filed a federal consistency certification with the Rhode Island Coastal Resources Management Council (CRMC) on October 31, 2016 for proposed construction of a natural gas liquefaction facility located at 121 Terminal Road, Providence, RI. The proposed project is subject to CRMC review authority pursuant to the federal Coastal Zone Management Act (CZMA), 16 USC §§ 1451-1464, and the CZMA's implementing regulations at 15 CFR Part 930 Subpart D – Consistency for Activities Requiring a Federal License or Permit. The CRMC and National Grid LNG LLC have mutually agreed to stay the CRMC six month federal consistency review period in accordance 15 CFR § 930.60(b). Accordingly, the CRMC decision date for the National Grid LNG LLC matter is now June 15, 2017.

The purpose of this letter is to notify the Federal Energy Regulatory Commission of this agreement as required under 15 CFR § 930.60(b). A copy of the agreement is attached herewith. Further, the CRMC requests FERC not to issue a license or permit to National Grid LNG LLC until the requirements of 15 C.F.R. Part 930, Subpart D have been satisfied. Accordingly, the CRMC will notify FERC when it issues a decision in this matter.

Please contact me at 401-783-3370 or email gfugate@crmc.ri.gov should you have any questions.

Sincerely,

Grover J. Fugate, Executive Director
Coastal Resources Management Council

/lat

cc David Kaiser, OCRM NOAA CRRC UNH
Anne Livingston, CRMC Chair
Anthony DeSisto, Esq., CRMC legal counsel
Robin L. Main, Esq. (representing National Grid)
Jeffrey Willis, CRMC Deputy Director
James Boyd, Coastal Policy Analyst

William R. Howard, Jr. CHMM
Environmental Manager
Environmental Compliance

nationalgrid

March 10, 2017

Mr. Grover J. Fugate
Coastal Resources Management Council
Stedman Government Center – Suite 3
4808 Tower Hill Road
Wakefield, RI 02879-1900

Re: File 2016-10-099
Response to CRMC Comments
Proposed Liquefier Project
Providence, Rhode Island

Dear Mr. Fugate:

National Grid LNG ("NGLNG") appreciates the opportunity to meet with you and your staff on Wednesday, February 8, 2017 to discuss the proposed liquefier project on Terminal Road in Providence, Rhode Island. During the meeting, several issues were discussed regarding the project, and CRMC requested that NGLNG provide written responses on those issues. Provided below are NGLNG's responses.

Comment No. 1: Will NGLNG's proposed facility export LNG?

Response: No, the proposed liquefier project does not propose to import or export LNG by marine vessels. Moreover, the current facility is neither authorized for nor capable of the import or export of LNG by marine vessels. LNG will still receive or ship LNG by tanker truck. This is not a change from the current operations of the facility.

The only difference in operations will be related to how we fill the existing tank during the summer season. Currently, tanker trucks are brought in to fill the tank at a rate of up to 20 trucks per day, the maximum number that can be offloaded in 24 hours. During the summer season, the proposed liquefier will fill the tank at an equivalent rate of 20 trucks per day (20 million cubic feet per day (MMCFD)). This slow fill process precludes the existing LNG facility from becoming an export facility in the future as a result of the liquefier. Furthermore, most international LNG cargoes

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are more than 3 billion cubic feet (BCF) per ship (1 BCF = 1,000 MMCF). The existing tank is only 2/3rd of this capacity and does not provide enough LNG for practical terminal operations.

Comment No. 2: Is the current storage tank onsite safe?

Response: Yes, the existing LNG storage tank has operated safely since 1974. NGLNG further states that continued operation of the storage tank is independent of the construction or operation of the proposed liquefier project. Specifically, no changes to the tank or the use of the tank are being proposed in this project. The storage tank is properly operated and maintained in accordance with all applicable regulations and regularly inspected by FERC and the U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration, Office of Pipeline Safety.

Comment No. 3: Does NGLNG's proposed project involve any remediation of soils?

Response: No and it should be noted that physical construction or site work on the liquefier project has not started.[1] The majority of the proposed liquefier project is located in an area of the site that has been previously remediated under the oversight of the Rhode Island Department of Environmental Management (RIDEM). A closure document for the remediation work in this area of the site was submitted to RIDEM in November 2002 and is entitled "Remedial Action Closure Report". The remediation work consisted of source removal and the installation of an engineered cap in this area. The scope of the liquefier project will require limited earthwork in areas of impacted soils that are located under the installed engineered cap.

The proposed project is not considered to be site remediation. Construction of the liquefier will require minor disturbances of the existing engineered soil cap, including the removal and disposal of limited amounts of impacted soils that are currently under the existing engineered soil cap. Expected soil movement activities that will likely occur during the liquefier project include that associated with connections to certain existing utility lines, focused rerouting of utility lines in the area as needed, installation of the outlet drain from the stormwater filter bed, and installation of piles and foundations within the proposed liquefier footprint. It is anticipated that the

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1 The LNG storage plant and neighboring Narragansett Electric Company facility at 642 Allens Avenue have had projects performed on site unrelated to the liquefaction project. These projects, such as capping of the former gas holder area and the construction of a safer access road to the existing LNG storage tank dike area, were performed under environmental and safety supervision.

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majority of piles will be driven, limiting the need to manage any impacted material. Impacted groundwater may be encountered during the proposed earthwork.

Once these activities occur, nine (9) to eleven (11) feet of clean, tested imported fill will be added to the area to raise the project area to provide protection from flooding and storm surges. Proposed stormwater drain lines and other underground utilities for the liquefier will be installed within this layer of clean, tested imported fill material.

NGLNG will conduct the earthwork associated with this project using its Site-Specific Soil Management Plan (SMP) that was submitted to RIDEM in September 2012. The SMP is used to manage activities that may disturb impacted soil or groundwater during projects. The entire liquefier project will be managed under the SMP. During soil disturbance activities compliance with the SMP will be monitored, as required by FERC, by a qualified environmental professional. The SMP also includes provisions for importing soil or aggregate material to the site.

If you require any further information or have any questions regarding these responses, please contact the undersigned at 401.784.7490. Thank you for your attention to this matter.

Sincerely,

William R. Howard, Jr. CHMM
Manager, Environmental, National Grid

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Manager – Environmental

March 15, 2017

Mr. Grover Fugate, Executive Director
Coastal Resources Management Council
Stedman Government Center - Suite 3
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Wakefield, RI 02879-1900

Subject: Response to Comments
Proposed Liquefaction Project
Providence, Rhode Island

Dear Mr. Fugate:

National Grid LNG, LLC ("NGLNG") is pleased to submit this response to certain comments that the Coastal Resources Management Council ("CRMC") received in early 2017 regarding CRMC's consistency review for the proposed Liquefaction Project in Providence, Rhode Island (known herein as the "Project").

This response to comments letter has been provided in three sections:

- Response to specific public comments received regarding the Coastal Resource Management Program ("CRMP") 1978 Energy Amendment, as amended February 23rd, 1982 (Section 610.2 – Siting of Energy Facilities). In order to facilitate your review, specific comments are provided in bolded and italicized text and are followed by NGLNG's responses.
- Response to a specific public comment received regarding the CRMP 1978 Energy Amendment, as amended February 23rd, 1982 (Section 640.2 – Storage and Processing of Liquefied Gases). In order to facilitate your review, the specific comment is provided in bolded and italicized text and is followed by NGLNG's response.
- Demonstration of Compliance with the CRMP, as amended December 14, 2010 (Section 300.1 Category B requirements, Section 300.2 Filling, Removing or Grading of Shoreline Features and Section 300.3 Residential, Commercial, Industrial and Recreational Structures). In order to facilitate your review, each requirement is provided in bolded and italicized text and is followed by a specific evaluation of how the Project has been located and designed and will be constructed to comply with the requirements of the CRMP.

The following figures have been prepared to facilitate your review:

- Figure 1 Overall Aerial
- Figure 2 Temporary Liquefaction Laydown Area
- Figure 3 Proposed Final Conditions Plan

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CRMP 1978 Energy Amendment, as amended February 23rd, 1982
Section 610.2 – Siting of Energy Facilities

Public Comment 1

In response to requirement B-1 (Alternative sites have been considered and rejected for environmental, economic and/or operational reasons.), NGLNG only states that "Constructing the liquefaction project in an alternative location would require additional pipelines and land disturbance." There is no evidence provided of this and no specific alternative sites were discussed or dismissed.

An alternate study evaluation was conducted and is available in the Federal Energy Regulatory Commission ("FERC") docket, specifically, the Certificate Application Volume II, Resource Report 10, filed in FERC Docket No. CP16-121 on April 1, 2016, and data response NGLNG-3-21 filed on June 9, 2016. The Certificate Application Volume II, Resource Report 10, filed in FERC Docket No. CP16-121 on April 1, 2016 has been provided as Attachment A and the data response NGLNG-3-21 filed on June 9, 2016 has been provided as Attachment B. To summarize the evaluation briefly, locating the liquefier at the existing liquefied natural gas ("LNG") site has several advantages over other options: (a) The Project does not need to increase or install storage; (b) the liquefier can utilize the existing gas lines on site as a resource to convert natural gas to LNG, therefore, new gas transmission pipelines are not required; (c) the site is a brownfield site so no green space is impacted; (d) the existing LNG plant has sufficient unused, gravel covered acreage to install the liquefier without any expansion requirements; (e) the site is in close proximity to Interstate 95 facilitating easy access and limiting impact on neighborhoods with construction traffic; and (f) the liquefier will be located away from residential neighborhoods and is consistent with the industrial nature of the neighborhood. In conclusion and as presented in Attachments A and B, the site is considered to be the only viable option for the Project in Rhode Island or Massachusetts given these existing facilities.

Public Comment 2

Under B-2 (Construction and/or operation will be in conformance with all applicable environmental standards, guidelines and objectives.), these written comments previously discussed how NGLNG is not operating in conformance with applicable statewide environmental standards (RIDEM Site Remediation Regulations).

To the extent the Rhode Island Department of Environmental Management ("RIDEM") Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases, as amended November 2011 ("Remediation Regulations") are applicable to the site, NGLNG is in compliance with these Regulations. Several site investigations and remedial actions have been performed at the site over the years. Much of the site has been capped to prevent exposure to and migration of on-site soils. Any excavation activities that occur on the site must follow the Site-Specific Soil Management Plan ("SMP") that was submitted to RIDEM in September 2012 to ensure that on-site soils are managed properly and that excavations and soil disturbance areas are capped as required under the SMP at the completion of construction. The September 2012 SMP is provided as Attachment C. Construction of the Project will require minimal excavation into onsite soils and the entire liquefaction area will be capped in accordance with the SMP. Furthermore, from an environmental monitoring perspective, NGLNG will have an environmental professional conduct daily inspections for the duration of the construction activities, as it will be required to do as a condition of FERC certificate approval.

Public Comment 3

In response to requirement B-5 (Adequate procedures for the safe transport and/or disposal of products, materials and/or wastes hazardous to land or the coastal environment will be taken, including emergency containment and cleanup.), National Grid only states that "the operation of the liquefaction project will not result in the production of hazardous wastes at the site" yet fails to discuss plans related to the safe management of the various hazardous wastes known to exist on-site in the soil and groundwater.

There will be minimal disruption of on-site soils at the site. The bulk of the soil movement activities will consist of raising the existing grade by importing clean fill material. The only activity that will generate small quantities of potentially contaminated soils will be the installation of utilities and concrete piles as the foundation is constructed. If geotechnically suitable, these excess materials will be reused on-site under a newly installed engineered cap in accordance with the SMP. Otherwise, excess materials will be removed from the site and disposed of at a thermal desorption facility in New Hampshire that is permitted to receive such materials.

Once constructed, the liquefaction Project will not generate hazardous waste during operation. NGLNG purposely chose a design that minimizes the use of hazardous substances in operation. As such, the liquefier will utilize nitrogen to cool the natural gas.

As stated above, any soil disturbance activities on the site will be governed by the RIDEM-submitted September 2012 Site-Specific SMP. The September 2012 SMP is provided as Attachment C.

Public Comment 4

NGLNG fails to mention or respond to requirement C-1 (There is a need for the project.) and does not demonstrate the need for the proposed project at all, let alone with reliable and probative evidence...National Grid makes vague claims such as "the proposed liquefaction project will support and maintain the public welfare and the state's economy," and tries to focus attention on requirement C-2 (Impacts on public service requirements and in-state employment opportunities have been identified and considered.) stating that "the construction and operation of the liquefaction project will create in-state employment opportunities."

The purpose and need for the Project is to add liquefaction capability to the existing NGLNG storage site to enable the customers to fill their contracted storage capacity with pipeline-sourced natural gas as an alternative to supplying gas for storage that is already in a liquid state. The current storage operation does not include any liquefaction equipment and receives LNG by truck to fill the 600,000 barrel (approximately 2.0 billion cubic feet) storage tank for the peak season needs. The local distribution company customers that have requested this additional service will use this capability to reduce their dependence on imported LNG supplies acquired from one of the LNG import terminals. The purpose is to reduce the customers' supply risks for obtaining the LNG that they store at the existing site, which enhances the reliability of the downstream gas service the customers provide.

The Project is being undertaken by NGLNG at the request of two of its storage customers, The Narragansett Electric Company ("TNEC") and Boston Gas Company ("BGC"), to add liquefaction capability so that they can deliver gas for storage in vapor form as an alternative to delivering LNG to the site by

tanker trucks. The Project will include one new 20 million standard cubic feet per day ("MMscfd") gas pretreatment and liquefaction system to convert domestic natural gas delivered by pipeline into LNG by cooling it to a liquid state for storage. Feed gas will be transported to the Project via an existing 12" pipeline owned by TNEC. Pre-treatment will consist of one train capable of providing treated gas to a liquefaction site for producing 20 MMscfd vapor equivalent of LNG for storage. The existing storage capacity will remain unchanged. There will be no change to the LNG storage tank and no relocation of the existing cryogenic piping or vaporization equipment is proposed.

Further discussion on TNEC and BGC needs related to LNG supply is included below in Section 300.1 Requirement 1 Response.

CRMP 1978 Energy Amendment, as amended February 23rd, 1982
Section 640.2 – Storage and Processing of Liquefied Gases

Comment Under Policies and Regulations, Section 640.2-2 it is clearly stated that "Applicants for such a permit shall be required to meet all permit and regulatory requirements set forth under Section 610.2-2 and to further demonstrate by a fair preponderance of evidence that facility siting and operations will be consistent with preservation of health and safety of nearby populations."

The liquefier has been designed, and will be constructed and operated in accordance with the U.S. Department of Transportation Pipeline and Hazardous Materials Safety Administration ("PHMSA") Federal Safety Standards for Liquefied Natural Gas Facilities. The liquefier will be equipped with an LNG trench to contain any potential LNG spills and direct them to the existing containment sump which has been located in a part of the plant to prevent any harm to employees or the public as prudent design and PHMSA regulations requires. Any oil containing equipment will be equipped with secondary containment. The liquefaction Project will be equipped with a Safety Instrumented System and Emergency Shutdown System that will alert facility operators of any abnormal conditions or internal control system faults. This type of control system in addition to the highly skilled employees at the plant is a strong factor in the ongoing safe operation of the existing site. The addition of the liquefier will not degrade the effective management practices or strong safety record of performance.

As part of the FERC Certificate Application (Docket CP16-121-000), NGLNG has demonstrated that there are minimal to no impacts from air emissions. NGLNG has provided models showing dispersion of the exhaust from the natural gas driven emergency generator proving minimal impacts. Data response NGLNG-3-17 filed on June 30, 2016 (in FERC Docket No. CP16-121) has been provided as Attachment D. Also as part of the application, studies were performed to identify the risks associated with potential natural gas and LNG leaks within the liquefier system and the studies showed that any potential leaks would not leave the property thus posing no risk to the public. The Project does not use any hazardous substances within the process as inert nitrogen is the refrigerant to be used to liquefy the natural gas.

NGLNG submitted an application for operation of the emergency generator to RIDEM and permit number GPEG-279 was received from RIDEM on October 31, 2016 for operation of the emergency generator.

Demonstration of Compliance with the CRMP, as amended December 14, 2010 (Section 300.1 Category B requirements, Section 300.2 Filling, Removing or Grading of Shoreline Features and Section 300.3 Residential, Commercial, Industrial and Recreational Structures)

In order to facilitate your review, each requirement/standard/policy/prohibition is provided in bolded and italicized text and followed by a specific evaluation of how the Project has been located and designed and will be constructed to comply with these requirements/standards/policies/prohibitions.

Section 300.1 Category B

The proposed Project includes work within the contiguous area of a coastal feature; therefore, the Project's compliance with Section 300.1 of the CRMP is addressed below.

Section 300.1 Requirement 1. Demonstrate the need for the proposed activity or alteration;

NGLNG's customers, affiliate companies TNEC (primarily services Rhode Island residential, commercial and industrial customers) and BGC, currently store their LNG in the NGLNG tank for their use in the winter months when peak demand for natural gas (for heating use) exceeds available supply in the pipelines. Note that this happens every year during the winter season. The LNG stored by these customers has been historically sourced from one location in the northeast, the existing Everett, Massachusetts LNG import terminal. NGLNG's customers buy natural gas in bulk on behalf of their customers and pass the costs through, at no mark up, to the TNEC and BGC customers. In the wintertime when the interstate pipelines are constrained, the costs to TNEC customers (mainly Rhode Island customers) would be much higher than normal. Therefore, by using the lower cost LNG sourced during the summer months, TNEC is able to keep customer heating bills at the lowest possible cost. This is a benefit that Rhode Island customers reap from NGLNG storing LNG and therefore justifies the existing plant. This fact has been proven in each of the plant's 43 years of operation evidenced by the usage of LNG to supplement supply every winter.

The liquefier adds a separate set of benefits on top of the LNG storage. In 2012, NGLNG's customers faced the potential of an overseas shipment not arriving due to force majeure events. If shipments from overseas fail to arrive in Everett for any reason, the supply chain of this peak natural gas supply becomes interrupted and unreliable. At the request of its customers, NGLNG is proposing this liquefier Project to fill the tank using domestic natural gas already flowing by the plant in an existing pipe. NGLNG's customers are simply changing the LNG supply source and lessening their dependence on imported LNG for increased security, reliability and cost effectiveness. The need of the Project is to add liquefaction capability to the existing NGLNG storage facility to enable the customers to fill their storage capacity with pipeline sourced natural gas instead of by truck. The pipeline already exists.

When called upon to supplement peak gas supply, NGLNG vaporizes LNG from the existing storage tank and injects the vaporized natural gas into the existing TNEC distribution pipeline infrastructure. As long as National Grid's retail customers require natural gas to heat their homes and fuel appliances, National Grid has an obligation to provide its customers with a safe and reliable natural gas supply.

The construction of the Project will not inhibit or restrict future development of renewable energy sources such as wind or solar. As mandated by law, Rhode Island will continue to develop renewable energy supplies such as the Block Island Wind Farm Project. Even as these renewable energy facilities are developed and constructed, Rhode Islanders will continue to rely on natural gas for efficient and clean

energy and heating so that renewable energy that is used to generate electricity is not a substitute for natural gas at this time. National Grid understands that developing renewable energy sources is extremely important to combat global climate change. However, renewable energy sources such as wind and solar rely on variable weather conditions and require a secondary energy source in case weather conditions are not conducive to generating electricity. Even Germany, which is considered a global leader in wind energy generation, relies on coal fired power plants when wind speeds are inadequate for power generation. Complete reliance on renewable energy sources will require development of advanced energy storage technology. Energy storage is an emerging technological field and may require decades to develop the energy storage capacity to completely rely on renewable energy sources. Although developing renewable energy is important, providing a reliable and continuous energy source is also very important, and the proposed liquefaction plant will improve the reliability of the existing natural gas energy system.

Section 300.1 Requirement 2. Demonstrate that all applicable local zoning ordinances, building codes, flood hazard standards, and all safety codes, fire codes, and environmental requirements have or will be met; local approvals are required for activities as specifically prescribed for non-tidal portions of a project in Sections 300.2, 300.3, 300.6, 300.8, 300.9, 300.11, 300.13, 300.15, and 300.17; for projects on state land, the state building official, for the purposes of this section is the building official;

The proposed Project will comply with all federal LNG facility design regulations, flood hazard standards, safety codes, and fire codes. NGLNG will secure any required local approvals that are not preempted for filling and grading (Section 300.2), industrial structures (Section 300.3), treatment of stormwater (section 300.6), and energy related activities (Section 300.8). The proposed Project is not located on state lands. The proposed Project does not require any dredging or disposal of dredged material; therefore, Section 300.9 of the CRMP does not apply to the Project. The Project does not include any commercial aquaculture facilities; therefore, Section 300.11 of the CRMP does not apply. The proposed Project does not include any public roadways, bridges, parking lots, railroad lines, or airports; therefore, Section 300.13 of the CRMP does not apply. The proposed Project does not include use of a municipal harbor; therefore, Section 300.15 of the CRMP does not apply. The proposed Project does not include any wetland walkover structures; therefore, Section 300.17 of the CRMP does not apply. A specific evaluation of compliance with Sections 300.2 and 300.3 of the CRMP is provided below.

Section 300.1 Requirement 3. Describe the boundaries of the coastal water and land area that are anticipated to be affected;

The coastal feature in the Project area consists of a man-made rip-rap revetment. The Project is located along the Providence River water body identification No. RI0007020E-01B. This section of the Providence River is listed as Type 6 Industrial Waterfront and Commercial Navigation Channel. The existing ground cover at the LNG Project consists of structures, crushed stone, and asphalt pavement.

Section 300.1 Requirement 4. Demonstrate that the alteration or activity will not result in significant impacts on erosion and/or deposition processes along the shore and in tidal water;

The Project does not propose any in-water work that would impact erosion or deposition processes in the vicinity of the site. The stormwater outfall for the liquefaction plant will be equipped with a rip-rap apron to protect the existing rip-rap revetment from erosion. Inland work along the shoreline will adhere to the Soil Erosion and Sediment Control ("SESC") Plan, which was prepared in accordance with the most recent

version of the Rhode Island Soil Erosion and Sediment Control Handbook. The SESC Plan is provided as Attachment E.

Section 300.1 Requirement 5. Demonstrate that the alteration or activity will not result in significant impacts on the abundance and diversity of plant and animal life;

The liquefaction Project work area currently consists of crushed stone and asphalt pavement. The LNG site is equipped with perimeter security fencing; the LNG site does not contain habitat areas for animals. The Project will not result in impacts to the abundance and diversity of plant and animal life because the site is currently developed and does not contain plant and animal life.

Section 300.1 Requirement 6. Demonstrate that the alteration will not unreasonably interfere with, impair, or significantly impact existing public access to, or use of, tidal water and/or the shore;

The LNG site is required to be a facility secured from public access in accordance with U.S. Homeland Security requirements. There is no public access to the tidal water and/or the shore at the site due to these regulatory requirements. The proposed Project will not impact public access to tidal waters and/or the shore at the site because public access is currently not allowed.

Section 300.1 Requirement 7. Demonstrate that the alteration will not result in significant impacts to water circulation, flushing, turbidity, and sedimentation;

The proposed Project does not include any in water work. There will be no filling or dredging below mean high water, therefore, there will be no impacts to water circulation, flushing, or sedimentation. Currently, stormwater runoff generated at the site is allowed to infiltrate or runs off site as sheet flow. There are currently no stormwater treatment systems at the Project site. The proposed liquefaction Project will be adding a stormwater treatment system to collect and provide treatment for stormwater runoff. In accordance with the Rhode Island Stormwater Design and Installation Standards Manual ("RISDISM"), the required treatment volume for the liquefaction Project is 4,880 cubic feet. The proposed stormwater treatment system consists of a series of catch basins, a concrete sediment forebay, and a lined sand filter. This treatment system has been designed in accordance with the RISDISM, and provides treatment for 6,121 cubic feet, which is 25% larger than the required volume. With the addition of stormwater treatment practices, the turbidity of stormwater runoff emanating from the site will be reduced.

Section 300.1 Requirement 8. Demonstrate that there will be no significant deterioration in the quality of the water in the immediate vicinity as defined by DEM;

The Providence River is classified by RIDEM as a Class SB1 water body. Per the Water Quality Regulations, an SB1 water body is defined as "waters designated for primary and secondary contact recreational activities and fish and wildlife habitat. They shall be suitable for aquacultural uses, navigation, and industrial cooling. These waters shall have good aesthetic value. Primary contact recreational activities may be impacted due to pathogens from approved wastewater discharges." The Providence River is currently listed by the RIDEM Office of Water Resources Final 2012 and Draft 2014 303(d) List of Impaired Waters as "Not Supporting" for fish and wildlife habitat, primary contact recreation, and secondary contact recreation; and is listed as "fully supporting" for fish consumption. The Rhode Island 303d list identifies that the causes of the impairments to the River are total nitrogen, dissolved oxygen, and fecal coliform bacteria. The 303d list also indicates that these impairments are likely due to Combined Sewer

Overflows. The proposed liquefaction Project will not result in any discharge of sewage, nutrients (*i.e.,* nitrogen), or combined sewer overflows ("CSO") to the Providence River. With no bathroom facilities added to the existing separate sanitary sewer system and by collecting and treating stormwater runoff on-site, the proposed Project will not contribute to CSO discharges. Therefore, the proposed Project will not impact primary and secondary contact recreational uses of the Providence River. Furthermore, operation of the proposed liquefaction Project will not impede or inhibit the use of the Providence River for aquacultural uses. There will be no marine vessel traffic to the site and no proposed work within tidal waters; therefore, the Project will not impact navigation activities in the Providence River. Although industrial cooling is a designated use of the Providence River, the proposed Project will not require any type of industrial cooling use of the Providence River.

The proposed Project will not discharge any fluids or materials to the Providence River other than properly treated stormwater. As described above, the area where the proposed liquefaction Project will reside currently does not have a stormwater treatment system. The stormwater treatment system is expected to improve the water quality of the runoff generated from the area of the Project once construction is complete. During the construction phase, stormwater runoff will be managed in accordance with a Rhode Island Pollutant Discharge Elimination System ("RIPDES") Construction General Permit ("CGP"). A Site-Specific SESC Plan has been developed for the liquefaction Project in accordance with the current edition of the Rhode Island Soil Erosion and Sediment Control Handbook. In accordance with the RIPDES CGP, the work area will be equipped with soil erosion and sediment controls consisting of Filtrexx Soxx™ sediment barriers, silt sacks, erosion control blankets, and a stabilized construction entrance. Throughout construction, the sediment and erosion controls will be inspected regularly by a qualified environmental inspector and repaired/replaced as necessary. The SESC Plan is provided as Attachment E for reference.

Groundwater at the site and throughout the entire City of Providence is classified as GB. GB classified groundwater is considered unsuitable for drinking water use without treatment. There are no wellhead protection areas and sole source aquifers within 4 miles of the site. Groundwater impacts due to historic use of the site as a Manufactured Gas Plant have been observed. As stipulated in the SMP, any groundwater generated during construction (which is expected to be minimal given the limited amount of excavation) will be treated to GB Groundwater Objectives prior to discharge. During construction, temporary soil stockpiles will be surrounded with Filtrexx Soxx™ and will be covered with polyethylene sheeting at the end of each work day to prevent exposure to runoff. The proposed stormwater treatment system will be lined to ensure that treated stormwater does not come in contact with groundwater at the site. The equipment pad foundations for the proposed Project will be supported by concrete piles. These piles will likely be driven to depths ranging from 50 to 90 feet below ground surface. Due to the significant thickness and prevalence of the low permeability organic silt layer underneath the site, downward migration of soil or groundwater impacts from pile driving is unlikely. The SMP is provided as Attachment C for reference.

Section 300.1 Requirement 9. Demonstrate that the alteration or activity will not result in significant impacts to areas of historic and archeological significance;

The location of the proposed liquefaction Project currently consists of anthropogenic fill material. Based on a review of historic maps of the shoreline in the area, the land area for the liquefaction Project did not exist prior to approximately 1905. An archaeological Sensitivity Assessment was performed by Public

Archaeology Laboratory Inc. ("PAL")[1] for the site in 1996. Section 4.6.1 of PAL's Assessment identified that the vicinity of the site presented "optimal conditions for the location of native American settlements..." However, the study ultimately concluded that "No documented historic period archeological sites are in the area of potential effect, although there are documented sites in the vicinity of the Project area. Historical accounts of the settlement of Providence and East Providence indicate that the Project area contains extensive modification to the areas of potential effect that has resulted in a low sensitivity rating. In summary, much of the Project area has been significantly altered by twentieth-century modifications to the landscape, therefore, it exhibits a low sensitivity for historic archaeological cultural resources." PAL also evaluated the existing buildings located at the site, and concluded that the buildings are not eligible for listing on the National Register of Historic Properties. PALs report was submitted to the Rhode Island State Historic Preservation Office ("RI SHPO") on February 12, 2016. The RI SHPO reviewed the assessment and concluded that the site is not eligible for listing on the National Register of Historic Properties. The proposed liquefaction Project will not result in any impacts to areas of historic or archeological significance because there are no areas of historic or archaeological significance currently on the site.

Section 300.1 Requirement 10. Demonstrate that the alteration or activity will not result in significant conflicts with water-dependent uses and activities such as recreational boating, fishing, swimming, navigation, and commerce, and;

The proposed liquefaction Project is consistent with the current use of the site as an LNG storage site. Due to U.S. Homeland Security requirements, the riverfront property housing the LNG site cannot be utilized for recreational boating, fishing, swimming, or water dependent commerce. The proposed liquefaction Project will not conflict with these water dependent uses because these uses are currently not allowed at the property. The Project will not conflict with navigation along the Providence River as there will be no impact on vessel traffic. The Project does not require vessels for construction and no terminal operations are part of this Project. Therefore, the Project will not include any alteration of navigational channels.

Section 300.1 Requirement 11. Demonstrate that measures have been taken to minimize any adverse scenic impact.

The aesthetic appearance of the proposed liquefaction Project will not be dissimilar to other infrastructure in the neighborhood. The area surrounding the LNG site consists of industrial land uses, and is comprised of numerous storage tanks that house liquid petroleum products, a large asphalt storage facility with storage tanks, Rhode Island's largest municipal waste water treatment facility (Field's Point), a large coal storage stockpile, a large roadway salt storage stockpile, a cement storage facility with large storage silos, and several scrap metal recycling storage yards. The proposed Project will be raised above anticipated flood levels. The profile of the liquefaction Project, however, will not be higher than the area's other infrastructure, including the existing LNG storage tank. Upon construction, the proposed Project will not have any adverse scenic impacts to the area.

[1] Algonquin LNG Proposed Modifications Project FERC Docket No. CP96-517-000 Resource Report No. 4 Cultural Resources Overview, authored by Beth P. Miller and Catherine deVieth, dated April 1996 (revised October 1996)

Section 300.2 Filling, Removing or Grading of Shoreline Features

The proposed Project does include filling within the contiguous area of a coastal feature. Therefore, Section 300.2 of the CRMP does apply. An explanation of the Project's compliance with policies, prohibitions, and standards set forth in Section 300.2 is provided below.

Section 300.2 Policies

Section 300.2 Policy 1. All filling, removing or grading activities shall be done in accordance with the policies and standards of this section and the standards and specifications set forth in the most recent edition of the Rhode Island Soil Erosion and Sediment Control Handbook.

A Site-Specific SESC Plan has been prepared in accordance with the most recent version of the Rhode Island Soil Erosion and Sediment Control Handbook (handbook). All filling, removal or grading activities will be performed in accordance with the policies of CRMP 300.2 and the most recent version of the handbook. Since this proposed Project is under FERC jurisdiction, the SESC Plan will be submitted to FERC for review. A copy has already been submitted to the City of Providence. The SESC Plan is provided as Attachment E.

Section 300.2 Policy 2. All new activities subject to Section 300.3 (residential, commercial, and industrial structures), Section 300.13, Section 320, or those activities which disturb more than 5,000 square feet of land on a site shall prepare and implement an erosion and sediment control plan approved by the Council which references all necessary practices for erosion and sediment control. All erosion and sediment control plans shall be consistent with applicable policies and standards contained in the Rhode Island Coastal Resources Management Program and the standards and specifications set forth in the most recent edition of the Rhode Island Soil Erosion and Sediment Control Handbook. All erosion and sediment control plans shall be strictly adhered to.

The proposed Project will disturb more than 5,000 square feet; therefore, a Site-specific SESC Plan has been prepared in accordance with CRMC regulations and the most recent version of the handbook. The SESC Plan will be strictly adhered to throughout construction. NGLNG will provide oversight (by a qualified environmental inspector as required by FERC) to ensure compliance with all environmental regulations for the duration of the Project construction.

Section 300.2 Policy 3. The Council recognizes the most recent version of the Rhode Island Soil Erosion and Sediment Control Handbook, and its amendments, published jointly by the Rhode Island Department of Environmental Management and the United States Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS), as containing appropriate Best Management Practices (BMP) for use within the CRMC's jurisdiction. All erosion and sediment control plans shall be consistent with this manual. Applicants are also encouraged to consult the most recent version of the Rhode Island Stormwater Design and Installation Standards Manual during the preparation of their erosion and sediment control plan in order to ensure consistency with the Council's stormwater management requirements (Section 300.6).

The Site-Specific SESC Plan is consistent with the most recent version of the handbook, as well as the most recent version of the Rhode Island Stormwater Design and Installation Standards Manual ("RIDISM"). Furthermore, a Site-Specific SWMP has also been prepared for the liquefaction Project in accordance with

the RIDSISM, and RIDEM Water Quality Regulations. The SWMP and SESC Plan have been submitted to RIDEM for their review. The SESC Plan is provided as Attachment E.

Section 300.2 Policy 4. Routine filling, removing, or grading of bulk materials (e.g. coal, salt, etc.) that occurs as part of the normal operations of an existing bulk transfer facility (e.g., the Port of Providence) which is adjacent to type 6 waters is excluded from the provisions of this section provided that all filling, removing or grading activities are done in accordance with applicable guidance manuals which specify the appropriate best management practices for Rhode Island. Any filling, removing or grading that will result in a modification of an existing bulk transfer facility's infrastructure shall be subject to the policies and standards in this section.

The proposed filling and grading activities for the liquefaction Project do not constitute routine filling, removing, or grading or bulk materials (i.e. coal, salt, etc.) as part of normal operations at the LNG site; therefore, this policy of Section 300.2 of the CRMP does not apply.

Section 300.2 Policy 5. Filling, removing, or grading activities shall be reviewed at the Category B level when (a) the filling or removing involves more than 10,000 cubic yards of material, (b) the affected area is greater than two acres, or (c) the affected area is a designated historic area or archaeologically sensitive site.

The proposed filling and grading activities are being reviewed at the Category B level because the proposed Project involves managing more than 10,000 cubic yards of material.

Section 300.2 Prohibitions

Section 300.2 Prohibition 1. Filling, removing, or grading is prohibited on beaches, dunes, undeveloped barrier beaches, coastal wetlands, cliffs and banks, and rocky shores adjacent to Type 1 and 2 waters unless the primary purpose of the alteration is to preserve or enhance the feature as a conservation area or natural buffer against storms.

The proposed liquefaction Project does not include any filling or grading on beaches, dunes, undeveloped barrier beaches, coastal wetlands, cliffs and banks, or rocky shores adjacent to Type 1 and 2 waters.

Section 300.2 Prohibition 2. Filling, removing, or grading on coastal wetlands is prohibited adjacent to Type 1 and 2 waters, and in coastal wetlands designated for preservation adjacent to Type 3, 4, 5 and 6 waters, unless a consequence of an approved mosquito-control ditching project (Section 300.12).

The proposed liquefaction Project does not include any filling or grading on coastal wetlands.

Section 300.2 Prohibition 3. On-site beach materials (cobbles, sand, etc.) may not be used as construction material.

The proposed Project does not include utilizing on-site beach materials as construction material.

Section 300.2 Prohibition 4. Mining is prohibited on coastal features.

The proposed Project does not include any mining activities.

Section 300.2 Standards

Section 300.2 Standard 1. The following standards apply in all cases where filling, removal, or grading is undertaken:

a. Fill slopes shall have a maximum grade of 30 percent

Fill slopes to raise the liquefaction area will have a grade that is greater than 30%. These grades are necessary to minimize the required fill material within the contiguous area of the coastal feature. These slopes will be equipped with rip-rap armoring to limit the potential for soil erosion.

b. All excess excavated materials, excess fill, excess construction materials, and debris shall be removed from the site and shall not be disposed in tidal waters or on a coastal feature

All excess material will be removed from the site and will not be disposed of in tidal waters or on a coastal feature. The majority of soil movement activities for the Project will involve management of clean fill that is tested and imported to the site. The construction of the liquefaction Project does not require extensive excavation of onsite soils because the liquefaction Project will be raised above the 100-year flood level. On-site soils will be disturbed only to the extent required to install the foundation piles and make tie-ins to existing on-site utilities, therefore generation of any excess material is expected to be minimal. Any onsite soils that are excavated during construction will be managed in accordance with the SMP. The SMP is provided in Attachment C for reference.

c. Disturbed uplands adjacent to a construction site shall be graded and re-vegetated or otherwise stabilized to prevent erosion during or immediately after construction. Nutrients shall be applied at rates necessary to establish and maintain vegetation without causing significant nutrient runoff to surface waters

Disturbed upland areas will be stabilized with rip-rap, crushed stone, and asphalt pavement as necessary throughout construction (consistent with existing conditions in the Project area). Vegetative stabilization methods will not be utilized at the LNG site; therefore, there will be no plant nutrients applied to the work area. Vegetated surfaces are not proposed as part of the Project.

d. Removal or placement of sediments along jetties or groins may be permitted only as part of an approved dredging or beach nourishment project (see Section 300.9)

NGLNG does not propose any removal or placement of sediment along jetties or groins; therefore, this standard does not apply.

e. All fill shall be clean and free of materials which may cause pollution of tidal waters

In accordance with the Site-Specific SMP, all imported fill material must be certified clean material. The material must meet RIDEM Method 1 Residential Direct Exposure Criteria ("RDEC"). The material must be sampled and analyzed to ensure compliance with the RDEC prior to delivery and placement. The material must be sampled for arsenic at a rate of once per 500 cubic yards, and must be sampled for Volatile Organic Compounds, Semi-Volatile Organic Compounds, Polychlorinated Biphenyls, Total

Petroleum Hydrocarbons, and 13 Priority Pollutant metals at a rate of once for every 2,000 cubic yards. The SMP is provided in Attachment C for reference.

f. Cutting into rather than filling out over a coastal bank is the preferred method of changing upland slopes and

NGLNG understands that cutting is the preferred method of changing upland slopes; however, for this Project filling is required because the grade is being raised to protect the proposed liquefaction Project from future flooding/storm events.

g. Limit the application, generation, and migration of toxic substances and ensure that toxic substances are properly stored and disposed of onsite in accordance with all applicable federal, state, and local requirements.

The proposed Project will not include any application or generation of toxic substances. As described previously, disturbance of any impacted materials will be minimal and limited to the installation of foundation piles, therefore minimizing risk of migration of toxic substances. This risk will be further mitigated through adherence to the Site-Specific SESC Plan, SMP, and oversight by a qualified environmental inspector. As part of the SMP, dust control measures will be implemented as necessary.

Section 300.2 Standard 2. The following upland and shoreline earthwork standards shall be required in those cases where the Council determines that additional measures are warranted in order to protect the environment of the coastal region. Such requirements shall be listed on Assents as stipulations.

a. For Earthwork on shoreline features:

1. Prior to initiation of construction, the contractor may be required to meet on-site with the CRMC staff to discuss and clarify the conditions of the permit

Prior to construction, NGLNG and its Contractor will meet on-site with CRMC personnel to discuss and clarify the conditions of the permit.

2. A re-vegetation plan shall be submitted for review and approval when construction is undertaken on a barrier beach. This plan shall describe plant material, methods of planting, time of planting, soil amendments, and maintenance

This Project will not be constructed on a barrier beach. Furthermore, there are no vegetated surfaces proposed as part of the Project because federal regulations preclude vegetation around the equipment; therefore, a re-vegetation plan is not included in the Project submittals.

3. Construction materials and excavated soils shall not be placed or stored on any shoreline feature excepting developed barrier beaches and manmade shorelines

There will be no staging of materials or equipment on any shoreline feature or its contiguous area.

4. ***All disturbed soils shall be graded smooth to a maximum 3:1 slope and re-vegetated immediately after construction, or temporarily stabilized with mulch, jute matting, or similar means until seasonal conditions permit such re-vegetation***

The slope of the Project revetment has been designed to reduce the foot print of the liquefaction Project and impacts associated with filling within the contiguous area of the coastal feature. The slope will be temporarily stabilized with erosion control blankets as needed and permanently stabilized with rip-rap.

5. ***In sensitive areas, work shall be carried out from areas above slope from coastal features. Machinery and construction equipment shall normally not be allowed to operate on a coastal wetland. For unavoidable work on a coastal wetland, a protective cover shall be deployed to minimize disturbance***

The Project will not involve utilizing construction equipment in sensitive areas such as coastal wetlands because all the proposed work can be performed from developed upland areas.

6. ***In instances where the CRMC permits temporary disturbance of a coastal feature, shoreline slope, buffer zone, or area of beach grass, the disturbed area shall be completely restored by the owner under the guidance of CRMC staff and***

NGLNG does not propose disturbance of the coastal feature except to install the stormwater management system outfall. Any disturbance of the coastal feature for the stormwater outfall will be restored in kind. If the coastal feature is incidentally disturbed during construction, the area will be restored in accordance with this standard.

7. ***Concrete structures which will come in contact with salt water shall be constructed with concrete which utilizes a Type II or Type V air-entraining Portland cement or an equivalent that is resistant to sulfate attacks of seawater.***

There are no concrete structures proposed that will come in contact with salt water.

b. ***For upland earthwork, measures shall be taken to minimize erosion:***

1. ***A line of staked hay bales or other erosion-preventing devices (including diversion ditches, check dams, holding ponds, filter barrier fabric, jute or straw mulch) shall be placed at the downslope perimeter of the proposed area of construction prior to any grading, filling, construction, or other earthwork. Hay bales shall be toed in to a depth of 3 to 4 inches, and maintained by replacing bales where necessary until permanent re-vegetation of the site is completed. No soils or other materials are authorized to pass beyond the bale line***

A line of Filtrexx SoxxTM will be installed along the downslope side of the work area in accordance with the SESC Plan. This perimeter control system will be maintained and inspected throughout construction until final soil stabilization has been achieved. The SESC Plan is provided as Attachment E for reference.

2. ***All slopes shall be returned to the original grade unless otherwise specified***

All slopes within the work area will be returned to their original condition if they are incidentally disturbed during construction except in areas where grading changes are proposed.

3. ***Where natural or manmade slopes are or have become susceptible to erosion, the slopes shall be graded to a suitable slope and re-vegetated with thick rooting brush vegetation. Mulch shall be applied as necessary to provide protection against erosion until the vegetation is established***

There are no natural slopes at the site. If manmade slopes at the site become susceptible to erosion they will be stabilized with rip-rap armoring.

4. ***Construction shall be timed to accommodate stream and/or runoff flow and not allow flows over exposed, un-stabilized soils, or into or through the excavation. Flows shall not be restricted in such a manner that flooding or inhibition or normal flushing occurs***

The proposed Project does not involve any in-stream work. During construction, exposed soils will be protected from runoff via erosion control blankets, and Filtrexx Soxx™ as needed (as specified in the SESC Plan).

5. ***Any pumping of groundwater which may be necessary for de-watering shall be discharged into sediment traps consisting of a minimum of staked hay bale rings enclosing crushed stone or trap rock of a size sufficient to disperse inflow velocity. Hay bales shall be recessed 4 to 6 inches into the soil and maintained and***

Dewatering is not anticipated to be necessary for the majority of the work. Any pumping of groundwater or dewatering activities occurring at the site will adhere to the Site-Specific SMP. Dewatering flows must be treated prior to discharge. The treatment process will include collection of dewatering flow into fractionation tanks for sediment/grit removal, filtration with bag filters to remove fine sediment and suspended solids, filtration with granular activated carbon to remove any volatile organic compounds, and non-erosive infiltration through an infiltration basin. Alternatively, NGLNG may choose to dispose of dewatering fluids through a waste disposal vendor at a facility licensed to receive this material.

6. ***There shall be no discharge of sediment-laden waters into storm drains. Storm drains shall be surrounded by staked hay bales to intercept sediment.***

There are no existing active storm drains within the Project area. Sediment laden water will not be discharged to storm drains.

c. ***For any disturbance of steep slopes (over 15 percent):***

1. ***Where such construction is allowed, the following shall be observed: (1) no fill shall be allowed on the slope; (2) excavation shall be kept to an absolute minimum; and (3) vegetative cover on the slope shall be permanently maintained to the maximum extent physically possible.***

2. ***Where the potential for damage to a slope exists from runoff, staked hay bales, berms, or similar diversions shall be placed at the top and toe of the slope. Collected water shall be suitably discharged through properly constructed drains or swales. Wherever possible, drainage swales shall be constructed along and adjacent to property lines so as to avoid drainage onto adjacent properties. Swales shall be capable of handling runoff from a 10-year-rainfall occurrence.***

3. ***For excavations on slopes or directly adjacent to coastal features, the excavated materials shall be cast upslope of the trench or excavation so as to minimize downslope runoff of sediment.***

4. ***Pedestrian access over steep shoreline slopes and banks shall be in the form of field stone or similar stabilized paths or elevated stairs. Access over bluffs shall be with elevated stairs only.***

NGLNG proposes construction of steep slopes, but does not propose disturbance of existing steep slopes, therefore, this standard does not apply. As previously discussed if any portion of the site is incidentally disturbed during construction it will be restored in kind.

Section 300.3 Residential, Commercial, Industrial and Recreational Structures

The proposed Project includes construction of an industrial facility. Therefore, an explanation of how the Project adheres to the policies of 300.3 is provided below:

Section 300.3 Policies

Section 300.3 Policy 1. It shall be the policy of the Council to undertake all appropriate actions to prevent, minimize or mitigate the risks of storm damage to property and coastal resources, endangerment of lives and the public burden of post-storm disaster assistance consistent with policies of the State of Rhode Island as contained in the Hazard Mitigation Plan element of the State Guide Plan when considering applications for the construction of residential, commercial, industrial and recreational structures, including utilities such as gas, water and sewer lines, in high hazard areas.

The proposed liquefaction plant has been designed to minimize the risk of storm damage to property and coastal resources. Based on a review of the Federal Emergency Management Agency ("FEMA") Flood Insurance Rate Map (FIRM) 44007C0317J for Providence County dated September 18, 2013 the 100-year flood elevation at the LNG site is 12 feet (NAVD88). A wave study performed by VHB[2] concluded that the wave height for the 100-year storm event is 2.9 feet. Section 145 – Climate Change and Sea Level Rise of the CRMP, provides guidance on expected sea level rise scenarios that should be considered when building in coastal areas and the policy of the Council is to rely on "...the most recent NOAA sea level rise data to address both short- and long-term planning horizons and the design life considerations for public and private infrastructure. The Council's policy is to adopt and use the sea level changes scenarios published by NOAA in Technical Report OAR CPO-1 (Parris et. al. 2012), and the sea level rise change curves for Newport and Providence as provided in the USACE sea level rise calculator. As of 2015, the range in sea level rise change is projected by NOAA to be a maximum of approximately 1.0-foot in 2035, 2.0 feet in 2050 and 7.0 feet in 2100." This policy was utilized to determine the sea level rise (incorporating increasing rates of sea level rise over time) to establish a sea level rise of 1.5 feet over the 25-year design life of the proposed Project. The final elevation of the liquefaction Project will be 21 feet NAVD88. Assuming the 100-year flood, and 25-year sea level rise, the base flood elevation is expected to be 13 feet

[2] National Grid LNG Facility Coastal and Hydraulic Modeling Analysis prepared by Vanasse Hangen Brustlin, Inc. Dated October 2013.

NAVD88. The armored slope of the liquefaction Project has been designed in accordance with the Coastal Engineering Manual[3].

Section 300.3 Policy 2. It is the Council's policy to require a public access plan, in accordance with Section 335, as part of any application for a commercial or industrial development or redevelopment Project in or impacting coastal resources.

In accordance with Section 120, a variance from this policy may be granted if an applicant can demonstrate that no significant public access impacts will occur as result of the proposed Project.

Due to U.S. Homeland Security requirements, public access to the LNG Project is prohibited. The liquefaction Project will not alter these security requirements. The construction of the liquefaction Project will not adversely impact public access because public access to the site is not allowed currently.

Section 300.3 Policy 3. All commercial and industrial structures and operations located within tidal waters shall obtain a structural perimeter limit (SPL). Owners/operators of these facilities may apply to the Council for definition and establishment of this structural perimeter at any time. However, the Council shall establish a structural perimeter limit (SPL) when an application subject to this section is under review.

There are no industrial structures or operations proposed within tidal waters and a Structural Perimeter Limit (SPL) is not required.

[3] Coastal Engineering Manual (CEM), Part VI – Design of Coastal Project Elements, Dated April 30, 2002, amended September 28, 2011.

We trust that this letter addresses all of your comments. If you require any additional information, please contact William Howard of National Grid at william.howard@nationalgrid.com or 401-784-7490 or Igor Runge of GZA GeoEnvironmental Inc. (GZA) at igor.runge@gza.com or 401-427-2710.

Sincerely,
NATIONAL GRID

William R. Howard

William R. Howard
Manager – Environmental

Attachments:

Figure 1 Overall Aerial
Figure 2 Temporary Liquefaction Laydown Area
Figure 3 Proposed Final Conditions Plan
Attachment A Certificate Application Volume II, Resource Report 10 filed on April 1, 2016
Attachment B Data response NGLNG-3-21 filed on June 9, 2016
Attachment C September 2012 Soil Management Plan (SMP)
Attachment D Data response NGLNG-3-17 filed on June 30, 2016
Attachment E Soil Erosion and Sedimentation Control (SESC) Plan

CC: Anthony LaRusso, National Grid
Wendy B. Levine, National Grid
Robin L. Main, Hinckley Allen
Igor Runge, GZA

nationalgrid

FIELDS POINT LIQUEFACTION PROJECT

DOCKET NO. CP16-___-000

ENVIRONMENTAL REPORT

DRAFT RESOURCE REPORT NO. 10

ALTERNATIVES

PUBLIC

SUBMITTED BY:

National Grid LNG, LLC
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MARCH 2016

RECEIVED
MAR 15 2017
COASTAL RESOURCES
MANAGEMENT COUNCIL

ATTACHMENT A
CERTIFICATE APPLICATION VOLUME II,
RESOURCE REPORT 10
FILED ON APRIL 1, 2016

FIGURES

RESOURCE REPORT 10 – ALTERNATIVES
SUMMARY OF COMMISSION FILING INFORMATION

INFORMATION	FOUND IN
Address the "no action" alternative and discuss the benefits and costs of each alternative (§ 380.12 (l)(1)).	Section 10.2
Identify system alternatives considered during the initial screening for the project and provide the rationale for rejecting each alternative (§ 380.12 (l)(1)).	Section 10.3
Identify the environmental characteristics of major and minor route alternative considered but eliminated in the initial screening and provide sufficient comparative data to justify the selection proposed (§ 380.12 (l)(2)(i)).	N/A
Identify the alternative sites for major new aboveground facilities and provide comparative data to justify the selection of the proposed site with a location map for the alternatives considered (§ 380.12 (l)(2)(ii)).	Section 10.5

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ACRONYMS AND ABBREVIATIONS

Bbls	Barrels
Btu	British thermal unit
CF	Cubic feet
Dth	Decatherms or dekatherms
FERC	Federal Energy Regulatory Commission
LNG	Liquefied natural gas
LPG	Liquefied petroleum gas
MDth	Thousand decatherms
MMscfd	Million standard cubic feet per day
MR	Mixed refrigerants
NGLNG	National Grid LNG, LLC
psig	Pounds per square inch gauge

10.0 ALTERNATIVES

10.1 Introduction

National Grid LNG, LLC ("NGLNG") proposes to construct and operate a natural gas liquefier at its existing liquefied natural gas ("LNG") storage facility (called the "Fields Point Liquefaction Project" or "Project"). NGLNG owns and operates a Commission-jurisdictional LNG storage facility located in Providence, Rhode Island (the "Site") that is used by its three firm storage customers for peak-shaving. The storage facility is located in an industrialized area and the Site has been used for LNG storage since 1974. Currently, it is used to provide firm storage service to three local distribution companies that use the LNG for peak-shaving to ensure the ability to provide reliable gas service in the winter months. The existing LNG storage facility does not have liquefaction capability and only receives LNG by truck. The stored LNG is then vaporized for redelivery to the customers via pipeline, although there is the capability to redeliver to the customers' trucks.. The storage facility is physically connected to the distribution system of The Narragansett Electric Company downstream of one of its city-gate interconnections with the Algonquin Gas Transmission System. The distribution system of The Narragansett Electric Company is used for redelivery by displacement to the Algonquin Gas Transmission System.

The Project is being undertaken by NGLNG at the request of two of its storage customers, The Narragansett Electric Company and Boston Gas Company, to add liquefaction capacity so that the customers can deliver gas for storage in vapor form as an alternative to delivering LNG to the Site by tanker trucks. The Project will include one new 20 million standard cubic feet per day ("MMscfd") gas pretreatment and liquefaction system to convert natural gas delivered by pipeline into LNG by cooling it to -260 degrees Fahrenheit where it takes a liquid form. Feed gas will be supplied to the Project via a connection with the existing 12-inch pipeline to the Site that is owned by The Narragansett Electric Company. Pre-treatment will consist of one train capable of providing treated gas to the liquefier for producing 20 MMscfd of LNG. The existing storage capacity will remain unchanged. There will be no change to the LNG storage tank and no relocation of the existing cryogenic piping or vaporization equipment is proposed.

This resource report describes the alternatives considered for the Project to identify the best method of accomplishing the Project purpose and need. The purpose and need for the Project is to add liquefaction capability to the existing NGLNG storage facility to enable the customers to fill their contracted storage capacity with pipeline-sourced natural gas as an alternative to supplying by truck gas for storage that is already in a liquid state.

Under current operations, the number of customer truck deliveries of LNG for storage has averaged 1389 trucks per year over a ten year period from 2005 to 2014. The customers have primarily accepted redelivery of their stored LNG in vapor form either at the NGLNG interconnection with The Narragansett Electric Co.'s distribution pipeline or by displacement to a point on the Algonquin Gas Transmission Pipeline system. Over the past 10 years, redelivered LNG to trucks was made for 66 loads in the spring of 2014 at the request of customers. Under the proposed operations, it is anticipated that the primary method to be used by the customers to deliver gas for storage will be in vapor form to be liquefied in the proposed liquefier prior to storage. The storage customers will continue to have the option to deliver gas for storage in liquid form by truck but are only expected to do so if liquefaction

capacity is unavailable. This could occur if a customer only has an interruptible liquefaction contract. While it is anticipated that under the proposed operations the customers will continue to take redelivery of some of their stored LNG in vapor form, it is expected that the option to take redelivery of LNG by truck will be used more frequently than in the past. The process and service of delivery to pipeline via vaporization will remain unchanged as a result of this project.

Table 10.1-1 is a summary table comparing the historical transportation methods for delivering LNG to storage and redelivering LNG to the storage customers with the methods expected with the Project.

Table 10.1-1 Comparison of Transportation Methods for LNG Delivery and Redelivery to Customers.

Transportation Method	Historical LNG Storage Operations	Proposed Operations
Volume of LNG (Trucks/Dth) delivered to the storage tank annually by LNG truck	10 year average: 1,382 Trucks/1,312,900 Dth[a] 10 year high: 2586 Trucks/2,456,700 Dth[a] (2014) 10 year low: 606 Trucks/575,700 Dth[a] (2006)	None to 526 Trucks/499,700 Dth2[a c]
Volume of gas (MDth) received annually from The Narragansett Electric Company pipeline under design conditions.	No gas received from the Narragansett 200 psig pipeline under current operations.	An estimated receipt maximum of 6,908 MDth including tail gas. Approximately 2500 MDth will be injected back into the line as tail gas for a net withdrawal of 4,408 MDth.[b]
The source of gas received from The Narragansett Electric Company pipeline	Not Applicable	Customer acquired supplies transported on the Algonquin Gas Transmission system

Transportation Method	Historical LNG Storage Operations	Proposed Operations
Volume of Gas (MDth) delivered to the Algonquin Gas Transmission Pipeline annually.	1,209 MDth was vaporized and injected into The Narragansett 200 psig distribution system in calendar year 2014 during peak shaving operations. Of which, 449.27 MDth was stored by The Narragansett Electric Company and the redelivery was absorbed into its distribution system. 759.74 MDth was nominated by the other Customers and delivered to the Algonquin Gas Transmission Pipeline by displacement. Over the past 5 years: Average total vaporization by all customers: 749 MDth/year 5 year high vaporization : 1,209 MDth (2014) 5 year low vaporization: 282 MDth (2010)	No change in operations
Volume of LNG (Trucks/Dth) redelivered to LNG trucks	66 Trucks/62,100 Dth was discharged to LNG trucks in 2014. There were no other redeliveries to trucks in the prior 10 year period.	Potentially up to 2,286 Trucks /2,171,700 Dth[a] a year dependent on customer needs. A 10 year average of Customer LNG usage indicates approximately 1,300 Trucks/1,235,000 Dth.[a]
Nitrogen Trucks delivering nitrogen	17 Trucks a year	60 Trucks a year[d]

[a] average truck volume of 950 Dth
[b] 1030 Btu/CF
[c] if the third storage customer does not participate in liquefaction service and chooses to fill by truck
[d] includes two nitrogen trucks per week during the operating season (for 30 weeks of the year)

As discussed in section 10.2 below, the local distribution company customers that have requested the liquefaction service will use the liquefaction capability to reduce their dependence on LNG supply sourced from a single LNG import terminal. Since the customers expect the LNG sourced from pipeline supplies to be lower priced than the imported supplies, the customers expect to use the stored LNG to refill their distribution system LNG storage facilities. As a result, the pattern of customer trucking at the NGLNG facility is expected to change from trucks primarily delivering the customers' LNG for storage to a pattern of trucks primarily transporting customers' LNG from the storage facility. In addition to providing an additional service option for the customers, adding liquefaction capability presents a

business opportunity for NGLNG because any liquefaction capability that is not used by the firm liquefaction customers would be available to others on an interruptible basis under the terms of the Commission's open access rules.

The source of the gas that will be purchased by the customers to be liquefied in the proposed facility will be supplies that can be accessed from the Algonquin Gas Transmission pipeline system. The production source of the gas the customers will purchase to be liquefied cannot be identified in advance and it may not be identifiable if the customers purchase their gas supplies at liquid trading hubs where natural gas supplies are aggregated from a variety of production areas. The proposed Project does not depend on natural gas produced from any particular production area or by any particular production method.

10.2 No Action Alternative

This section addresses the consequences of not constructing the proposed Project. Any potential adverse impacts directly associated with the Project during the construction phase (e.g, disturbance of soils, storm water discharge, air and noise quality impacts) would not occur. Instead, the NGLNG customers would continue to deliver LNG for storage by truck, which would not achieve the purposes of the proposed Project. The customers would not have the option of supplying their contracted storage quantities with pipeline-sourced gas for on-site liquefaction and would need to continue to obtain LNG from other sources.

To date, the customers have obtained the majority of the LNG they store at the NGLNG storage facility from the Everett, Massachusetts LNG import terminal with the LNG supplies sourced from overseas. According to testimony filed before the Massachusetts Department of Public Utilities by Boston Gas, one of NGLNG's customers, its reliance on this single source of LNG supply has resulted in significantly increased prices charged by the supplier since 2008 and there have been instances when the supplier has not been able to meet all of the LNG supply requirements.[1] As stated in this testimony, Boston Gas seeks to increase the reliability of its LNG supply by using a portfolio of LNG supply sources to reduce its dependence on imported LNG and the price volatility associated with the imported supplies.[2] The proposed Project is one of several sources of LNG supply the customers propose to use to lower their supply risk by providing a domestic-sourced alternative for the LNG they store in the NGLNG storage facility.[3] This Project will enable the customers to more fully utilize the interstate pipeline capacity they have under contract during the off-peak season to move domestic gas supply to the Project site for liquefaction and storage.[4]

If the proposed liquefaction facility is not constructed, NGLNG's customers would continue to bear the supply risk to obtain and provide LNG for storage by NGLNG but their supply reliability risk would be higher. As noted above, among the supply risks that the customers have experienced in the past is a disruption in the availability of imported LNG and significantly higher prices for the imported LNG than

[1] Joint Testimony of Elizabeth D. Arangio and John E. Allocca at pp. 6, 19-22, filed in *Boston Gas and Colonial Gas, d/b/a National Grid*, MA D.P.U. 15-129 (filed Aug. 20, 2015) ("DPU Testimony").

[2] DPU Testimony at pp. 6, 34.

[3] DPU Testimony at p. 6.

[4] DPU Testimony *at p. 7.*

the market price for North American-sourced gas because of their single source of LNG supply and the fact that they must compete with an ever growing demand in the world LNG market. These higher prices are ultimately reflected in the prices paid by retail natural gas customers.

The NGLNG customers use the LNG to supplement the supplies available through the interstate pipelines on the peak demand winter days. The geology of New England does not enable the underground storage of natural gas so local distribution companies in New England have had to rely on LNG storage to supply approximately 6% of the winter supply needs and as much as 40% of the peak day supply needs.[5] On the cold winter days, when consumer demand for natural gas exceeds the ability of the interstate pipelines to deliver gas into the region, the LNG is vaporized and injected into the local distribution systems to supplement the pipeline supplies.

Since the LNG is used to serve the needle peaks in demand on the coldest days, at times when the pipeline infrastructure cannot accommodate the demand, energy conservation is not an alternative because the objective of energy conservation is to reduce the total amount of consumption as opposed to consumption on a peak day. Similarly, alternative fuels, such as electricity generated from renewable energy sources, do not present an alternative to LNG for meeting peak gas consumption needs of the retail customers on the coldest winter days. Retail customers cannot readily switch to alternative fuels such as electricity for heating and gas distribution companies, like NGLNG's customers, must be ready to supply the projected needs of their retail gas customers on peak winter days. Improvements in energy efficiency could lower the amount of natural gas needed for heating on the coldest days but it is unlikely to eliminate the need for LNG use on the distribution systems. The LNG is used to accommodate sharp hourly spikes in retail customer use and for pressure regulation. A peaking supply alternative commonly used by gas utilities in the past was to inject a liquefied petroleum gas ("LPG") and air mixture ("LPG-Air"), usually propane mixed with air, into the distribution system. However, this option would require the NGLNG customers to add new LPG tank storage to their existing distribution systems, after having eliminated these facilities, and these types of small scale LPG-Air systems do not have the same peaking capacity as the existing LNG storage facility. Further, one of the purposes of the Project is to enable the customers to continue to use the existing LNG storage and to source their LNG from pipeline supplies.[6]

Whether or not the Project is constructed it is anticipated that the safety record of the storage tank will remain unchanged. The existing storage tank has an excellent safety record. It has been in operation since 1974 without incident. The storage facility is inspected by FERC biannually and is also subject to the requirements of and inspection by the U.S. Department of Transportation Pipeline and Hazardous Materials Safety Administration. If constructed, the proposed Project would not have an impact on the safety record of the storage tank because the Project would be an independently operated facility located outside the existing containment area for the storage tank. No alteration or replacement of the existing LNG storage systems or equipment is proposed.

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[5] DPU Testimony at p. 6; and "Liquefied natural gas meets a quarter of New England's average natural gas needs," *Today In Energy*, U.S. Energy Information Administration (Jan. 18. 2012), available at http://www.eia.gov/todayinenergy/detail.cfm?id=4610; see also "The Role of LNG in the Northeast Natural Gas (and Energy) Market," Northeast Gas Association (June 2015), available at http://www.northeastgas.org/about_lng.php.

[6] DPU Testimony at p. 31.

10.3 System Alternatives

This section addresses the system alternatives for the proposed Project. NGLNG's customers could obtain liquefaction of pipeline-sourced natural gas from other facilities than the proposed Project. There are currently no such existing liquefaction facilities with unsubscribed capacity within New England so the use of other existing liquefaction facilities would require trucking the LNG long distances at greater cost to the customers and with the associated environmental impacts from trucking, including air emissions. In recent years, NGLNG customers have sourced their LNG by truck from Montreal, Quebec, and Pennsylvania.

Since the liquefaction process is more efficient with higher inlet feed gas pressures, NGLNG considered increasing the size of the pipeline connection to the Site to obtain higher pressure. However, this would have required the construction of a new 1.5 mile 24-inch pipeline on the local gas distribution system with the attendant construction impacts along the Allens Ave route of the distribution system pipeline. Instead, NGLNG is proposing to add on-site booster compression for the feed gas. This would result in a smaller environmental footprint than new pipeline construction because the area of disturbance is larger for pipeline construction. In addition, the compressor will be electric motor-driven rather than using natural gas as the fuel, which minimizes emissions issues.

An alternative liquefaction cooling system to the proposed closed loop nitrogen refrigeration cycle would be to use a mixed refrigerant ("MR") system. These are commonly used by LNG peakshaving facilities. A MR system uses a combination of methane, ethane (or ethylene), propane, isopentane and nitrogen. A major disadvantage of a MR system is that it would require on-site storage and handling of the flammable hydrocarbon components for the refrigerant system. As a result, this alternative would present a higher safety risk for the employees on site who would need to handle the flammable hydrocarbons. A closed loop nitrogen refrigerant cycle was chosen because of its superior safety and environmental properties. Nitrogen is inert and nonpolluting and the use of a single refrigerant eliminates the need for storing and mixing several hydrocarbons to produce a refrigerant.

10.4 Alternative Routes

The proposed Project does not include any new pipeline facilities so this factor is not applicable.

10.5 Alternative Sites for New Aboveground Facilities

NGLNG only has one site – the current location of its storage facility in Providence, R.I. There are a number of advantages to locating the liquefier at this Site rather than at other LNG storage facilities in New England. The NGLNG storage tank is larger than existing distribution system LNG storage tanks owned by NGLNG affiliates. This provides the NGLNG customers with a measure of flexibility because they can use the proposed liquefier to supply LNG for storage in the NGLNG tank and to supply some of the LNG stored in the customer distribution system storage tanks within Massachusetts and Rhode Island. A combination of factors makes the proposed Site superior to alternative locations with fewer environmental impacts compared to other NGLNG affiliate-owned LNG storage facilities. These factors include the industrial location of the proposed Site, distance from residential properties, utility access on site, and close proximity to major highways. In addition, the proposed Project Site is within the existing NGLNG security fence so no additional property is required.

At the existing NGLNG property there are no other alternative locations within the existing security fence or plant property boundaries where the liquefaction facilities could be located. Any potential sites for the proposed Project in areas adjacent to the current Site would require the acquisition of new property rights. The current use of the adjacent properties likely would make the proposed Project uneconomic if those sites had to be acquired for the liquefier. The parcel to the southeast is currently leased by a cement terminal that has been in operation since the 1960s. The parcel to the west is occupied and used by The Narragansett Electric Co. for its natural gas regulation facility and its compressed natural gas fueling area, both of which would need to be relocated. Furthermore, this westerly parcel is closer to residential properties and therefore not as advantageous as the location selected on the existing LNG plant property.

The 20 MMscfd capacity of the proposed liquefier was chosen based on supply needs and current capabilities of the existing LNG storage tank. At this size, the LNG storage tank will take approximately 100 days to fill under full capacity operation of the liquefier. This leaves sufficient time for the NGLNG customers to dispatch some of the liquefier created LNG to their other LNG storage facilities in Massachusetts and Rhode Island over the non-heating season, April 1 to October 31, which is typically used by peak shaving LNG plants to fill storage in preparation for winter peak shaving operations. In addition, the existing LNG plant has the capacity to load or unload 20 LNG truck transports per day. This is equivalent to the capacity of the proposed liquefier and therefore will require no changes to the existing LNG tank operation or flows. Finally, the size of the system is limited by the space available without site expansion and a system with lesser capacity would not meet the supply needs of the NGLNG customers as effectively.

10.6 Summary and Conclusions

The proposed Project is the best alternative to meet the purposes and needs of the Project with the least environmental impact. LNG is an essential component of the supply mix for NGLNG's storage customers to be able to serve their retail natural gas customer peak winter needs. Therefore, NGLNG's customers will continue to depend on the NGLNG storage facility. The addition of liquefaction capability to the existing LNG storage Site will provide a more reliable alternative for NGLNG's customers to obtain the LNG they store at the existing storage facility than their current reliance on imported LNG. The proposed Project will be located in an industrialized area on NGLNG's existing property. Further, the Project has been designed to minimize the environmental footprint during the construction and operation of the Project. As designed, there is no need for additional construction of upstream nonjurisdictional distribution system pipeline facilities and the equipment components selected for the liquefaction plant will result in fewer emissions and greater safety than alternative equipment options.

10.7 REFERENCES

Joint Testimony of Elizabeth D. Arangio and John E. Allocca at pp. 6, 19-22, filed in *Boston Gas and Colonial Gas, d/b/a National Grid*, MA D.P.U. 15-129 (filed Aug. 20, 2015), available at http://web1.env.state.ma.us/DPU/FileRoom/dockets/bynumber

"Liquefied natural gas meets a quarter of New England's average natural gas needs," *Today In Energy*, U.S. Energy Information Administration (Jan. 18. 2012), available at http://www.eia.gov/todayinenergy/detail.cfm?id=4610.

"The Role of LNG in the Northeast Natural Gas (and Energy) Market," Northeast Gas Association (June 2015), available at http://www.northeastgas.org/about_lng.php.

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ATTACHMENT B
DATA RESPONSE NGLNG-3-21
FILED ON JUNE 9, 2016

Data Request NGLNG-3-21

Request:

Resource Report 10 – Alternatives (Question 1)

Section 10.5 states that a combination of factors makes the proposed site superior to alternative locations at other National Grid affiliate-owned liquefied natural gas storage facilities. National Grid lists examples of factors such as the industrial location of the proposed site, distance from residential properties, etc.; however, no details are provided for the referenced alternative sites. Provide mapping of alternative site locations, descriptions of the alternative sites, a discussion of how each alternative site could (or could not) meet the Project objective, and a comparative analysis to support the basis of this conclusion.

Response:

As noted in Resource Report 10, Section 10.5, NGLNG only has one site. However, its affiliated customers considered the feasibility of other National Grid affiliate-owned sites before requesting NGLNG to add liquefaction facilities. Specifically, four other sites with existing LNG storage tanks and one greenfield site were considered as alternatives to the NGLNG site. Each of these alternatives is discussed below and two attachments are provided: Attachment 1 is a map showing the location of each alternative site and Attachment 2 is a summary comparison table.

Burrillville, RI

An affiliate company owns an approximately 99-acre parcel of land in Burrillville, RI adjacent to the Algonquin Gas Transmission pipeline right-of-way. A small building with pressure letdown facilities to feed a local gas distribution system is located on the southwest corner of the lot and the remaining part of the site is wooded and undeveloped land. The site was considered to build a liquefaction facility and a new LNG production storage tank that would hold about 10 days' worth of the output of the liquefaction equipment. Since this is a greenfield site, the location would require the construction of new utility infrastructure for the electric service and firewater system and a significant amount of land clearing to prepare the site. The site is not in close proximity to any major highways. LNG trucks to and from the site would need to travel seven to 12 miles, depending on the destination, over secondary surface roads to access a major road and the routing would be through the towns of Burrillville (including villages of Harrisville and Nasonville), North Smithfield, and Glocester. The site is inferior to the proposed Providence site because the addition of a new liquefaction facility to this greenfield site

would have greater impacts on the local ecosystem and the human environment from the clearing of the wooded land and the truck traffic. Further, a liquefaction facility with a small production storage tank would also require peak season LNG production and transportation with the attendant operational reliability issues that arise from cold weather operations in New England.

Commercial Point, Dorchester, MA

Boston Gas owns a 331,000 Barrel LNG storage tank for peak shaving that is located on a 34.5-acre site in Dorchester, MA near Interstate 93 south of Boston. There is approximately 17.4 acres of open space within the security fence at this site but a significant part of it has been committed to a solar electric generation facility leaving a much smaller area available for liquefaction equipment. The site borders the Neponset River and Dorchester Bay. The Neponset River was designed as a 1300-acre Area of Critical Environmental Concern in 1995 by the Massachusetts Executive Office of Energy and Environmental Affairs. Logan Airport is less than 20,000 feet across the water from the site. The site is located in a mixed use industrial area within the urban area of Boston. The distance to the nearest residences is about 1600 feet and there is a yacht club located approximately 700 feet from the existing storage tank. Currently, approximately 850 trucks per year deliver LNG to the storage tank.

The customers' objective is to be able to diversify their sources of LNG so they are less dependent on imported LNG supply. Using this site would still require the LNG to be trucked to the NGLNG site in Providence for storage. The existing Commercial Point storage tank is smaller than the NGLNG 600,000 Barrel tank, and the storage capacity is needed by Boston Gas for its peak shaving needs in addition to the capacity it holds in the NGLNG storage tank. The Commercial Point storage tank cannot accommodate the LNG storage needed for Narragansett. Therefore, there would continue to be almost the same amount LNG trucking from the Boston area to the NGLNG site as occurs currently without any potential trucking related emissions reductions.

With respect to the local impacts of adding liquefaction to this site, the site is closer to residences and other public uses than the NGLNG site. Adding liquefaction to this site would result in a significant increase in trucking at the site from approximately 850 trucks per year to a potential of more than 3500 trucks per year based on the rated output of the NGLNG liquefier over a similar period and the fact that less LNG is stored on site. In addition, the location near an Area of Critical Environmental Concern is an additional factor to be taken into account during the construction phase that makes the site an inferior alternative to the NGLNG site.

Cumberland, RI

The Cumberland LNG storage facility has a 23,900 Barrel tank on a site near Interstate 295 in a suburban location in northeast Rhode Island. Both the Maritimes and Northeast Pipeline and the Tennessee Gas Pipeline systems cross the site. The surrounding area is primarily residential with the nearest residences approximately 550 feet from the site and a public school within 1000 feet. Because of its very small storage tank, the site was considered for a liquefaction facility that would only serve the LNG supply needs for Rhode Island. Currently, the storage facility receives approximately 95 truck deliveries per year or roughly three per week in the off-peak season. The addition of liquefaction facilities to the site would result in a significant and noticeable increase in truck traffic. The site would not serve the LNG supply objectives of the customers because of its small storage tank that is needed to serve the peak shaving needs of the local distribution system. It was determined that a tank approximately three times larger would be needed just to provide the LNG supply needs for Rhode Island and this would not achieve the objectives for Boston Gas Company. In addition, the change in use of the site could have a significant impact on the surrounding community because of the additional truck traffic.

Lynn, MA

A 290,000 Barrel LNG peak shaving storage facility is also located at a site in Lynn, MA just off MA Route 1A. The site is on the edge of Lynn Harbor along Broad Sound off Nahant Bay in a Designated Port Area District. It is a small site of about 10.3 acres with a limited area to add liquefaction and truck loading facilities. The site is about nine miles from a major highway. The nearest residences are 1200 feet away and there is a public boat ramp about 200 feet away. Due to the small size of the existing storage tank at this site that is needed for the peak shaving needs of the local distribution system, almost all of the LNG produced would have to be trucked away from the site soon after production to satisfy the supply objectives of the customers. This would result in a significant increase in truck traffic at the site from approximately 600 truck deliveries[1] a year to more than 3900 trucks a year similar to the Commercial Point alternative described above. In addition, the trucks would need to travel through downtown Lynn to and from the highway. Use of this location would continue to require trucking of the produced LNG within New England as occurs currently.

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[1] The number of current truck deliveries differs from site to site despite the similar tank sizes based on historical dispatching of vaporization over a 10 year period.

Tewksbury, MA

The Tewksbury LNG storage facility is located in a suburban community about 20 miles northwest of Boston in a wooded area on the edge of Long Pond. The site has a 290,000 Barrel LNG peak shaving storage tank and the location is approximately six to seven miles from major highways. The nearest residences are located approximately 500 feet from the site. Due to the small size of the existing storage tank at this site that is needed for local peak shaving requirements, almost all of the LNG produced would have to be trucked away from the site soon after production to satisfy the supply objectives of the customers. This would result in a significant increase in trucking because currently there are approximately 700 truck deliveries per year to the site but this would increase to potentially more than 3800 truck trips per year. Because of the proximity to residences and the distance from major highways, adding liquefaction to this site would have a noticeable impact on the surrounding community from the trucking. In addition, there are local restrictions on trucking to the site during school hours that make this location difficult to use from an operational stand point. LNG trucking within New England would continue to be needed to transport the LNG produced from this site to other sites in Massachusetts and Rhode Island. In addition, its location next to Long Pond presents potential issues for construction near wetlands.

Attachments

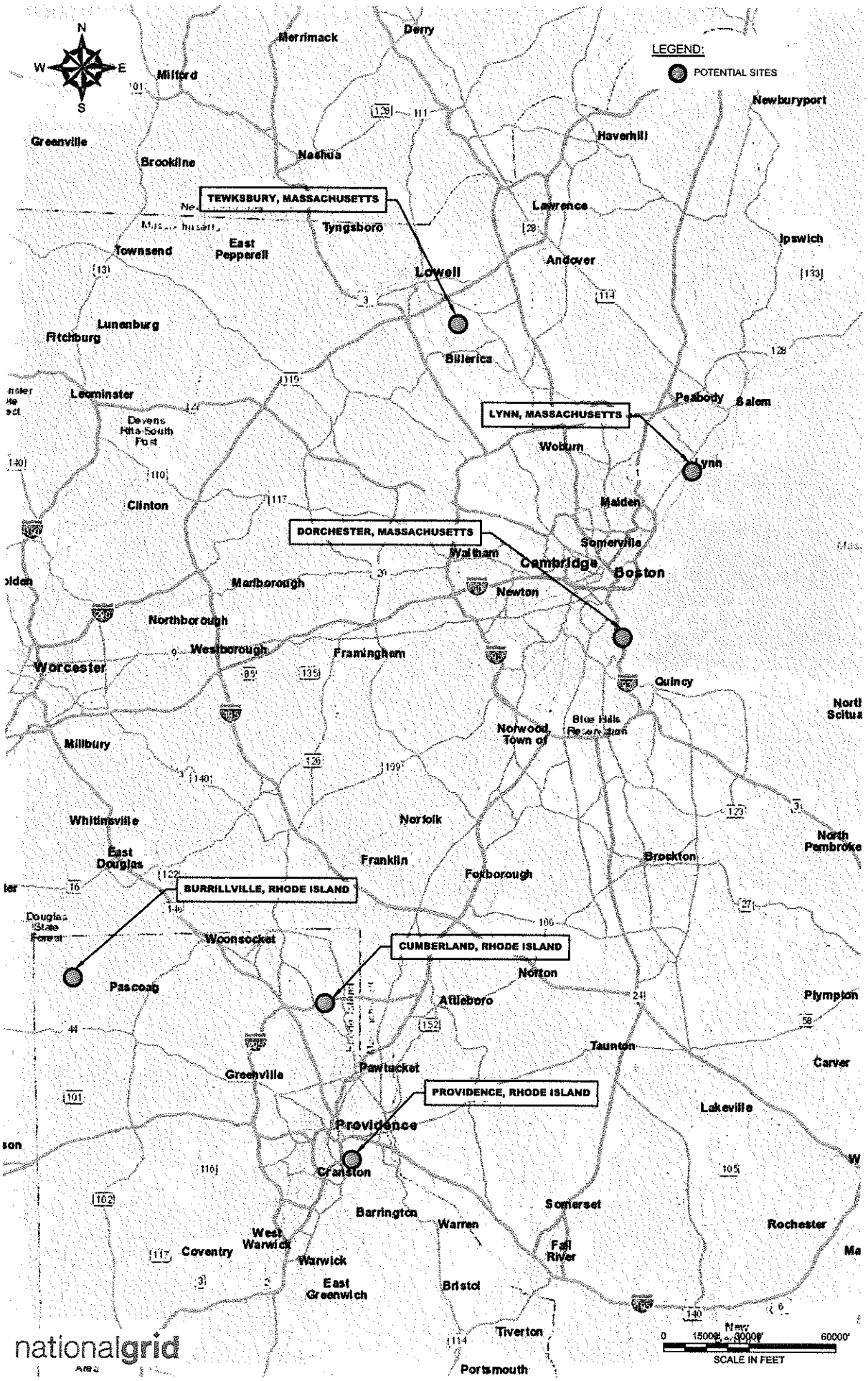
Attachment 1 – Alternatives Sites Map

Attachment 2 – Comparison of Alternative Sites Considered Table

Prepared by or under the supervision of:
Anthony LaRusso

NGLNG-3-21_Attachment 1

Alternatives Sites Map


N
W
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LEGEND:
POTENTIAL SITES
TEWKSBURY, MASSACHUSETTS
LYNN, MASSACHUSETTS
DORCHESTER, MASSACHUSETTS
BURRILLVILLE, RHODE ISLAND
CUMBERLAND, RHODE ISLAND
PROVIDENCE, RHODE ISLAND
Merrimack
Derry
Milford
Newburyport
Greenville
Brookline
Nashua
Haverhill
Lawrence
Tyngsboro
Ipswich
Townsend
East Pepperell
Andover
Lowell
Lunenburg
Fitchburg
Billerica
Leominster
Peabody
Salem
Devens Rita-South Post
Woburn
Lynn
Clinton
Malden
Somerville
Waltham
Cambridge
Boston
Marlborough
Newton
Northborough
Westborough
Framingham
Worcester
Quincy
Norwood, Town of
Blue Hills Reservation
Millbury
Whitinsville
Norfolk
North Pembroke
East Douglas
Franklin
Brockton
Foxborough
Douglas State Forest
Woonsocket
Norton
Pascoag
Attleboro
Plympton
Taunton
Carver
Greenville
Pawtucket
Lakeville
Providence
Cranston
Somerset
Barrington
Warren
Rochester
West Warwick
Coventry
Fall River
Warwick
East Greenwich
Bristol
Tiverton
Portsmouth
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SCALE IN FEET

NGLNG-3-21_Attachment 2

Comparison of Alternative Sites Considered Table

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Comparison of Alternative Sites Considered Table

CONSIDERATIONS	Burrillville, RI	Commercial Point, Dorchester, MA	Cumberland, RI	Lynn, MA	Tewksbury, MA	Providence, RI
Existing Tank Size	None (greenfield project)	331,000 Barrels	23,900 Barrels	290,000 Barrels	290,000 Barrels	600,000 Barrels
Site Setting	Approx. 99 acres of undeveloped land adjacent to Algonquin pipeline	Urban, Boston harbor	Suburban	Urban, Lynn harbor	Suburban	Urban, Providence River
Land Use	Undeveloped wooded land with a small gas pressure letdown station.	Mixed Use Area (Industrial)	Residential	Designated Port Area District	Residential	Industrial Use
Nearest Residences And Other Public Uses	Not determined.	1,600 ft.; Yacht Club 700 ft.	Approx. 550 ft.; public school within 1000 ft.	Approx. 1200 ft.; Boat Ramp 200 ft.	Approx. 500 ft.	1900 ft.
Associated Local Trucking Activities During Operations	Trucks would travel 7-12 miles over secondary surface roads to access major roads. Routing would be through	Significant increase from approx. 850 trucks/year to potential of more than 3500	Currently plant receives 95 trucks per year to fill or roughly 3 per week during the non-	Significant increase from approx. 600 trucks/year to more than 3900 trucks/year. 9	Significant increase from approx. 700 trucks/year to more than 3800 trucks/year – poor access to	Potential for slight incremental increase from 2586 trucks/year to 2872

CONSIDERATIONS	Burrillville, RI	Commercial Point, Dorchester, MA	Cumberland, RI	Lynn, MA	Tewksbury, MA	Providence, RI
	towns of Burrillville (villages of Pascoag, Harrisville, and Nasonville), North Smithfield, and Glocester.	trucks/year	heating season. Any increase would be noticeable.	miles distance to highway.	highways (~6-7 miles).	trucks/year, but current plan is 2346 trucks/year.
Other Notable Environmental Factors	Greenfield development would require significant land clearing, electric and firewater infrastructure development. Requires more trucking through towns on secondary roads.	Borders Neponset River, an Area of Critical Environmental Concern; requires more trucking through NE		Requires more trucking through New England without potential truck-related emissions reduction.	Potential issues with construction near wetland area; requires more trucking through New England without potential related emissions reduction.	

CONSIDERATIONS	Burrillville, RI	Commercial Point, Dorchester, MA	Cumberland, RI	Lynn, MA	Tewksbury, MA	Providence, RI
Operational Factors	Would require winter time LNG production and trucking.		Existing tank is very small and not optimally sized for the scale of the customers' needs. Storage tank would need to be 3X larger to replace imported supplies.	Small site with limited area to add the liquefaction and truck facilities.	Operational restrictions during school hours.	

ATTACHMENT C
SEPTEMBER 2012
SOIL MANAGEMENT PLAN (SMP)

SOIL MANAGEMENT PLAN
642 ALLENS AVENUE
PROVIDENCE, RHODE ISLAND

PREPARED FOR:
RIDEM
Providence, Rhode Island

ON BEHALF OF:
National Grid
Waltham, Massachusetts

PREPARED BY:
GZA GeoEnvironmental, Inc.
Providence, Rhode Island

September 2012
File No. 33554.00

GZA
GeoEnvironmental, Inc.

Engineers and Scientists

September 12, 2012
File No. 03.0033554.00-C

Mr. Joseph Martella
Rhode Island Department of Environmental Management
Office of Waste Management
235 Promenade Street
Providence, Rhode Island 02908-5767

530 Broadway
Providence
Rhode Island
02909
401-421-4140
Fax: 401-751-8613
http://www.gza.com

Re: Soil Management Plan
642 Allens Avenue
Providence, Rhode Island

Dear Mr. Martella:

Attached is the most recent version of the *Soil Management Plan* (SMP) for the 642 Allens Avenue Property (Site) in Providence, Rhode Island. The plan was prepared by GZA GeoEnvironmental, Inc., (GZA), on behalf of National Grid, to establish procedures to be followed during the installation of subsurface lines and other construction related activities at the Site that disturbs the subsurface.

Should you have any questions or comments, do not hesitate to call the undersigned at 401-421-4140, or Amy McKinnon, from National Grid, at 781-907-3644.

Very truly yours,

GZA GEOENVIRONMENTAL, INC.

Margaret S. Kilpatrick, P.E.
Senior Project Manager

James J. Clark, P.E.
Principal

MSK/JJC:tja

Attachments: Soil Management Plan

cc: Amy McKinnon, National Grid

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APPENDIX B	RIDEM APPROVED REMEDIAL OBJECTIVES

1.00 INTRODUCTION

On behalf of the Narragansett Electric Company d/b/a/ National Grid (National Grid), GZA GeoEnvironmental, Inc., (GZA) has prepared this *Soil Management Plan* (SMP). The SMP serves to provide guidance relating to the excavation, storage, and reuse or disposal of soils from the National Grid-owned property located at 642 Allens Avenue in Providence, Rhode Island (the "Site"). This plan also provides guidance related to the handling and management of groundwater. This SMP is subject to the Limitations provided in Appendix A.

The Site is identified on the Providence Tax Assessor's Map as Assessors Plat (AP), Lots 5, 273, 316, and 317, and as Plat 101, Lot 1. A Site *Locus Plan* is included as Figure 1.

The Site is the location of a former manufactured gas plant (MGP) and prior environmental testing indicated the presence of MGP-related contaminants at concentrations above certain regulatory criteria. The Site is currently occupied by National Grid for use as an active natural gas distribution facility. A tenant Holcim (Canada) Inc., (Holcim), a cement company, occupies the southeastern portion of the Site.

Note that the coastal resource areas of the Site (the Providence River) are subject to regulation by the Coastal Resources Management Council (CRMC), Rhode Island Department of Environmental Management (RIDEM), the U.S. Army Corps of Engineers (ACOE), and the U.S. Coast Guard (USCG). In addition, stormwater management, treatment and discharge may be subject to Narragansett Bay Commission (NBC) or RIDEM Rhode Island Point Discharge Elimination System (RIPDES) jurisdiction. Accordingly, an evaluation of potential regulatory requirements must be evaluated prior to the initiation of projects by National Grid Environmental personnel.

This SMP is based in part on the May 2009 SMP developed by VHB on behalf of National Grid. It has been prepared to establish procedures that will be followed during future construction/maintenance activities at the Site, which require the need to manage soils excavated and groundwater removed from the subsurface.

- Section 1.0 includes this introduction;
- Section 2.0 describes the Site and provides relevant background information;
- Section 3.0 presents a summary of the Site hydrogeologic features;
- Section 4.0 summarizes soil and groundwater quality data;
- Section 5.0 presents soil and groundwater management guidelines; and
- Section 6.0 presents health and safety guidelines.

2.00 SITE DESCRIPTION/BACKGROUND

The following provides a brief description and history of the Site and a summary of relevant past operations. For more detailed information, please refer to the April 2003 *Site Investigation Report* (SIR) submitted to RIDEM.

The Site consists of an approximately 42-acre parcel of land and is bound to the west by Allens Avenue, to the east by the Providence River, to the northwest by the Motiva Terminal property, to the northeast by a water lot owned by Motiva, to the southwest by Terminal Road, and to the south and southeast by UNIVAR (a chemical distributor), the former Sun Oil/ProvPort facility, the LeHigh Cement Distribution Company and the New England Petroleum Terminal Corporation. All surrounding properties are industrial in nature and either historically or currently store(d) petroleum and/or hazardous materials and have the potential to impact the Site. (Refer to Figure 2 for a *Site Plan*).

The Site is comprised of three principal areas and associated operations (as shown on Figure 2):

- National Grid's 642 Allens Avenue facility;
- National Grid's 670 Allens Avenue Compressed Natural Gas (CNG) Fueling Station;
- The Liquefied Natural Gas (LNG) facility operated by National Grid LNG; and
- Holcim's Cement facility.

The MGP occupied portions of all three locations described above. The main entrance to the Site is on Allens Avenue, on the west side of the Site. There are also gated entrances to the National Grid LNG site and Holcim facilities off Terminal Road.

From 1910 until 1954, an MGP operated at the Site producing coal gas, carbureted water gas, and high-BTU oil gas. Gas manufacturing by-products were routinely managed through recovery, storage, recycling, reprocessing, and resale of the by-products. Such by-products included coke, coal tar, ammonia, toluene, and benzene. B.P. Clapp operated an ammonia works at the Site beginning in 1910, and managed the recycling and sale of ammonia by-products. The United States Government operated a toluene facility at the Site for a short period of time during 1918.

In 1952, a liquefied petroleum gas distribution plant began operation at the Site. By 1954, coal gasification operations at the Site had ceased. As indicated previously, a LNG facility has operated on the eastern and southeastern portions of the Site since 1972 and Holcim (formerly, St. Lawrence Cement Company) has leased the southeastern section of the Site since 1961.

3.00 HYDROGEOLOGIC CONDITIONS

Site stratigraphy generally consists of fill materials, underlain by organic deposits/ materials, underlain by a discontinuous layer of sorted sands (outwash deposits) and underlain by glacial till. In general, the shallow fill consists of sands and gravels with cinders, cinder ash, coal fragments, wood chips and bricks. Bedrock is expected to be more than 100 feet below ground surface (bgs). The organic materials, which occurs at various depths ranging from 16.5 to 19 feet bgs is likely to an original tidal mud deposit. The glacial till is very dense, heterogeneous and poorly sorted.

Groundwater is encountered at depths of approximately 2 to 8 feet below the ground surface across the Site and is inferred to flow to the northeast toward the Providence River and to the north towards the cove area. Groundwater is tidally influenced and the groundwater table is predominantly encountered within the fill materials. Groundwater underlying the Site is classified by RIDEM as "GB" or not suitable for potable use without treatment due to known or presumed degradation.

4.00 SUMMARY OF ENVIRONMENTAL IMPACTS

Based on the type of chemical constituents present at the Site, the potential routes of exposure to excavation and/or utility repair workers include inhalation, dermal contact or accidental ingestion of impacted soil and/or groundwater, and the possible introduction of contaminants through broken skin. Utilization of the appropriate personal protective equipment and the general safety guidelines provided herein will serve to minimize the potential for worker exposure to impacted media while performing work.

The following sections present a summary of soil and groundwater quality at the Site. This information was obtained from previous environmental studies of the Site. For further detail, please refer to the following:

- February 1995 *Summary Report Phase 1A Field Characterization Investigations* prepared by Resource Controls (RCA);
- June 1996 *Summary Report Phase 1B Field Characterization Investigations* prepared by RCA; and,
- September 2003 *Site Investigation Report (SIR)* prepared by VHB.

In planning activities that may include disturbance of impacted materials, a qualified environmental consultant[1] shall review this environmental data and develop appropriate project-specific procedures for addressing impacted soil and groundwater disturbance/ management/disposal and worker health and safety consistent with this SMP.

[1] For the purpose of this document, this term is consistent with the definition of "Environmental Consultant" contained in RIDEM's *Rules and Regulations for Underground Storage Facilities Used for Petroleum Products and Hazardous Material* dated April 2011.

4.10 CONSTITUENTS OF CONCERN

Based on the results of the previous investigations described in the above reports, certain constituents of concern (COCs) were detected in soil and groundwater associated with former operations at concentrations that represent Method 1 exceedances of the RIDEM *Rules and Regulations for the Investigation and Remediation of Hazardous Waste Materials* (Remediation Regulations, DEM-DSR-01-93, as amended). Please refer to the 2003 *SIR* for a complete data set.

For the Site, the following exceedances have been documented:

- **Industrial/Commercial Direct Exposure Criteria (I/C DEC):** arsenic, lead, total petroleum hydrocarbons (TPH), and several polynuclear aromatic hydrocarbons (PAHs);
- **GB Leachability Objectives:** TPH, benzene, toluene, ethylbenzene, and xylene;
- **GB Groundwater Objectives:** benzene and naphthalene;
- **Soil Upper Concentration Limits:** TPH, lead, and naphthalene; and
- **Groundwater Upper Concentration Limits:** light non-aqueous phase liquid (LNAPL) and trace amounts of dense non-aqueous phase liquid (DNAPL).

4.20 EXTENT OF CONTAMINATION

The extent of impacted soil associated with the former MGP usage varies throughout the Site. In addition to MGP impacts, much of the Site and its surroundings are filled land and may contain hazardous materials-impacted soils not associated with the former MGP. Based on the above, soil management guidelines are necessary to ensure soils are managed with consideration to the project remedial goals and the Remediation Regulations.

Areas that have been remediated and capped with approximately 2 feet of cover material include the former Compressor Building No. 1 area and the northwestern and southern portions of the National Grid LNG Site (see Areas 1, 2, and 3 on Figure 3, *Remediated Areas*). The former Materials Handling Area has had approximately 6 inches of clean loam applied and has a grass cover established to stabilize the soils.

Subsurface soil exceedances exist throughout the Site, but there appears to be concentrated areas of exceedances in the general vicinity of the former Gasholders No. 18 and No. 21, the former Purifier Area, and the National Grid Regulator Area.

NAPL has been observed in the subsurface throughout the Site, with both LNAPL and dense non-aqueous phase liquid (DNAPL) occurring. LNAPL occurs in trace amounts proximate to the former Gasholders Nos. 18 and 21, trace amounts proximate to the former propane cradles in the central portion of the Site and in thicknesses ranging from approximately trace amounts to 3 feet thick in the eastern portion of the Site (within the LNG facility). DNAPL occurs in the northern portion of the Site, proximate to the cove, in trace amounts only.

4.30 REMEDIAL ACTIONS

Several remedial actions have been completed at the Site.

In June 1999, Environmental Science Services (ESS) supervised the excavation of surface and subsurface soils in preparation for the construction of a vaporizer pad, located to the south of the offload area on the National Grid LNG portion of the Site. Subsurface piping was removed and recovery wells and groundwater flow barriers were installed to aid in the recovery of LNAPL. Areas that were excavated were capped with approximately 2 feet of clean fill or were covered by structures (the vaporizer pad). The area west of the LNG tank sub-impoundment was also excavated as part of these remedial activities. See Area 1 on Figure 3, for the location of this area.

Additional remedial actions were initiated in May 2002 at the Site and were conducted in accordance with the ESS *Remedial Action Work Plan* (RAWP) (as amended), which was approved in 1998 and a Temporary Remedial Action Permit issued by RIDEM in 2002. See Areas 2 and 3 on Figure 3 for the location of the remediated areas. These remedial actions consisted of the removal of MGP waste and impacted soils from subsurface structures and their surroundings and construction of engineered caps in portions of the Site. VHB supervised some of these remedial actions. The Remedial Objectives (ROs) for this project were divided into three categories: surface soil objectives (0-2 feet bgs); subsurface soil objectives (>2 feet bgs) within 100 feet from the shore; and subsurface soil greater than 100 feet from the shore. These ROs were based on the RIDEM DEC (surface soil) and UCLs (subsurface soil). The ROs from the 1998 ESS RAWP are provided in Appendix B.

Based on the industrial nature of the surrounding properties, the documented releases of petroleum hydrocarbons on all surrounding properties, the continued large-capacity storage of petroleum products, and the excavation of source materials within the Site, it was proposed, in the *Site Investigation Report*, to address groundwater impacts through monitoring and passive recovery of non-aqueous phase liquid (NAPL).

5.00 SOIL AND GROUNDWATER MANAGEMENT GUIDELINES

This SMP has been prepared to establish procedures that will be followed should future construction/maintenance activities at the Site require the need to manage soils and groundwater during excavation activities. As previously noted, soils have been detected at the Site exceeding the RIDEM-approved Remedial Objectives, as well as RIDEM Industrial/Commercial DEC, GB Leachability Criteria, and UCLs.

Soils generated from an excavation conducted at the Site may be placed back into its original excavation, based on the discretion of the environmental consultant (refer to Section 5.20). However, so as to maintain known exposure scenarios, every attempt shall be made to backfill the excavation so that the corresponding depth and location of the backfilled soil resembles the depth and location at which the soil originally existed. In certain areas where remedial

actions have been completed, this requirement includes the reinstallation of the geosynthetic barrier and the re-placement of the engineered control cap. Excess materials and/or materials deemed unsuitable for use as backfill shall be managed and disposed of in accordance with this SMP. As described previously, the natural groundwater table is encountered at depths ranging from approximately 2 to 8 feet below grade and has been observed to be tidally influenced, with the groundwater table is generally observed within the fill unit. In addition, NAPL has been observed in certain areas of the Site. Projects involving excavation below the water table and/or disturbance of impacted groundwater will require additional controls and Best Management Practices (BMPs) as described below. As part of any construction activities, soils will need to be stockpiled within the Site area. Specifics regarding stockpiling protocol are outlined in the following sub-sections.

5.10 PRELIMINARY ACTIVITIES

- While formal RIDEM approval of planned utility/construction projects is not a requirement, it is recommended that RIDEM be notified prior to commencing these types of activities.

- Before preparing for any planned activities involving the disturbance of materials beneath any of the engineered controls, this SMP shall be reviewed by a qualified environmental consultant. Project-specific plans shall be prepared in consideration of the Site conditions and soil and groundwater impacts described herein, so as to prevent potential human exposures to or migration of hazardous materials.

- Should any project require the need for dewatering and/or disturbance of impacted groundwater in support of excavation/construction, the qualified environmental consultant shall plan to manage, contain, treat (if necessary) and discharge or dispose of impacted groundwater. In addition, all appropriate regulatory approvals related to the removal, handling, treatment and discharge of impacted groundwater shall be in-place prior to the initiation of the project. Such plans shall, at a minimum, include an evaluation of water quality and the potential presence of NAPL, the method by which water will be treated, contained and/or discharged/disposed and the necessary regulatory approvals, permits, *etc.* Impacted, untreated groundwater shall not be discharged directly to the ground surface, collection utilities or neighboring water bodies.

- Prior to the initiation of soil excavation, the selected contractor or any other personnel performing subsurface work at the Site shall contact DIGSAFE® and appropriate utility companies to identify and mark the location of below grade utilities.

- Prior to performing the proposed work, the selected contractor and/or responsible party shall obtain all applicable federal, state and local permits. As noted, portions of the Site are located within the jurisdictional limits of the CRMC. A jurisdictional determination of the requirements of the CRMC shall be made prior to the implementation of proposed construction projects. If applicable, CRMC approval shall be obtained prior to conducting the work.

- As described further herein, prior to conducting any earthwork/construction activities that involves disturbance of materials, a qualified environmental consultant shall be consulted to determine the appropriate level of health and safety training required by personnel involved with the work, the personal protection equipment required, and general health and safety guidelines. A project-specific Health and Safety Plan (HASP) shall be prepared by a qualified Certified Industrial Hygienist (CIH) and strictly adhered to during all phases of the work.

5.20 SOIL SCREENING/DISPOSAL REQUIREMENTS

- Environmental consultant(s) will be available during earthwork activities to provide guidance regarding the management of potentially impacted soil and groundwater. The environmental consultant will monitor the work areas during soil excavation to conduct observations and for field screening/soil sampling, and will be available on a fulltime or as needed basis. The environmental consultant will summarize all observations and sampling activities in daily field reports that will serve as the Operating Log.

- If unusual observations are made during excavation anywhere in the work area (*e.g.*, NAPL, buried containers, or unusual odors), work in the subject areas shall stop immediately. Workers should not excessively handle the material of interest and will notify the NGRID's construction project supervisor and request further direction. The construction project supervisor will in turn notify NGRID's Environmental Department. Unusual material will be segregated by the contractor and characterized by the environmental consultant per the following bullet.

- The contractors, with guidance from the environmental consultant, will segregate any suspect soil ("suspect soil" includes observations of NAPL or unusual odors) based on visual observations and total volatile organic compounds (TVOC) headspace screening via a photo ionization detector (PID). Any soils which exceed a TVOC concentration of 50 parts per million per volume (ppmv) or which exhibits visual or olfactory evidence of contamination will be segregated for laboratory analysis for comparison to the RIDEM regulatory criteria and disposal parameters. The segregated soil will be stockpiled by placing on two layers of 6 mil polyethylene sheeting, or stored in roll-off type containers or drums. In either case, the material in storage will be covered with secured polyethylene sheeting at the end of each work day, as specified in Section 5.30. All other soil will be considered suitable for reuse on the Site, but must be stockpiled in accordance with Section 5.30. The environmental consultant will sample segregated soil every 1,000 cubic yards for TPH via Method 8100M, semi-volatile organic compounds (SVOCs) via Method 8270, arsenic and lead via Methods 200s/6010/7000s and volatile organic compounds (VOCs) via Method 8260/5035. A determination regarding the potential for such soils to be reused on the Site will be made by comparing the laboratory analytical data to the RIDEM approved surface and subsurface Remedial Objectives per the 1998 RAWP (see Appendix B).

- Should soils with evidence of NAPL be discovered during excavation, these materials and/or soils shall be segregated for disposal at a licensed facility approved by National Grid.

- Soil disposal documentation for non-hazardous soil will be maintained on file by National Grid.

- For soil disposed of as a hazardous waste, disposal documentation (*i.e.*, Hazardous Waste Manifests) will be provided to National Grid for distribution to RIDEM.

- Any soil remaining after the completion of construction activities requiring disposal (based on analytical results) at a licensed and National Grid approved facility will be kept on polyethylene sheeting and covered until it is shipped off-Site.

- **Soils excavated from the Site shall not be re-used at non-permitted locations off-Site.** All excess Non-RCRA Hazardous soils shall be transported to a licensed thermal desorption or other similar type of facility for treatment/recycling. In the event RCRA Hazardous materials are generated, these materials shall be disposed off-Site at a licensed hazardous waste disposal facility. A qualified environmental consultant shall collect samples of the excavated soils (either during excavation or from stockpiles) for laboratory testing. Soil must be sampled at a frequency adequate to support the data requirements of the selected recycling/disposal facility.

- The National Grid Environmental contact will make arrangements for the disposal of the material and will sign as the generator of these materials on all waste profiles and shipping manifests. Copies of these records shall be provided to National Grid.

5.30 SOIL STOCKPILE MANAGEMENT/EROSION CONTROL

- Segregated materials which meet the on-Site re-use requirements, and can be re-used on the Site considering the scope of the active project, will be temporarily stockpiled on 6 mil polyethylene sheeting. Temporary stockpiles may also be created adjacent to excavation areas to accommodate the contractor's work schedule throughout the Site area.

- Excavated materials shall be temporarily staged on two layers of 6-mil polyethylene sheeting in working stockpiles adjacent to excavations. Depending on the volume of material involved in the project, soils shall be either stockpiled on polyethylene sheeting as described herein, or stored in lined roll-off type containers or drums. No excavated materials shall be placed directly on the ground surface. At the end of each work day, all stockpiles shall be covered with 6-mil polyethylene sheeting to control the generation of wind-blown dusts and potential migration of soils with stormwater runoff. Stockpile areas shall be equipped with appropriate controls to limit the loss of the cover and protect against storm water erosion. These controls shall include the installation of hay bales, silt fencing and any other appropriate measures during the

entire duration of the project. Stockpiles shall be inspected daily by site personnel. Should tears or punctures be observed in either the polyethylene sheeting covering or underlying the piles, repairs shall be made immediately. Daily shutdown procedures shall include the covering and securing of all stockpiled material area with polyethylene sheeting and appropriately sized materials to secure the polyethylene sheeting in place.

- All catch basins/storm drains proximate to work areas will also be protected from excessive sediment discharge by placing staked haybales or similar protective devices around its perimeter. All catch basins/storm drains will be protected and inspected daily during the course of the entire project to ensure haybale placement and integrity.

- Stockpiled soils shall be staged and temporarily stored in a designated area of the Site for no more than 90 days. To the extent practical, the storage location shall be selected to limit the unauthorized access to the materials (*i.e.,* away from public roadways/walkways).

- Soil, construction material and/or debris stockpile areas shall not be located on any coastal feature, within 200-feet of the inland edge of the coastal feature or in coastal waters.

5.40 DUST AND ODOR CONTROL

All reasonable precautions must be taken to prevent the excessive generation of dust and/or nuisance odor during soil excavation, stockpiling, loading, and other soil handling activities. At a minimum, the PM_{10} dust concentration, as measured with a real-time dust monitor, shall not exceed 150 ug/m^3 over a 24-hour period. Dust control measures must be implemented, as required, to prevent airborne particulate matter from leaving the Site at all times. Methods of stabilization consisting of sprinkling, mulching, or similar methods shall be employed as soil conditions warrant (*i.e.,* visual evidence of dust). Odor controls such as sprinkling, covering of piles and/or disturbed areas, and use of foams or other techniques shall also be employed as necessary to control odors.

Work at the Site must comply with all applicable federal, state, and local regulations, including the RIDEM's *Air Pollution Control Regulations*, and specifically Regulation No.5 regarding control of fugitive dust. The contractor will conduct dust/odor control measures during and after normal work hours and on weekends as necessary to control dust/odors. All stockpiles shall be inspected on a daily basis to ensure compliance with RIDEM *Air Pollution Control Regulations*.

5.50 CAPPING REQUIREMENTS

Following construction activities, soils will be managed in a manner which ultimately results in these materials being interred in the following manner.

- All excavated soils which meet the re-use criteria (refer to Appendix B – RIDEM approved Remedial Objectives) will be re-interred (if possible).
- Soil meeting the surface soil Remedial Objectives will be used as surface soil or subsurface backfill. Soil passing the subsurface soil Remedial Objectives will be used only as subsurface soil backfill.
- Soil not meeting the subsurface Remedial Objectives or soils that cannot be reused will be disposed at a National Grid approved licensed facility.
- The replacement of the existing surficial cap should consist of either: (1) two feet of clean soil, (2) one foot of clean soil underlain by permeable geosynthetic; (3) asphalt pavement cover; or (4) permanent structures with concrete slab.

5.60 DECONTAMINATION PROTOCOL

Since heavy equipment/hand tools may remain onsite for several days, decontamination need not occur on a daily basis. At the conclusion of the construction activities, heavy equipment and tools will be decontaminated. Soil will be brushed from the equipment and containerized prior to washing the equipment surfaces. The containerized material should be sampled for disposal determination (as required) and then properly disposed at on off-Site facility. All liquid (water) generated as a result of decontamination procedures will be spread over as large an area as possible and allowed to infiltrate the ground surface.

Crushed gravel will be placed at the construction boundary zone to facilitate the removal of excess soil from vehicle tires for vehicles which need to leave the work zone on a daily basis (such as vehicles used to transport soil).

5.70 OTHER SOILS

Any clean fill material brought on-Site is required to meet the RIDEM's Method 1 Residential Direct Exposure Criteria or be designated by a qualified environmental consultant as Non-Jurisdictional under the Remediation Regulations. All clean fill, including sub-grade material and loam, imported to the Site must be sampled prior to delivery and placement. Laboratory analytical results shall be reviewed by a qualified environmental consultant and National Grid prior to acceptance or delivery to the Site. Clean fill and loam shall be sampled for arsenic at a minimum frequency of one sample per 500 cubic yards. One-quarter of the total number of compliance samples of clean fill and loam shall be sampled for total petroleum hydrocarbons (TPH), volatile organic compounds (VOCs), semi-volatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs) and the 13 priority pollutant metals. Any fill determined to be non-jurisdictional will also require the submission of a written certification by a qualified

environmental consultant designating that the fill is not jurisdictional. Any clean fill that is stockpiled on the Site prior to use will be segregated from any stockpiles of excavated soils, although must be stockpiled pursuant to Section 5.30.

5.80 DEWATERING

Laboratory analytical results of Site groundwater samples indicate the detection of hazardous substances that exceed RIDEM GB Groundwater Objectives and possibly sewer or surface water discharge criteria. If dewatering is necessary, all impacted fluids shall either be properly treated on-site for subsequent surface water or Narragansett Bay Commission (NBC) discharge, or containerized for off-Site disposal. Any discharges shall be performed consistent with all applicable regulations and permits. With respect to fluids to be disposed off-site (including NAPL), they shall be properly transferred and containerized to prevent discharges or leaks, characterized per the requirements of the receiving facility, and subsequently transported to a fully licensed/permitted treatment/recycling facility. **Impacted, untreated groundwater shall not be discharged directly to the ground surface, collection utilities or neighboring water bodies.** Open excavations shall be protected when feasible to prevent introduction of stormwater runoff and/or precipitation into the excavation (ie. staked haybales to berm the edge of excavations, etc.) If dewatering is part of the Contractor's scope of work, the cost implication of dewatering, permitting and disposal must be included in the bid costs.

5.90 MANAGEMENT OF NON SOILS

Work area excavations may unearth solid debris and/or refuse materials such as concrete, brick, rubble, pipe, lumber and other building materials. This material should be segregated to the extent feasible and stockpiled separately utilizing the procedures outlined above. Disposal of this material is not the subject of this plan and will be handled by the contractor in a manner consistent with demolition and refuse clearing projects and in accordance with RIDEM *Solid Waste Regulations*, and subject to National Grid approval.

6.00 HEALTH AND SAFETY GUIDELINES

The basic health and safety procedures outlined below are intended as a general guideline for basic short-term excavation activity conducted at the Site and that a project- specific HASP may be warranted for complex or long-duration subsurface work. **The contractor is responsible for developing their own HASP and to provide site safety personnel who will be responsible for ensuring that safety measures are strictly followed.** Prior to starting work, the project-specific HASP must be reviewed by National Grid.

6.10 PERSONNEL PROTECTIVE EQUIPMENT (PPE)

In general, the level of protection which will be used by workers will be determined by the task which the person is performing; however, at a minimum, workers performing excavation

work subject to the SMP are required to wear the following Level D personnel protection equipment (PPE):

- Safety leather steel toe boots;
- Rubber or leather gloves;
- Eye and hearing protection;
- Hard hats; and
- Florescent vests.

6.20 SITE OPERATING PROCEDURES / SAFETY GUIDELINES

Regardless of the level of PPE necessary to complete work, the following general health and safety guidelines shall be followed during the performance of any excavation activities conducted.

- Workers conducting site activities under this SMP should do so with consideration to OSHA Standards including OSHA Standard 29 CFR 19.10-120.

- Site security shall be maintained on a continuous basis. No trespassers will be allowed.

- Work in the LNG portion of the site will be performed in accordance with National Grid's LNG safe practice procedures for that area of the Site.

- A pre-work meeting will be conducted at the start of every workday to discuss the health and safety procedures.

- The location of all utilities in the vicinity of the excavation shall be established prior to beginning work.

- Practice contamination avoidance: never sit or kneel in an excavation; never lay equipment on the ground; avoid obvious sources of contamination; and avoid unnecessary contact with objects in an excavation.

- Be alert to any unusual changes in your physical condition; never ignore warning signs. Notify the responsible employee as to any changed conditions.

- All equipment used in an excavation shall be properly cleaned and maintained in good working order. Equipment shall be inspected for signs of defect and/or contamination before use.

- Eating, drinking, chewing gum, and smoking shall be prohibited in active excavation areas.

- During working hours, workers who stop to drink or eat should leave the active work area, remove PPE, and wash hands thoroughly with soap and water prior to eating or drinking.

- The discovery of any condition that would suggest the existence of a situation more hazardous than anticipated shall result in the evacuation of personnel from the excavation and the re-evaluation of the hazard and the level of protection; and

- At the completion of work, workers are required to wash their hands with soap and water or use pre-moistened wipes (such as Go-Jo wipes) before leaving the Site. All workers' safety boots are required to be brushed with a stiff bristle brush or similar instrument (not by hand) to remove residual soil. Used disposable PPE (such as Go-Jo® wipes, nitrile or latex gloves, boot covers, and Tyvek® suits, if necessary) is required to be disposed according to applicable regulations.

6.30 EMERGENCY PHONE NUMBERS

Emergency telephone numbers and the directions to the nearest hospital are included below. This information shall also be included in the project-specific HASPs developed for the activity and shall be periodically reviewed and updated as needed.

Response Agency	Phone Number
Ambulance	911
Police	911
Fire	911
RIDEM/Office of Compliance & Inspection/Emergency response Program	(401) 222-1360 or (401) 222-3070 (non-business hours)
USEPA/Hazardous Materials Spills	(800) 424-8802
Poison Control Center	(800) 562-8236
DigSafe® (Utility Clearance)	1-888-DIGSAFE
Hospital	
Rhode Island Hospital 593 Eddy Street Providence, RI 02903	401-444-4000
Route to Hospital	
1. Turn RIGHT out of the Site onto ALLENS AVENUE 2. Turn LEFT at the ninth turn onto PUBLIC STREET 3. Turn RIGHT at the first turn onto EDDY STREET 4. End at 593 EDDY STREET	

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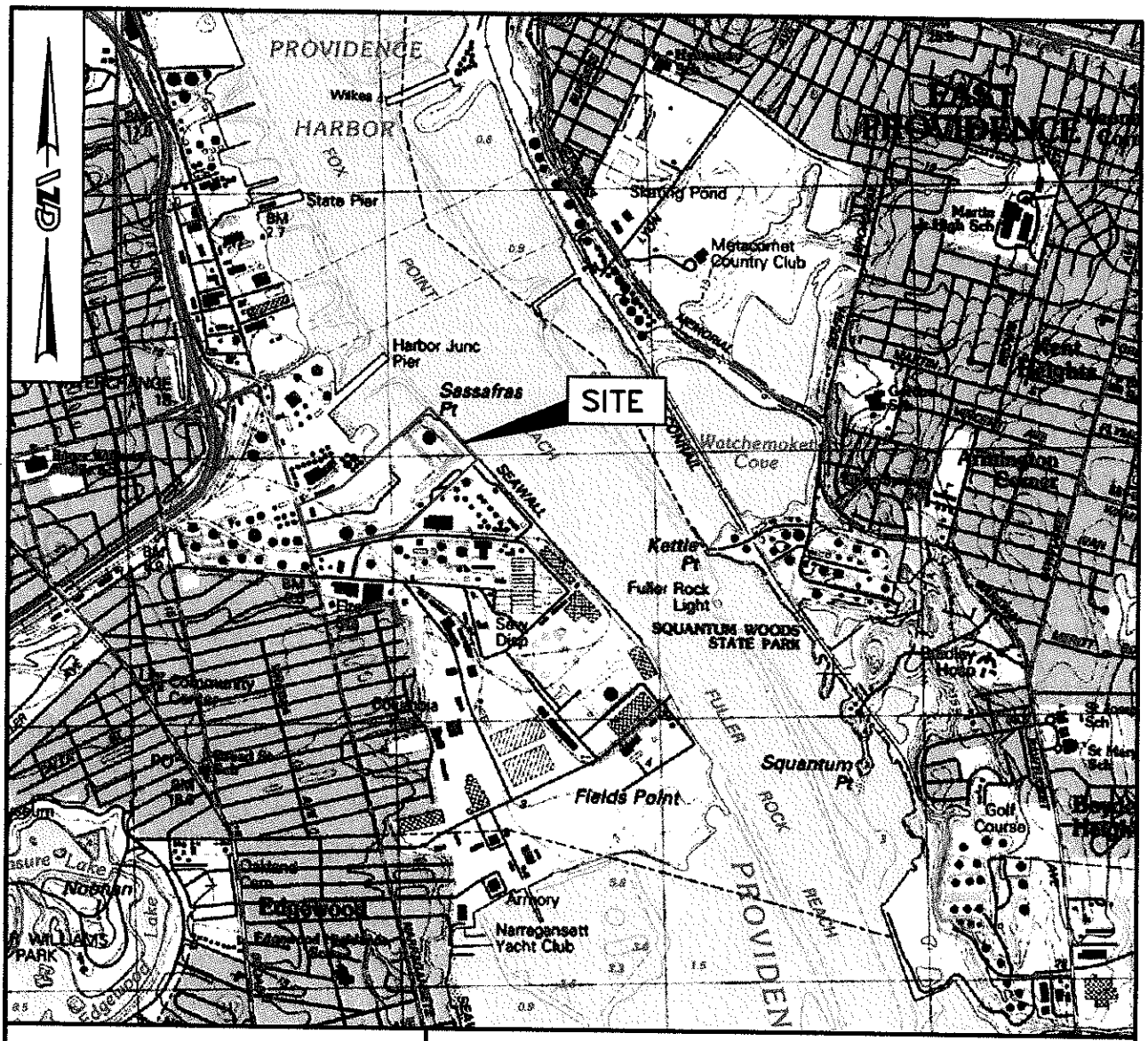
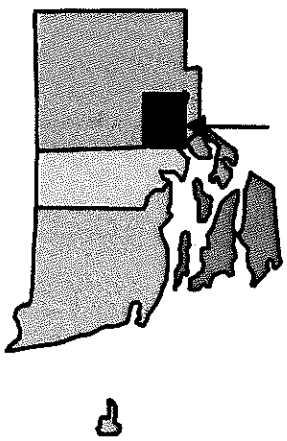
FIGURES





BASE MAP FROM THE FOLLOWING USGS QUADRANGLE MAP: PROVIDENCE, RHODE ISLAND-MASSACHUSETTS (1987)

DIGITAL TOPOGRAPHIC MAPS PROVIDED MY MAPTECH, INC.

CONTOUR ELEVATIONS REFERENCE NGVD 29,
CONTOURS ARE SHOWN IN METERS AT 3 INTERVALS

APPROXIMATE SCALE IN FEET

0' 1000' 2000' 4000'

NATIONAL GRID GAS FACILITY
642 ALLENS AVENUE

PROVIDENCE, RHODE ISLAND

LOCUS PLAN

SEPTEMBER 2012

FIGURE NO. 1

© 2010 - GZA GeoEnvironmental, Inc. GZA-J:\ENV\33554.abu\FIGURES\GZA DWGS\33554.00_F1-2_R0.DWG [LOCUS] September 12, 2012 - 10:03am Sophia.narkiewicz

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MANAGEMENT COUNCIL

APPENDIX A

LIMITATIONS

LIMITATIONS

1. This Soil Management Plan has been prepared on behalf of and for the exclusive use of The Narragansett Electric Company d/b/a National Grid (National Grid), solely for use at the 642 Allens Avenue Providence, Rhode Island ("Site") in documenting the work completed as described herein at the Former Tidewater MGP and Power Plant Site ("Site") under the applicable provisions of the State of Rhode Island Department of Environmental Management Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (Remediation Regulations). This report and the findings contained herein shall not, in whole or in part, be disseminated or conveyed to any other party, nor used by any other party in whole or in part, without the prior written consent of GZA GeoEnvironmental, Inc.(GZA) or National Grid.

2. GZA's work was performed in accordance with generally accepted practices of other consultants undertaking similar studies at the same time and in the same geographical area, and GZA observed that degree of care and skill generally exercised by other consultants under similar circumstances and conditions. GZA's findings and conclusions must be considered not as scientific certainties, but rather as our professional opinion concerning the significance of the limited data gathered during the course of the study. No other warranty, express or implied is made. Specifically, GZA does not and cannot represent that the Site contains no hazardous material, oil, or other latent condition beyond that observed by GZA as described herein.

3. The observations described in this report were made under the conditions stated therein. The conclusions presented in the report were based upon services performed and observations made by GZA.

4. In the event that National Grid or others authorized to use this report obtain information on environmental or hazardous waste issues at the Site not contained in this report, such information shall be brought to GZA's attention forthwith. GZA will evaluate such information and, on the basis of this evaluation, may modify the conclusions stated in this report.

5. The conclusions and recommendations contained in this report are based in part upon the data obtained from environmental samples obtained from relatively widely spread subsurface explorations. The nature and extent of variations between these explorations may not become evident until further exploration. If variations or other latent conditions then appear evident, it will be necessary to reevaluate the conclusions and recommendations of this report.

6. The generalized soil profile described in the text is intended to convey trends in subsurface conditions. The boundaries between strata are approximate and idealized and have been developed by interpretations of widely spaced explorations and samples; actual soil transitions are probably more gradual. For specific information, refer to the boring logs.

7. In the event this work included the collection of water level data, these readings have been made in the test pits, borings and/or observation wells at times and under conditions stated on the exploration logs. These data have been reviewed and interpretations have been made in the text of this report. However, it must be noted that fluctuations in the level of the groundwater may occur due to variations in rainfall and other factors different from those prevailing at the time measurements were made.

8. The conclusions contained in this report are based in part upon various types of chemical data and are contingent upon their validity. These data have been reviewed and interpretations made in the report. Moreover, it should be noted that variations in the types and concentrations of contaminants and variations in their flow paths may occur due to seasonal water table fluctuations, past disposal practices, the passage of time, and other factors. Should additional chemical data become available in the future, these data should be reviewed by GZA and the conclusions and recommendations presented herein modified accordingly.

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APPENDIX B

RIDEM APPROVED REMEDIAL OBJECTIVES

Appendix B
RIDEM-Approved Remedial Objectives
642 Allens Avenue
Providence, Rhode Island

Constituent (mg/kg)	RIDEM			RIDEM Approved Remedial Objectives		
	I/C DEC	GB Leachability Criteria	UCL	Surface Soils	Subsurface Soils <100 feet from shore	Subsurface Soils >100 feet from shore
Metals						
Arsenic	7	NE	10,000	7	-	-
Cyanide	10,000	NE	10,000	10,000	-	-
Lead	500	NE	10,000	500	-	-
PAHs						
2,4-Dimethylphenol	10,000	NE	10,000	10,000	10,000	10,000
2,6-Dinitrotoluene	NE	NE	10,000	10,000	10,000	10,000
2-Methylnaphthalene	10,000	NE	10,000	10,000	10,000	10,000
Acenaphthene	10,000	NE	10,000	10,000	10,000	10,000
Acenaphthylene	10,000	NE	10,000	10,000	10,000	10,000
Anthracene	10,000	NE	10,000	10,000	10,000	10,000
Benzo (a) anthracene	7.8	NE	10,000	7.8	10,000	10,000
Benzo (a) pyrene	0.8	NE	10,000	0.8	10,000	10,000
Benzo (b) fluoranthene	7.8	NE	10,000	7.8	10,000	10,000
Benzo [g,h,i] Perylene	10,000	NE	10,000	10,000	10,000	10,000
Benzo [k] Fluoranthene	78	NE	10,000	78	10,000	10,000
Chrysene	780	NE	10,000	780	10,000	10,000
Dibenzo (a,h) anthracene	0.8	NE	10,000	0.8	10,000	10,000
Fluoranthene	10,000	NE	10,000	10,000	10,000	10,000
Fluorene	10,000	NE	10,000	10,000	10,000	10,000
Indeno [1,2,3-cd] Pyrene	7.8	NE	10,000	7.8	10,000	10,000
Naphthalene	10,000	NE	10,000	10,000	500	5,000
PCBs	10	10	10,000	10	10,000	10,000
Pentachlorophenol	48	NE	10,000	48	10,000	10,000
Phenanthrene	10,000	NE	10,000	10,000	10,000	10,000
Pyrene	10,000	NE	10,000	10,000	10,000	10,000
TPH						
TPH	2,500	2,500	30,000	2,500	15,000	30,000
VOCs						
Benzene	200	4.3	10,000	200	4.3	43
Ethylbenzene	10,000	62	10,000	10,000	62	620
Toulene	10,000	54	10,000	10,000	54	540
Xylenes	NE	NE	10,000	10,000	540	540

NE - Not Established
- No Remedial Objective established for this consistuent

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MANAGEMENT COUNCIL

ATTACHMENT D
DATA RESPONSE NGLNG-3-17
FILED ON JUNE 30, 2016

Data Request NGLNG-3-17

Request:

Resource Report 9 – Air and Noise (Question 1)

Section 9.1 states that potential air pollutant emissions from the proposed equipment do not exceed the Rhode Island Department of Environmental Management (RIDEM) air permitting thresholds for air dispersion modeling. However, to address public concerns as reflected in public comments received on the Project, conduct at least screening level air dispersion modeling (predicted impacts plus background) based on an U.S. Environmental Protection Agency approved model as well as an air toxics screening based on the RIDEM Air Toxics Program and provide results to confirm the assertion that emission impacts from the proposed equipment will be protective of the health and welfare of the affected community. Provide a plain-language explanation of the results to address comments that the proposed new emissions will cause harmful impacts to ambient air quality.

Supplemental Response:

Air dispersion modeling has been conducted for the Project hot oil heater and emergency generator to evaluate criteria pollutant emissions relative to the National Ambient Air Quality Standards ("NAAQS") and air toxic compound emissions relative to RIDEM Acceptable Ambient Levels ("AALs"). The air dispersion modeling analysis is provided as Attachment 1 to this response. The modeling results in Attachment 1 demonstrate that the potential air quality impacts associated with the Project are below the NAAQS for all criteria pollutants. In addition, as part of the NAAQS analysis, local monitored background concentrations (representing non-modeled sources in the Project area) were summed with the Project modeled concentrations to conduct a cumulative analysis, and all concentrations were below the NAAQS. Also, the modeling indicated the maximum modeled concentrations for the Project were predicted at receptors located along the facility fence line and the concentrations drop off rapidly with distance.

Resource Report 9, question 1(NGLNG-3-17) also asked for air dispersion modeling be conducted to evaluate Project emissions relative to RIDEM AALs. The AAL modeling was performed and the results can be found in Attachment 1. The results demonstrate that the potential air quality impacts associated with the Project are below the AALs for all air toxic compounds with the exception of the 1-hour acrolein AAL (0.2 $\mu g/m^3$; potential health effect is eye irritation) due to emissions associated with the emergency generator. The emergency generator operations under normal circumstances (i.e., non-emergency) will be limited to approximately 30 minutes per week for maintenance purposes which is approximately 26

hours/year. The model, however, conservatively assumes the unit is running every hour of the year for the five year modeling period. Because the model assumes that the emergency generator runs 24 hour per day, 365 days per year – or a total of 8,760 hours of running per year, the probability that the public will be exposed to concentrations above the AAL under normal circumstances are low; 26 hours/year is only 0.3% of the year (26/8760 = 0.003 or 0.3%).

As discussed further in Attachment 1, the maximum impacts are at receptors along the facility fence line. With a default assumption of 8760 hours of use (rather than 26 hours), the model results in a maximum of approximately 0.26 $\mu g/m^3$ in a residential area. Given the maximum impact in the residential area is just barely above the AAL, and the low frequency of operation, the probability of the emergency generator emissions resulting in concentrations that exceed the RIDEM AAL at a residential receptor is extremely low.

According to the *Rhode Island Air Toxics Guideline (Revised, September 2008)*(Table D)[1], the 1-hour AAL for acrolein of 0.2 $\mu g/m^3$ was based on the California Office of Environmental Health Hazard Assessment (OEHHA) or California Air Resources Board (CAL) derived acute Reference Exposure Level (REL). However, a review of the CAL RELs (*OEHHA Acute, 8-hour and Chronic Reference Exposure Level (REL) Summary*[2]) indicates the acrolein acute (1-hour) REL is actually 2.5 $\mu g/m^3$.

The definition of the REL (see *OEHHA Risk Assessment Guidelines, February 2015*[3]) is as follows:

> A Reference Exposure Level (REL) is the concentration level at or below which no adverse non-cancer health effects are anticipated for the specified exposure duration. RELs are based on the most sensitive, relevant, adverse health effect reported in the medical and toxicological literature. RELs are designed to protect the most sensitive individuals in the population by the inclusion of factors that account for uncertainties as well as individual differences in human susceptibility to chemical exposures. The factors used in the calculation of RELs are meant to err on the side of public health protection in order to avoid underestimation of non-cancer hazards. Exceeding the REL does not automatically indicate an adverse health impact. However, increasing concentrations above the REL value increases the likelihood that the health effect will occur.

As noted in the definition, RELs are designed to protect the most sensitive individuals in the population and the factors used in the calculation of RELs are meant to avoid underestimation of potential health effects. In addition, exceeding the REL does not automatically indicate an adverse health impact. Acrolein is a compound with potential non-cancer health effects that

[1] http://www.dem.ri.gov/programs/benviron/air/pdf/airtoxgl.pdf
[2] http://oehha.ca.gov/air/general-info/oehha-acute-8-hour-and-chronic-reference-exposure-level-rel-summary
[3] http://oehha.ca.gov/media/downloads/crnr/2015guidancemanual.pdf

could result in eye irritation. Based on the CAL REL of 2.5 $\mu g/m^3$ and maximum modeled 1-hour acrolein concentrations for the Project (about 0.5 $\mu g/m^3$ in the industrial area and 0.26 $\mu g/m^3$ in the residential area based on the conservative assumption that the emergency generator operates 8760 hours/year), the modeling results demonstrate the risks of acrolein health effects to residents is extremely low and that the Project emissions do not pose any threat to public health.

Ambient air quality levels are the levels that define good air quality. These levels build in a wide margin of safety to ensure protection of human health. The modeling results, and actual usage and expected emissions results, demonstrate that the Project will not exceed acceptable ambient air quality levels for all pollutants.

Attachment

Attachment 1 – Overview of Modeling Analysis

Prepared by or under the supervision of:
William Howard

Overview of Modeling Analysis

Air dispersion modeling was conducted with U.S. EPA's AERMOD dispersion model in accordance with U.S. EPA *Guideline on Air Quality Models*[1] and RIDEM dispersion modeling guidance provided in *Rhode Island Dispersion Modeling Guidelines for Stationary Sources, March 2013 Revision*[2]. The modeling was conducted to assess criteria pollutant emissions (SO_2, $PM_{2.5}$, PM_{10}, NO_2 and CO) relative to the National Ambient Air Quality Standards ("NAAQS") and air toxic compound emissions relative to RIDEM Acceptable Ambient Levels ("AALs").

The latest version of AERMOD, Version 15181 was applied with the U.S. EPA regulatory default options and 5-years, 2007-2011, of hourly meteorological data from T.F. Green Airport in Providence. Data already processed for input to AERMOD was provided by RIDEM[3].

Source Data

Note that subsequent to the March filing, the size of the heater has been reduced to 9.76 MMBtu/hr compared to the former size of 10 MMBtu/hr unit. Therefore, the heater will be below the minor source permitting threshold of 10 MMBtu/hr and no permit will be required for the heater.

In addition, the Project obtained additional information on the size of emergency generator needed. Emissions were revised to reflect the new unit information, which includes updating to a lean burn engine and a slightly larger size than initially assumed.

Note that given the changes to emissions, Table 9.1-6 from RR9, was revised. See updated Table 9.1-6 below. As shown, emissions are still well below the Significant Emission Rate levels.

Table 9.1-6 Fields Point Liquefaction Project Operational Air Emission Rates

Equipment	Tons per Year							
	CO	NO_X	VOC[1]	SO_2	PM_{10}	$PM_{2.5}$	GHG[2]	HAPs[3]
Hot Oil Heater	13.18	7.67	0.23	0.03	0.32	0.32	5,036.05	0.08
Emergency Generator	0.73	0.83	0.25	0.0009	0.02	0.02	197.46	0.05
Fugitives	---	---	---	---	---	---	3,137.48	---
Total	13.92	8.50	0.48	0.03	0.33	0.33	8,370.99	0.13

[1] Guideline on Air Quality Models (Revised). Codified in the Appendix W to 40 CFR Part 51. Office of Air Quality Planning and Standards, Research Triangle Park, NC.
[2] http://www.dem.ri.gov/pubs/regs/regs/air/airtoxmd.pdf
[3] http://www.dem.ri.gov/documents/regulations/index.php#air [MET Data zip file]

Significant Emission Rate	**100**	**25**	**---**	**40**	**15**	**10**	**---**	**---**

1. VOC – non-methane/ethane volatile organic compounds.
2. GHG – as carbon dioxide equivalents (CO_2e). The threshold for GHG only applies if a different regulated NSR pollutant is also subject to PSD review. Fugitive GHG emissions represent the estimated increase associated with the Project.
3. HAPs – as aggregated total HAPs

The heater will have the potential for unlimited operation (i.e., up to 8760 hours/yr). The source parameters and emission rates for the heater used in the modeling are provided in Table 1.

Table 1 Stack Parameters and Emission Rates – Heater

Parameter		Value
Stack Height (m)		6.096
Stack Diameter (m)		0.406
Exhaust Velocity (m/s)		15.240
Exhaust Temperature (K)		606.483
Pollutant Emissions (g/sec)(1)	NO_x	0.220
	CO	0.379
	SO_2	0.0007
	$PM_{10}/PM_{2.5}$	0.009
(1) For short-term (≤24-hour) and annual averaging periods.		

Under normal operating conditions, the emergency generator will only be run for approximately 30 minutes once per week for maintenance purposes. In addition, as an emergency unit, it is limited to 500 hours/yr operation annually. U.S. EPA exempts operationally intermittent sources such emergency generators from the evaluation of the 1-hour SO_2 and NO_2 NAAQS[4]. Therefore it was not included in the 1-hour SO_2 and NO_2 modeling. However, the emergency generator was included in the modeling for all other pollutants and averaging periods as well as annual NO_2. For those short-term modeling standards that are longer than 1-hour (3-hour SO_2, 8-hour CO, and 24-hour PM_{10} and $PM_{2.5}$), the emission rate for the generator was determined by dividing the 1-hour emission rate by the number of hours in the period. The source parameters and emission rates for the emergency generator used in the modeling are provided in Table 2.

[4] *Additional Clarification Regarding Application of Appendix W Modeling Guidance for the 1-hour NO_2 National Ambient Air Quality Standard, U.S. EPA March 1, 2011. (https://www.epa.gov/sites/production/files/2015-07/documents/appwno2_2.pdf).*

Table 2 Stack Parameters and Emission Rates – Emergency Generator

DPU-NG 1-1	**Parameter**	**DPU-NG 1-2**	**Values**
DPU-NG 1-3	Stack Height (m)	DPU-NG 1-4	6.706
DPU-NG 1-5	Stack Diameter (m)	DPU-NG 1-6	0.254
DPU-NG 1-7	Exhaust Velocity (m/s)	DPU-NG 1-8	36.362
DPU-NG 1-9	Exhaust Temperature (K)	DPU-NG 1-10	682.594

DPU-NG 1-11	Averaging Period	**DPU-NG 1-12**	**DPU-NG 1-13**	**DPU-NG 1-14**	**DPU-NG 1-15**	**DPU-NG 1-16**
DPU-NG 1-17	DPU-NG 1-18	DPU-NG 1-19	DPU-NG 1-20	DPU-NG 1-21	DPU-NG 1-22	DPU-NG 1-23
	CO	0.369	--	0.046	--	--
	SO_2	--	0.0002	--	--	--
	$PM_{10}/PM_{2.5}$	--	--	--	0.0003	0.00044

(1) The emergency generator was not included in 1-hour NO_2 and SO_2 modeling, in accordance with USEPA guidance. For the 3-, 8- and 24-hour period the hourly emission rate is divided by the number of hours in the period. Annual emission rate is based on 500 hours/yr operation.

In addition, a Good Engineering Practice ("GEP") stack height analysis was performed for the heater and emergency generator stacks in accordance with US EPA's guidelines. The GEP analysis accounts for the potential for aerodynamic downwash effects from building and structures to effect the dispersion from stack emissions. The U.S. EPA's Building Profile Input Processor (BPIP) was used to develop additional inputs required by AERMOD to simulate building downwash.

NAAQS Modeling Results for Criteria Pollutants

The NAAQS modeling results are summarized in Table 3. Table 3 lists the maximum modeled design concentration for the Project, as well as the sum of the modeled concentrations with the measured background concentrations (representing non-modeled sources). As shown in the table, all total concentrations are below the NAAQS.

Table 3 NAAQS Modeling Results

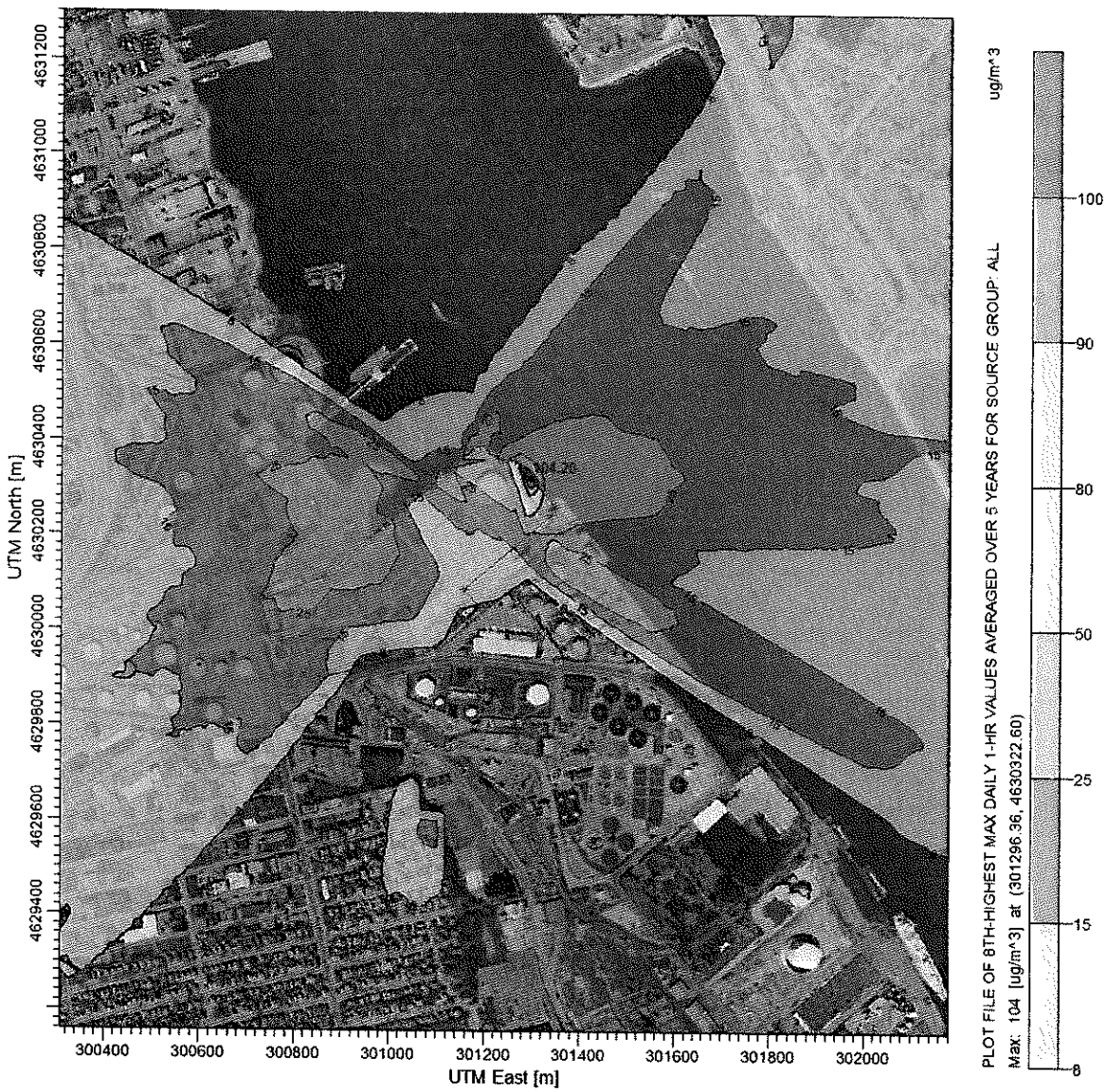
Pollutant	Averaging Period	Modeled Design Conc. for Project[1] (µg/m³)	Ambient Background (µg/m³)[3]	Total Impact (µg/m³)	NAAQS (µg/m³)
NO_2 [2]	1-hour	104.20	80.00	184.20	188
	Annual	5.30	19.70	25.00	100
CO	1-hour	318.79	2,346.00	2,664.79	40,000
	8-hour	162.85	1,495.00	1,657.85	10,000
PM_{10}	24-hour	1.48	44.00	45.48	150
$PM_{2.5}$	24-hour	1.07	20.90	21.97	35
	Annual	0.26	8.79	9.05	12
SO_2	1-hour	0.46	36.00	36.46	196
	3-hour	0.42	45.00	45.42	1,300

[1] Design concentrations for NAAQS are based on standards listed in Table 9.2-1 of RR9.
[2] US-EPA default NO_X to NO_2 conversion rates of 0.8 (1-hour NO_2) and 0.75 (annual NO_2) applied to modeled NO_2 concentrations.
[3] Values taken from RIDEM document: "Background Criteria Pollutant Air Monitoring Data for Modeling Rhode Island Sources".

The pollutant and averaging period closest to the NAAQS is 1-hour NO_2 at about 98% of the NAAQS with 80 µg/m³ contributed by the background. The Project modeled concentration is 104 µg/m³. Figure 1 illustrates the Project 1-hour NO_2 modeling results in the form of isopleths overlaid on a satellite image of the Project area. Figure 1 also shows that the highest modeled

concentration due to the Project, 104 $\mu g/m^3$, is on the facility fence line and that the modeled concentrations drop off significantly with distance from the facility. For instance, the highest modeled Project concentration in a residential area is only about 15 $\mu g/m^3$ compared to the maximum of 104 $\mu g/m^3$; almost an order of magnitude lower.

Figure 1 1-hour NO_2 NAAQS Isopleth



AAL Modeling Analysis for Air Toxic Compounds

Modeling of air toxic emissions was conducted for emissions from the heater and emergency generator stacks for comparison to the AALs. AALs have been established for 1-hour, 24-hour and annual averages. As noted, the emergency generator will be operated for approximately 30 minutes once per week under normal circumstances while the heater will have potentially unlimited operation. The modeling results are summarized in Table 4. Table 4 lists the maximum Project modeled concentrations for each compound and pertinent averaging period for each AAL.

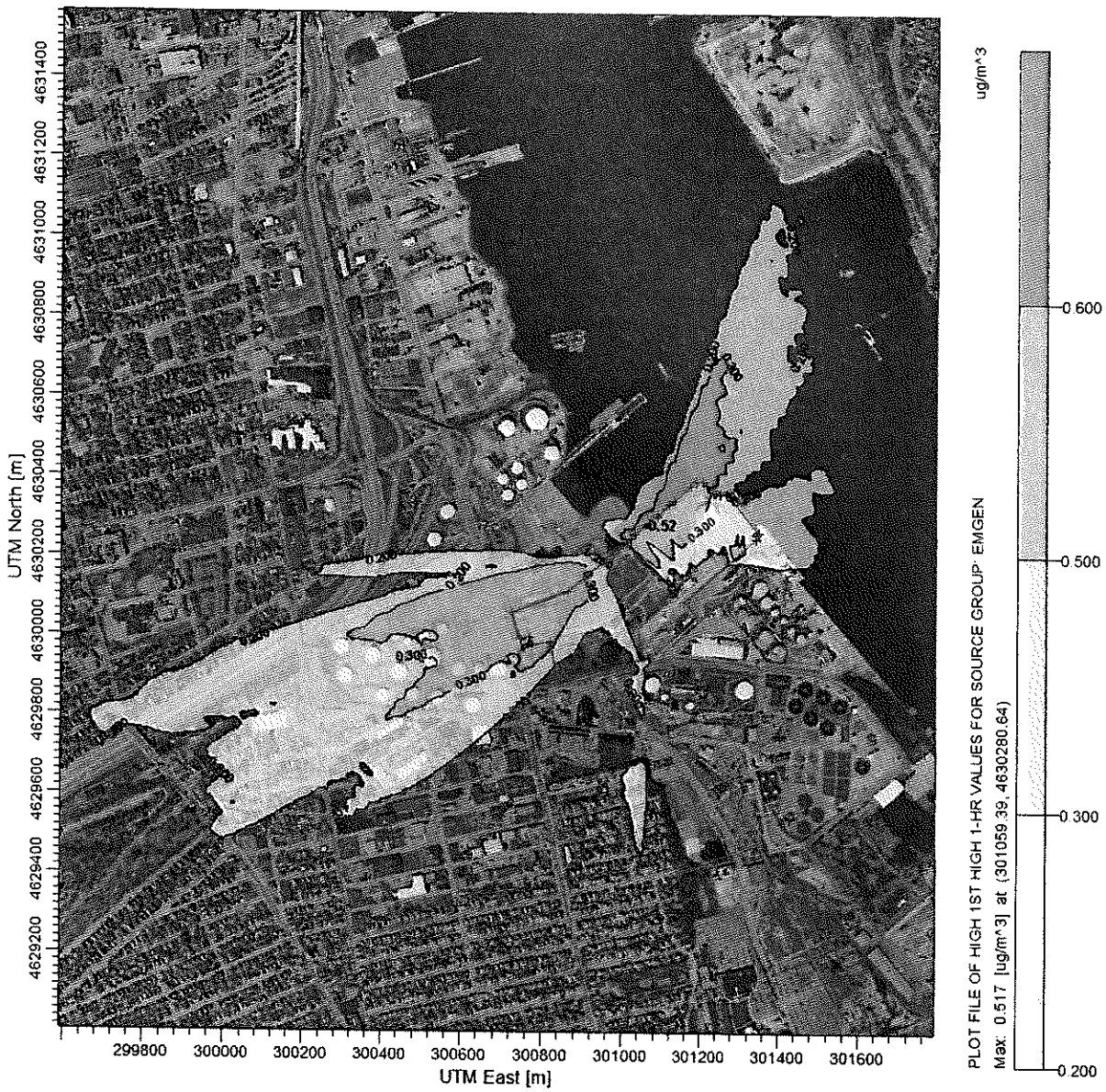
Table 4 indicates that all Project concentrations are below the AALs with the exception of the 1-hour acrolein AAL due to emissions associated with the emergency generator. The 1-hour acrolein modeling results are illustrated in Figure 2. Figure 2 shows that the maximum impact, 0.52 $\mu g/m^3$, was modeled along the facility fence line. Figure 2 also includes the 0.2 $\mu g/m^3$ isopleth that delineates the area where modeled concentrations have the potential to exceed the AAL. As shown by examination of the 0.2 $\mu g/m^3$ isopleth, impacts above the AAL do extend beyond the industrial area into some residential areas, and the maximum modeled concentration in a residential area is approximately 0.26 $\mu g/m^3$. It is noted that the emergency generator operations under normal circumstances (i.e., non-emergency) will be limited to approximately 30 minutes per week for maintenance purposes which is approximately 26 hours/year. The model however, conservatively assumes the unit is running every hour of the year for the five year modeling period. Therefore, in reality, the operating frequency will be much less, limiting the probability that acrolein concentrations would have the potential to exceed the AAL.

Table 4 Air Toxic Modeling Results and AAL Comparison

Pollutant	1-hr Maximum Modeled Concentration µg/m³	AALs (µg/m³) 1-hour	Exceed 1-hr AAL?	24-hr Maximum Modeled Concentration µg/m³	AALs (µg/m³) 24-hour	Exceed 24-hr AAL?	Annual Maximum Modeled Concentration µg/m³	AALs (µg/m³) Annual	Exceed Annual AAL?
1,1,2,2-Tetrachloroethane	---	---	---	0.0003	2000	N	---	---	---
1,1,2-Trichloroethane	---	---	---	0.0003	10	N	---	---	---
1,1-Dichloroethane	---	---	---	---	---	---	0.00003	0.6	N
1,2-Dichloropropane	0.0036	200	N	0.0002	4	N	0.00004	0.1	N
1,3-Butadiene	---	---	---	---	---	---	0.0004	0.03	N
1,3-Dichloropropene	---	---	---	0.0002	20	N	0.00004	0.2	N
2,2,4-Trimethylpentane	---	---	---	---	---	---	0.0003	3000	N
2-Methylnaphthalene (POM)	---	---	---	---	---	---	0.00005	0.0001	N
3-Methylchloranthrene (POM)	---	---	---	---	---	---	0.0000001	0.0001	N
7,12-Dimethylbenz(a)anthracene (POM)	---	---	---	---	---	---	0.000001	0.0001	N
Acenaphthene (POM)	---	---	---	---	---	---	0.000002	0.0001	N
Acenaphthylene (POM)	---	---	---	---	---	---	0.000008	0.0001	N
Acetaldehyde	---	---	---	---	---	---	0.0117	0.5	N
Acrolein	0.5162	0.2	Y	---	---	---	0.0054	0.02	N
Anthracene (POM)	---	---	---	---	---	---	0.0000001	0.0001	N
Benz(a)anthracene (POM)	---	---	---	---	---	---	0.0000001	0.0001	N
Benzene	0.0612	30	N	0.0040	20	N	0.0007	0.1	N
Benzo(a)pyrene (POM)	---	---	---	---	---	---	0.00000005	0.0001	N
Benzo(b)fluoranthene (POM)	---	---	---	---	---	---	0.0000003	0.0001	N
Benzo(e)pyrene (POM)	---	---	---	---	---	---	0.0000006	0.0001	N
Benzo(g,h,i)perylene (POM)	---	---	---	---	---	---	0.0000006	0.0001	N
Benzo(k)fluoranthene (POM)	---	---	---	---	---	---	0.0000001	0.0001	N
Biphenyl	---	---	---	0.0017	200	N	---	---	---
Carbon Tetrachloride	0.0049	2000	N	0.0003	200	N	0.0001	0.07	N
Chlorobenzene	---	---	---	---	---	---	0.00004	1000	N

Chloroethane	0.0003	40000	N	0.00001	10000	N	---	---	---
Chloroform	0.0038	100	N	---	---	---	0.00004	0.2	N
Chrysene (POM)	---	---	---	---	---	---	0.000001	0.0001	N
Dibenzo(a,h)anthracene (POM)	---	---	---	---	---	---	0.00000005	0.0001	N
Ethylbenzene	0.0053	40000	N	0.0003	3000	N	0.0001	1000	N
Ethylene Dibromide	---	---	---	0.0003	9	N	0.0001	0.02	N
Fluoranthene (POM)	---	---	---	---	---	---	0.000002	0.0001	N
Fluorene (POM)	---	---	---	---	---	---	0.00001	0.0001	N
Formaldehyde	2.0476	50	N	0.1335	40	N	0.0234	0.08	N
Indeno(1,2,3-c,d)pyrene (POM)	---	---	---	---	---	---	0.0000001	0.0001	N
Methanol	0.3348	30000	N	---	---	---	0.0035	4000	N
Methylene Chloride	0.0027	2000	N	0.0002	1000	N	0.00003	2	N
n-Hexane	---	---	---	---	---	---	0.0705	700	N
Naphthalene	---	---	---	0.0007	3	N	0.0001	0.03	N
Phenanthrene (POM)	---	---	---	---	---	---	0.00002	0.0001	N
Phenol	0.0032	80	N	---	---	---	0.00003	200	N
Pyrene (POM)	---	---	---	---	---	---	0.000002	0.0001	N
Styrene	0.0032	9000	N	0.0002	1000	N	0.00003	100	N
Toluene	0.0583	4000	N	---	---	---	0.0007	300	N
Vinyl Chloride	0.0020	1000	N	0.0001	100	N	0.00002	0.2	N
Xylene	0.0246	9000	N	0.0015	3000	N	0.0003	100	N
Arsenic	0.0002	0.2	N	---	---	---	0.000008	0.0002	N
Beryllium	---	---	---	0.000003	0.02	N	0.0000005	0.0004	N
Cadmium	---	---	---	0.0003	0.1	N	0.00004	0.0006	N
Chromium	---	---	---	0.0003	0.01	N	0.0001	0.0001	N
Cobalt	---	---	---	---	---	---	0.000003	0.001	N
Manganese	---	---	---	0.0001	0.1	N	0.00001	0.04	N
Mercury	0.0003	2	N	0.0001	0.3	N	0.00001	0.009	N
Nickel	0.0023	6	N	0.0005	0.2	N	0.0001	0.004	N
Selenium	---	---	---	---	---	---	0.0000009	20	N

Figure 2 1-hour Acrolein AAL Isopleth



STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
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RIHPHC No. 11367
160323.02

23 March 2016

Via email: solausen@palinc.com

Stephen A. Olausen
Executive Director and Senior Architectural Historian
PAL
26 Main Street
Pawtucket, RI 02860

Re: National Grid Fields Point Liquefaction Project
Sassafras Point Station
642 Allens Avenue
Providence, RI

Dear Mr. Olausen:

The Rhode Island Historical Preservation and Heritage Commission (RIHPHC) staff has reviewed the documentation submitted for the above referenced project. National Grid is proposing to construct and operate a natural gas liquefier at its existing liquefied natural gas facility at 642 Allens Avenue, Fields Point, Providence. The proposed undertaking will require a permit from the Federal Energy Regulatory Commission.

The subject property, historically known as the Providence Gas Company's Sassafras Point Station, is eligible for listing in the National Register of Historic Places. The Tar Extractor and Washer House, a 1 ½-story brick industrial building with clerestory monitor roof built in 1910, will be demolished as part of the project.

The RIHPHC determined that the Providence Gas Company's Sassafras Point Station was eligible for listing in the National Register of Historic Places in 1996 based on the following report:

> *Proposed Algonquin LNG Modification Project, Providence and East Providence, Rhode Island, Summary Documentation for a Consensus Determination of National Register Eligibility of the Providence Gas Company Sassafras Point Station, Providence, Rhode Island* (PAL, November 1996).

At its peak, the Sassafras Point Station contained approximately three dozen buildings and structures associated with the processing, production, storage, and distribution of gas and its raw materials and byproducts. Significant alterations to the property over time include the removal of numerous buildings and structures at the eastern end of the facility, and the recent removal of two large gas holders near Terminal Road.

When the RIHPHC determined the National Register eligibility of the Sassafras Point Station in 1996, the facility contained 10 contributing buildings and structures. Since then four contributing resources have been demolished: Gas Holders 18 and 21, the Condenser House and the Sanitary Building. This once sprawling industrial complex has been reduced to a desolate field of several isolated buildings that no longer convey the integrated and complex operations that occurred among the buildings throughout the entire facility.

Due to a lack of integrity, it is the RIHPC's conclusion that the Providence Gas Company's Sassafras Point Station is not eligible for listing in the National Register of Historic Places. No historic properties will be affected by the proposed undertaking.

These comments are provided in accordance with Section 106 of the National Historic Preservation Act. If you have any questions, please contact Glenn Modica, Senior Project Review Coordinator of this office at glenn.modica@preservation.ri.gov or 401-222-2671.

Very truly yours,

FOR Edward F. Sanderson
Executive Director
State Historic Preservation Officer

cc: Jason Martin, Providence Department of Planning & Development, by email

State of Rhode Island and Providence Plantations
Coastal Resources Management Council
Oliver H. Stedman Government Center
4808 Tower Hill Road, Suite 3
Wakefield, RI 02879-1900

(401) 783-3370
Fax (401) 783-2069

AMENDED AGREEMENT TO STAY SIX MONTH REVIEW PERIOD

Between

The Rhode Island Coastal Resources Management Council

And

National Grid LNG LLC

The Rhode Island Coastal Resources Management Council, hereinafter referred to as the "CRMC," and the National Grid LNG LCC, hereinafter referred to as "National Grid," hereby agree as follows.

National Grid has filed a federal consistency certification with the CRMC for proposed construction of a natural gas liquefaction facility on Assessor's Plat 56 Lots 316, 5 and Plat 101 Lot 1, located at 121 Terminal Road, Providence. The proposed liquefaction facility will be constructed adjacent to National Grid's existing liquefied natural gas (LNG) tank. The proposed project is subject to CRMC review authority pursuant to the federal Coastal Zone Management Act (CZMA), 16 USC §§ 1451-1464, and the CZMA's implementing regulations at 15 CFR Part 930 Subpart D – Consistency for Activities Requiring a Federal License or Permit.

Pursuant to 15 CFR § 930.60(b) the CRMC and National Grid have mutually agreed to the following dates and to stay the CRMC six-month review period as specified herein.

- Date the CRMC 6-month review period commenced: October 31, 2016
- Date the 6-month period was to end: April 29, 2017
- Date during the 6-month review period that the stay begins: April 19, 2017
- Date that the stay ends: October 21, 2017
- Date the CRMC decision is due: October 31, 2017

The CRMC will issue its consistency determination on or before October 31, 2017 unless National Grid and CRMC mutually agree in writing to another later date.

These agreements made and entered by:

Grover J. Fugate
Executive Director, CRMC

4/25/2017
Date

William R. Howard
Manager-Environmental, National Grid

4-18-2017
Date

20170407-3043 FERC PDF (Unofficial) 04/07/2017

FEDERAL ENERGY REGULATORY COMMISSION
WASHINGTON, DC 20426

OFFICE OF ENERGY PROJECTS

In Reply Refer To:
OEP/DG2E/Gas 4
National Grid LNG, LLC
Fields Point Liquefaction Project
Docket No. CP16-121-000
§ 375.308(x)

April 7, 2017

Anthony LaRusso
Director, US Business Development
National Grid LNG, LLC
40 Sylvan Road
1st Floor East
Waltham, MA 02451

Re: Environmental Data Request

Dear Mr. LaRusso:

On November 16, 2016, National Grid LNG, LLC (National Grid) filed supplemental information related to Resource Report 7 and the Soil Management Plan (SMP) for its proposed Fields Point Liquefaction Project (Project). Attachment B to the November 16, 2016 filing includes a September 26, 2016 letter to the Rhode Island Department of Environmental Management (RIDEM) that states that National Grid originally planned to manage soil disturbance associated with the Project under a Short Term Response Action Plan (STRAP) to be approved by RIDEM, but that National Grid since determined it would be more appropriate to proceed under its 2012 Soil Management Plan (2012 SMP). Attachment B goes on to say that if the Commission finds the 2012 SMP insufficient, the Commission will require alternative approaches. At this point, the Commission Staff believes that the 2012 SMP is insufficient and inappropriate for the review of National Grid's proposal. Following additional consultation with RIDEM on March 30 and April 6, 2017, Commission Staff believes it is appropriate for National Grid to proceed with the development of a STRAP under the purview of RIDEM and pursuant to the procedures set forth in RIDEM's *Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases* (Remediation Regulations), as National Grid originally contemplated.

20170407-3043 FERC PDF (Unofficial) 04/07/2017

We will look to RIDEM, as a cooperating agency, as the primary source of information regarding soil/groundwater disturbance and addressing or managing potential contamination at the site. Hence, Commission Staff believes this process is the most efficient way to proceed with the processing of National Grid's application before the Commission.

Accordingly, please provide an update on National Grid's consultations with RIDEM regarding soil/groundwater disturbance and addressing or managing potential contamination at the site. Also, describe how National Grid plans to comply with the requirements outlined in RIDEM's Remediation Regulations, including the public involvement requirements set forth in Rule 7.07 (and specifically, Rule 7.07(E)).

File your responses in accordance with the provisions of the FERC's Rules of Practice and Procedure. In particular, 18 Code of Federal Regulations (CFR) 385.2010 (Rule 2010) requires that you serve a copy of the response to each person whose name appears on the official service list for this proceeding.

You should file a complete response within 5 days of the date of this letter. The response must be filed with the Secretary of the Commission at:

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street NE, Room 1A
Washington, DC 20426

If your response cannot be filed within this time frame, please provide a projected filing date. **You should be aware that the information described above is necessary for us to continue preparation of the environmental document for this Project.**

When filing documents and maps, be sure to prepare separate volumes, as outlined on the Commission's web site at http://www.ferc.gov/resources/guides/filing-guide/file-ceii.asp. Any plot plans showing equipment or piping details or other Critical Energy Infrastructure Information should be filed as non-public and labeled **"Contains Critical Energy Infrastructure Information – Do Not Release"** (18 CFR 388.112).

For all materials submitted, in addition to the copies filed with the Secretary of the Commission, please provide electronic and hard copies directly to our third-party environmental contractor, ERM (to the attention of Christina Hoffman).

20170407-3043 FERC PDF (Unofficial) 04/07/2017

Thank you for your cooperation. If you have any questions, please contact me at 202-502-6173.

Sincerely,

David Swearingen, Chief
Gas Branch 4
Division of Gas -- Environment
and Engineering

cc: Public File, Docket No. CP16-121-000

Susan Forcier, Esq.
Rhode Island Department of Environmental Management
235 Promenade Street
Providence, RI 02908

20170407-3043 FERC PDF (Unofficial) 04/07/2017

Document Content(s)

CP16-121-000 APR 7 2017.DOC.....1-3

STATE OF RHODE ISLAND
COASTAL RESOURCES MANAGEMENT COUNCIL

IN THE MATTER OF:

Narragansett Electric Company
d/b/a National Grid (TNEC)

CRMC Assent No.: B2012-09-065

NOTICE OF APPEARANCE

I, Robin L. Main, hereby enter my appearance on behalf of The Narragansett Electric Company d/b/a National Grid (TNEC) in the above-referenced matter.

The Narragansett Electric Company
d/b/a National Grid (TNEC)

By their Attorney,

Robin L. Main

Robin L. Main (#4222)
Hinckley, Allen & Snyder LLP
100 Westminster Street, Suite 1500
Providence, Rhode Island 02903
rmain@hinckleyallen.com
Phone: 401-457-5278
Fax: 401-277-9600

Dated: April 28, 2017

CERTIFICATE OF SERVICE

Coastal Resources Management Council
Stedman Government Center, Suite 3
4808 Tower Hill Road
Wakefield, RI 02879-1900

I hereby certify that I mailed the within document in quadruplicate original to the CRMC in Wakefield, Rhode Island on April 28, 2017.

Robin L. Main

Robin L. Main

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MAY - 1 2017
COASTAL RESOURCES MANAGEMENT COUNCIL

56785245 v1

STATE OF RHODE ISLAND
COASTAL RESOURCES MANAGEMENT COUNCIL

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STATE OF RHODE ISLAND
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IN THE MATTER OF:

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CRMC Assent No.: B2012-09-065

NOTICE OF APPEARANCE

I, Rhiannon A. Campbell, hereby enter my appearance on behalf of The Narragansett Electric Company d/b/a National Grid (TNEC) in the above-referenced matter.

The Narragansett Electric Company
d/b/a National Grid (TNEC)

By their Attorney,

Rhiannon A. Campbell

Rhiannon A. Campbell (#9613)
Hinckley, Allen & Snyder LLP
100 Westminster Street, Suite 1500
Providence, Rhode Island 02903
rcampbell@hinckleyallen.com
Phone: 617-378-4418
Fax: 617-345-9020

Dated: April 28, 2017

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Rhiannon A Campbell
Rhiannon A. Campbell

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COASTAL RESOURCES MANAGEMENT COUNCIL

56785296 v1

STATE OF RHODE ISLAND
COASTAL RESOURCES MANAGEMENT COUNCIL

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d/b/a National Grid (TNEC)

By their Attorney,

Rhiannon A. Campbell

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Hinckley, Allen & Snyder LLP
100 Westminster Street, Suite 1500
Providence, Rhode Island 02903
rcampbell@hinckleyallen.com
Phone: 617-378-4418
Fax: 617-345-9020

Dated: April 28, 2017

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4808 Tower Hill Road
Wakefield, RI 02879-1900

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Rhiannon A Campbell
Rhiannon A. Campbell

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STATE OF RHODE ISLAND
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d/b/a National Grid (TNEC)

By their Attorney,

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rcampbell@hinckleyallen.com
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Rhiannon A Campbell
Rhiannon A. Campbell

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MAY - 1 2017
COASTAL RESOURCES MANAGEMENT COUNCIL

56785296 v1

nationalgrid

HERE WITH YOU. HERE FOR YOU.

RECEIVED
JUL 10 2017
COASTAL RESOURCES MANAGEMENT COUNCIL

July 7, 2017

Dear Interested Party,

The purpose of this letter is to notify you that The Narragansett Electric Company d/b/a National Grid (National Grid) recently established an information repository for the former 642 Allens Avenue Manufactured Gas Plant (MGP) Site (the Site) located at 642 Allens Avenue in Providence, RI. This notice is being provided to abutting property owners, tenants, easement holders, the municipality and members of the 642 Allens Avenue mailing list in accordance with requirements established in the Rhode Island Department of Environmental Management's (RIDEM) *Rules and Regulation for the Investigation and Remediation of Hazardous Materials* (Remediation Regulations) and the June 2017 Public Involvement Plan (PIP) for the Site. Should you be an owner of property that is leased, we request that you provide a copy of this letter to your tenants.

In accordance with the June 2017 PIP, National Grid has established an informational repository at the Knight Memorial Library in Providence, RI. Due to space limitations at the library, information has been and will continue to be provided in electronic format and will be consistent with the information available on the website maintained by RIDEM for the 642 Allens Avenue Site (http://www.dem.ri.gov/programs/wastemanagement/site-remediation/Providence-Gas-Co.php).

The Knight Memorial Library is located at 275 Elmwood Avenue in Providence, RI. The phone number of the library is 401-467-2625. Knight Memorial Library hours are Monday from 12:00 p.m. to 8:00 p.m., Tuesday through Thursday from 9:00 a.m. to 5:30 p.m. and Friday and Saturday from 12:30 p.m. to 5:30 p.m.

We look forward to meeting with you and continuing to serve you.

Sincerely,

Amy A. Willoughby
National Grid
Lead Environmental Scientist
amy.willoughby@nationalgrid.com
or 781-907-3644

Additional information for the July 13, 2017 public meeting is provided below:

- Use the "Trip Planner" feature on the RIPTA website https://www.ripta.com to identify public transportation options to the Providence Public Safety Complex located at 325 Washington Street, Providence, RI.
- Free public parking is available at the parking garage located at 347 Fountain Street, Providence, RI.
  The entrance to the garage is located immediately across the street from the entrance to the Providence Public Safety Complex located at 325 Washington Street, Providence, RI.
- Upon entrance to the Providence Public Safety Complex, IDs will not be checked.

This is an important notice. Please have it translated.
Este é um aviso importante. Quiera mandá-lo traduzir.
Este es un aviso importante. Sirvase mandarlo traducir.
Avis important. Veuillez traduire immediatement.
Questa è un'informazione importante, si prega di tradurla.

Это очень важное сообщение. Пожалуйста, попросите чтобы вам его перевели.

ĐÂY LÀ MỘT BẢN THÔNG CÁO QUAN TRỌNG XIN VUI LÒNG CHO DỊCH LẠI THÔNG CÁO ẤY

nationalgrid

AQUÍ CON USTED. AQUÍ PARA USTED.

RECEIVED
JUL 10 2017
COASTAL RESOURCES MANAGEMENT COUNCIL

7 de Julio, 2017

Estimada Parte Interesada:

El propósito de esta carta es informarle que The Narragansett Electric Company, de nombre comercial National Grid (National Grid), recientemente creó un registro de información para el Sitio de las antiguas instalaciones de 642 Allens Avenue Manufactured Gas Plant (MGP) (el Sitio), ubicado en 642 Allens Avenue, Providence, Rhode Island. Este es un aviso para dueños de propiedades colindantes, inquilinos, tenedores de servidumbres, la municipalidad y miembros de la lista de correo de 642 Allens Avenue de conformidad con los requisitos establecidos en las *Normas y reglamentaciones para la investigación y el saneamiento de la emisión de materiales peligrosos* (las Reglamentaciones de saneamiento) del Departamento de Gestión Ambiental de Rhode Island (RIDEM, Rhode Island Department of Environmental Management) y el Plan de participación pública (PIP, Public Involvement Plan) de junio de 2017 para el Sitio. Si usted es dueño de una propiedad que está alquilada, le solicitamos que facilite una copia de esta carta a sus inquilinos.

De conformidad con el PIP de junio de 2017, National Grid ha creado un registro de información en la biblioteca Knight Memorial Library de Providence, Rhode Island. Debido a las limitaciones de espacio en ese edificio, la información se ha proporcionado y se seguirá proporcionando en formato electrónico y se corresponderá con la información disponible en el sitio web del RIDEM para el Sitio de 642 Allens Avenue (http://www.dem.ri.gov/programs/wastemanagement/site-remediation/Providence-Gas-Co.php).

La Knight Memorial Library está ubicada en 275 Elmwood Avenue, Providence, Rhode Island. El número de teléfono de la biblioteca es 401-467-2625 y se atiende al público los lunes, de 12:00 p.m. a 8:00 p.m., de martes a jueves, de 9:00 a.m. a 5:30 p.m., y los viernes y sábados, de 12:30 p.m. a 5:30 p.m.

Ansiamos reunirnos con usted y continuar prestándole servicios.

Atentamente.

Amy A. Willoughby
National Grid
Científica Ambiental Principal
Escriba a amy.willoughby@nationalgrid.com
o llame al 781-907-3644

A continuación, se brinda más información sobre la reunión pública que se realizará el 13 de julio de 2017:

- Utilice la herramienta "Trip Planner" (Planificador de viajes) disponible en el sitio web de la Autoridad de Transporte Público de Rhode Island (RIPTA, Rhode Island Public Transit Authority) https://www.ripta.com para conocer las opciones de transporte público hasta el Providence Public Safety Complex (Complejo de Seguridad Pública de Providence), ubicado en 325 Washington Street, Providence, Rhode Island.
- Puede utilizar el estacionamiento público gratuito del estacionamiento ubicado en 347 Fountain Street, Providence, Rhode Island. El ingreso al estacionamiento se encuentra justo frente a la entrada del Providence Public Safety Complex, ubicado en 325 Washington Street, Providence, Rhode Island.
- Cuando ingrese al Providence Public Safety Complex, no se le solicitará ninguna identificación.

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Это очень важное сообщение. Пожалуйста, попросите чтобы вам его перевели.
ĐÂY LÀ MỘT BẢN THÔNG CÁO QUAN TRỌNG XIN VUI LÒNG CHO DỊCH LẠI THÔNG CÁO ẤY

2016-10-099

nationalgrid

William R. Howard
Manager -Environmental

RECEIVED
AUG 18 2017
COASTAL RESOURCES MANAGEMENT COUNCIL

August 18, 2017

Mr. David Reis
Coastal Resources Management Council
Stedman Government Center - Suite 3
4808 Tower Hill Road
Wakefield, RI 02879-1900

Subject: Additional Information – CRMP Section 300.8
Proposed Liquefaction Project
Providence, Rhode Island

Dear Mr. Reis:

I understand that during your meeting with Igor Runge on Wednesday, 16 August 2017, you requested that additional information be provided by National Grid LNG, LLC ("NGLNG") to address two topics identified in Section 300.8 – Energy Related Activities and Structure of the Coastal Resources Management Program. Specifically, how will the construction, operation, decommissioning, and waste disposal of the proposed project impact the social and economic environment?

The social and economic impacts of the proposed project have been addressed in *Resource Report Number 5 – Socioeconomics* that was provided to the Federal Energy Regulatory Commission in March 2016.

The proposed project is anticipated to directly provide up to 5 new jobs supporting LNG plant operations and 155 jobs during the construction phase (approximately 2 years). The workforce will be a combination of workers residing in Providence and outside of Providence. To the extent that construction employees would spend wages within the socioeconomic areas, the potential impact on employment resulting from construction of the Project will be beneficial. The locally available vacant rental units are anticipated to be sufficient to house the construction workforce. Available housing would be more than sufficient to accommodate the 5 full-time operational employees.

The daily commuting of the construction workforce to the project may temporarily affect traffic flow. However, because of the need to work during daylight hours, much of the additional traffic will be during off-peak hours. Parking will be at the existing facility. During the operational phase, the additional traffic associated with the 5 full-time workers will be minimal.

The proposed facility will generate a minimal additional amount of waste, primarily used lubrication and filters from rotating equipment. During the operational phase, any condensate generated in the liquefaction process that is not reinjected into the gas stream will be captured in vessels and stored in barrels in accordance with RIDEM rules. The barrels will be collected regularly and disposed off-site during waste pick-ups that currently occur as part of the LNG plant activities.

Decommissioning is not anticipated to introduce any impacts.

Construction and operation of the Project will have beneficial impacts on local property tax revenue. Payroll taxes will also be collected from workers employed on the project. Spending in the area on local goods and services by project operations and personal will increase during the construction and operational phases. NGLNG anticipates that the total payroll for the Project will be approximately $10,500,000 during the construction phase.

If you require any additional information, please contact William Howard of National Grid at william.howard@nationalgrid.com or 401-784-7490 or Igor Runge of GZA GeoEnvironmental Inc (GZA) at igor.runge@gza.com or 401-427-2710.

Sincerely,
NATIONAL GRID

William R. Howard

William R. Howard
Manager – Environmental

CC: Anthony LaRusso, National Grid
Wendy B. Levine, National Grid
Robin L Main, Hinckley Allen
Igor Runge, GZA

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AUG 18 2017
COASTAL RESOURCES MANAGEMENT COUNCIL

HINCKLEY ALLEN

100 Westminster Street, Suite 1500
Providence, RI 02903-2319
p: 401-274-2000 f: 401-277-9600
hinckleyallen.com

Robin L. Main
Direct Dial 401-457-5278
rmain@hinckleyallen.com

RECEIVED
SEP 11 2017
COASTAL RESOURCES MANAGEMENT COUNCIL

September 8, 2017

Jeffrey M. Willis, Deputy Director
Coastal Resources Management Council
Oliver H. Stedman Government Center
4808 Tower Hill Road, Suite 3
Wakefield, RI 02879-1900

Re: National Grid LNG LLC

Dear Jeff:

Enclosed please find the original, fully executed waiver for the above-referenced matter. I will call you soon about the October hearing dates and overall status of this application. Thank you very much for your time.

Very truly yours,

Robin L. Main

RLM/lsg

Enclosure

cc: William Howard, National Grid

State of Rhode Island and Providence Plantations
Coastal Resources Management Council
Oliver H. Stedman Government Center
4808 Tower Hill Road, Suite 3
Wakefield, RI 02879-1900

(401) 783-3370
Fax (401) 783-2069

AMENDED AGREEMENT TO STAY SIX MONTH REVIEW PERIOD

Between

The Rhode Island Coastal Resources Management Council

And

National Grid LNG LLC

RECEIVED
SEP 11 2017
COASTAL RESOURCES MANAGEMENT COUNCIL

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Pursuant to 15 CFR § 930.60(b) the CRMC and National Grid have mutually agreed to the following dates and to further stay the CRMC six-month review period an **additional ninety (90) days** as specified herein.

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- Date the 6-month period was to end: April 29, 2017
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- Date that the stay ends: December 21, 2017
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This agreement made and entered by:

Jeffrey M. Willis
Deputy Director, CRMC

Aug 25 2017
Date

William R. Howard
Manager-Environmental, National Grid

Aug 29, 2017
Date

Lisa Turner

To: Council Members
Cc: Jim Boyd; Grover Fugate
Subject: CRMC Public Notice -- National Grid in Providence - Federal Consistency
Attachments: Public Notice 11-16-2016.pdf

Dear Members: Please Review the attached CRMC Public Notice.

Lisa A. Turner
Office Manager
Coastal Resources Management Council
O S Government Center
4808 Tower Hill Road, Rm 116
Wakefield, RI 02879
(401)783-3370

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State of Rhode Island and Providence Plantations
Coastal Resources Management Council
Oliver H. Stedman Government Center
4808 Tower Hill Road, Suite 3
Wakefield, RI 02879-1900

(401) 783-3370
Fax (401) 783-3767

PUBLIC NOTICE

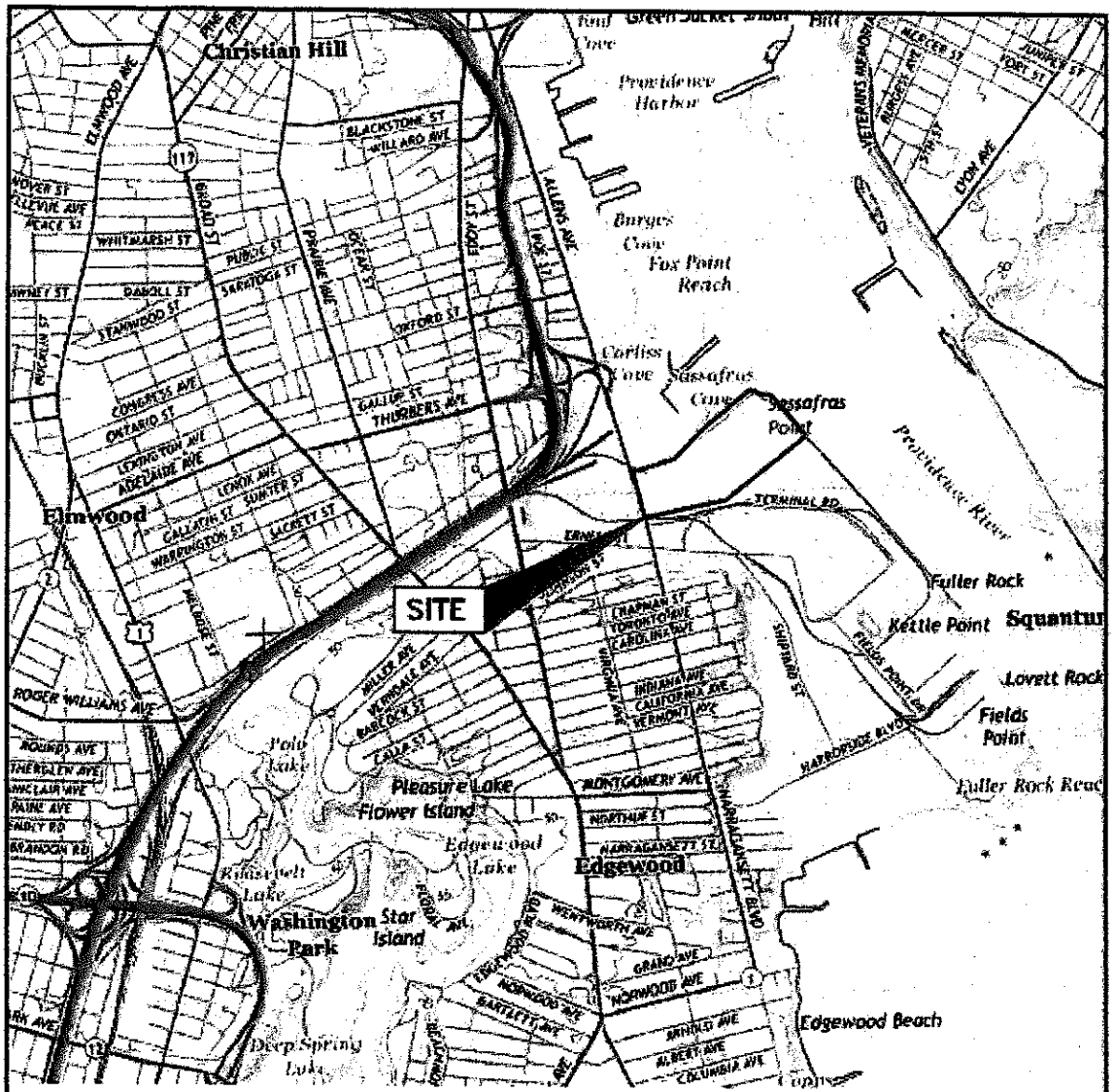
The Coastal Resources Management Council ("CRMC") is in receipt of a federal consistency certification filed by National Grid on October 31, 2016 for the proposed construction of a natural gas liquefaction facility ("project") on Assessor's Plat 56 Lots 316, 5 and Plat 101 Lot 1, located at 121 Terminal Road, Providence. The proposed liquefaction facility will be constructed adjacent to National Grid's existing liquefied natural gas (LNG) tank. The proposed project is subject to CRMC review authority pursuant to the federal Coastal Zone Management Act (CZMA), 16 USC §§ 1451-1464, and the CZMA's implementing regulations at 15 CFR Part 930 Subpart D – Consistency for Activities Requiring a Federal License or Permit.

The CRMC will not be issuing a state permit in this case. Rather, as the State's authorized coastal zone management agency, the CRMC must make a determination as to whether the proposed project is consistent with the enforceable policies of the State's federally approved coastal program. National Grid is seeking a variance to the CRMC minimum 50-foot setback requirement for proposed filling and grading activity on the project site. National Grid's consistency certification and supporting information have been assigned file number **2016-10-099** and can be reviewed at the CRMC office during regular office hours (Monday-Friday 8:30 am to 4:00 pm). In addition, a downloadable PDF file copy of National Grid's consistency certification and supporting information, including site plans, are posted on the CRMC website at www.crmc.ri.gov.

The CRMC is providing public notice on National Grid's consistency certification in accordance with 15 CFR § 930.61 and will scheduled a public hearing in this matter for a date yet to be determined. The CRMC will accept written comments from parties interested in or concerned with the above matter. All comments should be sent to Grover J. Fugate, CRMC Executive Director at the above address **on or before December 23, 2016**. Comments must be specifically directed to the issue as to whether the proposed project is consistent with the enforceable policies of the Rhode Island Coastal Resources Management Program.

Signed this 16th day of November 2016.

Grover J. Fugate, Executive Director
Coastal Resources Management Council



RHODE ISLAND

&

QUADRANGLE LOCATION

SOURCE:

BASE MAP FROM THE FOLLOWING USGS QUADRANGLE MAP:
PROVIDENCE, RHODE ISLAND (2015)

DIGITAL TOPOGRAPHIC MAPS PROVIDED BY USGSSTORE.GOV.

CONTOUR ELEVATIONS REFERENCE NAVD 88.
CONTOURS ARE SHOWN IN FEET AT 10' INTERVALS

N
W E
S

LIQUEFACTION FACILITY
642 ALLENS AVENUE
PROVIDENCE, RHODE ISLAND

PREPARED BY:
GZA GeoEnvironmental, Inc.
Engineers and Scientists
www.gza.com

PREPARED FOR:
nationalgrid

LOCUS PLAN

PROJ MGR: MSK	REVIEWED BY: SMF	CHECKED BY: MSA	FIGURE
DESIGNED BY: SMF	DRAWN BY: LBT	SCALE: AS NOTED	1
DATE: OCTOBER 2016	PROJECT NO. 33554.00	REVISION NO. 0	SHEET NO. 1 OF 2

OR'S PLAT #52
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ce, Rhode Island
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Ste. 151
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AGEE'S SALE
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AGEE'S SALE
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A. D'ALESSIO
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Book 606, Page
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00 in cash, certified
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terms will be an-
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o & Tomasso, Inc.
ttorney for Holder
Of the Mortgage
Elmwood Avenue
vidence, RI 02907
(401) 785-1442

Interested parties may obtain a scope of services at the Warwick Housing Authority, 1035 West Shore Road, Warwick, RI between the hours of 8:30 A.M. and 4:00 P.M.

Individuals requesting interpreter services for the hearing-impaired must notify the Warwick Housing Authority at 732-8500 seventy-two hours prior to deadline for submission of proposals.

J. William Quirk
Chairman

MORTGAGEE'S NOTICE OF SALE OF REAL ESTATE
15 JOHNSON AVENUE, JOHNSTON, RI 02919

The premises described in the mortgage will be sold subject to all encumbrances and prior liens on November 28, 2016 at 09:00 AM on the premises, by virtue of the power of sale contained in a mortgage by Michael J. Heufelder dated July 23, 2009 and recorded in the Johnson Land Evidence Records in Book 2016 Page 1, the conditions of said mortgage having been broken.

TERMS OF SALE:
A deposit of FIVE THOUSAND DOLLARS AND 00 CENTS ($5,000.00) in the form of a certified check, bank treasurer's check, or money order will be required to be delivered at or before the time the bid is offered. The description of the premises contained in said mortgage shall control in the event of an error in this publication. Other terms will be announced at the sale.

ORLANS MORAN PLLC
Attorney for the Present Holder of the Mortgage
P.O. Box 540540
Waltham, MA 02454
Phone: 781-790-7800
682.4255

MORTGAGEE'S SALE
57 CAPUANO AVE AND 0 CAPUANO AVE CRANSTON, RI
Plat 10, Lot 137, 138 and 139

The premises described in the mortgage will be sold subject to all encumbrances and prior liens on December 5, 2016 at 10:00 a.m. on the premises, by virtue of the power of sale contained in a mortgage by Maged A Taman and Manal Ismail dated January 31, 2008 and recorded in the CRANSTON Land Evidence Records in Book 3821, Page 216, the conditions of said mortgage having been broken.

$5,000.00 in cash, certified or bank check is required to bid. Other terms will be announced at the sale.

HARMON LAW OFFICES, P.C.
Attorney for the Holder of the Mortgage
150 California Street
Newton, MA 02458
(617) 558-0500
201506-0130 - PRP

Newton, MA 02458
(617) 558-0500
201104-1288 - TEA

PUBLIC NOTICE

The Coastal Resources Management Council ("CRMC") is in receipt of a federal consistency certification filed by National Grid on October 31, 2016 for the proposed construction of a natural gas liquefaction facility ("project") on Assessor's Plat 56 Lots 316, 5 and Plat 101 Lot 1, located at 121 Terminal Road, Providence. The proposed liquefaction facility will be constructed adjacent to National Grid's existing liquefied natural gas (LNG) tank. The proposed project is subject to CRMC review authority pursuant to the federal Coastal Zone Management Act (CZMA), 16 USC §§ 1451-1464, and the CZMA's implementing regulations at 15 CFR Part 930 Subpart D - Consistency for Activities Requiring a Federal License or Permit.

The CRMC will not be issuing a state permit in this case. Rather, as the State's authorized coastal zone management agency, the CRMC must make a determination as to whether the proposed project is consistent with the enforceable policies of the State's federally approved coastal program. National Grid is seeking a variance to the CRMC minimum 50-foot setback requirement for proposed filling and grading activity on the project site. National Grid's consistency certification and supporting information have been assigned file number 2016-10-099 and can be reviewed at the CRMC office during regular office hours (Monday-Friday 8:30 am to 4:00 pm). In addition, a downloadable PDF file copy of National Grid's consistency certification and supporting information, including site plans, are posted on the CRMC website at www.crmc.ri.gov

The CRMC is providing public notice on National Grid's consistency certification in accordance with 15 CFR § 930.61 and will scheduled a public hearing in this matter for a date yet to be determined. The CRMC will accept written comments from parties interested in or concerned with the above matter. All comments should be sent to Grover J. Fugate, CRMC Executive Director at the above address on or before December 23, 2016. Comments must be specifically directed to the issue as to whether the proposed project is consistent with the enforceable policies of the Rhode Island Coastal Resources Management Program.

Signed this16th day of November 2016.

Grover J. Fugat,
Executive Director
Coastal Resources Management Council

sale contained in a mortgage by Christopher B. Pemental dated September 10, 2004 and recorded in the Barrington Land Evidence Records in Book 869 Page 242 , the conditions of said mortgage having been broken.

TERMS OF SALE:
A deposit of FIVE THOUSAND DOLLARS AND 00 CENTS ($5,000.00) in the form of a certified check, bank treasurer's check or money order will be required to be delivered at or before the time the bid is offered. The description of the premises contained in said mortgage shall control in the event of an error in this publication. Other terms will be announced at the sale.

ORLANS MORAN PLLC
Attorney for the Present Holder of the Mortgage
PO Box 540540
Waltham, MA 02454
Phone: (781) 790-7800
16-011430

MORTGAGEE'S SALE
27 RODMAN STREET PROVIDENCE, RI 02908
TAX ASSESSOR'S PLAT 53 LOT 724

The premises described in the mortgage will be sold subject to all encumbrances and prior liens on DECEMBER 13, 2016, at 11:00 am on the premises, by virtue of the power of sale contained in a mortgage by Gerard C. Catala dated February 19, 20.10 and recorded on February 22, 2010 in Book 9653 Page 250 of the Providence Land Evidence Records, the conditions of said mortgage having been broken.

FIVE THOUSAND DOLLARS ($5,000.00) in cash, certified or bank check is required to bid. Other terms will be announced at the sale.

HOBSON & COUTU, LTD.
Attorney for the Holder of the Mortgage
222 Jefferson Blvd.
Warwick, RI 02888
401-739-1115

MORTGAGEE'S SALE
5 Pettine Street,
East Greenwich, RI

The premises described in the mortgage will be sold subject to all encumbrances and prior liens on November 29, 2016 at 11:30 A.M., on the premises, by virtue of the power of sale contained in a mortgage by Royston A. Kane and Glenis M. Kane, dated February 22, 2008 and recorded in the Town of East Greenwich, Rhode Island Land Evidence Records in Book 939, Page 101, et. seq., the conditions of said Mortgage having been broken.

$10,000.00 in cash, certified or bank check is required to bid. Other terms will be announced at the sale.

Americo M. Scungio, Esq.
Attorney for Mortgagee
167 Main Street
Westerly, R.I. 02891
(401) 596-0151

ken.

TEN THOUSAND DOLLARS ($10,000.00) down payment in cash, bank check or certified check at time of sale; other terms will be announced at time of sale.

Marinosci Law Group, P.C.
275 West Natick Road,
Suite 500 Warwick, RI 02886
Attorney for the present Holder of the Mortgage
MLG File # MLG 16-12315
A-4595728 11/14/2016, 11/21/2016, 11/28/2016

MORTGAGEE'S SALE
9 York Road,
Johnston, RI

Will be sold at public auction on December 12, 2016 at 11:30 a.m. local time on the premises by virtue of the power of sale contained in a mortgage by 9 York Holdings LLC recorded August 25, 2015 in Book 2451 page 202 of the Johnston Land Records the condition of said mortgage having been broken. Sale will be subject to all prior liens, encumbrances, taxes, assessments, housing code violations, tax sales, IRS rights of redemption.

Down payment of $5,000.00 in cash, certified or bank check, at time of sale is required to bid. Other terms to be announced at time of sale. By order of the mortgagee which gives notice of intention to bid.

M. Beth Arruda, Ltd.
(Attorney for the Mortgagee)
1116 Park Avenue
Cranston, RI 02910
(401) 943-9434

MORTGAGEE'S NOTICE OF SALE OF REAL ESTATE
22 MAPLE AVENUE, EAST PROVIDENCE, RI 02915

The premises described in the mortgage will be sold subject to all encumbrances and prior liens on December 12, 2016 at 12:00 PM on the premises, by virtue of the power of sale contained in a mortgage by Norma A. Costa dated November 9, 2006 and recorded in the East Providence Land Evidence Records in Book 2756 Page 161 , the conditions of said mortgage having been broken.

TERMS OF SALE:
A deposit of FIVE THOUSAND DOLLARS AND 00 CENTS ($5,000.00) in the form of a certified check, bank treasurer's check or money order will be required to be delivered at or before the time the bid is offered. The description of the premises contained in said mortgage shall control in the event of an error in this publication. Other terms will be announced at the sale.

ORLANS MORAN PLLC
Attorney for the Present Holder of the Mortgage
PO Box 540540
Waltham, MA 02454
Phone: (781) 790-7800
16-008363

TELEPHONE/OFFICE VISIT RECORD

FILE # 2016-10-099 NAME NG LNG TOWN PROV

PARTY/DISCUSSION J. MARTELLA DATE 10/4/17 STAFF INITIAL DR

10/5 NGRID TO SUBMIT RESPONSE TO COMMENTS TO RIDEM (TENTATIVE)

10/10 RIDEM ISSUES STRAP COMMENT LETTER

BY 10/13 RIDEM ISSUES STRAP APPROVAL LETTER (IF ALL ISSUES / COMMENTS ARE APPROPRIATELY ADDRESSED BY THAT TIME)

RHODE ISLAND
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
235 Promenade Street, Providence, RI 02908-5767 TDD 401-222-4462

STRAP COMMENT LETTER
File No. SR -28-1152
Formerly Case No. 98-004

October 6, 2017

Amy A. Willoughby
Lead Environmental Scientist
New England Site Investigation & Remediation Group
National Grid
40 Sylvan Road, E3.691
Waltham, MA 02451

RE: Providence Gas Co. – AA
A.k.a. Former New England Gas Company MGP property
642 Allens Avenue, Providence, Rhode Island
Plat Map 56 / Lot 5, Plat Map 101 / Lot 1

Dear Ms. Willoughby:

The Rhode Island Department of Environmental Management's (the Department) Office of Waste Management (OWM) has reviewed the Short Term Response Action Plan (STRAP), Proposed Liquefaction Project, 121 Terminal Road / 642 Allens Avenue, Providence, Rhode Island, RIDEM Case No. 98-004 / Site Remediation File No. SR-28-1152, FERC Docket No. CP16-121-000 (Liquefaction STRAP), for the above referenced property (the Site), which was submitted on May 12, 2017, by GZA Geoenvironmental, Inc. (GZA) in accordance with Section 6.00 of the Department's Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (the Remediation Regulations).

After careful review of the Liquefaction STRAP, the Department requires a response to the attached comments, questions, and concerns about the submittal, which must be fully addressed in writing to receive a Short Term Response Action Plan Approval.

If you have any questions regarding this letter or would like the opportunity to meet with Department personnel, please contact me by telephone at (401) 222-2797, ext. 7109, or by E-mail at joseph.martella@dem.ri.gov.

Sincerely,

Joseph T. Martella II
Senior Engineer
Rhode Island DEM
Office of Waste Management

cc: Ronald Gagnon, RIDEM/OCTA
Kelly J. Owens, RIDEM.OWM
Susan Forcier, Esq., RIDEM/OLS
Gregory Swift, RIDEM/OWR
Ruth Gold, RIDEM/OAR
Barbara Morin, RIDOH/Center for Healthy Homes & Environment
Jeffrey Willis, RI CRMC
Dave Reis, RI CRMC
Kenneth J. Warn, FERC
Robert E. Azar, Providence Planning and Development
Dania Alejandra Flores-Heagney, EJLRI
Robin L. Main, Esq., Hinckley Allen
Margaret S. Kilpatrick, GZA

DEPARTMENT COMMENTS
October 6, 2017

Liquefaction STRAP, dated May 12, 2017
Providence Gas Co. – AA
642 Allens Avenue, Providence, Rhode Island

1. Page 4, Section 3.1 (Project Description):

    a. Please clarify the planned order of proposed remedial events, including raising the level of the STRAP Area, pre-drilling/driving piles, installing underground utilities, removing existing groundwater monitoring wells, reinstalling replacement monitoring wells, installing engineered caps and implementing related restoration activities, etc.).

    b. The third paragraph indicates *"Note the majority of the Project Work Site will be raised approximately 9 to 11 feet above existing grade."* This seems to contradict other references to the very limited amount of strictly non-intrusive work proposed to be completed in the Project Work Site. Please clarify this discrepancy.

    c. What are the planned dimensions of the temporary laydown area?

    d. Will any regulated materials be stored in the temporary laydown area, and if so, how?

    e. Please provide a site figure showing the proposed location and layout of the temporary laydown area.

2. Page 4, Section 3.2 (Former MGP Structures) - Are there any known or suspected subsurface former MGP structures that may still contain MGP residuals such as coal tar, which may be disturbed during construction or predrilling?

3. Page 8, first sentence – The referenced Site Piling Plan is in Appendix D, not Appendix C, please correct this.

4. Page 13, Section 6.1 (Excavated Soil Reuse) - Please clarify how and where any soils which exhibit excessive visual or olfactory evidence of contamination will be segregated and temporarily stored until off-Site disposal/recycling is done. Please provide a site figure showing the proposed management/storage locations. If appropriate, this item may be included on the site figure requested in comment 1.e above.

5. Page 14, Section 6.3 (Soil Disposal/Recycling) - Please clarify how and where excess soils described in this section will be segregated and temporarily stored until off-Site disposal/recycling occurs. Please provide a site figure showing the proposed management/storage locations. If appropriate, this item may be included on the site figure requested in comment 1.e above.

6. Page 14, Section 6.4 (Import Sampling) - Please clarify how and where imported soil material described in this section will be segregated and temporarily stored. Please provide a site figure showing the proposed management/storage locations. If appropriate, this item may be included on the site figure requested in comment 1.e above.

7. Page 15, Section 6.6 (Required Air Monitoring and Controls) - Please include a copy of Attachment N, Clarification to the Proposed Air Monitoring Program for STRAP Activities, STRAP Proposed Liquefaction Project, 121 Terminal Road/642 Allens Avenue, Providence, Rhode Island, from the October 5, 2017, Response to Public Comments, in the final STRAP Addendum.

8. Page 16, Section 6.7 (Decontamination Protocol) – Indicates that *"If sediment is tracked out of the Project Site, the sediment must be removed by sweeping, shoveling, or vacuuming by the end of the work day."* Please revise this section to indicate that any regulated material tracked out of the Project Site shall be removed and appropriately managed promptly and completely.

9. Page 16, Section 6.8 (Soil Stockpile Management Requirements) - Please provide a site figure showing the proposed locations of the temporary soil stockpile area, the central soil stockpile area, and the long-term soil, construction material and/or debris stockpile areas referenced in this Section. If appropriate, this item may be included on the site figure requested in comment 1.e above.

10. Page 17, Section 6.11 (Monitoring Well Re-Installation) – Section 4.4 (Groundwater and NAPL Measurements) indicated that Light Non-Aqueous Phase Liquid (LNAPL) has been historically detected in the STRAP Area at thicknesses ranging from trace amounts to 3.58 feet, in nine (9) monitoring wells. This section indicates that only three (3) replacement monitoring wells are proposed. Please clarify the reason for decreasing the number of potential future LNAPL monitoring/recovery wells. Please be advised that the final remedy for the Site will likely include some form of long-term LNAPL gauging and recovery in addition to groundwater monitoring.

11. Regarding Drawing 4 (Completed Remedial Activities) and Drawing 6 (Proposed Final Conditions Plan), please clarify plans for areas within the proposed Project Work Site that have not been subject to prior remediation and capping, and do not currently have an existing equivalent cap, but are not identified on Drawing 6 as being subject to proposed capping. Please be advised that any unremediated areas on the Site, that are not subject to remedial activities under the Liquefaction STRAP, shall be subject to remediation under the anticipated Site Investigation Report (SIR) Addendum for the remainder of the Site.

12. Please provide certification that the STRAP and STRAP Addendum were prepared under the supervision of a Registered Professional Engineer in the State of Rhode Island, stamped by that engineer.

13. Please submit a STRAP Addendum that addresses the abovementioned comments on or before October 11, 2017.

RHODE ISLAND
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
235 Promenade Street, Providence, RI 02908-5767 TDD 401-222-4462

Letter Response to STRAP Public Comments
File No. SR -28-1152
Formerly Case No. 98-004

October 6, 2017

Amy A. Willoughby
Lead Environmental Scientist
New England Site Investigation & Remediation Group
National Grid
40 Sylvan Road, E3.691
Waltham, MA 02451

RE: Providence Gas Co. – AA
A.k.a. Former New England Gas Company MGP property
642 Allens Avenue, Providence, Rhode Island
Plat Map 56 / Lot 5, Plat Map 101 / Lot 1

Dear Ms. Willoughby:

On November 9, 2011, the Rhode Island Department of Environmental Management's (the Department) Office of Waste Management (OWM) amended the Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases (the Remediation Regulations). The purpose of these regulations is to create an integrated program requiring reporting, investigation and remediation of contaminated sites in order to eliminate and/or control threats to human health and the environment in a timely and cost-effective manner.

In the matter of the above-referenced property (the Site), the Department's OWM has received the Meeting Summary, Response to Public Comments and Additional Clarifications, Short Term Response Action Plan (STRAP): Proposed Liquefaction Project, STRAP Addendum: Holcim Driveway, 121 Terminal Road / 125 Terminal Road / 642 Allens Avenue, Providence, Rhode Island (Response to Public Comments), which was submitted on October 5, 2017, by GZA Geoenvironmental, Inc. (GZA) in accordance with Sections 6.00 and 7.00 of the Remediation Regulations. The Department has reviewed the Response to Public Comments with regard to responses to comments and questions on the technical feasibility of the remedial actions proposed in the Liquefaction Project Short Term Response Action Plan (STRAP) and the Holcim Driveway STRAP Addendum. Some of the submitted comments address topics beyond the scope of the STRAPs and the Remediation Regulations, concerning the siting and federal licensing of the liquefaction facility, and therefore did not require responses from National Grid under this regulatory process. A copy of this letter is being sent to the Federal Energy Regulatory Commission (FERC) which has authority over the siting and federal licensing of the liquefaction facility. Certain other comments and questions required responses from the Department and are addressed below.

Because many of the comments and questions were repeated by commenters, the Department is addressing each applicable topic in a response, rather than repeating the same response numerous

times throughout this document.

1. Various comments and/or statements received indicating that the speaker or submitter of the comment is in opposition to the permitting, construction and/or operation of National Grid's proposed Liquefaction Facility.

    a. While the permitting of the Liquefaction Facility is outside the scope of the Department's STRAP permitting process, the Department acknowledges that a significant percentage of comments from the public and community indicated a clear opposition to the overall Liquefaction project. Public comments regarding the permitting of the Liquefaction Facility should be addressed to the appropriate permitting authority for that project which is the FERC, under Docket #CP 16-121-000, www.ferc.gov. That would include all questions about the chosen location of the facility and concerns about the design, construction, and operational safety of the facility. This letter and all the public comments received by the Department have been submitted to the FERC.

2. Suggestions, requests and/or demands that the Department stop the Liquefaction Facility project by not issuing a STRAP Approval to National Grid for the remediation of the Liquefaction project area.

    a. Under the Remediation Regulations, the Department's authority over a contaminated Site is limited to jurisdictional releases of hazardous materials to soil and/or groundwater at that subject Site. The property at 642 Allens Avenue, Providence, became a regulated Site in the Department's Site Remediation Program because of historic releases of hazardous materials to soil and groundwater on the property, primarily related to the property's former usage as a Manufactured Gas Plant (MGP). As such, the Department's authority, under the Remediation Regulations, is specifically limited to the investigation and remediation of those jurisdictional releases to the Site soil and groundwater, and does not extend to facility siting issues or reviews which are federally regulated by the FERC. The Department acknowledges and understands that the opponents of the Liquefaction Facility hope to prevent the Liquefaction project by requesting that the Department not issue a Liquefaction STRAP Approval. However, it is the position of the Department that it does not have the discretion to refuse to allow a Responsible Party to remediate its property, nor does it have the ability to arbitrarily refuse to approve a remedy if that remedy is consistent with the requirements of the Remediation Regulations, even if there is significant public opposition to the proposed post-remediation reuse of the property. As stated in the above response, the appropriate agency to address questions, comments, concerns and opposition to the Liquefaction Facility Project is the FERC.

3. Questioning why the Department claims that it has no say in what National Grid does with the Site, and that considering the final use of the Site cannot be part of the Department's decision on the STRAP, since Remediation Regulation Rule 7.07.C (Community Meetings), indicates *"The purpose of the meeting is to: 1) disseminate information about the Department's Site Remediation program and the specific Contaminated-Site of*

interest; 2) document community comments and concerns about the investigation, clean-up, and reuse of the Contaminated-Site; and 3) engage in a dialogue with the public about the Contaminated-Site."

a. To clarify, particularly with respect to item 2, the Department does consider the use, reuse and/or end use of a Site when a Site remedy is proposed. The remedy must be consistent with the proposed usage of the Site, and the proposed Site usage often dictates what the final remedy will be, and what future activities will be restricted at the Site (e.g. restrictions from drinking impacted Site groundwater, restricting residential usage, prohibiting disturbance of impacted Site soil without prior Department approval, long-term monitoring, maintenance, periodic inspection and reporting for all engineered control caps to insure they remain in good condition, etc.). The Department does not have the authority to control or change a Site's current or proposed usage, as long as that usage is compliant with the Remediation Regulations. That authority typically rests with the local zoning board, other municipal offices, and local, state and/or federal facility permitting authorities as applicable (e.g. Public Utilities Commission [PUC], FERC, etc.).

4. The following question about specific statements made by the Department at the August 9, 2017, community meeting, concerning the limits to the Department's authority. *"At this meeting, Mr. Martella told community members and members of No LNG in PVD that the site in question is private property owned by National Grid and that RIDEM doesn't have authority over how a company chooses to use their property. The following comments are a reminder that National Grid does in fact need to comply with the Remediation Regulations, and RIDEM does in fact have the authority to approve or deny an applicant's proposals, and the authority to require property owners to consider other remedial alternatives instead of the applicant's proposal remedial actions (DEM-DSR-01-93 Section 7.07)."*

a. The statement that *"the site in question is private property owned by National Grid and that RIDEM doesn't have authority over how a company chooses to use their property"* is accurate. The Site Remediation Program can review and approve the investigation and remediation of a property. It cannot dictate the current use or end use of that property, other than to periodically monitor that any restrictions on the usage of the property, which may be part of a Department approved remedy, are being followed. Regarding the second sentence above, National Grid's need to follow the Remediation Regulations has never been in question. The roles of the Department and FERC regarding the Liquefaction Facility Project admittedly did take several months to sort out. The Department may deny an applicant's proposal if it is deficient or not compliant with the Remediation Regulations. During the public comment period, technical comments on the proposed remedy are solicited and are considered by the Department and the Responsible Party. However, the Department is not obliged to automatically require the originally proposed remedy to be modified to an alternative remedy if the proper implementation of the original remedy will result in compliance with the Remediation Regulations.

5. What is the Department's role in the review of National Grid's Liquefaction Facility

Project and how can the public participate in the decision-making process?

a. The Department's OWM has a role reviewing, commenting on and approving the remedy for the Liquefaction Facility project Area through the Liquefaction STRAP. The public may participate in that process by commenting on the technical feasibility aspects of the proposed Liquefaction STRAP remedy. Many comments were received during the public comment period for the STRAPs. All of the substantive technical comments were either addressed by National Grid in the previously referenced Response to Public Comments, or are addressed in this document as applicable. The OWM does not have a role in planning, reviewing or approving the actual Liquefaction Facility project, and therefore cannot facilitate the community's participation in that specific decision making process through the limited STRAP review and approval process. However, the community still has the opportunity to participate in the FERC process which has a bearing on whether or not the project is approved.

6. Various comments and/or questions asking why National Grid is allowed to separate the Liquefaction Facility Project discussion from the soil and groundwater remediation?

   a. The Department acknowledges that the construction of a Liquefaction Facility and the pre-construction remediation of the proposed location of said Facility are clearly related to the same end goal of constructing an operational Liquefaction Facility. There are, however, two separate and distinct ongoing regulatory processes involved. The state lead remediation permitting process to address the remediation of soil and groundwater located in the proposed Liquefaction Facility Area, and the federal FERC lead facility permitting process to address the siting, design, construction, operation and related permitting of the actual facility. FERC has the ultimate say about whether or not the Liquefaction Facility can be built. Each of these processes has its own regulatory path and public participation components. That is why National Grid is allowed to separate the discussion of the merits of placing a Liquefaction Facility on the 642 Allens Avenue property, from the discussion of the related remediation of that property. The remediation of the property is the subject of this letter. The scope of the Department's regulatory authority under the Remediation Regulations, and therefore its regulatory authority over National Grid, is specifically limited to the remediation of soil and groundwater for this project.

7. Various comments and/or statements indicating that the speaker or writer objected to the location, format, timing, lack of childcare, and/or degree of accessibility for the July 13, 2017, Technical Information Session and Public Meeting held at the Providence Public Safety Complex, 325 Washington Street, Providence.

   a. In response to numerous comments expressing concerns about the first public meeting, a second public meeting with a different format, time of day and location, was scheduled and held on August 9, 2017, at the Open Table of Christ Church, 1520 Broad Street, Providence. Notifications for the meeting were provided in multiple languages with explanations for how to request translation services. There

is no provision or requirement in the Remediation Regulations that the responsible party provide child care at public meetings.

8. Comment indicating that the Public Meeting should be run by the public.

    a. Under the Remediation Regulations, National Grid, as the Responsible Party, is responsible for holding the public meeting about the STRAP under the PIP.

9. Comment suggesting the Site should be made into a Superfund Site.

    a. 642 Allens Avenue, Providence, is already a Site listed in the Department's Site Remediation Program, subject to investigation and remediation in accordance with the Remediation Regulations.

10. Various comments and/or statements questioning why the Public Involvement Process was delayed and/or why it took so long to hold a public meeting?

    a. The Department received a petition requesting that a Public Involvement Plan (PIP) be developed for the 642 Allens Avenue, Providence, Site on August 31, 2016. On September 6, 2016, the Department issued a Public Involvement Plan Process Initiation Letter to National Grid requesting that they develop a PIP. On September 26, 2016, Hinkley Allen, on behalf of National Grid, submitted a legal memorandum to the Department indicating that while the 642 Allens Avenue, Providence, Site was subject to the requirements of the Remediation Regulations, including the requirement to prepare a PIP, the Liquefaction Facility Project was subject to regulation under the FERC which preempted the Remediation Regulations. On October 21, 2016, the Department issued a Letter to National Grid acknowledging the FERC preemption of the Remediation Regulations with regard to, and limited to, the Liquefaction Facility Project. On October 26, 2016, National Grid submitted their first draft PIP (which did not include the Liquefaction Facility Project). Between October 2016 and mid-January 2017, it was the Department's understanding that the FERC oversight of the Liquefaction Facility Project would include FERC review and approval of any remediation plans for impacted soil and groundwater in the proposed Liquefaction Facility area. On February 10, 2017, No LNG in PVD submitted a letter to the Department requesting, in part, that the Department *"Require National Grid LNG to obtain a Short Term Remedial Action Plan (STRAP) as originally intended for oversight of soil disturbance from construction, while holding the STRAP subject to the conditions of the Public Involvement Plan."* After several discussions involving the Department, FERC and National Grid, FERC issued a letter to National Grid on April 4, 2017, indicating that they would like National Grid to proceed with preparation and submittal of a STRAP to the Department for the Liquefaction Facility Project. National Grid agreed to comply with FERC's suggested approach, and while reserving their rights regarding the statutory and preemption questions, on May 12, 2017, they submitted a draft STRAP for the Liquefaction Project subject to Department review, the PIP, the public participation process and a public meeting. On June 9, 2017, the final PIP was submitted by National Grid (which did include the Liquefaction Facility

Project). The finalization of the PIP had been delayed for several months because the scope of the document, specifically whether it would include the Liquefaction Facility STRAP, needed to be resolved. The scope of the public meetings were limited to the items under the jurisdiction of the Remediation Regulations. The Department acknowledges public frustration with the limited scope of the public meetings and lack of discussion of the Liquefaction Facility or any related topic outside the jurisdiction of the Remediation Regulations, and suggests that any remaining Liquefaction Facility concerns be directed to the FERC while they are accepting public comments, at www.ferc.gov.

11. Various comments indicating National Grid should either clean up the entire 642 Allens Avenue site or leave it alone and not disturb the impacted soil or groundwater.

    a. The Department cannot deny a property owner's plan to clean up their property simply because the proposed end use is unpopular with the community. In addition, it is not uncommon for the Department to allow for Site remedies to be conducted in a phased or prioritized approach, with the understanding that remediation of the entire property will eventually be completed, as is the case here. This is most often the case when dealing with the remediation of an active facility, or in a situation where requiring the completion of the entire remediation of the Site at the same time would result in unreasonable or overly burdensome logistical difficulties, or impose otherwise unnecessary additional administrative process and delays on the Responsible Party.

12. Various comments suggesting that the Department should require National Grid to clean up the Site to the maximum extent possible.

    a. Under the Department's Remediation Regulations, a Responsible Party is required to remediate a Site to a degree that is consistent with the Site's current and foreseeable future usage. In this case, the current and proposed continued future usage of the Site is as an active Liquefied Natural Gas (LNG) Terminal facility. That usage is consistent with the definition of Industrial/Commercial Activity in Rule 3.39 of the Remediation Regulations. Therefore, National Grid is required to provide a remedy that is consistent with Industrial/Commercial usage, which is what they have proposed in the Liquefaction STRAP.

13. Various comments indicating National Grid's Liquefaction Facility Project does not qualify for a STRAP or that a STRAP is not an appropriate form of approval, referencing Rule 3.18 which states *"Emergency or Short-Term Response Action shall mean any activities undertaken immediately following the discovery of a Release of Hazardous Material in order to completely or partially contain, clean up or treat the Released material and/or remove an Imminent Hazard if it exists."*

    a. Emergency Actions and Short-Term Response Actions are separate and distinct remedial activities. While Rule 3.18 indicates an Emergency or Short-Term Response Action are activities undertaken immediately following the discovery of a Release of Hazardous Material, non-emergency Short-Term Response Actions

have routinely been addressed through the usage of STRAPs. It is the Department's position that the phrase *"immediately following the discovery of a Release of Hazardous Material"* used in Rule 3.18 was intended to primarily refer to Emergency Actions, and not to limit the applicability of Short-Term Response Actions where implementation of a Short-Term Response Action under a Department approved STRAP would otherwise be a reasonable approach to remediation of a portion of a Site. Several STRAPs have already been successfully initiated and completed at the subject Site, and STRAPs are regularly used state-wide to achieve remedial objectives on other Sites.

14. Comment referencing Rule 6.01 (Emergency or Short-Term Response Actions) of the Remediation Regulations which indicates *"No Emergency or Short-Term Response Action undertaken by the Responsible Party may be conducted in a manner which increases the potential for harm, either short-term or long-term, to human health or the environment."* Then suggesting that *"the proposed work would increase the risk of harm to both human health and the environment by removing a protective cap and bringing contaminated soil up to the surface where the toxins could be blown into the surrounding community and/or the bay, particularly given the high winds that are common in this waterfront area."*

    a. The phrase *"increases the potential for harm"* is referring to harm from a jurisdictional release to the environment of hazardous materials that is being remediated during an Emergency Action or Short-Term Response Action, and indicating that the threat of harm from those hazardous materials following the remediation should not be greater than it was before the remediation. Properly implemented erosion, sedimentation, dust and vapor monitoring and control procedures conducted under the final Department approved STRAP should be sufficient to limit significant increased potential for short-term harm during STRAP activities involving the disturbance of impacted soil or groundwater. There should be no long-term increased potential for harm once the STRAP work is completed and any remaining impacted soil is controlled under an engineered cap preventing any future exposure and associated risk.

15. Similar comments to the previous one regarding increasing the potential for harm, either short-term or long-term, to human health or the environment, from potential extreme weather events, a 100-year coastal storm or area flooding during remedial and /or construction activities.

    a. As indicated in the previous response, properly implemented erosion, sedimentation, dust and vapor monitoring and control procedures conducted under the final Department approved STRAP should be sufficient to limit significant increased potential for short-term harm during STRAP activities involving the disturbance of impacted soil or groundwater during remedial activities. (Please also see National Grid's Response to Public Comments, Attachment K, page 14, Response 53, and Attachment M, page 4, Response paragraphs 2 - 5, for additional clarification regarding National Grid's procedures during earthwork activities and preparation for extreme weather events).

16. Similar comments to the previous one regarding increasing the potential for harm, either short-term or long-term, to human health or the environment, from potential seismic activity and or potential gas leaks during remedial and/or construction activities, as well as potential increased harm or possible negative impacts from placement of a Liquefaction Facility at the Site and long-term risks and hazards related to climate change associated with human consumption of fossil fuels.

    a. While these are certainly significant safety issues and valid public and community concerns, they extend outside the jurisdictional authority and regulatory limits of the Department operating under the Remediation Regulations. The phrase "*increases the potential for harm*" is referring to harm from the jurisdictional hazardous materials that are being remediated during the Emergency Action or Short-Term Response Action, and indicating that the threat of harm from those hazardous materials following the remediation should not be greater than it was before the remediation. Questions and concerns related to the safety and operation of the existing LNG Facility, or construction, design and operation of the proposed Liquefaction facility, should be addressed to the appropriate regulatory authority (e.g. PUC, FERC, Occupational Safety and Health Administration [OSHA], etc.). The Department, under the Remediation Regulations, does not have the authority to control or change a Site's current or proposed usage.

17. Comments indicating the Remediation Regulations don't do anything if the Department can't stop the Liquefaction Facility Project, and implying that the Department does not consider the community's safety concerns and objections to the project to be genuine.

    a. The Department considers the community's safety concerns and objections to the project to be genuine. It is the Department's position, however, that requests to prevent the Liquefaction Facility Project extend outside the Department's jurisdictional authority and regulatory limits under the Remediation Regulations, and therefore outside the current public process. Objections to the project fall under the FERC's jurisdiction.

18. Comments questioning if STRAP permits are limited to 90 days, then how can the proposed longer duration project be allowed under a STRAP?

    a. Under Rule 6.06 (Emergency Permit Duration) of the Remediation Regulations, *"Emergency Permits shall not exceed ninety (90) days in duration."* There is no corresponding duration limit for STRAP Approvals.

19. Comments indicating *"Before making a final decision on this permit application RIDEM should conduct and publish a Health Risk Assessment and include a comment period on the findings."*

    a. Under the Remediation Regulations, a Responsible Party may propose a Human Health Risk Assessment to evaluate the risk associated with leaving a Site in its unremediated state, rather than implementing a traditional "clean up" remedy. Site specific factors (assumptions about the usage, activities, potential exposure

pathways, etc.), are then used to mathematically evaluate the potential exposure risk to users of the Site to justify the no action remedy. A Human Health Risk Assessment is not applicable for 642 Allens Avenue because National Grid is not proposing to leave the Site in an un-remediated state, or to leave impacted soil uncapped. Placing an engineered control cap over impacted soil will eliminate the direct exposure pathway, and therefore eliminate the associated human health risk from exposure.

20. Who is responsible to pay for the investigation and remediation of the property?

    a. Under the Remediation Regulations, National Grid, as the owner of the property, is the Responsible Party for all investigation and remediation of the Site, and is therefore responsible for the related costs.

21. Various comments indicating that National Grid's Liquefaction Facility Project will create an imminent hazard when the impacted soil and groundwater are disturbed, potentially impacting community health and safety; that National Grid does not have a comprehensive plan for the safe remediation of the Site; and questions asking why the Department would allow National Grid to disturb the Site when there are known hazardous materials in the ground?

    a. The property at 642 Allens Avenue, Providence, is a contaminated Site in the Department's Site Remediation Program, with documented releases of hazardous materials to the soil and groundwater. National Grid, as the owner of the property, is the Responsible Party for the investigation and remediation of the Site. Part of the remediation process requires the Responsible Party to submit a work plan to the Department explaining how they are proposing to remediate the subject Site. There are many methods that can be employed to ensure that remedial activities that involve the disturbance of contaminated materials are done in a protective way that minimizes risk to the workers, Site employees and the neighboring community. The Department reviews submitted work plans to make sure that the proposed work will be done in a manner consistent with the requirements of the Remediation Regulations, and will be protective of human health and the environment.

22. The request that an independent environmental monitor be allowed on Site throughout the construction period of the STRAPs, that the monitor report to the No LNG in PVD coalition, and that the No LNG in PVD coalition be reimbursed on a weekly basis for the cost of the independent monitor.

    a. There is no provision or requirement in the Remediation Regulations, for an independent environmental monitor. However, National Grid will provide weekly monitoring result summaries, which will be posted by the Department on its web site, and the Department will conduct oversight, including periodic Site visits, to observe the STRAP work.

23. Comment indicating the Department should require National Grid to provide copies of all air monitoring results to the No LNG in PVD coalition on a daily basis.

a. National Grid will be providing the Department with a summary of the air monitoring results on a weekly basis and the monitoring results will be posted on the Department's dedicated web page for the 642 Allens Avenue, Providence, Site http://www.dem.ri.gov/programs/wastemanagement/site-remediation/Providence-Gas-Co.php. The summary shall include an indication of any detected exceedances of any action levels and a complete description of how the detected exceedances were responded to and how the causes were controlled or resolved.

24. Ecological concerns raised indicating that the project area may be located in potential habitat for a federally listed threatened species, may potentially affect 19 migratory bird species, and therefore requesting that an Ecological Risk Assessment be conducted per Rule 8.05 of the Remediation Regulations.

    a. Evaluation of ecological environmental impacts and concerns, including potential impacts to endangered and threatened species, are considered by the FERC during their environmental document preparation process, as part of their ongoing project permitting process, and does not warrant duplication at the state level.

25. Questions about the language in the PIP indicating that the Site is not located in an Environmental Justice (EJ) Focus Area and concerns that the requirements of Rule 7.07.B (fact sheets and enhanced communication), Rule 1.04 (Environmental Justice and Public Involvement) and Rule 7.01.D (sign requirements) do not apply.

    a. While the Site was determined to not be in an EJ Focus Area, National Grid has proactively been completing the enhanced notification and communication activities that would otherwise have been required consistent with EJ areas per the Remediation Regulations, including hosting public meetings with translation services available, providing and distributing meeting notices and project fact sheets in multiple languages (per Rule 7.07.B), and committing to post informational signs at the project Site perimeter (per Rule 7.17.D).

26. Questions about how the community can be meaningfully involved in the decision-making process under the Remediation Regulations, including decisions related to Rule 7.04 (development of at least two remedial alternatives), and Rule 7.09 (Remedy Selection), as they apply to community opposition to the LNG Facility (National Grid's selected remedy) and community demands for remedial alternatives that include 1) no action (not allowing for construction) and 2) full and comprehensive remediation of the entire property.

    a. Rules 7.04 (Development of Remedial Alternatives), and 7.09 (Remedy Selection), are not applicable to Short Term Response Actions. Technical comments on the proposed remedial alternative are however considered by the Department and the Responsible Party. Proposed remedial alternative 1) no action (not allowing for construction), is not consistent with the intent of the Remediation Regulations to encourage remediation of hazardous material releases. Regarding proposed remedial alternative 2) full and comprehensive remediation of the entire property, it is the Department's understanding that a comprehensive Site Investigation Report

(SIR) Addendum is planned to be submitted later this year or in early 2018, which is the next step in the cleanup process and should present remedial alternatives to address all outstanding areas of the 642 Allens Avenue Site.

27. What state agency or branch of state government works with the FERC regarding decisions about whether these projects are wanted in Rhode Island?

    a. The FERC operates as an independent federal agency with specific jurisdiction for energy facility siting determinations. The FERC has identified the U.S. Department of Transportation (U.S. DOT), the Rhode Island Coastal Resources Management Council (RI CRMC), and the Department as cooperating agencies regarding specific limited portions of this project, in the preparation of the Environmental Assessment (EA) for the Liquefaction Project.

28. Various comments and concerns raised regarding the potential for contaminants in soil to be released into the air in the form of dust or vapors during soil disturbance remedial activities or when the existing engineered cap is disturbed. How were the perimeter air monitoring Action Levels for total Volatile Organic Compounds (TVOC) and Respirable Dust (PM_{10}) determined? Are those numbers adequate to protect the health of children?

    a. After receiving a request for assistance reviewing National Grid's proposed air monitoring plans, the following response was provided to the Department by a representative of the Rhode Island Department of Health (RI DOH):

       The PM_{10} Action Level is based on the United States Environmental Protection Agency's National Ambient Air Quality Standard (NAAQS) for that pollutant. The NAAQS is exceeded if the 24-hour average concentration of PM_{10} is over 150 $\mu g/m^3$. Since the National Grid Action Level will be triggered if PM_{10} level is 150 $\mu g/m^3$ for only five minutes, the Action Level is considerably more stringent than the NAAQS. Note that NAAQS are set at levels designed to protect all people, including children and other sensitive individuals.

       Setting the TVOC Action Level was less straightforward, because there is no NAAQS for TVOC and because TVOC is made up of a number of different substances which are not equally toxic. TVOC are present everywhere in all indoor and outdoor air. The Action Level was set at a level that is higher than normal background levels but which is very unlikely to be associated with toxic effects. Note that the TVOC Action Level for this site (1 ppm for a five-minute period) is considerably more stringent than the hazardous waste site clean-up Action Level used by the New York Department of Environmental Conservation (5 ppm as a 15-minute average).[i]

       Note also that both PM_{10} and TVOC will be measured at the perimeter of the site, considering wind direction and the location of neighborhoods. Since pollutant concentrations decrease as you move away from a source, the actual concentrations in nearby neighborhoods will be lower than those at the perimeter location.

29. Why will National Grid's monitoring and pollution-control measures cease after the STRAP projects are finished?

    a. The monitoring and pollution-control measures that National Grid is implementing are specific to the remedial work and disturbance of regulated soil and groundwater described in the STRAP, and therefore will not be required once remediation of the soil and groundwater is completed. National Grid will be required to apply for a minor source air pollution control permit from the Department's Office of Air Resources prior to the start of facility construction, and if approved will regulate and control the allowable air emissions from facility construction activities and facility operation.

Comments on the draft STRAPs will be issued separately. If you have any questions regarding this letter, please contact me by telephone at (401) 222-2797, extension 7109 or by e-mail at joseph.martella@dem.ri.gov.

Sincerely,

Joseph T. Martella II
Senior Engineer
Rhode Island DEM
Office of Waste Management

cc: Ronald Gagnon, RIDEM/OCTA
Kelly J. Owens, RIDEM.OWM
Susan Forcier, Esq., RIDEM/OLS
Gregory Swift, RIDEM/OWR
Ruth Gold, RIDEM/OAR
Barbara Morin, RIDOH/Center for Healthy Homes & Environment
Jeffrey Willis, RI CRMC
Dave Reis, RI CRMC
Kenneth J. Warn, FERC
Robert E. Azar, Providence Planning and Development
Dania Alejandra Flores-Heagney, EJLRI
Robin L. Main, Esq., Hinckley Allen
Margaret S. Kilpatrick, GZA

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[i] NY State Department of Environmental Conservation, DER-10/Technical Guidance for Site Investigation and Remediation, May 2010. http://www.dec.ny.gov/docs/remediation_hudson_pdf/der10.pdf

From: Sherrie Andre [mailto:lngcampaign@ejlri.org]
Sent: Monday, May 23, 2016 1:43 PM
To: gfugate@crmc.ri.gov
Subject: Inquiry: Fields Point LNG Facility

Hello,

I am writing to you in regards to National Grid's proposed Fields Point LNG Facility -- The Environmental Justice League of RI has launched a campaign opposing the Fields Point project and has been contacting the Coastal Resource Management Council's office (the past month) to see if National Grid has submitted the application needed for their permits.

Since we began this campaign we have acquired over 1,000 signatures on our petition and 25 local, regional, and national groups have signed onto our opposition letter.

I am hoping that through this correspondence, I can be kept up to date on whether or not National Grid has submitted their permits (I can continue to call and email weekly) -- but also be notified when the CRMC intends to host public hearings about the project. Please let me know if this is a possibility.

I have attached our sign on letter that we are continuously circulating.

Thank you for your time,
Sherrie'Anne Andre
LNG Campaign Coordinator, EJLRI

James Boyd

From: James Boyd <jboyd@crmc.ri.gov>
Sent: Thursday, July 14, 2016 3:51 PM
To: 'Sherrie Andre'
Cc: 'Aaron Jaehnig'; 'Jeff Willis'; 'Lisa Turner'; 'Tony Affigne'; 'Grover Fugate'; Anne Livingston; 'James Boyd'; Laura Dwyer
Subject: RE: Inquiry: Fields Point LNG Facility
Attachments: NGrid-FieldsPoint_prefile_071416.pdf

Hello Ms. Andre,

On behalf of Grover Fugate, CRMC Executive Director, we are providing the attached PDF file copy of all correspondence that has been filed with this office to date in regard to the proposed LNG liquefaction project located at Field's Point in Providence. National Grid has begun their filing process with the Federal Energy Regulatory Commission (FERC) for this project. You may review all documents filed with FERC in this matter by searching under docket number CP16-121 on the FERC eLibrary webpage here: http://www.ferc.gov/docs-filing/elibrary.asp.

Although National Grid has not yet filed an application for this project with the CRMC, we expect an application to be filed with our office later this year. As you've requested, we will notify you when an application has been filed with our office, as well as the date(s) on which any public hearings may be scheduled. In the interim, please contact me should you have any questions.

Regards - Jim

James Boyd
Coastal Policy Analyst
RI Coastal Resources Management Council
Oliver Stedman Government Center
4808 Tower Hill Road
Wakefield, RI 02879
jboyd@crmc.ri.gov | 401.783.3370

From: Grover Fugate [mailto:gfugate@crmc.ri.gov]
Sent: Wednesday, July 13, 2016 8:46 AM
To: Tony Affigne
Cc: Sherrie Andre; Aaron Jaehnig; Jeff Willis; jboyd@crmc.ri.gov; Lisa Turner
Subject: Re: Inquiry: Fields Point LNG Facility

Tony

We will take care of this right away.

Grover

Sent from my iPhone

On Jul 12, 2016, at 9:06 PM, Tony Affigne <affigne@gmail.com> wrote:

> Grover, Jeff, and Jim:
>
> Thank you for responding to Sherrie Andre's May 23 and July 12 emails, about the National Grid LNG liquefaction project, on the Providence waterfront adjacent to the Washington Park and South Providence neighborhoods.

Sign-on Letter Opposing Fields Point LNG Liquefaction Facility

To: Federal Energy Regulatory Commission (FERC), RI Department of Environmental Management (RIDEM), RI Coastal Resources Management Council (RICRMC), Governor Gina Raimondo, Senator Sheldon Whitehouse, Senator Jack Reed, Congressman David Cicciline, Congressman Jim Langevin, Mayor Jorge Elorza, and all other relevant parties and elected officials:

We, the undersigned organizations and individuals, oppose National Grid's proposal to build the Fields Point Liquefaction Facility in the Port of Providence. For the numerous reasons outlined below, we call upon the Federal Energy Regulatory Commission (FERC), the RI Department of Environmental Management (RIDEM), and the RI Coastal Resources Management Council (RICRMC) to reject National Grid's applications. We also call upon our elected and appointed officials to support the residents of Rhode Island they are sworn to protect and serve, and join us in asking the federal and state regulatory bodies to reject National Grid's Fields Point Liquefaction Facility proposal. We insist that FERC, RIDEM, and RICRMC take the following issues into consideration in the review of National Grid's proposal, and reject the proposal based on this community opposition.

• It is a high-risk facility with numerous potential disasters including but not limited to earthquakes, hurricanes, storm surges, industrial accidents, fires, explosions, and chemical incidents.

• The proposed facility would be adjacent to numerous toxic industrial facilities, located in a densely populated community of color with many environmental justice concerns. According to the EPA, the neighboring community is ranked over the 95th percentile on numerous environmental justice indicators including: traffic proximity and volume; proximity to chemical facilities requiring a risk management plan; proximity to facilities storing and transferring toxic and hazardous waste; and proximity to major water discharge polluters.

• The proposed facility is next to to a chemical facility that has a 14-mile hazard radius.

• Rhode Island's only trauma and hospital complex including RI Hospital, Hasbro Children's Hospital, and Women and Infants is less than two miles away, within the potential evacuation zone of the proposed facility. Providence Community Health Center, Hasbro Medicine Pediatric Primary Care, and other medical facilities are even closer, which is unacceptable.

• The proposal will increase the price of gas by adding the $180 million cost of the facility to customer's bills. It will not lead to more stable and predictable natural gas costs, as National Grid claims, because domestic natural gas prices have a history of extreme volatility.

• There is no need to increase the supply of LNG. The existing LNG storage tank serves RI's needs; there are three LNG import terminals already built near Boston. Our focus needs to be on energy conservation, weatherization, and reducing demand, not increasing our supply unnecessarily.

• The LNG produced at the facility would be from gas extracted by the controversial process of hydraulic fracturing, which has been banned in New York State due to public health risks. The dangerous chemicals used in the extraction process are contained in the produced gas and may be emitted during the LNG production process when "impurities" in the gas are removed.

• The Liquefaction Facility would be a massive waste of electricity, requiring 15 Megawatts which is half of all the electricity that will be produced by the Deepwater Wind project.

• National Grid's public participation plan is extremely flawed. They contacted certain officials, industrial neighbors, and a handful of homeowners but ignored the residents and tenants who will be negatively impacted by the project. The only two community organizations listed by National Grid were fictitious neighborhood organizations that have never existed.

• National Grid's Fields Point Liquefaction Facility is unnecessary, costly, and risky. It's a bad idea for everyone in Rhode Island, but the negative effects will be felt more directly and severely by the poorer and non-white residents in Providence. The area where the project is planned is one of the state's most polluted. Building this plant will contribute to the pollution, not cut back. In a state where 67% of pre-K through 12th-grade students attend schools in high-risk zones that threaten chemical leaks, gas clouds and explosions, we need clean, renewable and non-polluting energy that is equitable for marginalized communities. We need investments in renewable energy, not dangerous fossil fuels, to be directed into low-income communities of color.

We are calling on FERC and our elected and appointed officials in Rhode Island to listen to this widespread community opposition to National Grid's proposal, and reject the application.

Sincerely,

1, 107 individuals who have signed the online No LNG in PVD petition as of May 13, 2016, as well as the following organizations:

Local / Providence
The Environmental Justice League of RI
Bell Street Chapel, Governing Board
The FANG Collective
BASE: Burrillville Against Spectra Expansion
Camilo Viveiros, George Wiley Center
emPOWER (Brown University)
Occupy Providence

Providence Student Union
PRYSM: Providence Youth Student Movement
The White Noise Collective
Representative Aaron Regunberg

Statewide (Rhode Island)
Clean Water Action (RI)
Fossil Free RI
The Green Party of RI
Humanists of RI
RI Sierra Club

Regional/National:
Climate Action Now (MA)
Climate Justice Alliance (National)
Coalition for Responsible Siting of LNG Facilities (Fall River, MA)
Food and Water Watch (National)
Grassroots Global Justice (National)
Hampshire College Climate Justice League (MA)
Popular Resistance (National)
People, Not Pipelines (New England)
Beyond Extreme Energy (National)
No Sharon Gas Pipeline (MA)

EFFECTIVE WITHOUT THE MAYOR'S SIGNATURE

City of Providence
STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS

RESOLUTION OF THE CITY COUNCIL

No. 117

EFFECTIVE March 28, 2016

WHEREAS, National Grid is proposing to build a natural gas liquefaction facility adjacent to its existing storage facility at Fields Point in Providence; and

WHEREAS, Currently, the National Grid storage facility receives liquefied natural gas (LNG) delivered via tanker trucks; and

WHEREAS, The existing storage facility is known as a peak-shaver facility, which stores LNG for use on peak energy days, when energy demand exceeds supply, such as during very cold weather days; and

WHEREAS, National Grid's proposal would construct an additional facility that would receive natural gas via existing pipeline, and produce LNG on site, with some to be stored on site, and some to be delivered to other locations via tanker truck; and

WHEREAS, The liquefaction process transforms natural gas to LNG by cooling it to -260 degrees, turning it into liquid, and thereby decreasing its volume 600 times; and

WHEREAS, National Grid asserts that "demand for LNG has increased around the world, creating market volatility for LNG pricing" and that since most of its "New England LNG supply is shipped to the region from foreign sources and transported by tanker trucks...unforeseen events can also place the reliability of LNG deliveries at risk, making it essential...to secure a reliable, reasonably priced LNG supply"; and

WHEREAS, The U.S. Energy Information Administration (EIA) reported that nearly 95% of Rhode Island's net electricity generation (electricity generated for consumer use) comes from natural gas, and that approximately half of the households in the state heat with natural gas; and

WHEREAS, The EIA also reported that Rhode Island had one of the lowest per capita energy consumption rates in the nation, and was the second lowest emitter of carbon dioxide of all states; and

WHEREAS, Rhode Island is positioned to become a leader in renewable energy, with the 30 megawatt Block Island Wind Farm--the first offshore wind farm in the United States--under construction and scheduled to be operational by the end of 2016; and

WHEREAS, Other innovative programs, such as Solarize Rhode, are incentivizing small-scale renewable energy systems in our cities and towns; and

WHEREAS, The environmental impacts of the liquefaction process, combined with the natural gas extraction process (fracking), are widely cited; and

WHEREAS, Studies have noted that the release of methane into the environment from oil and gas production is significantly greater than previously estimated the U.S. Environmental Protection Agency (EPA); and

WHEREAS, In March 2016, President Obama announced new rules to reduce methane emissions--which according to the EPA, have a 25 times greater impact on climate change than carbon dioxide emissions--from existing gas and oil facilities; and

WHEREAS, Supporting the proposed Fields Point liquefaction facility could undermine efforts to reduce Rhode Island's reliance on natural gas and other fossil fuels; and

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WHEREAS, The impact of the proposed National Grid LNG facility on public safety, public health, environmental justice, and climate change must be thoroughly considered and publicly discussed; and

WHEREAS, The proposed project site has an impact area that includes neighborhoods with populations vulnerable to environmental threats, including high rates of poverty, unemployment, and asthma; and

WHEREAS, The Director of the Rhode Island Department of Health, Dr. Nicole Alexander-Scott stated in a letter to FERC regarding the project that the department of health "has ample data on poor health outcomes, elevated health risks, and racial and ethnic disparities within the City of Providence and in particular within the neighborhoods of Upper and Lower South Providence and Washington Park, which are in close proximity to the proposed project" and noted that these and other factors should be included in assessments of the cumulative impacts of this proposal; and

WHEREAS, While LNG-related disasters are uncommon, a recent incident at an LNG facility in Washington State required the evacuation of a two-mile zone, which if applied to the proposed site at Fields Point, would mean the evacuation of tens of thousands of people; and

WHEREAS, Other uses near the proposed LNG liquefaction facility may increase the potential for casualties and public health and safety risks that could result from an accident.

NOW, THEREFORE, BE IT RESOLVED, That the City Council of the City of Providence does hereby support and urge the City's involvement in the development of an Environmental Impact Statement that comprehensively addresses the environmental impacts of the current and proposed LNG facilities.

BE IT FURTHER RESOLVED, That the environmental impact analysis include potential disaster scenarios, evacuation plans, and casualties within a two-mile radius of the project site, as well as evaluates the concentration of other facilities in the area that may impact public health and safety in the case of a disaster; and

BE IT FURTHER RESOLVED, That the environmental review include studies of diesel truck traffic between I-95 and the port area on a daily, monthly, and annual basis, and the estimated particulate matter released into the air as a result of such traffic; and

BE IT FURTHER RESOLVED, That the City Council supports the Rhode Island Department of Health request that a Risk Management Plan be required; and

BE IT FURTHER RESOLVED, That the City of Providence will hold public forums in multiple neighborhood locations and shall require representatives of the project site owner to attend to answer questions and address concerns, as well as require that representatives from Rhode Island Department of Health, Rhode Island Department of Environmental Management, and the Rhode Island Coastal Resources Management Corporation participate in the public forums; and

BE IT FURTHER RESOLVED, That the City of Providence will ensure compliance with the highest standards of environmental and health protocols, and will address, to the extent allowed by law, environmental, safety, and health concerns associated with this project; and

BE IT FURTHER RESOLVED, That upon passage, copies of this resolution be delivered to the Director of the Department of Planning and Development, the Rhode Island Department of Health, the Rhode Island Department of Environmental Management, and the Rhode Island Coastal Resources Management Corporation, and the Secretary of the Federal Energy Regulatory Commission.

IN CITY COUNCIL

MAR 17 2016

READ AND PASSED

PRES.

CLERK

Effective without the Mayor's Signature

Lori L. Hagen
City Clerk

RECEIVED
APR 01 2016
COASTAL RESOURCES MANAGEMENT COUNCIL

DEPARTMENT OF CITY CLERK
CITY HALL, PROVIDENCE, R.I. 02903

LORI L. HAGEN, CITY CLERK

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Grover Fugate, Executive Director
Coastal Resours Mgmt. Corp
Stedman Government Center
Suite 3
4808 Tower Hill Road
Wakefield, RI 02879

02879$2219

EFFECTIVE WITHOUT THE MAYOR'S SIGNATURE

City of Providence
STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS

RESOLUTION OF THE CITY COUNCIL

No. 117

EFFECTIVE March 28, 2016

WHEREAS, National Grid is proposing to build a natural gas liquefaction facility adjacent to its existing storage facility at Fields Point in Providence; and

WHEREAS, Currently, the National Grid storage facility receives liquefied natural gas (LNG) delivered via tanker trucks; and

WHEREAS, The existing storage facility is known as a peak-shaver facility, which stores LNG for use on peak energy days, when energy demand exceeds supply, such as during very cold weather days; and

WHEREAS, National Grid's proposal would construct an additional facility that would receive natural gas via existing pipeline, and produce LNG on site, with some to be stored on site, and some to be delivered to other locations via tanker truck; and

WHEREAS, The liquefaction process transforms natural gas to LNG by cooling it to -260 degrees, turning it into liquid, and thereby decreasing its volume 600 times; and

WHEREAS, National Grid asserts that "demand for LNG has increased around the world, creating market volatility for LNG pricing" and that since most of its "New England LNG supply is shipped to the region from foreign sources and transported by tanker trucks...unforeseen events can also place the reliability of LNG deliveries at risk, making it essential...to secure a reliable, reasonably priced LNG supply"; and

WHEREAS, The U.S. Energy Information Administration (EIA) reported that nearly 95% of Rhode Island's net electricity generation (electricity generated for consumer use) comes from natural gas, and that approximately half of the households in the state heat with natural gas; and

WHEREAS, The EIA also reported that Rhode Island had one of the lowest per capita energy consumption rates in the nation, and was the second lowest emitter of carbon dioxide of all states; and

WHEREAS, Rhode Island is positioned to become a leader in renewable energy, with the 30 megawatt Block Island Wind Farm--the first offshore wind farm in the United States--under construction and scheduled to be operational by the end of 2016; and

WHEREAS, Other innovative programs, such as Solarize Rhode, are incentivizing small-scale renewable energy systems in our cities and towns; and

WHEREAS, The environmental impacts of the liquefaction process, combined with the natural gas extraction process (fracking), are widely cited; and

WHEREAS, Studies have noted that the release of methane into the environment from oil and gas production is significantly greater than previously estimated the U.S. Environmental Protection Agency (EPA); and

WHEREAS, In March 2016, President Obama announced new rules to reduce methane emissions--which according to the EPA, have a 25 times greater impact on climate change than carbon dioxide emissions--from existing gas and oil facilities; and

WHEREAS, Supporting the proposed Fields Point liquefaction facility could undermine efforts to reduce Rhode Island's reliance on natural gas and other fossil fuels; and

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WHEREAS, The impact of the proposed National Grid LNG facility on public safety, public health, environmental justice, and climate change must be thoroughly considered and publicly discussed; and

WHEREAS, The proposed project site has an impact area that includes neighborhoods with populations vulnerable to environmental threats, including high rates of poverty, unemployment, and asthma; and

WHEREAS, The Director of the Rhode Island Department of Health, Dr. Nicole Alexander-Scott stated in a letter to FERC regarding the project that the department of health "has ample data on poor health outcomes, elevated health risks, and racial and ethnic disparities within the City of Providence and in particular within the neighborhoods of Upper and Lower South Providence and Washington Park, which are in close proximity to the proposed project" and noted that these and other factors should be included in assessments of the cumulative impacts of this proposal; and

WHEREAS, While LNG-related disasters are uncommon, a recent incident at an LNG facility in Washington State required the evacuation of a two-mile zone, which if applied to the proposed site at Fields Point, would mean the evacuation of tens of thousands of people; and

WHEREAS, Other uses near the proposed LNG liquefaction facility may increase the potential for casualties and public health and safety risks that could result from an accident.

NOW, THEREFORE, BE IT RESOLVED, That the City Council of the City of Providence does hereby support and urge the City's involvement in the development of an Environmental Impact Statement that comprehensively addresses the environmental impacts of the current and proposed LNG facilities.

BE IT FURTHER RESOLVED, That the environmental impact analysis include potential disaster scenarios, evacuation plans, and casualties within a two-mile radius of the project site, as well as evaluates the concentration of other facilities in the area that may impact public health and safety in the case of a disaster; and

BE IT FURTHER RESOLVED, That the environmental review include studies of diesel truck traffic between I-95 and the port area on a daily, monthly, and annual basis, and the estimated particulate matter released into the air as a result of such traffic; and

BE IT FURTHER RESOLVED, That the City Council supports the Rhode Island Department of Health request that a Risk Management Plan be required; and

BE IT FURTHER RESOLVED, That the City of Providence will hold public forums in multiple neighborhood locations and shall require representatives of the project site owner to attend to answer questions and address concerns, as well as require that representatives from Rhode Island Department of Health, Rhode Island Department of Environmental Management, and the Rhode Island Coastal Resources Management Corporation participate in the public forums; and

BE IT FURTHER RESOLVED, That the City of Providence will ensure compliance with the highest standards of environmental and health protocols, and will address, to the extent allowed by law, environmental, safety, and health concerns associated with this project; and

BE IT FURTHER RESOLVED, That upon passage, copies of this resolution be delivered to the Director of the Department of Planning and Development, the Rhode Island Department of Health, the Rhode Island Department of Environmental Management, and the Rhode Island Coastal Resources Management Corporation, and the Secretary of the Federal Energy Regulatory Commission.

IN CITY COUNCIL

MAR 17 2016

READ AND PASSED

PRES.

CLERK

Effective without the Mayor's Signature

Lori L. Hagen
City Clerk

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COASTAL RESOURCES MANAGEMENT COUNCIL

NO LNG in PVD

April 24, 2017

The Honorable Kimberly D. Bose
Secretary
Federal Energy Regulatory Commission
888 First St., N.E.
Washington, D.C. 20426

RE: National Grid LNG LLC
Fields Point Liquefaction Project
Docket No. CP16-121-000

Dear Secretary Bose,

No LNG in PVD is a growing coalition of individuals, organizations, and elected officials that are opposed to National Grid LNG, LLC ("NGLNG") proposed Fields Point Liquefaction Project (hereafter "Project"). The No LNG in PVD Coalition (hereafter "Coalition") is submitting these comments to Docket Number CP16-121 in response to recent changes and developments related to the project. The comments are based on three areas of concern: 1) Public Involvement Plan and Contaminated Soil; 2) Recent accidents and safety issues; 3) Dropping plans for the Bund Wall safety enhancements.

The Coalition represents all of the individuals who have signed the online petition[1] (1,532 people to date) as well as 17 elected officials and 35 community groups, faith-based organizations, businesses, governmental unions and offices, and coalitions that have formally endorsed the Coalition (see attached for full list). In addition, Environmental Council of Rhode Island, a coalition of 62 environmental organizations in Rhode Island, has also voted to officially oppose the Facility - see attached for the ECRI statement, which was approved October 3, 2016.

The No LNG in PVD Coalition is not an official Intervenor because it was formalized after the Intervenor filing period had passed, but it has standing in these proceedings due to having three lead member organizations that are recognized are Intervenors: BASE: Burrillville Against Spectra Expansion, The Environmental Justice League of Rhode Island, and The FANG Collective. The Coalition submits these comments on behalf of organizational and individual members who are recognized Intervenors, and requests that these comments be considered part of the record and duly considered in the review of the Certificate application by National Grid LNG for the Fields Point Liquefaction Facility (Docket CP16-121).

1) Public Involvement Plan and Contaminated Soil

The Coalition appreciates that the Commission has been proactive in responding to concerns raised about soil contamination at the project site, with the questions posed to NGLNG in the 11/17/2016 data request, the 1/17/2017 letter to the Rhode Island Department of Environmental

[1] https://actionnetwork.org/petitions/no-lng-in-pvd

Management ("RIDEM"), and the recent 4/7/2017 letter and data request to NGLNG. In particular, the Coalition's longstanding stance has been validated by the fact that the most recent April 7th data request confirms that the 2012 Soil Management Plan is insufficient and that NGLNG should abide by RIDEM regulations under Rhode Island law including the STRAP and Public Involvement Plan.

NGLNG's determination to avoid public involvement and refusal to adhere to Rhode Island state law regulations has been consistent throughout this process and especially since community members within our Coalition initiated the Public Involvement Plan in September 2016. This blatant disregard for legitimate concerns and relevant regulations is evident in NGLNG's April 12, 2017 response to the April 7 data request. With this response, NGLNG is refusing to comply with the approach agreed upon by both FERC and RIDEM. NGLNG is also ignoring the January 17, 2017 letter from Ann Miles, Director of FERC's Office of Energy Projects, to Susan Forcier at RIDEM, which clarifies that while federal preemption applies for construction and operation of approved facilities, applicants for new facilities should cooperate with state agencies. The Coalition agrees with the Commission's assessment that the State of Rhode Island has the authority, ability, and obligation to deal with environmental issues raised in this proceeding, and NGLNG's ongoing attempts to skirt the State's authority is disturbing.

The Coalition has been in communication with RIDEM since initiating the Public Involvement Plan process in September 2016. Numerous complaints about ongoing construction activities and exposed soil were made in September and October 2016 (see Appendix at end for details). Written communications from the Coalition to RIDEM are attached to this letter as documentation to be included in this Docket, and to be taken into consideration in the preparation of the Environmental Document. See attached for:

- August 31, 2016 Public Involvement Plan Petition to RIDEM
- September 6, 2016 RIDEM PIP Initiation Letter
- November 1, 2016 No LNG in PVD open letter to RIDEM
- February 10, 2017 No LNG in PVD follow up letter to RIDEM

In addition, concerns over soil and groundwater contamination were raised in comments submitted on January 23, 2017 to RICRMC as part of the federal consistency review, and are also attached for inclusion in the Docket and for consideration in the preparation of the Environmental Document.

The Coalition considers these issues and the environmental and health risks entailed to be serious environmental impacts, which should warrant a full Environmental Impact Statement and not a limited Environmental Assessment. NGLNG's attempt to avoid oversight and minimize these issues is highly problematic. NGLNG's December 7, 2016 response to the FERC data request issued November 17, 2016 is emblematic of an attempt to disregard the extensive amount of data which must be reviewed. While FERC requested "all supporting documentation, of surficial and subsurface investigations to delineate the horizontal and vertical extent of soil and groundwater contamination and all remedial actions conducted to remove and/or contain contaminants at the Project site," NGLNG did not submit the required documentation. Their justification for not sharing the full information stated that "the supporting documentation for these investigations is voluminous and contained in multiple binders that take up a full bookcase shelf and/or a full file drawer. The majority of this documentation consists of paper copies and has not been converted to electronic files." In fact, this shows the extent of the data that needs to be reviewed related to the contamination, and is in itself justification of significant impact and the requirement for a full EIS.

2) Recent accidents and safety issues

Commission staff should be aware of two recent accidents that made national news and are relevant to the review of the proposed project. In the early morning of March 8th 2017, an ethanol train being delivered to the Motiva terminal derailed onto Allens Avenue, adjacent to National Grid's property.[2] Luckily it occurred during a low-traffic time and did not spill, but Allens Ave is a very busy four lane road with industrial, commuter, and residential traffic. If the train car had tipped to the side instead of falling forward onto the street, it would have fallen on the fuel lines connected to all of Motiva's storage tanks at the point where they cross underneath Allens Ave. The location of National Grid's existing LNG tank and proposed liquefaction facility is directly abutting the Motive property. Following the accident, the No LNG in PVD Coalition along with The FANG Collective, The Environmental Justice League of RI, and the Sierra Club - RI Chapter issued a press release[3] about the concentration of high risk hazardous facilities and environmental justice issues in the Washington Park neighborhood. These issues have been raised in previous comments to the Commission, but it is worth emphasizing that the Port of Providence area and the proposed LNG facility is located in the Washington Park residential neighborhood with a 6,300 people/sq mile density, just over 1 mile from RI Hospital and 2 miles from downtown Providence's financial, business and commercial center.[4]

A few weeks later on March 29th, there was a major gas leak following a rupture on a National Grid high pressure line that lasted for over 3 hours before it could be shut off, and resulted in the closure of the major interstate highway I-195 due to a visible gas cloud and risk of ignition.[5] It was determined that the major accident, that would have been catastrophic if an ignition source was present, was caused by construction work on the property done by Spectra Energy.[6] The rupture occurred at National Grid's Franklin Square station at the intersection of Eddy Street and Allens Ave, just a few hundred feet away from the state's major hospital complex and close to the Manchester Street power plant. Following the incident there were protests in front of National Grid's existing facility on Allens Ave[7] and the No LNG in PVD Coalition issued another press release calling for an end to the proposed Fields Point liquefaction facility.[8] It has since been reported that the line rupture resulted in contaminating the surrounding site with PCBs, black powder, and oil products, rendering it a hazmat site.[9]

These recent developments serve to highlight the concerns and support the claims made by opponents of the proposed Fields Point Liquefaction Facility, which have been raising since the project was announced and scoping comments were requested. There is an overburden of risks and environmental justice issues due to the high concentration of existing facilities in the area. These incidents illustrate the existing conditions upon which the proposed facility would add an additional cumulative impact. It also shows that despite all of National Grid's claims, accidents do indeed

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[2] https://www.usnews.com/news/best-states/rhode-island/articles/2017-03-08/police-train-carrying-ethanol-derailed-in-providence

[3] http://www.rifuture.org/after-ethanol-train-accident-activists-call-for-an-end/

[4] http://www.city-data.com/neighborhood/Washington-Park-Providence-RI.html

[5] http://www.providencejournal.com/news/20170330/officials-construction-caused-gas-line-rupture-in-providence

[6] http://www.providencejournal.com/news/20170329/gas-line-rupture-in-providence-closes-route-195-city-streets--video

[7] http://wpri.com/2017/03/30/environmental-groups-protest-at-national-grid-facility-following-gas-leak/

[8] http://www.rifuture.org/nolnginpvd-end-liquifaction/

[9] http://www.rifuture.org/pipeline-rupture-remediation/

happen and they are more likely to happen along Allens Avenue. LNG tankers and construction traffic would be transiting along Allens Avenue where the ethanol derailment occured. Construction to install the electrical line to power the liquefaction facility would occur along Allens Ave. That proposed construction would begin with installing new electrical equipment at the same Franklin Square station where the massive gas rupture just occurred. Construction activity was what caused the recent rupture, which raises concerns about additional construction activities at the site. The site of the proposed liquefaction facility, similar to the Franklin Square substation, in that it is a connection point between a Spectra Energy high pressure transmission line and the National Grid distribution system. The recent accident raises many additional concerns about the risks of construction activity and pile driving at such a location. If the recent gas leak had occurred at or near the existing LNG storage tank, the results could have been much worse.

3) Dropping plans for Bund Wall safety enhancements

On March 10, 2017 the Commission issued an environmental information request to NGLNG about the proposed bund wall project, and raised some important questions about the project's design and safety during construction, including: how panels would be secured; whether the LNG tank would remain cold with inventory (LNG) inside or if it would be emptied during construction; how the existing "LNG tank, piping, equipment, and instrumentation would be protected from damage during the bund wall construction activities including pile installation." The No LNG in PVD coalition shared many of the same concerns and would have pressed for extensive review and public involvement with plans to build the bund wall. However, on March 16, 2017 NGLNG replied and said that "NGLNG is currently reevaluating the design of the Bund Wall Project and does not now expect to proceed with construction of the Bund Wall Project at the same time as the FPLP given the time needed for the reevaluation of the Bund Wall Project."

The removal of the plans for the bund wall is especially concerning now, given the recent nearby incidents. The existing tank is also at sea level, on the wrong side of the hurricane barrier, and vulnerable to storm surges. The tank was brought into service in 1974 and has been in operation for over 40 years. When it was built, what was the expected lifespan for the facility? In 2005, Keyspan LNG's (now NGLNG) proposal to build an LNG import terminal at the site was rejected by the Commission due to the fact that existing storage facility, impoundment, and facility site did not meet DOT safety standards for LNG import facilities.[10] In particular, this was because the existing storage tank did not have an impoundment that would fit 110% of the tank's capacity, which was one of the primary items that the formerly proposed bund wall was supposed to address. According to to January 24, 2005 filing by Keyspan LNG[11],

> "KeySpan contends that in order to bring its facility into compliance with current safety standards, it would need to make the following major modifications: (1) replace anchors, possibly increase inner tank annular plate thickness and width, and replace or increase foundation for seismic requirements; (2) install in-tank pumps and eliminate bottom penetrations to reduce flammable vapor exclusion zones; (3) increase impoundment capacity; (4) add pressure and vacuum relief valves; and (5) acquire legal control of eight adjacent industrial properties for thermal exclusion zones. KeySpan asserts that the cost of

[10] Order Denying Authorization Under Section 3 and Dismissing Certificate Application (Issued July 5, 2005). Dockets CP04-223, CP04-293, and CP04-358. https://www.ferc.gov/whats-new/comm-meet/063005/C-3.pdf

[11] ibid

> these modifications would exceed $35 million and require the removal of the LNG storage facility from service for two to three heating seasons. Based on these findings, KeySpan contends that it would not be feasible for the existing facility to meet the federal safety standards."

One decade later, the same company (now acquired by National Grid) returned with a new plan to expand the facility. This time, the proposal was combined with an $80 million enhancement to the existing storage tank that was designed for it to meet the safety standards that were the cause of the previous rejection. However, after receiving a few questions about whether the construction of the proposed safety enhancement could be done safely, and whether the storage tank would be taken out of service while undergoing construction, the applicant is once again deciding to not comply with federal safety standards. This is ample justification for the Commission to deny authorization, as it did in 2005. Within the current phase of the review process, this also serves as yet another reason to conduct a full Environmental Impact Statement and review these safety concerns in greater depth.

The cancellation of the bund wall component is a major change in the design and plans for the proposed facility, and it should require having National Grid re-do all the hazard analyses and thermal exclusion zones based on this change. Given the recent rupture and gas leak at a nearby National Grid facility, a thorough analysis must be conducted of the worst case scenario. Worst case scenarios should include catastrophic failure at both the liquefaction facility and the existing storage tank, as well as any potential offset impact or hazard resulting from neighboring facilities such as the Univar chemical plant or the neighboring Motiva facility where the ethanol trail derailed.

Conclusion

In closing, the No LNG in PVD Coalition re-asserts the request that the Commission undertake a full Environmental Impact Statement instead of the limited Environmental Assessment. This echoes previous requests by Providence Mayor Jorge Elorza, multiple members of the Rhode Island legislature, organizations and individual residents. The combination of issues related to: 1) soil contamination; 2) recent accidents and concerns around risks and cumulative impacts; and 3) removal of the bund wall project are each ample justification to show the potential for significant impact and require a full EIS.

The Coalition also affirms the Commission's position that RIDEM has authority and responsibility to enforce regulations and policies applying to contaminated sites with land use restrictions such as the entire property upon which the proposed facility would be sited. No LNG in PVD will be contacting RIDEM to follow up on the two previous open letters, and to inquire about the agency's plan for implementing the Public Involvement Plant and reviewing the requests for the required STRAP permit and 401 Water Quality Certification.

Sincerely,

Monica Huertas, Campaign Coordinator
On behalf of the No LNG in PVD Coalition
NoLNGinPVD@gmail.com

Attached:
No LNG in PVD Coalition members and supporters
Environment Council of Rhode Island statement
August 31, 2016 Public Involvement Plan Petition to RIDEM
September 6, 2016 RIDEM PIP Initiation Letter
November 1, 2016 No LNG in PVD open letter to RIDEM
January 23, 2017 No LNG in PVD comments to RICRMC
February 10, 2017 No LNG in PVD follow up letter to RIDEM

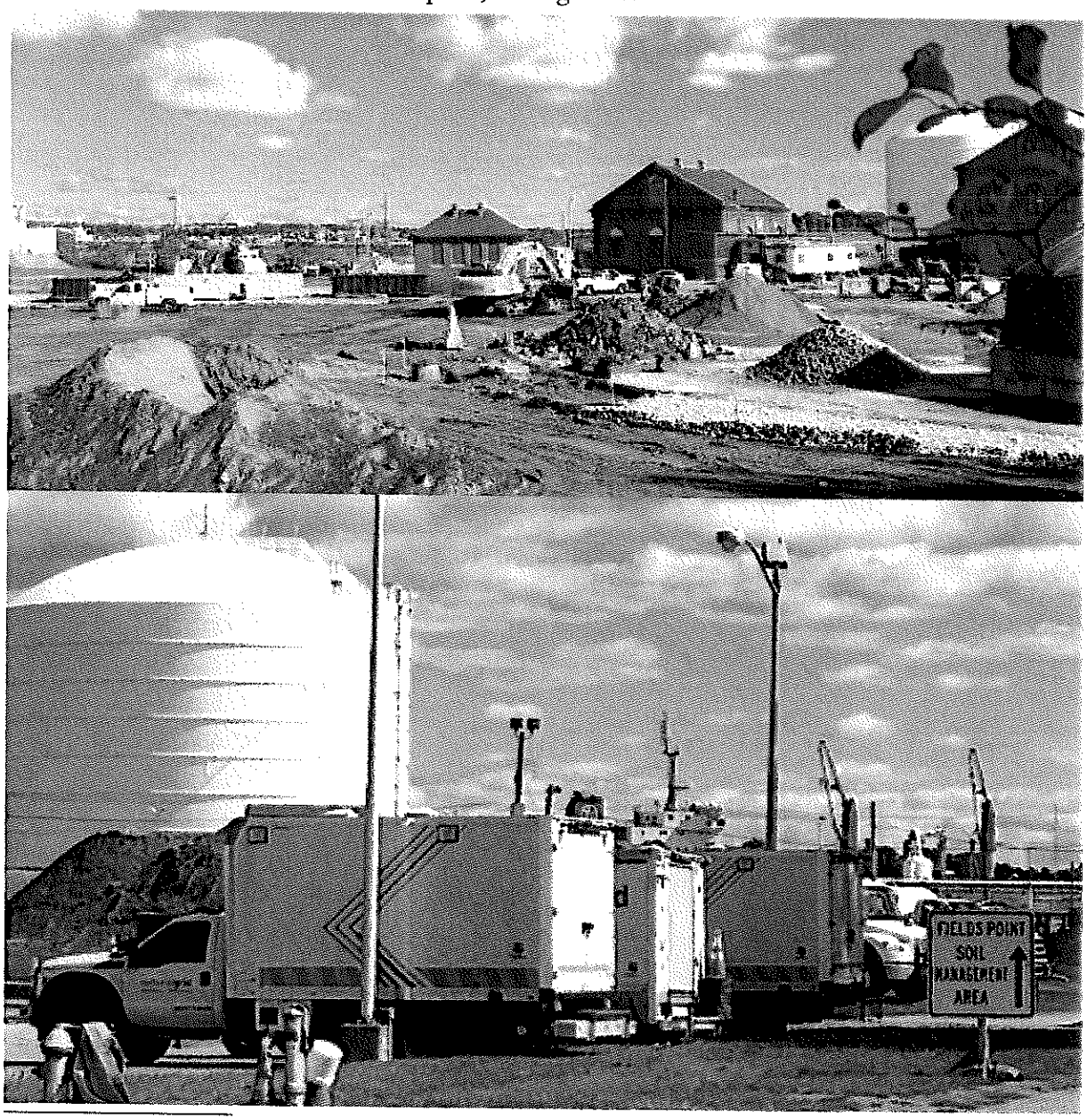
CC: Docket CP16-121 Intervenor List
Susan Forcier, RIDEM
Janet Coit, RIDEM
Terry Gray, RIDEM
Ron Gagnon, RIDEM
Ernie Panciera, RIDEM
Joseph Martella, RIDEM
Craig Roy, RIDEM
Grover Fugate, RICRMC

APPENDIX:

The following is documentation of construction activity occurring at the site of the project location that was related to preparations for the proposed liquefaction facility, as well as documentation of recent accidents in the area.

September 24, 2016:

Construction was visible on the site, in areas with known contaminated. A sign identifying the Fields Point Soil Management Area pointed towards piles of exposed soil, which had visible dust blowing off of them. Community complaints about the ongoing construction, and calls for it to be halted until a Public Involvement Plan was in place, were ignored.[12]



[12] September 27, 2016: "No LNG in PVD demands National Grid halt construction at Fields Point: http://www.rifuture.org/nolnginpvd-halt-construction/

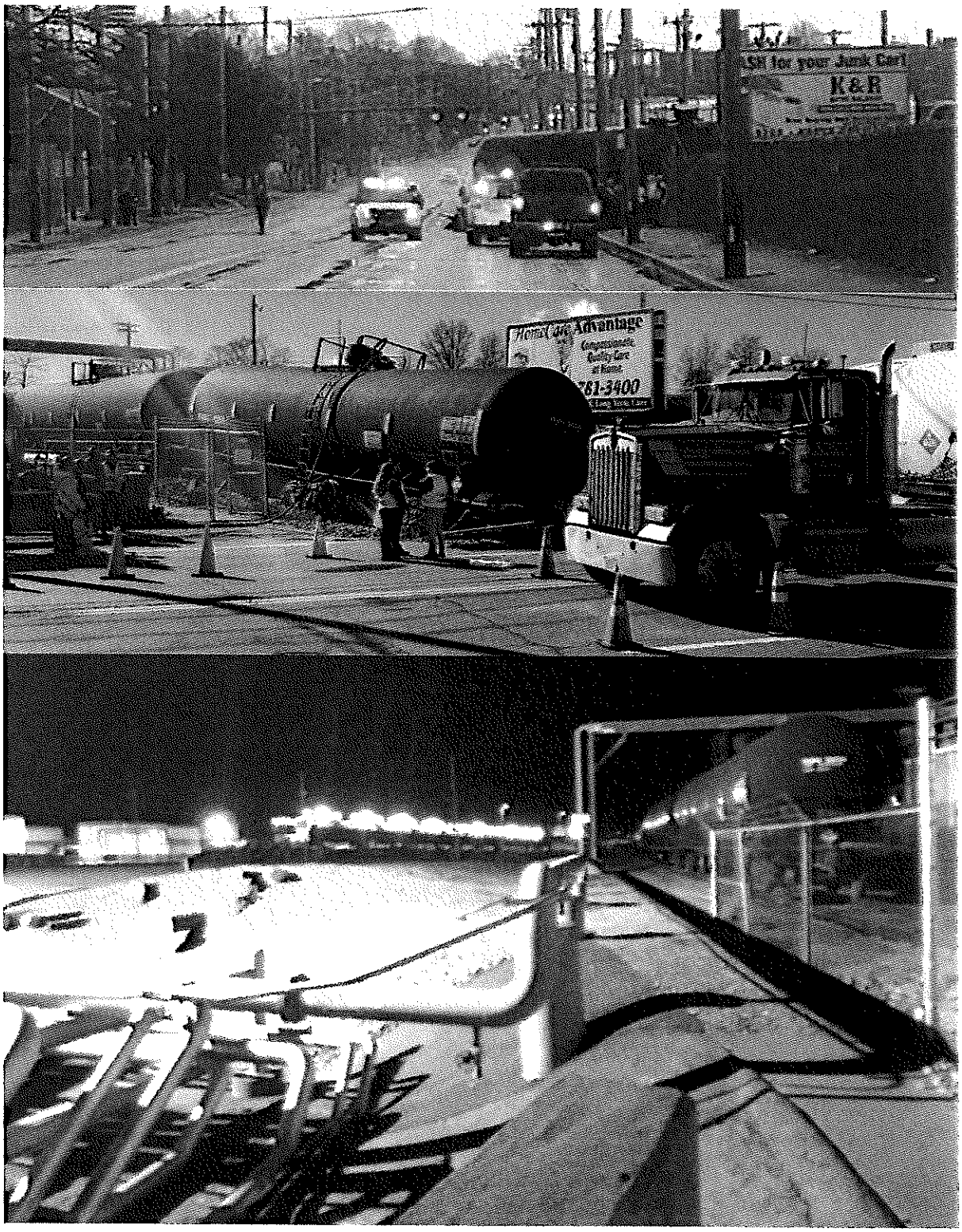
October 13, 2016:
As documented in an article on RI Future,[13] after NGLNG denied that the ongoing construction work at the site had anything to do with the Fields Point Liquefaction Project, and ignored the Public Involvement Plan request and concerns about conducting construction activity in contaminated soils, the following sign was posted on Terminal Road at the project site.

National Grid's application states that they were expecting to receive all necessary approvals in August 2016 and beginning construction in September 2016. The No LNG in PVD Coalition believes that despite not receiving *any* of the required approvals, National Grid still started construction on work related to the liquefaction facility, while attempting to call that work unrelated.

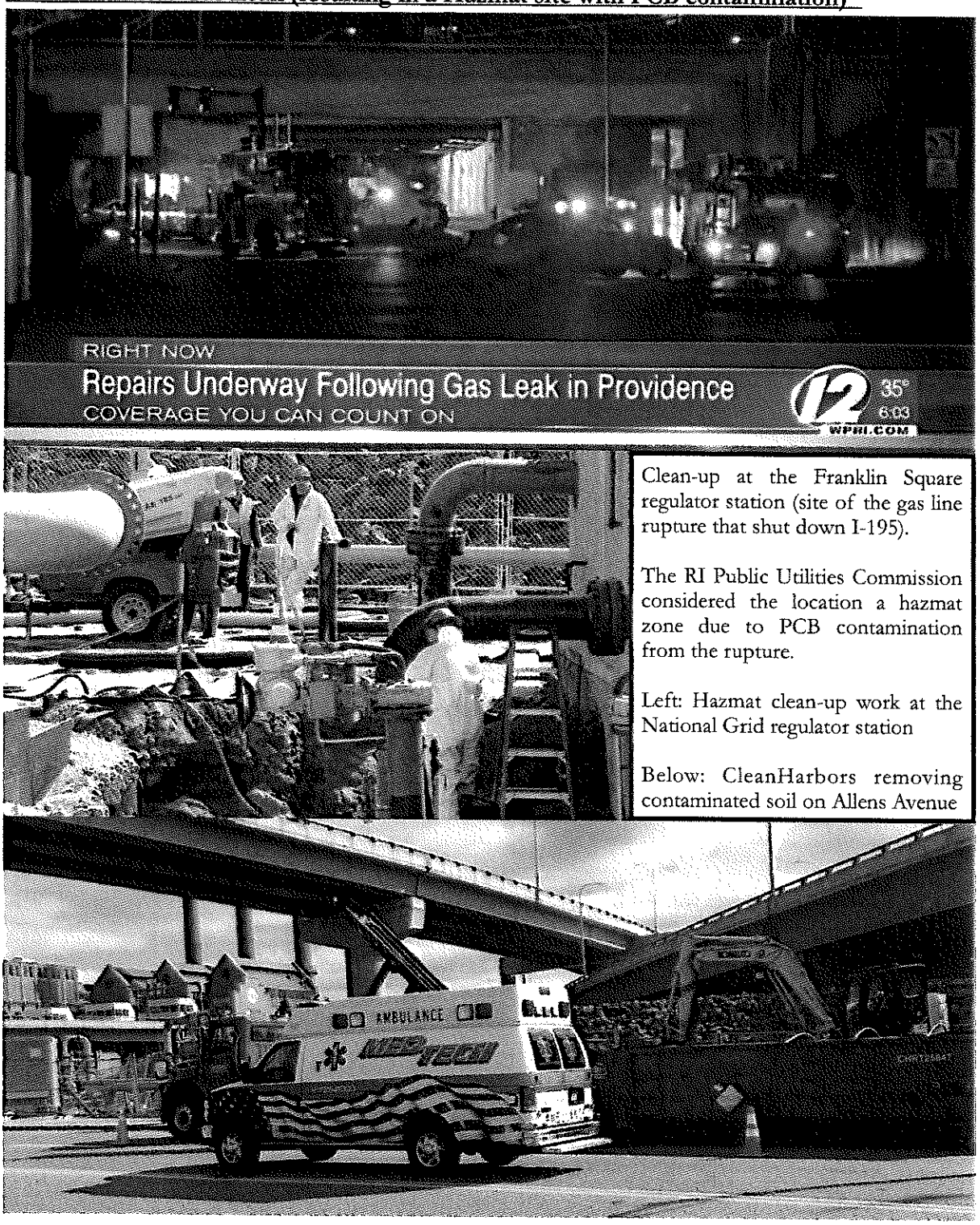
[13] October 14, 2016: "Even National Grid's Contractor doesn't seem to know what's going on in Fields Point" http://www.rifuture.org/national-grid-contractor/

March 8, 2017: Ethanol Train derailment

Pictures of the ethanol train derailment onto Allens Avenue, across from the NGLNG property.



March 29th 2017 Gas Leak (resulting in a Hazmat site with PCB contamination)[14]



Clean-up at the Franklin Square regulator station (site of the gas line rupture that shut down I-195).

The RI Public Utilities Commission considered the location a hazmat zone due to PCB contamination from the rupture.

Left: Hazmat clean-up work at the National Grid regulator station

Below: CleanHarbors removing contaminated soil on Allens Avenue

[14] http://www.ecowatch.com/gas-pipeline-leak-rhode-island-2336400242.html
http://www.rifuture.org/pipeline-rupture-remediation/
https://www.ecori.org/renewable-energy/2017/4/20/leaks-still-a-mystery-amid-cleanup-and-repairs
https://www.ecori.org/renewable-energy/2017/3/30/lkqt0nwk4tadfivyb6hyyxfqv4bhym,

No LNG in PVD Coalition

The No LNG in PVD Coalition represents all the individuals who have signed the online petition (https://actionnetwork.org/petitions/no-lng-in-pvd) as well as the following:

LOCAL / PROVIDENCE:

BASE: Burrillville Against Spectra Expansion
Bell Street Chapel, Governing Board
City of Providence, Office of Sustainability
Community Music Works
emPOWER (Brown University)
English for Action
Environmental Justice League of Rhode Island
The FANG Collective
Farmacy Herbs
George Wiley Center
Occupy Providence
Providence Student Union
PRYSM: Providence Youth Student Movement
Quisqueya Liquors
Renaissance Church
The White Noise Collective

STATEWIDE (RHODE ISLAND)

Clean Water Action (RI)
Fossil Free RI
Green Party of RI
Humanists of RI
PSA/NEARI Local 859 (Professional Staff Association, National Education Association - RI)
Rhode Island Progressive Democrats
RI Sierra Club

REGIONAL AND NATIONAL:

American Friends Service Committee - South East New England
Beyond Extreme Energy (National)
Climate Action Now (MA)
Climate Justice Alliance (National Coalition)
Coalition for Responsible Siting of LNG Facilities (Fall River, MA)
Food and Water Watch (National)
Grassroots Global Justice (National Coalition)
Hampshire College Climate Justice League (MA)
No Sharon Gas Pipeline (MA)
Popular Resistance (National)
People, Not Pipelines (New England)
Toxics Action Center (New England)

ELECTED OFFICIALS:

Mayor Jorge Elorza, City of Providence
State Representative Edith Ajello, District 1
State Representative Christopher Blazejewksi, District 2
State Representative Moira Walsh, District 3
State Representative Aaron Regunberg, District 4
State Representative Marcia Ranglin-Vassell, District 5
State Representative John Lombardi, District 8
State Representative Anastasia Williams, District 9
State Representative Grace Diaz, District 11
State Representative Joseph Almeida, District 12
State Representative John Lombardi, District 13
State Representative Susan Donovan, District 69
State Senator Ana Quezada, District 2
State Senator Gayle Goldin, District 3
State Senator Paul Jabour, District 5
State Senator Harold Metts, District 6
State Senator Jeanine Calkin, District 30

ECRI Statement on Proposed Fields Point LNG Terminal

Climate change is the most urgent problem facing Rhode Island and, indeed, the world. One of the major causes of climate change is the burning of fossil fuels, like coal, oil and natural gas, to make energy. The Environment Council of Rhode Island (ECRI) has consistently opposed construction of new natural gas infrastructure, including the proposed Invenergy plant in Burrillville, RI. In this context, ECRI strongly opposes the new LNG liquefaction facility that National Grid has proposed to locate in Fields Point, Providence. ECRI supports a rapid and just transition to clean, renewable energy and greater energy efficiency; this is not the time to be investing ratepayer dollars into building new fossil fuel infrastructure.

The Environment Council of Rhode Island is the voice of the environmental community in Rhode Island. It is a coalition of 62 small, medium, and large environmental and environmental justice groups in the state, and stands in solidarity with the environmental justice community which is opposing this facility.

(Proposed statement passed unanimously, October 3rd 2016)

Environmental Justice League of Rhode Island

Environmental Justice League of Rhode Island
3 Bell Street, Providence, RI 02909
Tel: (401) 383-7441 Fax: (401) 941-8156
email@ejlri.org | http://www.ejlri.org

January 23, 2017

Grover Fugate, Executive Director
RI Coastal Resources Management Council
Oliver H. Stedman Government Center
4808 Tower Hill Road, Suite 3
Wakefield, RI 02879-1900

RE: 2016-10-99, National Grid Fields Points Liquefaction Facility

Dear Mr. Fugate,

The Environmental Justice League of Rhode Island is a membership based organization that works to build power in the communities most impacted by environmental burdens by developing leaders who can take action to create healthy environments for all peoples. We have membership in the communities of Washington Park and South Providence, neighborhoods which are already disproportionately impacted by the concentration of polluting facilities in and around the Port of Providence. We are concerned about the additional cumulative impacts of National Grid's proposed Fields Point Liquefaction Facility and offer the following comments with respect to their application for a federal consistency review under the Coastal Zone Management Act.

Comments number 1 refers to CRMC Enforceable Policies (Section 145) Addressing Climate Change and Sea Level Rise.

Comments number 2 refers to the lack of demonstration of need for the proposed project.

Sincerely,

Cristina Cabrera

Executive Director

RECEIVED
JAN 23 2017
COASTAL RESOURCES MANAGEMENT COUNCIL

Comments part 1: Section 145 Addressing Climate Change and Sea Level Rise

The Project is inconsistent with the CRMC's Enforceable Policies (Section 145) Addressing Climate Change and Sea Level Rise

Background:

The Coastal Resources Management Plan (CRMP) developed and implemented by the Coastal Resources Management Council ("CRMC") as part of the federal coastal management program established by the Federal Coastal Zone Management Act ("CZMA") (16 USC §§ 1451 – 1464).

Pursuant to R.I.G.L. § 46-23-6, the CRMC promulgated its statement of management actions and enforceable policies concerning Climate Change and Sea Level Rise into the CRMP. The CRMP, in turn, incorporates the findings and recommendations developed by the Rhode Island Executive Climate Change Coordinating Council ("Council"). The June 2016 Report issued by the Council adopted and published the findings of the Rhode Island Sea Grant concerning the impacts of Climate Change and Alternatives for Reducing GHG emissions throughout Rhode Island.

The CRMP also incorporates the relevant policies and conclusions presented by the Rhode Island Department of Administration, Division of Planning in the October 2015 Energy 2035 Plan.

These two state policy documents recommend that the state reduce its significant dependence on natural gas, from all sources and support the expansion of renewable energy facilities, energy efficiency, reduction and repair of the thousands of natural gas leaks throughout all natural gas storage and pipeline facilities, and the reduction of infrastructure at risk of inundation resulting from sea level rise in Rhode Island.

The proposed Project is inconsistent with all of the enforceable policies, as further described *infra*.

Rhode Island Executive Climate Change Coordinating Council ("Council")

The Council, in 2016, identified the primary risk to Rhode Island safety, security, and environmental sustainability was its greater than 60% state dependence on natural gas for heating and generation of electricity. The Council recommended overall state reductions in GHG emissions through continued participation in the Regional Greenhouse Gas Initiative ("RGGI), a reduction in methane emitting sources (i.e. leaks within natural gas pipeline and storage facilities), developing greater diversity in the energy resources available to Rhode Island, including zero-emission renewable technologies (i.e. wind, solar, low-impact hydropower, and thermal energy), and adoption of the U.S. EPA Clean Power Plan.[1]
In making these recommendations, the Council did not contemplate the exchange of one source of emissions (transportation) for another (LNG storage and liquefaction). This is a significant point in implementation of enforceable policies.

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[1] The RIEC^4 2016 Report is available for download at: http://www.dem.ri.gov/programs/air/climate-change.php

National Grid has suggested that the development of the Project would reduce emission by reducing truck transport of LNG, primarily from Massachusetts. This is a false equivalency that should be rejected by the CRMC. The goal for Rhode Island is a total net reduction of emission sources, not substitution of one source for another that will maintain Rhode Island's precarious reliance on natural gas.

Energy 2035: Rhode Island State Energy Plan (2015)

Energy 2036, the Rhode Island State Energy Plan[2] ("Plan") urges the state to take advantage of alternative fuels, especially zero-emission renewable energy facilities:

> Rhode Island's primary challenge is to move away from its heavy reliance on natural gas, which today supplies more than 50 percent of Rhode Island's energy needs. Dependence on natural gas exposes the state to a substantial amount of price risk and potentially a supply risk[3] since Rhode Island sits at the end of a long stretch of pipeline infrastructure. The challenge is underscored by natural gas's important role across multiple sectors. [M]oreover, natural gas generation accounts for more than 50 percent of regional electric generation.
>
> Due to the challenges of displacing overall natural gas consumption as a portion of total fuel use in Rhode Island, it might not be possible, across the Plan's horizon, to significant reduce Rhode Island's reliance on natural gas. Despite this, feasible opportunities for fuel diversification do appear to exist in each sector individually.
> (44 – 45)

With respect to sustainability, the Plan expressly recommends the reduction of GHG emission by 45 percent below 1990 levels and states as follows:

> In order to decrease the electric sector carbon footprint further, Rhode Island must address supply-side GHG emissions, vis the displacement of fossil fuel generation by renewable energy generation. (51 - 52)

Natural Gas Leaks: Emission and Economy

Over 10,000 existing natural gas leaks currently exist throughout National Grid natural gas facilities, some of the leaks dating back to 1998. National Grid was and is fully aware of these leaks, which have been consistently adding tons of GHG precursors to Rhode Island's air. Further, as set forth in National's Grid's 2013 Natural Gas Integrated Safety and Reliability Plan, the costs for identifying and repairing those leaks, in excess of thirty-eight million dollars over the next decade, will be passed completely to Rhode Island and Massachusetts ratepayers.[4]

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[2] The Plan is available at: http://www.energy.ri.gov/energyplan/

[3] As described in the comments demonstrating that no need exists for this Project, the development of the Project, including all associated risks, will impose a massive economic burden on Rhode Island's ratepayers with no equivalent public benefits.

[4] See RI PUC Docket 4474, FY 2015 Gas Infrastructure, Safety, and Reliability Plan available for download at: http://www.ripuc.org/eventsactions/docket/4474-NGrid-Gas-ISR-2015(12-20-13).pdf

These ongoing emissions, about which National Grid has full knowledge, not only imposes significant economic penalties on ratepayers, the ongoing nature of the leaks exacerbates sea level rise and Climate Change impacts in Rhode Island.

The CRMP expressly provides that:

15. Climate Change will result in wide scale systematic changes in the terrestrial and marine environments. These changes will result in ecosystem shifts that will challenge natural resource managers' efforts to cope and adapt to the new regime.

16. Future increases in relative sea level will displace coastal populations, threaten infrastructure, intensify coastal flooding and ultimately lead to the loss of recreation areas, public space, and coastal wetlands.

17. Coastal infrastructure will become increasingly susceptible to complications from rising sea levels, as the upward trend continues. Residential and commercial structures, roads, and bridges will be more prone to flooding. Sea level rise will also reduce the effectiveness and integrity of existing seawalls and revetments, designed for historically lower water levels. [5]

Conclusions:

National Grid's proposed Project will not comply with the enforceable policies necessary to demonstrate federal consistency. The Project will exacerbate GHG emissions, add to the state's vulnerability concerning dependence on natural gas, and facilitate significant negative impacts as the result of Climate Change.

Accordingly, the CRMC should determine the National Grid Coastal Zone Consistency Certification as inconsistent with the enforceable policies of the CRMC and the state of Rhode Island.

[5] See also Section 145 at paragraphs 18 – 30, with which the Project is clearly inconsistent.

Comments part 2: No Demonstration of Need

Background:

On October 31, 2016, National Grid filed a Coastal Zone Consistency Certification in support of its proposed LNG Liquefaction Facility to be located at 121 Terminal Road, Providence, RI ("Project"), with the Rhode Island Coastal Resources Management Council.

In 1978, Rhode Island adopted the Rhode Island Coastal Resources Management Plan, implemented by the Coastal Resources Management Council ("CRMC") as part of the federal coastal management program established by the Federal Coastal Zone Management Act ("CZMA") (16 USC §§ 1451 – 1464).

Section 307 of the CZMA requires that certain federal actions (i.e. applying for a permit or certification under the Clean Water Act)[1] that are reasonably likely to affect any land or water use or natural resource of Rhode Island's coastal zone be consistent with the state's approved coastal management program, as implemented by the CRMC.

The Coastal Resources Management Plan ("CRMP") approved by the National Oceanic and Atmospheric Administration ("NOAA") prescribes the performance standards and requirements to be met in order to determine whether the federal action is consistent with the enforceable policies of the CRMP.

As set forth in the CRMC Federal Consistency Manual:

> Federal consistency is more than just a procedural dictate. Because it is based on effects, not geographic boundaries, and there are no categorical exemptions from its requirements, federal consistency is a method of ensuring greater protection of coastal uses and resources.[2]

The CRMP identifies the enforceable policies applicable to specified activities. These policies have the force of regulation. Any applicant seeking a certification of Coastal Zone Consistency must demonstrate that it complies and will comply with those enforceable policies.

The October 31, 2016 National Grid consistency certification request must be evaluated for compliance with a series of these enforceable policies.[3]

On November 16, 2016, the CRMC issued a Public Notice describing National Grid's Consistency Certification for the Project and soliciting public review and comments. To be submitted to the CRMC on or before December 23, 2016.

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[1] Consistency with the CRMP must be demonstrated by applicants for federal licenses, permits, or approvals.

[2] RICRMC Federal Consistency Manual (September 24, 2015).

[3] The CRMC enforceable policies, which include a showing of compliance with Rhode Island's § 401 Water Quality Standards and Rhode Island's State Pollution Discharge Elimination Standards, cannot be waived and cannot be preempted by federal law.

The National Grid Consistency Certification demonstrates that the Project is inconsistent with a series of the CRMP enforceable policies, including but not limited to Section 300.8: Energy Related Activities and Structures.

Coastal Resources Management Program, Section 300.8: Energy-Related Activities and Structures

The CRMP defines "energy-related activities" to include, in relevant part, all operations and structures in power generation, transfer, and storage on a shoreline feature or its contiguous area or within tidal waters. Accordingly, the Project must demonstrate consistency with the requirements of § 300.8.

Section 300.8 incorporates the 1978 Energy Amendments to the CRMP, which prescribe that a Project must, in addition to a series of other requirements, demonstrate that a need for this Project exists.[4]

The 1978 Energy Amendments provides, in relevant part, as follows:

> Applicants shall be further required to demonstrate by reliable and probative evidence that ... there is a need for the facility...(§ 610.2-2)

The assertions of "need" filed by the Project fail by a significant margin to demonstrate any need for this Project that is not substantially outweighed by the negative impacts on the public, including but not limited to ratepayers carrying the burden of the costs to develop and construct the Project and the imposition and limitations on access to the shoreline created by the existence of a LNG bulk storage terminal requiring substantial security and exclusion zones effectively foreclosing other uses of the shoreline.

Demonstration of Need

The Project Proponent, National Grid, has asserted in filings to the CRMC and to the Federal Energy Regulatory Commission, that there is a significant "need" for this Project in Rhode Island. However, all of those assertions have characterized the need based on worldwide demand and perceived demand in New England. The state of Rhode Island is not addressed as an individual unit, but rather as part of a general region. As stated in the October 31, 2016 Consistency Certification, which is representative of other statements of need proffered by National Grid:

> Adding the liquefaction facility will improve the stability of the LNG supply to customers during high demand winter months. LNG storage provides needed capacity in gas supply during time of peak use from heating loads of residential and commercial customers. The demand for natural gas worldwide has increased, which has led to more volatility in LNG prices. Adding liquefaction equipment to the existing LNG facility will help to stabilize

[4] The suite of requirements, as applied to energy storage, include addressing :(a) environmental impacts, (b) social impacts, (c), economic impacts, (d) alternative sites, (e) alternative means to fulfill the need for the facility, (f) demonstration of need, (g) consistency with state and national energy policies, and, for shorefront sites a demonstration of the need for access to navigable waters or cooling and/or process water.

these prices and costs for National Grid's customers in the New England area. (Certification at 3).

Deconstruction of this statement is useful. The reference to "customers" does not break out Rhode Island customers, as distinct from the New England Regional generally.

"LNG storage provides needed capacity during time of peak use from heating loads of residential and commercial customers." Again, no reference to Rhode Island customers and rate payers is made and, as described *infra.*, demand for natural gas for heating has, in fact, decreased in Rhode Island.

"The demand for natural gas worldwide has increased..." As discussed *infra.* this statement is telling. The very purpose of the Project is to further consolidate National Grid's primacy as a LNG exporter from the United States to Europe and Asia. The profit-making opportunities for the investors of National Grid may be significant, but the rate payers of Rhode Island will, if the Project is approved, be subsidizing the profit margins posted by National Grid for exporting LNG to Europe and Asia.[5]
"Adding liquefaction... will help to stabilize these prices and costs for National Grid's customers in the New England area." As with the other statements, there is no distinction between Rhode Island, New England, and demand "worldwide."

Market Analyses Contradict Assertions of "Need" in Rhode Island.

According the U.S. Energy Information Administration (Natural Gas Monthly, November 2016), demand for natural gas for heating has consistently decreased for 2014 forecasts for Rhode Island. In 2014, (based on annual nine-month totals) Rhode Island demand reached 65,523 bcf/d. In 2015, Rhode Island demand increased by only 4,531 bcf/d. In 2016, the Rhode Island decreased to 63,915 bcf/d, less than the 2014 demand. Overall, this trend represents general demand trends for natural gas in Rhode Island.[6]

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[5] In the case of Engie Gas & LNG, LLC v. Department of Public Utilities (SJC-12051, May 5, 2016) the Massachusetts Supreme Judicial Court ruled that National Grid (and another) were foreclosed from shifting the capital risk burden from their investors and ratepayers to the general public.

National Grid, both prior to this decision and after issuance of the decision when it withdrew its Petition, maintained that this project was developed in response to "need." National Grid asserted that the project represented one billion dollars in savings to ratepayers, but that was not sufficient to go forward if its investors had to shoulder the capital costs.

"Need" is clearly a flexible standard as asserted by National Grid. "Need" appears to be the need of its investors, not its Rhode Island customers. "Need" of additional profit at the expense of ratepayers is not the definition of "need" as contemplated by the CRMC or by the Federal Energy Regulatory Commission.

[6] See EIA Natural Gas Monthly, November 2016, Table 18.

This downward demand trend is also reflected in the 2014[7] and 2015[8] Federal Energy Regulatory Commission ("Commission") State of the Markets Reports.

As set forth on page 6 of the 2014 Report by the Commission:

> By the end of the year, [natural gas] inventories stood at 3,220 Bcf, 8 percent above 2013 levels. Despite strong natural gas withdrawals early in January and February of this year, inventories were 47 percent above 2014 levels by March 6. Assuming average withdrawals between now and the end of March, inventories are poised to enter the injection season over half a Bcf above the same time in 2014, putting downward pressure on [domestic] prices going into the summer.

As set forth on page 8 of the 2014 Report by the Commission:

> The Northeast became a net exporter of natural gas for the first time last summer and future pipeline expansions are targeting exports to eastern Canada, the Midwest, the Southeast, and the Gulf Coast. As Marcellus Shale gas makes its way into neighboring regions, its impact on markets and basis relationships will broaden. Last summer New York and Boston experienced prices below Henry Hub for the first time.

Of all of the conclusions set forth in the 2014 Report, the following is probably the most demonstrative of the lack of "need" in Rhode Island for the Project:

> Plans to export LNG from the U.S. continue to move forward. As of the end of 2014, eight projects had been approved, with four under construction including those at Sabine Pass, expected to enter service in 2016, and at Freeport LNG, Cove Point LNG, and Cameron LNG. Meanwhile, reliance on LNG imports continued to decrease. Sendouts from U.S. LNG terminals averaged 100 MMcfd in 2014, 67% below the 2013 levels, while imports from Canaport LNG into New England averaged 49 MMcfd, 52% below 2013.

These findings demonstrate that the only "need" to be filled here is the development of a Project intended to export LNG in order to take advantage of higher prices in Europe and Asia. By no stretch of the imagination can that be considered "reliable and probative evidence" of need.

The 2015 Commission Report further undermines any assertion of "need" for this Project in Rhode Island. This Report concludes, based on the markets, that the U.S. lower forty-eight states had achieved the status of a net LNG exporter for the first time in history (page 2, 2015 Report).

This finding was not arrived at in isolation. As described at pages 2 – 3, the reason for the decline in both demand and in U.S. LNG prices has resulted from significant increases in pipeline access, the greater use and development of renewable energy resources, and the expansion of distributed energy facilities.

Additional findings fill in a forecast that reflects future reductions in natural gas demand, increased incorporation of renewable energy resources, and lower prices in the United States, but higher prices for

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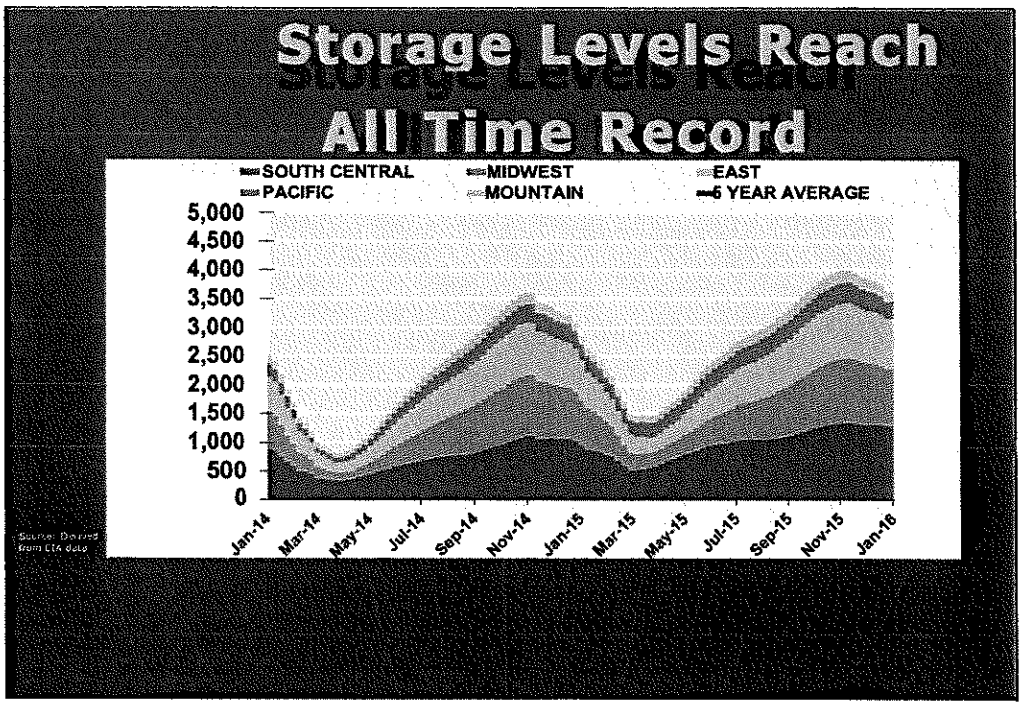
[7] This Report may be accessed at: https://www.**ferc**.gov/**market**-oversight/reports.../st-mkt.../**2014**-som.pdf

[8] This Report may be accessed at https://www.**ferc**.gov/**market**-oversight/reports.../st-mkt.../**2015**-som.pdf

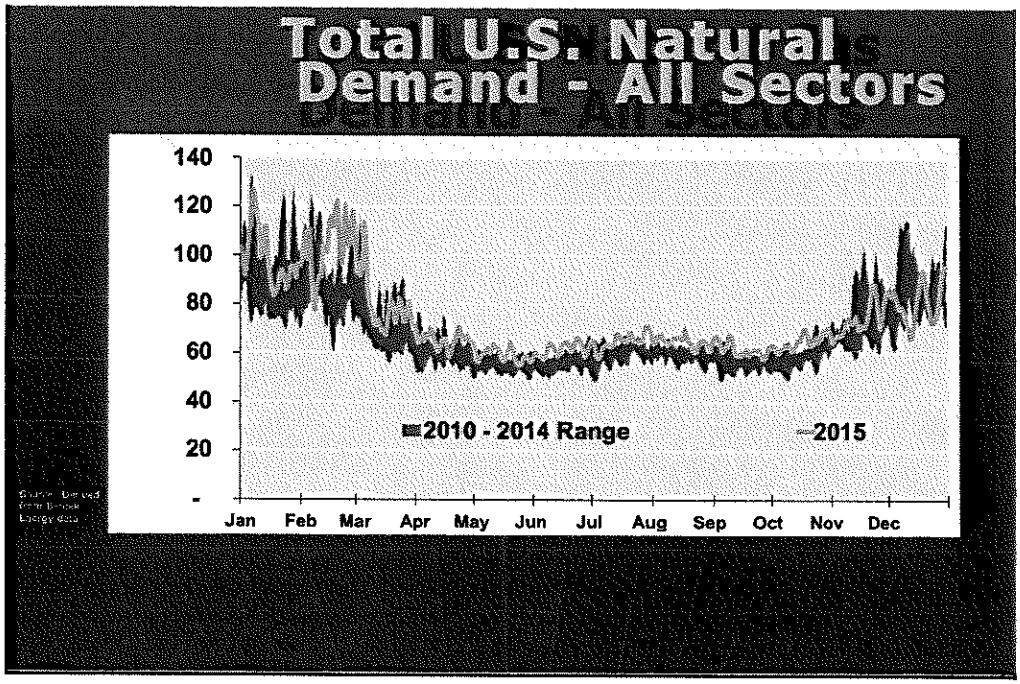
those with the means to export LNG out of the United States. As set forth at page 9 of the Report, the North American natural gas market is over-supplied and will continue to be over-supplied and prices will continue to remain low for the near-term.

Natural Gas storage levels have also reached an all-time high:

> Natural gas storage levels reached a record high of 4 Tcf in November [2015], despite starting the winter season below the 5-year average. The 2,469 Bcf net injection in 2015 is second only to 2014's record 2,746 Bcf net injection. Based on demand so far this winter, it is likely that the natural gas in storage will be at record levels come spring, putting downward pressure on prices for the rest of 2016. (page 11, 2015 Report)



Natural Gas Demand Growth Has Trailed Supply:



In general, natural gas demand growth has trailed supply, contributing to low prices. Total U.S. natural gas demand grew only 1.3 percent in 2015, driven by a 3.8 percent growth in power burn. Industrial natural gas demand fell slightly, while residential and commercial gas demand fell by 2 percent. (page 13 of the 2015 Report)

There is another extremely significant finding contained in this Report. The so-called "need" for additional LNG storage appears to be a contrivance. The total U.S. exports of LNG reported were the highest ever attained and forecasted exports are continuing to grow in order to take advantage of the European and Asian markets, where LNG prices are much higher. (page 10 of the 2015 Report).

National Grid has failed to demonstrate a "need" for additional LNG storage by Rhode Island ratepayers. If storage levels in New England drop over the near-term, the reason, and the demand asserted by National Grid, has been created exclusively by and for National Grid, to the detriment of Rhode Island ratepayers.

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JAN 23 2017
COASTAL RESOURCES
MANAGEMENT COUNCIL

Mayor of Providence

Jorge O. Elorza

January 23, 2017

Grover Fugate, CRMC Executive Director:
Coastal Resources Management Council
Stedman Government Center - Suite 3
4808 Tower Hill Road
Wakefield, RI 02879-1900

Dear Mr. Fugate:

The Coastal Zone Management Act (CZMA) and the applicable federal consistency regulations, specifically, 15 CFR § 930 Subpart D, require that construction of the proposed natural gas liquefaction facility at Fields Point be consistent with Rhode Island's federally approved coastal zone management program which is administered by the Coastal Resource Management Council (CRMC). I am writing to express deep concern with National Grid's inability to meet the state's requirements. For the reasons expressed in this letter, I encourage you to uphold the state's regulatory duties to protect our coastal resources and reject this application.

The application does not adequately address climate change risk, a critical requirement of CRMCs regulations. The application use the 1% annual chance (100-year) flood FEMA maps to assess the wave action risk, despite the fact that these maps are created with historical data and take no account of future sea level rise or storm intensity. Simply elevating the base-flood elevation or mean sea level with backwards looking maps is a severe misrepresentation of future flood risk and this "bathtub" methodology is consistently debunked for planning purposes. The plans do include 1.5 feet of sea level rise to protect the facility over the course of its 25-year useful life; however, this is a gross underestimation of the life of the facility, especially since there is no mention of any plans to decommission the facility after this time. Furthermore, if the facility is operational in 2018 that would extend its useful life to 2043, much closer to NOAA's 2-feet by 2050 sea level rise projections. Section 145.C.3 of the CRMC regulations ("Redbook") states, "The Council recognizes that the lower the sea level rise estimate used, the greater the risk that policies and efforts to adapt sea level rise and climate change will prove to be inadequate." The low estimate and misuse of data used in this application is in clear conflict with the City's and CRMC's stated goals of making our coastal areas more resilient.

Secondly, the LNG facility is not a priority use as defined by the Redbook, Section 200.6 Type 6 Industrial Waterfront and Commercial Navigation Channels:

> 1) The Council's goals for Type 6 waters and adjacent lands under Council jurisdiction are to encourage and **support modernization and increased commercial activity related to shipping and commercial fisheries.**
> (2) Highest priority uses of Type 6 waters and adjacent lands under Council jurisdiction are: (a) berthing, loading and unloading, and servicing of commercial vessels;

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(b) construction and maintenance of port facilities, navigation channels, and berths; and (c) construction and maintenance of facilities required for the support of commercial shipping and fishing activities.

The processing of natural gas is clearly unrelated to waterfront and commercial navigation and therefore, per CRMC's Redbook, shall be prohibited. Providence's industrial waterfront is a scarce and vital economic resource. The City is committed to ensure it is put to its best and highest uses, which means those that are dependent on waterfront access.

While these reasons provide ample justification for denial of this application, perhaps the most blatant inadequacy is the applicant's failure to address the requirements of Redbook, Section 300.8 Energy-Related Activities and Structures. The applicant does not address the social impacts, as the impacts on the residential community surrounding the facility are ignored entirely. It also does not provide alternative means to fulfill the need for the facility, demonstrate the need for the facility, or prove consistency with state and national energy policies. The Rhode Island State Energy Plan sets clear goals around diversifying fuel sources and investing in renewable thermal technologies as a means of shifting away from natural gas. Furthermore, the recently published Rhode Island Greenhouse Gas Emissions Reduction Plan by the Executive Climate Change Coordinating Council sets clear targets for replacing fossil fuel-based heating sources with electric heat pumps (33% of residential and 30% of commercial main heating load met with heat pumps by 2035 and 81% of residential and 67% of commercial heating load met with heat pumps by 2050). This is a critical strategy for meeting the state's goal of an 80% reduction in greenhouse gas emissions by 2050. Such policies send clear signals that the state is moving away from fossil fuels, including natural gas. Natural gas is not a bridge fuel because it does not provide or support the infrastructure or technology necessary for wide scale renewable energy adoption. Lastly, Section 300.8 also states that shorefront sites shall demonstrate the need for access to navigable waters or cooling and/or process water. Nowhere in the application does it state that the proposed facility has such need.

Sincerely,

Jorge O. Elorza, Mayor

cstaff1@crmc.ri.gov

From: No LNG in PVD <nolnginpvd@gmail.com>
Sent: Monday, January 23, 2017 11:44 AM
To: gfugate@crmc.ri.gov; cstaff1@crmc.ri.gov
Cc: Aaron Jaehnig; Adeola Oredola; Andrew Poyant; ansimmons.6610@gmail.com; annaaizer@gmail.com; Barbaraholtzman@cox.net; blott@uri.edu; christina_ergas@brown.edu; corkyhg@gmail.com; cristina@ejlri.org; Ellen Tuzzolo; Erica Mena; cheps6793@aim.com; Gina@birthinrhythm.com; Greg Gerritt; unk.pooch@gmail.com; janetlarsonyoga@gmail.com; jtbeen@yahoo.com; joshcatone@gmail.com; jhuertas0309@gmail.com; judithskain@gmail.com; Julian Rodriguez-Drix; Justin Boyan; Kp85@hampshire.edu; Karlo Berger; Kate Aubin; kjschapira@hotmail.com; kathy_rourke@verizon.net; Kerry Bergin; Lisa Petrie; mschopac@gmail.com; mkuhlman@bryant.edu; Melissa02882@gmail.com; mm@michelemeek.com; Mikaila Mariel Lemonik Arthur; Monica Huertas; Nick Katkevich; Patricia Raub; nigh@pobox.com; rldownes@aol.com; Sheila1666@gmail.com; stephen70@cox.net; SueEllen Kroll; sunnydsood@gmail.com; susan rohwer; Svetromile@gmail.com; thalia_field@hotmail.com; Tomthetreeman@gmail.com; false_mirror@hotmail.com; yao_liu@brown.edu; Dina Dolbec; jberard@cleanwater.org; gebennett@verizon.net; Aaron Regunberg; Christopher Blazejewski; edithajello@gmail.com; gaylegoldin@mac.com; gdiaz@providenceri.gov; Hdmetts@aol.com; jeanine@jeaninecalkin.com; jayomay@aol.com; jzalmeida@verizon.net; marci5216@yahoo.com; mjwalsh823@gmail.com; Susandonovanbristol@gmail.com
Subject: No LNG in PVD coalition comments on 2016-10-099 National Grid Fields Point LNG
Attachments: NoLNGinPVD Comments to CRMC digital.pdf; Appendix A - Petition signatures 1.23.17.pdf; Appenndix B - Position Paper.pdf; Appendix C - Public Involvement Plan petition.pdf; Appendix D - Open Letter to RIDEM.pdf; Appendix E - Mashapaug Nahaganset Tribe letter.pdf

Dear Grover Fugate,

Please see attached for an electronic copy of comments from the No LNG in PVD coalition, including appendices. A printed copy of these materials will be delivered to your office today before 4pm and are being provided her digitally for sake of convenience.

The elected officials, organizations, and individuals who have endorsed and signed these comments are cc'd in this email.

Thank you.

--
No LNG in PVD!
Sign the petition: https://actionnetwork.org/petitions/no-lng-in-pvd
Have your org endorse the coalition: http://tinyurl.com/NoLNGinPVD

Follow on social media:
#NoLNGinPVD
Facebook: https://www.facebook.com/NoLNGPVD/
Twitter: @NoLNGPVD https://twitter.com/NoLNGPVD

NO LNG in PVD

January 23, 2017

Grover Fugate, Executive Director
RI Coastal Resources Management Council
Oliver H. Stedman Government Center
4808 Tower Hill Road, Suite 3
Wakefield, RI 02879-1900

RE: 2016-10-99, National Grid Fields Points Liquefaction Facility

Dear Mr. Fugate,

"No LNG in PVD" is a growing coalition of residents, community organizations, businesses, churches, health care practitioners, students, educators, and elected officials who oppose National Grid's plans to build the "Fields Point Liquefaction Facility". These written comments are compiled and submitted on behalf of all of the individuals and organizations who have signed below. We are also including our general petition to the RI Coastal Resources Management Council (CRMC) and other regulatory agencies (see Appendix A).

There are many reasons that we are opposed to National Grid's LNG facility; not all of them fall within the scope of CRMC's regulations and enforceable policies. However, they do provide important background information for CRMC to consider while conducting the federal consistency review of National Grid's application. The Environmental Justice League of Rhode Island published a position paper in October 2015 (see Appendix B), that goes in depth into issues around potential disasters from LNG liquefaction, environmental racism, climate change, public health, economic inequality, and alternatives to the proposed project.

We also have strong concerns about the existing contamination at the site, with high levels of toxic, hazardous, and cancer-causing substances in the soil and the tidally influenced groundwater. We successfully petitioned the RI Department of Environmental Management (RIDEM) for a Public Involvement Plan (PIP), based on RI's site remediation regulations.[1] The PIP initiation letter from RIDEM and the full text of the petition is attached as Appendix C. National Grid has ignored multiple requests to hold public meetings about the project and concerns about contamination and community impacts. After RIDEM initiated the Public Involvement Plan process, National Grid decided to no longer go through RIDEM to receive the Short Term Remedial Action Plan (STRAP) soil management permits for construction work on the Fields Point Liquefaction Facility. Instead, FERC will be in charge of oversight and management of the contaminated soils, with National Grid proposing to use a generic 2012 Soil Management Plan which is not intended for the intensive construction activity of this project.

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[1] RI Gen. Laws §§ 23-19.14, Rhode Island Industrial Property Remediation and Reuse Act,("IPRRA")

No LNG in PVD recognizes that the controversy around site contamination and which agencies have authority and oversight is more applicable to the regulatory reviews being conducted by FERC and RIDEM. No LNG in PVD submitted an open letter to RIDEM, attached here as Appendix D, which discusses these issues as they directly relate to National Grid's application for a 401 Water Quality Certification and RIPDES Construction General Permit being reviewed by RIDEM. These issues are being raised here, as the introduction to these written comments for the CRMC Federal Consistency Review, because they provide crucial context in two key areas. First, it shows the lack of transparency and lack of goodwill displayed by National Grid with respect to this project, in relation to the general public and impacted communities and even towards another state agency. Second, the issues of site contamination also have the potential to impact areas that are subject to the jurisdiction of CRMC's enforceable policies.

Based on these areas of National Grid's proposed project that are subject to RI's federally approved coastal management program, the primary problems and inconsistencies with the application for the proposed LNG Facility are:

* It is not needed: There is not sufficient justification for the need for this facility, and available data does not support National Grid's claim that the facility is needed. Demonstrating need is a requirement under CRMP Section 642-2.2 within the 1978 Energy Amendments.

* Climate change and sea level rise: The proposed project goes against the enforceable policies in CRMP Section 145 that require proactively planning for the impacts of climate change and sea level rise.

* Cumulative impact: National Grid does not account for the cumulative impact of the project on coastal waters or communities. The application makes the unfounded claim that there are no cumulative impacts, but does not provide any justification or evidence for this claim. There are in fact many cumulative impacts that need to be taken into account, which is one of the criteria required for granting a variance in CRMP Section 120.

* Setback requirements: National Grid should be held to the standards set forth in CRMP Section 140, and should not be allowed to do construction including any grading or filling less than 50 feet from the coastline. This is especially important given that there is known contamination that exceeds industrial standards in the soil and the tidally influenced groundwater. The setback requirements need to be enforced, the requested variance denied.

It is abundantly clear that the proposed LNG facility is not consistent with the guidelines and enforceable policies contained within the RI Coastal Resources Management Program (aka the "Redbook"), including the 1978 Energy Amendments. The following sections detail the numerous ways that National Grid's application is inconsistent, incomplete, and should be denied by CRMC under the authority of the federal Coastal Zone Management Act (CZMA), 16 USC §§ 1451-1464, and the CZMA's implementing regulations at 15 CFR Part 930 Subpart D – Consistency for Activities Requiring a Federal License or Permit.

Section 120 - Variances

The variance requested by National Grid should be denied and not be granted an Assent because it does not meet all six criteria as required.

(1) The proposed alteration, along with the overall application, does not conform with the applicable goals and policies in Parts Two and Three of the Coastal Resources Management Program, as is discussed more detail in the following sections. It does not adequately plan for climate change or adapt to sea level rise, and it makes the coastline less, not more resilient. The proposed alteration is not for a water-dependent industry and is not a priority use for Type 6 Industrial Waterfronts. The filling and grading activities create unnecessary risk of releasing contaminants known to be in the soil and groundwater at the site. The proposed facility does not meet the requirements for Energy-Related Activities and Structures and the applicant did not address environmental impacts, social impacts, economic impacts, alternative sites, alternative means to fulfill the need for the facility, demonstration of need, or consistency with state energy policies.

(2) The applicant does not provide sufficient justification that the proposed alteration would not result in significant adverse environmental impacts, and does not discuss the potential impacts from releasing the known contaminants within the soil and groundwater, such as the potential for vertical migration of contaminants. A major flood event or storm surge during the lengthy construction process could have the potential to wash unknown quantities of contaminated soil into the Providence River, directly across from the East Bay Bike Path. The applicant copied and pasted the phrase from the criteria guidelines "*will not result in significant adverse environmental impacts or use conflicts, including but not limited to, taking into account cumulative impacts*" and just changed "will not" to "does not". However, the applicant provides no justification and does not show any evidence of having taken cumulative impacts into account. The presence of high levels of contamination and hazardous substances at the site is the result of more than a century of industrial pollution and significant negative environmental impacts at the site and at nearby properties. The waters of the Providence River and sediment within Corliss Cove are impaired. The proposed alteration would be an additional construction project which would be adding to the cumulative impacts of a waterfront property which is already degraded and negatively impacts the adjacent communities without providing any benefit such as public access.

(3) The applicant makes the argument that no other location at the site is suitable, but the project itself is not suitable for the site and does not need to be built.

(4) The applicant makes the case that alternative locations to set the liquefier farther inland would require additional construction such as additional piping, moving an access road, and further raising the level of the stormwater treatment system. This appears to contradict their statement for the previous criteria, and also appear to be safer options given that raising the level of the stormwater treatment system would better protect it from storm surge or other severe weather events.

(5) The applicant states that the alteration is not the result of any actions by National Grid LNG or The Narragansett Electric Company, yet the responses given for criteria (3) and (4) detail a list of reasons why the proposed site is the only possible location given the existence and locations of equipment and manmade structures which were built by the applicant and/or its predecessors in title.

(6) The reasons stated in the applicants response to this criteria do not constitute undue hardship. The guidelines clearly state that "mere economic diminution, economic advantage, or

inconvenience does not constitute a showing of undue hardship that will support the granting of a variance."

An Assent for a variance should only be granted if all six criteria are met. There are valid questions of whether the applicant met *any* of the criteria, but there are certainly strong concerns on criteria (1) and (2) given the complete lack of justification or discussion around existing contamination and cumulative impacts of the proposed alteration. Therefore, the variance should be denied.

Section 140 - Setbacks

Part B. of Section 140 clearly maintains that setbacks should be maintained, including on existing manmade shorelines, for categories of alterations that include (1) Filling, removal, or grading, except when part of an approved alteration involving a water-dependent activity or structure (Section 300.2), or (4) Industrial structures, commercial structures, and public recreation structures that are not water dependent (Section 300.3).

The proposed liquefier is not water dependent and does not meet the criteria for a variance, so the 50 foot setback should be maintained.

Section 145 - Climate Change and Sea Level Rise

While the applicant acknowledges that climate change and sea level rise will impact the proposed facility, and planned the facility for a height that incorporates 1.5 feet sea level rise and the wave action of a 100 year storm, this is not sufficient to address the enforceable policies of Section 145. In Part C, the policies state that: *(emphasis added)*

(1) "The Council will review its policies, plans and regulations to *proactively plan for and adapt to climate change and sea level rise*. The council will integrate climate change and sea level rise scenarios into its operations to prepare for these new, evolving conditions and *make our coastal areas more resilient*."
(2) The Council's sea level rise policies are based upon the *CRMC's legislative mandate* to preserve, protect, and where possible, *restore* the coastal resources of the state through *comprehensive and coordinated long-range planning*.
(3) "*... the policies of the Council may take into account different risk tolerances for differing types of public and private coastal activities*. In addition, this long term sea level change base rate will be revised by the Council periodically to address new scientific evidence."

Part of proactively planning for climate change needs to include an especially high level of scrutiny for any new fossil fuel infrastructure which is subject to CRMC's enforceable policies, especially when the facility is not needed and would lock Rhode Islander's into using (and paying for) climate change causing fossil fuels for the next 25 years.

Planning for a 100-year storm is no longer sufficient, climate change means increased frequency and intensity of storms. The risk factors and probabilities used to determine what a 100, 500, or 1,000 year storm are no longer valid as more sever storms are happening more frequently. As is noted in the findings of Section 210, the head of funnel shaped embayments like Narragansett Bay are especially susceptible to storm surge. The 1938 hurricane was 13 feet over the mean

high water mark, with waves 10 feet high and more above the storm surge level. CRMP regulations outline a clear mandate to make coastal areas more resilient to climate change, not more high risk. With the proposed facility, the question is not just whether the facility would be submerged, but how a severe hurricane and storm surge could impact a facility that contains complex processes involving hazardous materials. As a storm surge travels up Narragansett Bay it gathers debris from boats, trees, buildings, scraps of metal, etc which then act like battering rams, striking stationary objects in the storm surge path. The Port of Providence sits at sea level and is filled with high risk and vulnerable fossil fuel and chemical facilities. The challenge of making this crucial and highly vulnerable section of coastline more resilient to the impacts of climate change is a tremendous and urgent task. Adding LNG liquefaction would add risk factors and does not improve resiliency.

There is no need for LNG liquefaction in Rhode Island or in New England. National Grid does not demonstrate the need because there is no data to support the claim. Even if there was a need for additional LNG supply, this proposal would not meet that need in the state because it does not change the storage capacity and would not provide any additional LNG beyond what is already available. Finally, even if the proposal did produce additional LNG and if there were a need for it (which there isn't), it would still not be a water-dependent facility and would not have to be placed along the coastline in such a high risk location. These arguments are for illustrative purposes only, given that there is no demonstrated need for LNG liquefaction in the first place.

RI Coastal Resources Management Council is mandated to conduct comprehensive and long-range planning for all coastal waters and adjacent lands, ranging from pristine protected areas to industrial waterfronts. An industrial waterfront does not need to be filled with climate-causing, health risk inducing, hazardous fossil fuel infrastructure. Comprehensive long-range planning around climate change and industrial ports such as the Port of Providence could utilize the industrial waterfront for activities which increase climate resilience and adaptation, promote renewable energy development, and support a Just Transition off of fossil fuels into green industries and green manufacturing that promote responsible and equitable economic development. The Just Transition framework is a long range comprehensive plan, but the immediate first step is to stop building out unnecessary new fossil fuel infrastructure.

Section 200.6 Type 6 Industrial Waterfronts and Commercial Navigation

The proposed liquefier is not dependent on water, is not related to shipping or commercial fisheries, does not require being on lands adjacent to Type 6 waters, and is therefore inconsistent with Section 200.6. Part C states that the Council's policies are:

(1) The Council's goals for Type 6 waters and adjacent lands under Council jurisdiction are to encourage and support modernization and increased commercial activity related to shipping and commercial fisheries.
(2) Highest priority uses of Type 6 waters and adjacent lands under Council jurisdiction are: (a) berthing, loading and unloading, and servicing of commercial vessels; (b) construction and maintenance of port facilities, navigation channels, and berths; and (c) construction and maintenance of facilities required for the support of commercial shipping and fishing activities.

The proposed facility is not consistent with any of the priority uses listed. The applicants characterization of the proposal as a modernization of the facility is also inaccurate, and it will not increase the "efficiency" of the existing storage tank. While it's true that it will replace incoming truck traffic by filling the storage tank with LNG produced on site from the pipeline, National Grid's application to FERC makes it clear that the purpose of the proposed facility is to be primary source for LNG across National Grid's network. The liquefier will produce far more LNG than can be stored in the existing tank, and the tanker trucks exporting LNG out to all of the other storage tanks across the region will be equal to, if not greater than, the incoming trucks that currently fill the tank. Actual improvements in efficiency would reduce our demand for the LNG currently stored in the tank, and would therefore reduce the amount of trucks needed to fill it. Instead, the proposed facility would contractually obligate the continued production and export of large amounts of LNG for the next 25 years.

As is addressed under Section 300.8, the facility itself is not needed. Within Section 200.6, it is clear that the the proposed facility does not need to be sited in a coastal area and is not the priority for Type 6 Industrial Waterfronts. In the event of an LNG spill or accident, the proposed facility would severely interfere with activity at nearby water-dependent industries, and could even trigger secondary incidents at other facilities. The Keyspan LNG application for an LNG import facility at this location was denied by FERC due to safety concerns. While it is true that there has never been an accident on an LNG tanker ship, there have been accidents with LNG storage tanks, LNG trucks, and LNG liquefaction facilities, such as the massive explosion in Skikda Algeria which killed 23, injured 74 others, and extended a large distance off site.

An enforceable policy in Section 200.6 says that "The Council shall prohibit activities that substantially detract from or interfere with these priority uses." The Council would be justified in stating that the proposed facility has the potential to substantially detract from or interfere with other priority uses, and on these grounds should be prohibited.

Section 210 Shoreline Features, Section 210. 6 Manmade Shorelines

Part A of Section 210 acknowledges that storm surge flooding is a principal concern of waterfront property owners, and states: "Storm surge occurs when a combination of low atmospheric pressure and the force of high winds over a large expands of open water cause sea level to rise dramatically along the coast, *particularly at the head of funnel-shaped embayments like Narragansett Bay.*" (emphasis added, due to the fact that this is where the proposed project is located, on the wrong side of the hurricane barrier). It also notes that during the 1938 hurricane, the storm surge in Providence forced water levels 13 feet above mean high water, with waves 10 feet high or more measured on top of the surge level. It goes on to state "such events are not rare; the state has been struck by 73 hurricanes in the past 350 years, 13 of which have causes severe flooding and erosion." Part B of Section 210.6 indicates that as of 1978, 25% of the Narragansett Bay shoreline has been sheathed in manmade features, but many would not survive a major hurricane.

The applicant states that "the slope protection/armoring has been designed to withstand the 100-year storm event." This is woefully inadequate, given the noted history of previous hurricane storm surges and the reality of climate change which will bring more frequent and more intense

storms. 100 year storms will happen much more frequently, and unfortunately it is not unlikely that we will experience storm events which are more severe than a 100 year storm.

Section 210.6 Part B-2 also states that "manmade shorelines usually have a major impact on the appearance of the shore, interfere with public access to and along the coast, and may alter erosion-accretion processes on neighboring beaches." The applicant proposes to conduct construction activity in contaminated soil over an extended period of time, proposes grading and filling to be conducted over a large areas, and is requesting a variance on the setback requirements to engage in these activities within 50 feet from the coastline. Even without a major storm event, the proposed activities do pose a risk to alter erosion-accretion processes on nearby beaches, and must also be considered as significant cumulative impacts on top of the existing impacts of the current manmade shoreline (see comments related to Section 120.2 above).

Section 220. Areas of Historic and Archaeological Significance

Within Section 220, Part B Findings, it is stated that "the coastal zone contains an abundant and diverse number of Native American Indian settlements, some dating back at least 3,000 years. The bulk of the information still to be obtained concerning Rhode Island's prehistory is associated with sites in the coastal zone." In Part C. Policies, it states "The Council's goal is to, where possible, preserve and protect significant historic and archaeological properties in the coastal zone. Preservation of significant historic and archaeological properties is a high priority use of the coastal region. Activities which damage or destroy important properties shall be considered a low priority."

The applicant does not include Section 220 within the federal consistency review application, and makes no reference to any discussion of potential impact to sites with historic or archaeological significance. However, in National Grid's application to FERC, under Docket CP16-121, Resource Report 4 Cultural Resources, there is extensive discussion and documentation of archaeological findings.

The Sassafras Point Station, a building on the property which was part of a former manufactured gas plant, had also been under consideration for inclusion on the National Registry as a historic property, though it was later deemed to be to not be eligible due to degradation. National Grid's archaeological consultant, "Public Archaeology Laboratory" (PAL) determined that coastal areas around the confluence of the Providence and Seekonk Rivers were "optimal conditions for the location of prehistoric settlements" and that "the variety of fresh and saltwater resources close to such areas would have made them attractive to prehistoric groups." (page 4-4 section 4.3.2).

On December 13th 2016, Neesu Wushuwunoag, Pomham Sachem of the Mashapaug Nahaganset Tribe, submitted a letter to the RI Department of Environmental Management expressing the Tribe's opposition to National Grid's LNG facility. The letter, included in full as Appendix E, states in part:

> "In section 4.5.2 *Native American Context* and section 4.5.2.1 *Documented Native American Archaeological Sites in the Vicinity of the Project Area of the* FIELDS POINT LIQUEFACTION PROJECT ENVIRONMENTAL REPORT RESOURCE REPORT NO. 4

submitted by National Grid LNG, LLC in March 2016 it is acknowledged that the lands slated for development have been the habitation of Aboriginal peoples for thousands of years prior to European contact and that at least 6 sites containing aboriginal artifacts are located near the proposed FPLNG project. As such the Tribe is particularly concerned that no effort was made to engage specifically with the Mashapaug Nahaganset Tribe, the ancestral inhabitants of these lands, to gauge concerns about these projects or to seek approval to move forward with these initiatives on lands that are held in trust by the Tribe."

"Further be advised that should the State of Rhode Island, any of its arms and/or extensions or any private commercial entity attempt to move forward with these projects without the expressed written consent of the Mashapug Nahaganset Tribe Ahtuskowoag Circle, the Tribe will proactively pursue any and all actions deemed appropriate to safeguard the integrity of its ancestral lands for the protection and support of its posterity and all natural inhabitants and residents of the lands of Rhode Island."

The applicant's lack of inclusion of any discussion of Areas of Historic and Archaeological Significance under Section 220 is evidence of an incomplete application and part of the grounds to deem the application inconsistent with the regulations and enforceable policies.

Section 300.1 Category B Requirements

National Grid's proposed project requires a Category B Assent under Section 300.1 Category B Requirements, which requires applicants to address each of eleven (11) topics in writing along with additional requirements listed for specific Category B activities and alterations in following sections (Sections 300.2, 300.3, 300,6, and 300.8). In addressing the 11 required topics for a Category B Assent, National Grid includes only a simple paragraph with 11 sentences, and does not sufficient address or demonstrate what is required, especially with topics 1, 2, 8, 9, 10, or 11:

1. Demonstrate the need for the proposed activity or alteration;

National Grid wrote that "the proposed liquefaction facility capacity has been fully subscribed by customers and enhances the use of the LNG facility and promotes economic growth." The customers National Grid refers to are Narragansett Electric Company and Boston Gas Company, both of which are National Grid subsidiaries. National Grid having a contract with itself does not constitute a need, and increased profitability for a private utility corporation does not equal economic growth, especially when ratepayers will be the ones paying for the entirety of the construction. National Grid does not demonstrate the need for the facility because it is not needed.

2. Demonstrate that all applicable local zoning ordinances, building codes, flood hazard standards, and all safety codes, fire codes, and environmental requirements have or will be met; **local approvals are required for activities as specifically prescribed for non tidal portions of a project in Sections 300.2, 300.3, 300.6, 300.8 (etc)**

National Grid wrote that the project will require FERC approval and will adhere to federal standards. This has not yet been determined, and a 2005 FERC ruling on the Keyspan LNG import facility proposal deemed that the existing storage tank did not meet federal safety standards. Furthermore, National Grid did not demonstrate that local standards have or will be

met, and does not demonstrate local approvals. In fact, National Grid has expressly refused to abide by RI's Public Involvement Plan requirements as stipulated in RI Gen. Laws §§ 23-19.14, Rhode Island Industrial Property Remediation and Reuse Act,("IPRRA") and is no longer seeking RIDEM approval of Short Term Remedial Action Plans (STRAPs) for construction activities in the contaminated soils. Finally, Mayor Jorge Elorza has expressly opposed the facility and will not be granting any local approvals.

8. Demonstrate that there will be no significant deterioration in the quality of the water in the immediate vicinity as defined by DEM;

National Grid's response discusses stormwater runoff but does not mention potential risks of runoff from contaminated soil or the potential for vertical migration of contaminants from the polluted and tidally influenced groundwater known to be present on the site. These are issues and concerns that have been brought before DEM, which has not yet released a public notice for the review of National Grid's 401 Water Quality Certification or RIPDES permit.

9. Demonstrate that the alteration or activity will not result in significant impacts to areas of historic and archaeological significance;

As described above, National Grid did not include any discussion on Section 220 previously in the application, and similarly failed to respond to the requirement to address this topic in writing under Section 300.1. With no answer given, National Grid clearly failed to demonstrate no significant impact.

10. Demonstrate that the alteration or activity will not result in significant conflicts with water-dependent uses and activities such as recreational boating, fishing, swimming, navigation, and commerce, and;

National Grid does not respond to this topic in writing and fails to demonstrate that the proposed facility will not result in significant conflicts with the water-dependent uses and activities listed. The written comments in response to Section 200.6 above show that the facility is not water-dependent and that there is the potential to conflict with other water-dependent uses.

11. Demonstrate that measures have been taken to minimize any adverse scenic impact (see Section 330).

National Grid also does not respond in writing to this topic and fails to demonstrate any measures taken to minimize the adverse scenic impact of the facility. Section 330 states that "In all areas adjacent to Type 3 and Type 5 waters and, where appropriate, adjacent to Type 6 waters, the public should, where possible, be provided a sense of the water from within the townscape. Views to and across the water through yards, between houses, and from roadways should be preserved and, where possible, created." There is no public access around the existing or proposed LNG facility, and the existing industrial infrastructure significantly blocks views of the water. The lack of waterfront access and public use of the coastal waters in South Providence stands in stark contrast to the ample waterfront views and activities available in downtown Providence, Fox Point, East Side Providence, and Blackstone Boulevard. The demographic differences, disparities, and lack of equity between these neighborhoods is part of what could be considered environmental racism or at least an socio-environmental disparity. National Grid does not acknowledge this, does not take any steps to minimize or mitigate the adverse scenic

impacts of their existing or proposed facility, and does not even take the time to respond to this required topic even if only to reject and dismiss it.

Based on the above comments for the required written comments and demonstrations in response to topics 1, 2, 8, 9, 10, and 11, No LNG in PVD believes that CRMC needs to deny National Grid's request for a Category B Assent. While there are additional comments to be made about inadequacies in National Grid's application under Sections 300.2, 300.3, and 300.6, the additional requirements listed in these specific Category B activities are effectually irrelevant because the applicant did not meet the basic demonstration requirements for a Category B Assent in the first place.

Section 300.8 Energy-Related Activities and Structures
As an energy related (generation, transfer, processing, or storage) activity, the proposed LNG liquefier is a Tier 3 facility under CRMC's Federal Consistency Manual, and is subject to additional requirements under Section 300.8 as well as the 1978 Energy Amendments to the Rhode Island Coastal Resources Management Program, discussed below. As was discussed in written comments responding to previous sections (Section 145, Section 210, and Section 210.6), National Grid's proposal does not adequately prepare for flood hazards when considering the potential for the combination of accelerating sea level rise, massive storm surge, and additional wave action on top of the storm surge level. The fact that the facility is a high risk energy facility compounds the risk, which also must be taken into the context of the surrounding area which contains numerous other high risk energy-related facilities. The proposed facility is also adjacent to a high risk chemical facility which stores seven (7) different substances regulated under the EPA's Risk Management Program (RMP), at quantities which are orders of magnitude above the trigger level that induces RMP regulations.

Under Part D. Additional Category B Requirements for Section 300.8, it states: "Shorefront sites shall demonstrate the need for access to navigable waters for cooling and/or process water." National Grid does not address or demonstrate this need; the facility is not water-dependent and does not need to be cited along navigable waters. The applicant also does not address or discuss the additional requirements of: "(a) environmental impacts, (b) social impacts, (c) economic impacts, (d) alternative sites, (e) alternative means to fulfill the need for the facility, (f) demonstration of need, and (g) consistency with state and national energy policies."

CRMP 1978 Energy Amendment, as amended February 23rd, 1982

Section 610.2 - Siting of Energy Facilities
Under the Policies and Regulations of Section 610.2-2 of the CRMP 1978 Energy Amendment, applicants such as National Grid are given the following requirements:

B. Applicants shall be further required to demonstrate by reliable and probative evidence that:

1. Alternative sites have been considered and rejected for environmental, economic and/or operational reasons.
2. Construction and/or operation will be in conformance with all applicable environmental standards, guidelines and objectives.

3. Siting will not cause secondary developments that are inconsistent with the State Guide Plan or approved municipal master plans.
4. Operation will not degrade aquifers or water bodies utilized for public water supply, and
5. Adequate procedures for the safe transport and/or disposal of products, materials and/or wastes hazardous to land or the coastal environment will be taken, including emergency containment and cleanup.

C. Applicants shall be further required to demonstrate by reliable and probative evidence that:

1. There is a need for the proposed facility, and
2. Impacts on public service requirements and in-state employment opportunities have been identified and considered.

D. Where on the basis of such evidence and/or demonstrations the Council finds a reasonable probability of noncompliance with any applicable Policy or Regulation, including B and C above, it shall require appropriate modification of or shall deny the application in question.

In response to requirement B-1, National Grid only states that "Constructing the liquefaction facility in an alternative location would require additional pipelines and land disturbance." There is no evidence provided of this, and no specific alternative sites were discussed or dismissed.

Under B-2, these written comments previously discussed how National Grid is not operating in conformance with applicable statewide environmental standards (RIDEM Site Remediation regulations).

In response to requirement B-5, National Grid only states that "the operation of the liquefaction facility will not result in the production of hazardous wastes at the facility" yet fails to discuss plans related to the safe management of the various hazardous wastes known to exist on site in the soil and groundwater.

National Grid fails to mention or respond to requirement C-1 and does not demonstrate the need for the proposed facility at all, let alone with reliable and probative evidence. This is because there is no evidence available to support the claim that the facility is needed. On these grounds alone, the application should be dismissed and deemed inconsistent. Instead of addressing or discussing this fundamental weakness of the application, National Grid makes vague claims such as "the proposed liquefaction facility will support and maintain the public welfare and the state's economy," and tries to focus attention on requirement C-2 stating that "the construction and operation of the liquefaction facility will create in-state employment opportunities." This does not address the fundamental fact that National Grid did not and can not demonstrate need for the facility. An equivalent investment of ratepayers dollars into weatherization and energy efficiency, especially for low-income tenants living in rental properties, would do far more to create in-state employment opportunities and improve public welfare and the state's economy.

Based on the failure to address requirements in both Part B and Part C of Section 610.2-2, noncompliance has been demonstrated and CRMC has the authority to deny the application in question according to Part D.

Section 640.2 Storage and Processing of Liquefied Gases
This section of the Coastal Resources Management Plan refers to the potential for proposals to import LNG via tanker ships into the Port of Providence. This was in fact proposed with the Keyspan LNG proposal over a decade ago, and was determined by FERC in 2005 to be unsafe. CRMP regulations to not discuss the potential for LNG liquefaction from domestic sources, which is only made possible due to the massive boom in domestic gas production levels which was brought about due to fracking.

The CRMP guidelines in Section 640.2 do acknowledge the risks and dangers related to LNG, stating: "As with other forms of highly concentrated energy, special scrutiny must be given to the location, design and operation of LNG/LPG facilities. Accidental releases of LNG could pose a public safety hazard" (640.2-1, Part C) and "little research has been completed on the long term environmental effects of an accidental release of LNG." (640.2-1, Part F) It states:

> "Should LNG accidentally spill on land or water it vaporizes rapidly forming a cold plume of flammable natural gas. If ignited quickly, LNG pools burn as very intense fires in a manner similar to gasoline. If ignition does not occur quickly, a flammable (explosive if confined) vapor plume may be carried downwind until a source of ignition is encountered or until the gas vapor-to-total volume is less than 5%."

Under Policies and Regulations, Section 640.2-2, it is clearly stated that

> "Applicants for such a permit shall be required to meet all permit and regulatory requirements set forth under Section 610.2-2, and to further demonstrate by a fair preponderance of evidence that facility siting and operation will be consistent with preservation of the health and safety of nearby populations."

Given the hazards inherent to LNG, and the following factors that risk the health and safety of nearby populations, including the:

- Risk of spill, leak, fire, or catastrophic vapor cloud explosion;
- Risk of placing a liquefaction facility (which is not water-dependent) in a coastal zone with expected sea level rise and potential for storm surge impact unmitigated by any hurricane barrier;
- Risk of placing a liquefaction facility adjacent to other high risk facilities including a chemical facility with very large quantities of hazardous substances regulated under the EPA's Risk Management Program;
- Risk of cumulative impacts being disproportionately carried by an Environmental Justice community which is already subject to numerous environmental hazards, socioeconomic inequalities, and health disparities;
- Risk of siting a liquefaction facility within close proximity of a federally qualified health center and the state's primary birthing center, children's hospital, and level one trauma center hospital;
- Risk of construction activity releasing known contaminants in the soil and groundwater which include, but are not limited to: complex mixtures of different polycyclic aromatic hydrocarbons (PAHs), total petroleum hydrocarbons (TPH), phenolic compounds, volatile organic compounds (VOCs) including benzene and naphthalene,

polychlorinated biphenyls (PCBs), ferri and ferrocyanide compounds, asbestos, and metals including lead and arsenic; with many locations in the site containing multiple hazardous substances at levels that exceed industrial allowances;

- Risk of expanding upon an old and oversized storage tank which was built in the 1970s and which was deemed not up to current safety standards in the 2005 Keyspan LNG decision;
- Risk of building out unnecessary new fossil fuel infrastructure when climate science demands a rapid transition to renewable energy;

It is thereby clear that the siting and operation of the facility will not be consistent with the preservation of the health and safety of nearby populations.

Section 400 Federal Consistency Review

Based on the sum total of all the individual issues, omissions, inaccuracies, and inconsistencies contained in the application and proposed facility, and raised within these written comments, the required response from the Rhode Island Coastal Resources Management Council is clear. **National Grid's proposed Fields Point Liquefaction Facility is not consistent with Rhode Island's federally approved Coastal Resources Management Program.**

Signed,

Elected Officials:

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Anna Aizer: annaaizer@gmail.com 54 Barnes Street Providence RI 02906
Christina Ergas: christina_ergas@brown.edu 39 Windmill St Providence, RI 02904
Claudia and Tom Gorman: corkyhg@gmail.com 180 Vernon Ave, Middletown, RI 02842
Cristina Cabrera: cristina@ejlri.org 3 Bell St Providence, RI 02909
Ellen Tuzzolo: ellen.tuzzolo@gmail.com 154 Miller Ave. Providence, RI 02905
Erica Mena-Landry: ericamena@gmail.com 36 Chapin Ave #2 Providence RI 02909
Genesis Garcia: cheps6793@aim.com 145 Sayles Ave Pawtucket, RI 02860
Gina Rodríguez: gina@birthinrhythm.com
Greg Gerritt: gerritt@mindspring.com 37 6th Street, Providence, RI 02906
Ivan Calderon: unk.pooch@gmail.com 10 priscilla Ave Providence ri 02909
Joshua Catone: joshcatone@gmail.com 39 Moorland Ave Cranston RI 02905
Juan Huertas: jhuertas0309@gmail.com 216 Ohio Ave, Providence RI 02905
Julian Rodríguez-Drix: julian@ejlri.org 93 Calla Street, Providence RI 02905
Justin Boyan: jboyan@gmail.com 10 Jenckes St, Providence RI 02906
Kara Provost: kp85@hampshire.edu 89 Prospect St., Barrington, RI 02806
Karlo Berger: karlo@KarloBerger.com 236 Fourth St, Providence RI 02906
Kate Aubin: kateaubin@gmail.com 39 Moorland Ave Cranston RI 02905
Kate Schapira: kjschapira@hotmail.com 4 Brighton St., Providence, RI 02909
Kathleen Rourke: kathy_rourke@verizon.net 37 6th Street, Providence, RI 02906
Lisa Petrie: teonlisa@juno.com
Martha Kuhlman: mkuhlman@bryant.edu 25 Harkness St #2, Providence RI 02909
Michele Meek: mm@michelemeek.com 150 Meeting Street, Providence, RI 02906
Mikaila Arthur: mmlarthur@gmail.com 34 4th St., Providence, RI 02906
Monica Huertas: monicavchuertas@gmail.com 216 Ohio Ave, Providence RI 02905
Nick Katkevich: nkatkevich@gmail.com
Patricia Raub: praub@providence.edu
Peter Nightingale: nigh@pobox.com Department of Physics, East Hall, URI, Kingston RI 02881
Sheila Calderon: sheila1666@gmail.com 10 Priscilla Ave Providence RI 02909
Stephen Dahl: stephen70@cox.net 36 Diane Drive, Kingston, RI 02881
SueEllen Kroll: sueellenkroll@gmail.com 32 Dexter St, 2nd Floor, Providence, RI 02909
Sundeep Sood: sunnydsood@gmail.com 130 Fair St, Apt 4, Warwick, RI 02888
Susan Rohwer: susanrohwer@gmail.com 139 Lancaster Street, Providence, RI 02906
Suzanne Enser: svetromile@gmail.com 722 Curtis Corner road, South Kingstown, RI 02879
Thalia Field: thalia_field@hotmail.com
Yao Liu: yao_liu@brown.edu

Appendix A: No LNG in PVD Petition
Appendix B: Position Paper
Appendix C: Public Involvement Plan Petition
Appendix D: No LNG in PVD Open Letter to RIDEM
Appendix E: Mashapaug Nahaganset Tribe letter to RIDEM

Federal Energy Regulatory Commission (FERC), RI Department of Environmental Management (RIDEM), RI Coastal Resources Management Council (RICRMC), Governor Gina Raimondo, Senators Whitehouse and Reed, and Congressmen Langevin and Cicciline:,

1367 people have signed a petition on Action Network telling you to No LNG in PVD.

Here is the petition they signed:

> We, the undersigned organizations and individuals, oppose National Grid's proposal to build the Fields Point Liquefaction Facility in the Port of Providence. For the numerous reasons outlined below, we call upon the Federal Energy Regulatory Commission (FERC), the RI Department of Environmental Management (RIDEM), and the RI Coastal Resources Management Council (RICRMC) to reject National Grid's applications. We also call upon our elected and appointed officials to support the residents of Rhode Island they are sworn to protect and serve, and join us in asking the federal and state regulatory bodies to reject National Grid's Fields Point Liquefaction Facility proposal. We insist that FERC, RIDEM, and RICRMC take the following issues into consideration in the review of National Grid's proposal, and reject the proposal based on this community opposition.
>
> • It is a high-risk facility with numerous potential disasters including but not limited to earthquakes, hurricanes, storm surges, industrial accidents, fires, explosions, and chemical incidents.
>
> • The proposed facility would be adjacent to numerous toxic industrial facilities, located in a densely populated community of color with many environmental justice concerns. According to the EPA, the neighboring community is ranked over the 95th percentile on numerous environmental justice indicators including: traffic proximity and volume; proximity to chemical facilities requiring a risk management plan; proximity to facilities storing and transferring toxic and hazardous waste; and proximity to major water discharge polluters.
>
> • The proposed facility is next to to a chemical facility that has a 14-mile hazard radius.
>
> • Rhode Island's only trauma and hospital complex including RI Hospital, Hasbro Children's Hospital, and Women and Infants is less than two miles away, within the potential evacuation zone of the proposed facility. Providence Community Health Center, Hasbro Medicine Pediatric Primary Care, and other medical facilities are even closer, which is unacceptable.
>
> • The proposal will increase the price of gas by adding the $180 million cost of the facility to customer's bills. It will not lead to more stable and predictable natural gas costs, as National Grid claims, because domestic natural gas prices have a history of extreme volatility.
>
> • There is no need to increase the supply of LNG. The existing LNG storage tank serves RI's needs; there are three LNG import terminals already built near Boston. Our focus needs to be on energy conservation, weatherization, and reducing demand, not increasing our supply unnecessarily.
>
> • The LNG produced at the facility would be from gas extracted by the controversial process of hydraulic fracturing, which has been banned in New York State due to public health risks. The dangerous chemicals used in the extraction process are contained in the produced gas and may be emitted during the LNG production process when "impurities" in the gas are removed.

• The Liquefaction Facility would be a massive waste of electricity, requiring 13 Megawatts which is half of all the electricity that will be produced by the Deepwater Wind project.

• National Grid's public participation plan is extremely flawed. They contacted certain officials, industrial neighbors, and a handful of homeowners but ignored the residents and tenants who will be negatively impacted by the project.

• National Grid's Fields Point Liquefaction Facility is unnecessary, costly, and risky. It's a bad idea for everyone in Rhode Island, but the negative effects will be felt more directly and severely by the poorer and non-white residents in Providence. The area where the project is planned is one of the state's most polluted. Building this plant will contribute to the pollution, not cut back. In a state where 67% of pre-K through 12th-grade students attend schools in high-risk zones that threaten chemical leaks, gas clouds and explosions, we need clean, renewable and non-polluting energy that is equitable for marginalized communities. We need investments in renewable energy, not dangerous fossil fuels, to be directed into low-income communities of color.

We are calling on FERC and our elected and appointed officials in Rhode Island to listen to this widespread community opposition to National Grid's proposal, and reject the application.

You can view each petition signer and the comments they left you below.

Thank you,

LNG Campaign

---

1. Mary Hutchins (*zip code: 02906*)
An emphatic no to this outrageous proposal

2. Sara Knight (*zip code: 02904*)

3. Kathleen Nelson (*zip code: 01915*)

4. Annavonh Phasouvor (*zip code: 02915*)

5. An anonymous signer (*zip code: 02908*)

6. Aaron Regunberg (*zip code: 02908*)

7. Abraham Henderson (*zip code: 02905*)
I think that it is not a good investment of our resources. Sustainable energy is what is needed for the betterment of our community and long term quality of life. The risk of investing further into this type of energy does not make sense economically, physically, health, social and justice wise.

8. ADELAIDE B. FORREST *(zip code: 02816)*
ARE YOU PEOPLE OUT OF YOUR MIND....IT GETS SHIPPED AND WE GET LEFT WITH THE POLLTION AND THE DANGER. NATIONAL GRID LAUGHS ALL THE WAY TO THE BANK...INVEST IN RENEWABLES AND GAS ISN'T ONE OF THEM.

9. Abigale Sanft *(zip code: 02912)*

10. Andrea Bresnick *(zip code: 02067)*

11. Mikaila Arthur *(zip code: 02906)*

12. Adam Morosky *(zip code: 02907)*

13. adam Buck *(zip code: 02906)*

14. Ada Okun *(zip code: 02906)*

15. Addy Schuetz *(zip code: 14534)*

16. Adeola Oredola *(zip code: 02907)*

17. Kerri White *(zip code: 02905)*

18. Eva Agudelo *(zip code: 02903)*

19. David Ahlborn *(zip code: 02908)*
This is a highly risky proposition that must not be approved. The potential for catastrophic environmental degradation, property damage, and loss of human life surely outweighs any economic benefit.

20. Aida Alazar *(zip code: 02906)*

21. Aidan O'Shea *(zip code: 02912)*

22. Aileen Bui *(zip code: 02906)*

23. Aimee Vue *(zip code: 02912)*

24. John Lawrence *(zip code: 48823)*

25. Mary Cicco *(zip code: 02878)*

26. An anonymous signer *(zip code: 02809)*

27. Alexa Bailon (*zip code: 80249)*

28. Allie Brooks (*zip code: 02908)*

29. Alexandra Fratila (*zip code: 02912)*
Accidentally used my last zip code on the other entry, moved here recently. Sorry!

30. Alexi (*zip code: 02835)*

31. Alexander Nibley (*zip code: 84106)*

32. Nancy Slack (*zip code: 02903)*

33. Alfred Bailey (*zip code: 02893)*

34. Alicia Hersey (*zip code: 02921)*

35. Alicia Lehrer (*zip code: 02860)*

36. alisa troncoso (*zip code: 01605)*

37. alizae link (*zip code: 02909)*

38. Alycia Metz (*zip code: 02852)*

39. Allan Shapiro (*zip code: 02906)*
NOT in RI

40. allen Williams (*zip code: 02903)*

41. Alli Loynd (*zip code: 63117)*

42. Allison Spooner (*zip code: 02906)*

43. Sandra Jaime (*zip code: 02905)*

44. Alonzo Jones (*zip code: 02907)*

45. Alex Carrion (*zip code: 02908)*

46. Amanda Lazarus (*zip code: 02906)*

47. Amanda Bingham *(zip code: 03879)*

48. Ann Blais *(zip code: 02813)*

49. Allegra Parrillo *(zip code: 02920)*

50. Arielis Melendez *(zip code: 02909)*

51. Amy Goldstein *(zip code: 02906)*
I think the proposed location for this facility is dangerous and poorly thought out. I hope this effort to block it is successful.

52. Amita Kulkarni *(zip code: 02906)*

53. Ammanuel Santa Anna *(zip code: 02860)*

54. Amy Miao *(zip code: 02912)*

55. Amy Webb *(zip code: 02906)*
invest in renewables!!!

56. AMY PRIGMORE *(zip code: 02906)*

57. Amy Torrence *(zip code: 02906)*

58. Ana Quezada *(zip code: 02907)*

59. erika Castillo *(zip code: 02908)*

60. Analisa Frietas *(zip code: 20002)*

61. Anamaria Meneses *(zip code: 07621)*

62. Sherrie Andre *(zip code: 02906)*

63. Marlen Andrea Salazar *(zip code: 85711)*

64. Andrea Sterling *(zip code: 02905)*

65. Andres Chang *(zip code: 02906)*

66. Andres Chang *(zip code: 02906)*

67. Andrew Poyant (*zip code: 02906)*

68. Kaitlyn Lyons (*zip code: 02893)*
Frack this. I am not interested in having anymore damage done to our city.

69. Angela Zhang (*zip code: 02906)*

70. Angela Nichols (*zip code: 02879)*

71. Angela Zhuo (*zip code: 02912)*

72. Angie Ankoma (*zip code: 02907)*

73. Latoya Watts (*zip code: 02909)*

74. Anna Browder (*zip code: 02906)*
This siting by National Grid would be an outrage. I am firmly opposed to it.

75. Anna Highsmith (*zip code: 02906)*
This deal might be good for the corporations, but it's bad for the people! Be brave and tell National Grid that this is not what Providence wants or needs.

76. Johanna Walczak (*zip code: 02907)*

77. Annajane Yolken (*zip code: 02909)*

78. Anna Van Lynden (*zip code: 02915)*
Thanks for warning report

79. Anneke Frazer (*zip code: 02909)*

80. Anne Mary Jaehnig (*zip code: 02908)*

81. Ann Patrick (*zip code: 02908)*

82. Anya Klepacki (*zip code: 01035)*

83. anthony atack (*zip code: 02852)*
don't you dare!

84. Arline Gould (*zip code: 02907)*

85. Arthur I Hanson Jr (*zip code: 02906)*

Stop this vary dangerous venture almost in the heart of our city!

86. Arthur Kreuter III *(zip code: 02906)*
No LNG terminal in Providence period.

87. Roberta Schaeffer *(zip code: 02888)*
This is an outrage. We cannot allow this to happen.

88. Arthur Toegemann *(zip code: 02909)*
go solar

89. arturo zuniga *(zip code: 87350)*
My brother has had great behavior these past five years he has been in TDCJ. He has never had a problem with another inmate or guard. But every time he goes to parole he always gets denied. My parents are not in the best health and they would love nothing more then to be able to see him and be with him. It is truly unfair that someone that had had the best behavior continues to get denied parole. Thank you for your help in this matter.

Here is his information
Jose Eleazar Zuniga
02/14/1968
Inmate number: 01816073

90. Andrea Bosgraaf *(zip code: 02908)*

91. Ashley Martinez *(zip code: 02906)*

92. Ashley Benson *(zip code: 02908)*

93. ashley lacey *(zip code: 02905)*
Shame on you National Grid for your environmental racism and deciding our community was not worth notification of your plans to further damage it.

94. Ashley Williams *(zip code: 60626)*

95. Steve Ahlquist *(zip code: 02906)*
Stop. Just stop.

96. Barbabra Brown *(zip code: 02818)*

97. August Guang *(zip code: 02903)*

98. Sydney Kinchen *(zip code: 02130)*

99. Chris Boie *(zip code: 02861)*

More solar and wind. Not encouraging fracking in any way please.

100. Angela Kane *(zip code: 02903)*

101. ada winsten *(zip code: 02906)*
Scary and terrible idea. If there is a fire or an explosion hospitals are across the way. The Bay is in danger as are the neighborhoods around it.
We are not willing to pay higher prices. Very much opposed to it.

102. Azaria Parrott *(zip code: 02860)*

103. Barbara Bacon *(zip code: 02906)*
Not in Providence RI.. We don't want this near our homes.

104. Shannon Scott *(zip code: 02907)*

105. Barbara Wilson *(zip code: 02904)*

106. barbara rhian *(zip code: 02910)*

107. Barbara Kremen *(zip code: 02144)*

108. Meg Battersby *(zip code: 02916)*

109. Zach Codon *(zip code: 02886)*

110. Betsy Dietrich *(zip code: 02906)*
Providence is NOT an appropriate site for a facility like this - there are too many risks to the people, city, environment, neighborhoods and history of this special place.

111. Elizabeth Cazden *(zip code: 02906)*
Fracking and more pipelines are not the solution, and will make global climate change worse. Instead, we urgently need ramped-up conservation and efficiency. Leave the gas in the ground.

112. Bonnie Combs *(zip code: 01504)*

113. Barbara Navas *(zip code: 02906)*

114. An anonymous signer *(zip code: 10024)*

115. Virginia Conway *(zip code: 02889)*

116. Susan Beaty *(zip code: 02907)*

117. Lynne Bell (*zip code: 02906)*

118. Kate Katzberg (*zip code: 02910)*
We cannot afford this potential disaster.

119. Tracy Manzella (*zip code: 02769)*
This must be stopped!

120. Bethania Jimenez (*zip code: 02907)*

121. elizabeth daniels (*zip code: 02906)*

122. Linda Perri (*zip code: 02905)*

123. Betsy Loucks (*zip code: 02906)*
Listen to our community!

124. Beth F.Adamo (*zip code: 02906)*

125. bill salmon (*zip code: 78336)*

126. Barbara Thornton (*zip code: 02906)*
Bad idea then, bad idea now. It would endanger some of our poorer neighborhoods. Not fair.

127. Deborah Gormly (*zip code: 02914)*

128. Beth Milham (*zip code: 02840)*
Everything that RI is doing or planning to increase our dependence on natural gas is counterproductive to our goal of 100% renewable energy, or at least meeting our goal for weaning ourselves from fossil fuels. We need to get started, and stop spending money on infrastructure which will hold us hostage to fossil fuels well into this critical century.

129. William Newkirk (*zip code: 02906)*

130. Robert Medeiros (*zip code: 02905)*

131. Bob Rizzo (*zip code: 02888)*

132. Beth Milham (*zip code: 02840)*
I support the people living and attending school very close to the proposed facility and all the neighboring toxic facilities in their neighborhood. This is grossly unjust!

133. Janet Bralove (*zip code: 02906)*
This would be a disaster for the environment, for the safety of a small crowded city with little access

to escape routes, for the children and people close to the port, and to life in general. Stay away from crowded East coast states! If asked, none of us would opt for fracking to get energy, and prefer renewable energy sources. And to charge us for this is the icing on the cake. Wrong source, wrong location, wrong economics of business. Stay away!!!!

134. Anthony Brattoli *(zip code: 60487)*

135. Brenda Zhang *(zip code: 02912)*

136. Brendan McGrath *(zip code: 02130)*

137. Bret Jacob *(zip code: 02905)*

138. Brian Demers *(zip code: 02905)*

139. Brighde Moffat *(zip code: 02906)*

140. Brian Patrick Mulligan *(zip code: 02906)*

141. Brittney Donahue *(zip code: 02886)*

142. Brenda Zhang *(zip code: 02912)*

143. Lisa Brosofsky *(zip code: 02906)*

144. Laura Howe *(zip code: 02906)*

145. vernetta Brown *(zip code: 02908)*

146. Glen Etzkorn *(zip code: 62920)*

147. Bryan San *(zip code: 02910)*

148. Bryan Le *(zip code: 02906)*

149. DAn and elizabeth REardon *(zip code: 02818)*

150. An anonymous signer *(zip code: 02912)*

151. Carrie Almeida *(zip code: 02747)*

152. Colin Kent-Daggett *(zip code: 02912)*

153. Connor Meegan (*zip code: 02809)*

154. Carole Costanza (*zip code: 02879)*

155. suzanne cox (*zip code: 02906)*

156. Cindy Buxton (*zip code: 02882)*

157. Caitlin Porter (*zip code: 02915)*

158. C Adamo (*zip code: 02906)*

159. Cal Barash-David (*zip code: 02912)*

160. Constance Greene (*zip code: 02882)*
National Grid, convert to safe, non-fossil fuels or leave the business!!! No more dangerous, explosive, polluting, cancer causing, Climate Change causing fossil Fuels!!! NO, NO, NO!!!

161. Ryan Clodfelter (*zip code: 02903)*
Student at Alpert Medical Student at Brown University - I stand in opposition to the plans for the LNG processing plant.

162. Camilo Viveiros (*zip code: 02860)*

163. Brendan Campbell (*zip code: 02907)*

164. Carla Castillo (*zip code: 02906)*

165. Carmelina Rosario (*zip code: 02909)*
We have enough harmful chemicals in our area already. Its like they're asking us to sacrifice our lives so they could play with science.

166. Carol Dutra (*zip code: 02743)*

167. Caroline Kory (*zip code: 02909)*
It's unconscionable that National Grid would move to increase the toxic chemicals in the Port of Providence-- particularly without adequate community awareness and input. We need renewable, sustainable, and healthy sources of energy and jobs here in Rhode Island. Please do not allow increased toxic risk in our state.

168. Caroline Picker (*zip code: 02909)*

169. Carolyn Barthel (*zip code: 01756)*

170. An anonymous signer *(zip code: 02908)*

171. Jessica Culley *(zip code: 08028)*

172. Linda Sullivan *(zip code: 02915)*
#No LNG in Prov
#stopfracking
#youshouldknowbetter

173. Catherine Garcia *(zip code: 02909)*

174. Catherine Perkins *(zip code: 02906)*

175. Cathy Chin *(zip code: 02906)*

176. Catherine McManus *(zip code: 02809)*
I am opposed to any LNG development in the port of Providence. It is dangerous, costly, and outdated. We must find alternative ways to get energy to RI. Our future is at stake.

177. Catherine Nacier *(zip code: 75077)*

178. John Cavaliere *(zip code: 02886)*
No!!!

179. Andrew Winters *(zip code: 02892)*

180. Camille Nixon *(zip code: 02885)*

181. carmen braxton *(zip code: 02908)*

182. Christina Cabrera *(zip code: 02890)*

183. Catherine Bates *(zip code: 02880)*

184. Chris Coughlin *(zip code: 02906)*

185. Joy Ames *(zip code: 02906)*
I am against the proposed liquefaction facility in the Port of providence.

186. Anna Cerutti *(zip code: 02908)*

187. Catarina Alves *(zip code: 02914)*

188. Chance Dunbar (*zip code: 02912)*

189. Chandallie Ho (*zip code: 02909)*

190. chanda womack (*zip code: 02908)*

191. Chandelle Wilson (*zip code: 02907)*

192. Chanravy Proeung (*zip code: 02920)*

193. Chanruom Pan (*zip code: 02909)*

194. Wendell Chase (*zip code: 31324)*
NO NATIONAL GRID (LNG) FOR SOUTH PROVIDENCE

195. Catherine Bodner (*zip code: 02906)*

196. Genesis Garcia (*zip code: 02911)*

197. Christine Muller (*zip code: 02881)*

198. Chris marble (*zip code: 01607)*

199. Christian Williams (*zip code: 02062)*

200. Christopher Hasslinger (*zip code: 02906)*

201. Kenneth Weiss (*zip code: 01701)*

202. Carolyn Hurdid (*zip code: 02882)*

203. Chloe Henson (*zip code: 87106)*

204. Catherine Lewis (*zip code: 02906)*

205. Cathy Kristofferson (*zip code: 01431)*
The time for fossil fuels has passed. Investments now must be in a clean renewable energy future.

206. Christina Chu (*zip code: 02912)*

207. Clare Sartori (*zip code: 02879)*

208. carolina clark (*zip code: 02906)*

209. Claudia Ford (*zip code: 02906)*

210. Clarence Gallop (*zip code: 02906)*

211. Clayton Rockefeller (*zip code: 02909)*

212. Christen Makram (*zip code: 02907)*

213. Cynthia DiDonato (*zip code: 02904)*

214. Chris Jacques (*zip code: 02888)*

215. Christy Nadalin (*zip code: 02809)*

216. Camille Montano (*zip code: 02903)*

217. Carolina salgado (*zip code: 02908)*

218. Colleen Johnston (*zip code: 02906)*

219. Linda Morin (*zip code: 20657)*

220. Collette Santy (*zip code: 02906)*

221. Colton Lacy (*zip code: 02912)*

222. Connie Lu (*zip code: 02903)*

223. Conor Fagundes (*zip code: 02715)*

224. Leslie Salmon Jones (*zip code: 02134)*

225. Jadrian Miles (*zip code: 01810)*
As a former long-time resident of Providence, I have a deep love for the southside community and the bay. Providence needs creative new ideas for sustainable economic development, not selling out to the usual suspects. We should be leaders in the fight for a safe climate, rather than further propping up a dying and destructive fossil-fuel industry.

226. Lauren Shin (*zip code: 02493)*

227. Nick Barlow (*zip code: 02915)*

228. Claudia Gorman (*zip code: 02842)*

229. Courtney Smith (*zip code: 60615)*

230. Samuel Eilertsen (*zip code: 02909)*

231. Mary Craig (*zip code: 02769)*
Stop this madness. Are you really wanting to invite terrorism to your town? Kill the wildlife and oh my the people for $$$$$. Does it always have to come back to money and power?

232. Quincy In (*zip code: 02909)*

233. carolyn Birnbaum (*zip code: 02906)*

234. courtney rebensdorf (*zip code: 02905)*

235. Colleen Redding (*zip code: 02879)*

236. Rev. Cathy Rion Starr (*zip code: 06119)*

237. Cristina Ballarini (*zip code: 02906)*

238. Cristina Ryan (*zip code: 02906)*
No LNG in PVD, I am a homeowner and a taxpayer and do not support this.

239. Christopher Samih-Rotondo (*zip code: 02904)*

240. Laurie Lofton (*zip code: 02814)*

241. Claire Stoscheck (*zip code: 55407)*

242. Chivonne Dutram (*zip code: 02908)*

243. Cassie Tharinger (*zip code: 02905)*

244. Cullen Roberts (*zip code: 02906)*

245. Noriyoshi Needle (*zip code: 01609)*

246. Christopher Currie (*zip code: 02859)*
We should not pay any price for exporting liquid natural gas.

247. Charles Chandler *(zip code: 95437-9508)*

248. Charlie Von Hoffer *(zip code: 02905)*

249. Christian Vye *(zip code: 02879)*

250. Cynthia Peng *(zip code: 02906)*

251. Cynthia Fong *(zip code: 94134)*

252. Danielle Richardson *(zip code: 02903)*

253. Dorothy Yam *(zip code: 12603)*

254. jennifer atack *(zip code: 02889)*
don't you dare!

255. Marguerite Schnepel *(zip code: 02906)*

256. Deborah Krous *(zip code: 02885)*
I work in Providence, right near the proposed LNG facility. My students and their families are there. If only one small accident happens, it will trigger unprecedented harm, due to the existing facilities that are already in the area. We cannot allow Nat'l Grid to place hundreds, if not thousands, of people at risk -- and at our own expense for their profit -- for a dying energy source.
Investing is only good if it is investing in the future! Our children are our future. And renewable energy is the way to go for the future!
Stop Nat'l Grid's fool-hardy plan! We don't need it; we don't want it! And we cannot afford it in economic terms nor in terms of our lives!
Thank you,

257. Damian Letellier *(zip code: 02907)*

258. Damilola Idowu *(zip code: 02906)*

259. Dana Rojas *(zip code: 02908)*

260. Dania Flores *(zip code: 01602)*

261. Dania Sanchez *(zip code: 02905)*

262. Daniel Patino *(zip code: 02906)*

263. Daniella Donis *(zip code: 02908)*

264. Danielle Castagneri (*zip code: 02906)*

265. Danika Padilla (*zip code: 02176)*

266. Daniel Martens (*zip code: 02860)*

267. Dannie Ritchie (*zip code: 02906)*

268. Dannielle Simonik (*zip code: 02907)*

269. Dan F (*zip code: 02920)*

270. Linda Haley (*zip code: 01945)*
Keep the fossil fuels in the ground instead of destroying RI & the climate.

271. Daryl Beecher (*zip code: 02906)*
Too risky! Please no.

272. Andrea Araujo (*zip code: 02908)*

273. David Finnegan (*zip code: 02813)*

274. david johnson (*zip code: 02905)*

275. Dawn Dexter (*zip code: 02888)*

276. Dawn Blizard (*zip code: 02906)*

277. Donald Baier (*zip code: 02906)*

278. David Brunetti (*zip code: 02830)*

279. Diana Garlington (*zip code: 02905)*

280. Diana H Jackson (*zip code: 02906)*

281. Dania Sanchez (*zip code: 02905)*

282. dean pena (*zip code: 02909)*

283. Deborah Vandermillen (*zip code: 02906)*

284. Deborah Goldhaft (*zip code: 02908)*
The risk of this proposal to the surrounding city is too great for this to go through, also I am not interested in paying for National Grid's energy needs. We need to provide sustainable alternative energy to circumvent large corporate energy providers and get the whole state of Rhode Island OFF the grid completely.

285. darcie dennigan (*zip code: 02906)*

286. Deirdre Aherne (*zip code: 10027)*

287. Dee Dee Taylor (*zip code: 02860)*

288. Delaney Williams (*zip code: 02901)*

289. carol delaney (*zip code: 02906)*
This is a crazy plan. It must be stopped.

290. Denise Davis (*zip code: 02909)*

291. Denise Marte (*zip code: 20906)*

292. Derek Pelotte (*zip code: 01850)*

293. David Norton (*zip code: 02861)*
We need utility reform

294. David Grace (*zip code: 02905)*

295. Diane Kupelian (*zip code: 20814)*

296. Divya Dethier (*zip code: 02906)*

297. Donald Smith (*zip code: 02892)*

298. Dorothy Licht (*zip code: 02906)*

299. Deniece Lobban (*zip code: 02907)*

300. Diana Thibault (*zip code: 02910)*

301. Justin Cifello (*zip code: 02532)*
While natural gas may burn cleaner than other fossil fuels, the leaked methane from pipes and extraction sites makes it a potent greenhouse gas emitter. Building a terminal will greatly increase European demand, and lead to massive carbon emissions. Rhode Island has a particular stake in

rising seas, and should recognize the risk in fueling an international gas market.
Additionally, Rhode Island itself has struggled with toxic post-industrial sites. Groundwater contamination is a real issue with fracked gas.
While they may seem lucrative now, these fossil fuel projects have high costs. We will all eventually have to pay for them, whether in disaster relief or public health crisis.

302. Danielle Masse *(zip code: 02906)*
I do not want National Grid to build a natural gas "liquefaction facility" in the Port of Providence, where they would convert fracked gas brought in by pipeline into Liquefied Natural Gas (LNG) for export. It's fiscally and environmentally irresponsible.

303. David Booy *(zip code: 02906)*
Medical Student at Alpert Medical School. I work at the healthcare complex and medical school within 1 mi of the proposed LNG liquefaction facility

304. Doug Victor *(zip code: 02907)*

305. Andrea *(zip code: 02816)*

306. Leanora Pewsey *(zip code: 02914)*
This has got to stop!!

307. Maria Fontes *(zip code: 02908)*

308. Andrea Mello *(zip code: 02743)*

309. Andrew O *(zip code: 02907)*

310. david leclerc *(zip code: 02637)*
no good

311. Joseph Singer MD *(zip code: 02906)*
Conservation is a shorter cut to energy independence than increasing production. (Jack Reed said this awhile ago)

312. David Stridel *(zip code: 02905)*

313. Gail Duarte *(zip code: O2915)*

314. Kirill Yulin *(zip code: 10308)*

315. John Pettinicchio *(zip code: 02893)*

316. Denise Wood *(zip code: 02906)*
Please do not even consider putting this potentially dangerous facility in Rhode Island!!!!

317. deb zuckerman (*zip code: 02906)*

318. Elisy Blanco-Mercado (*zip code: 02907)*

319. Ellie Leonardsmith (*zip code: 55107)*

320. Ellen Shatter (*zip code: 02906)*

321. Erin Collins (*zip code: 02915)*

322. Marcin Z Stefaniuk (*zip code: 02857)*
Solar energy is a way to go for us and other beings that we destroy through use of fossils

323. Loren mendozzi (*zip code: 02906)*

324. Elizabeth Bernier (*zip code: 02915)*

325. Erik Sudderth (*zip code: 02906)*

326. Ed Benson (*zip code: 02860)*

327. Edward Raff (*zip code: 02906)*
NO

328. Emily Eisenstein (*zip code: 02906)*

329. Ellen Weininger (*zip code: 10606)*

330. Eli Bloch (*zip code: 01002)*

331. Elizabeth Grossman (*zip code: 02906)*
Do not dismiss this petition as a mere manifestation of a nimby response. The extreme dangers of such a facility to the population of providence are so clear any one would object. Let's focus our energies, time and money on getting clean renewable energy in a city and state.

332. Ellen Goodman (*zip code: 02915)*

333. erroll lomba (*zip code: 02907)*

334. Elizabeth Morse (*zip code: 02906)*
This plan is irresponsible at best.

335. Robert Koshgarian (*zip code: 02906)*

336. Elana Rosenberg (*zip code: 02860)*

337. Samuel Cruz (*zip code: 02907)*

338. elena gariepy (*zip code: 02903)*
This is a bad idea, for so many, many reasons.

339. Elinor Thompson (*zip code: 02905)*
I live near this proposed area located on Narragansett Bay. This is a terrible idea with perhaps disastrous consequences we should not ever consider.

340. Elisa Glubok (*zip code: 02912)*

341. Elisa Helford (*zip code: 60025)*
No Fracking anywhere!

342. Eli Berkowitz (*zip code: 02908)*

343. Beth Rodio (*zip code: 02067)*

344. Elizabeth Watts (*zip code: 11563)*

345. Elizabeth Macdougal (*zip code: 02906)*

346. Ellen Tuzzolo (*zip code: 02905)*

347. Elliesha Santos (*zip code: 02904)*

348. Ellen House (*zip code: 02906)*

349. Amber Ma (*zip code: 02909)*

350. Edward Markward (*zip code: 02904)*

351. Emily MacDuffie (*zip code: 02906)*

352. Emily Boucher (*zip code: 02905)*

353. Ellen Morais (*zip code: 02914)*
No Fracking period!

354. Emily Oglesby (*zip code: 02909)*

355. Eric Glickman- Tondreau *(zip code: 02138)*

356. Eric Khiev *(zip code: 02907)*

357. Erica Mena *(zip code: 02909)*

358. Ericka Forman *(zip code: 02818)*

359. Ericka Gomes *(zip code: 02910)*

360. Eric Kretsch *(zip code: 02809)*

361. Erin Kelley *(zip code: 11238)*

362. Escarlen Feliz *(zip code: 02889)*

363. Esmerée Thornley *(zip code: 02804)*

364. Esther Moore *(zip code: 02806)*

365. Esther Urdang *(zip code: 02906)*

366. Ethan McIntosh *(zip code: 02912)*

367. Evan Lehmann *(zip code: 63146)*

368. Evelyn santos *(zip code: 02912)*
i agree

369. Emilio Vides-Curnen *(zip code: 02912)*

370. Eliza Vorenbegr *(zip code: 02906)*

371. William Jiacovelli *(zip code: 02906)*

372. Jose Maldonado *(zip code: 02904)*

373. Faiz Khan *(zip code: 02906)*

374. william hancock-brainerd *(zip code: 02840)*

375. Lynn Miller *(zip code: 02915)*

376. james parker (*zip code: 39047)*

377. Fanny Manzella (*zip code: 02769)*

378. Hammed (*zip code: 02905)*

379. An anonymous signer (*zip code: 02903)*

380. Felice Holt (*zip code: 02906)*

381. Felicia (*zip code: 02762)*

382. Juan Reyes (*zip code: 02905)*

383. Patricia Hval (*zip code: 02891)*

384. Christine Mathews (*zip code: 01746)*

385. Diane Joss (*zip code: 02813)*

386. Devin Miller (*zip code: 02906)*

387. Joseph Fortune (*zip code: 02909)*

388. francisco almonte (*zip code: 02907)*

389. feather sedam (*zip code: 02906)*
I am vehemently opposed to National Grid's proposal on several levels. Outrageous!

390. Anthony Hall (*zip code: 01060)*

391. Funmibi Yusuff (*zip code: 02907)*

392. Gail Porter (*zip code: 02906)*

393. greta abbott (*zip code: 02903)*
No LNG "liquefication" facility should be built in such close proximity to large population centers. NO NO!
Greta L, Abbott

394. gail sidney (*zip code: 02038-3416)*

395. Gail Scanlon (*zip code: 02906)*

396. Galena Ojiem (*zip code: 13135)*

397. An anonymous signer (*zip code: 02906)*

398. Gary Glassman (*zip code: 02906)*

399. Kim Rackliffe (*zip code: 02806)*

400. Gaspar Espinoza (*zip code: 02909)*

401. Gayle Simmons (*zip code: 02906)*

402. Geraldine Bilotta (*zip code: 02904)*

403. Grace Dayian (*zip code: 02906)*

404. Glen Bennett (*zip code: 02886)*

405. Eric Larson (*zip code: 02909)*

406. George Goodwin (*zip code: 02906)*
A horrible idea!

407. Gerianne Connell (*zip code: 02903)*

408. Greg Gerrit (*zip code: 02906)*

409. Gina Rodriguez (*zip code: 02905)*

410. Gina Mazza (*zip code: 02906)*

411. Virginia Rodriguez (*zip code: 02919)*

412. Gio Santiago (*zip code: 60644)*

413. Gioser Collado (*zip code: 02907)*

414. Gloria Johnson (*zip code: 02904)*

415. Gardiner Northup (*zip code: 02915)*

416. Gail Porter (*zip code: 02906)*

417. Carrollyn Grace *(zip code: 02906)*

418. Deirdre Lovecky *(zip code: 02906)*
Please do not build this dangerous and costly facility in Providence. A processing plant with a potential for explosion does not beng in a city especially close to residential areas.

419. Kerri Labelle *(zip code: 02914)*

420. Virginia Allen *(zip code: 02878)*

421. Lisa Williams *(zip code: 02920)*

422. Gus Uht *(zip code: 02864)*

423. Janet Handford *(zip code: 02893-7516)*

424. Esther Trneny *(zip code: 02809)*

425. Harvey Perry *(zip code: 02891)*

426. Andrew Stewart *(zip code: 02888)*

427. Jill Greenberg *(zip code: 10025)*

428. Christian Herrera *(zip code: 02908)*

429. Hrant Tatian *(zip code: 02906)*

430. Heather Dolan *(zip code: 02906)*

431. Heejae Yang *(zip code: 02906)*

432. Helena Wong *(zip code: 19143)*

433. Chloe Henson *(zip code: 87106)*

434. Paige Armstrong *(zip code: 32084)*

435. Hilary Salk *(zip code: 02882)*

436. Kate Lovejoy *(zip code: 02814)*

437. Helen Woodhouse *(zip code: 02837)*

438. Heather Sorel *(zip code: 02889)*

439. Harriet Magen *(zip code: 02906)*

440. Hannah Snow *(zip code: 01603)*

441. Helen McDonald *(zip code: 02903)*

442. Helen O'Grady *(zip code: 02835)*

443. hollie galloway *(zip code: 02817)*

444. Hannah Blakely *(zip code: 02192)*

445. Hope Moffat *(zip code: 02888)*

446. Kimberly Andrade *(zip code: 02905)*

447. Harold Terry *(zip code: 02904)*

448. Nancy Ayton *(zip code: 02906)*
This facility would be too dangerous for our small state!

449. Howard Rotblat-Walker *(zip code: 02809)*
There is no reason to build a facility for such a hazardous substance in a populated area and near to crucial hospitals.
Previous LNG proposals were withdrawn as untenable; this one should be too.

450. Heather Shepheard *(zip code: 06226)*

451. Robert Valley *(zip code: 02914)*

452. Tricia Byon *(zip code: 02906)*

453. Melissa Dasilva *(zip code: 02914)*
This is a crazy idea. Please don't do this!!!

454. Ida Schmulowitz *(zip code: 02906)*

455. An anonymous signer *(zip code: 02998)*

456. ILYA FISHMAN *(zip code: 02882)*

457. Connie Liou *(zip code: 02906)*

458. Iman Jenkins *(zip code: 02906)*

459. Marcie Ingber *(zip code: 02906)*

460. Ina Fuchs *(zip code: 02906)*

461. Mary Blue *(zip code: 02904)*

462. Rhode Island Doula Collective *(zip code: 02905)*

463. Marlon Carey *(zip code: 02908)*
100 million dollars would be better spent on renewable energy. Solar in particular.

464. Therese Shea *(zip code: 02908)*

465. Samantha Smith *(zip code: 02908)*

466. Sandy Pliskin *(zip code: 02825)*

467. Isaiah Weaver *(zip code: 020774)*

468. doreen johnston *(zip code: 11963)*

469. ira schaeffer *(zip code: 02888)*

470. Betsy Perez *(zip code: 02905)*

471. Joe Clapprood *(zip code: 02919)*

472. An anonymous signer *(zip code: 02906)*

473. Jaclyn Ioignon *(zip code: 02904)*

474. John Dwyer *(zip code: 02907)*

475. Jacob Eury *(zip code: 02904)*

476. Jacqueline Betty *(zip code: 02905)*

477. Jacqui Ketner (*zip code: 02906)*
No Liquefaction facility in Providence. It is too dangerous.

478. Jael Lopes (*zip code: 02905)*

479. janice fontes (*zip code: 02914)*

480. Jahnae Rodriguez (*zip code: 02909)*

481. Jair Perez (*zip code: 02907)*

482. Jeremy Fitch (*zip code: 02909)*

483. Jennifer Allegretto (*zip code: 02882)*

484. Jamie Marsicano (*zip code: 02903)*

485. Jamila Gilmore (*zip code: 02905)*

486. JEFFREY DIXON (*zip code: 20657)*

487. Jane Sharp (*zip code: 02906)*
My children's school is within a few miles of this proposed site. I am worried the site is too close to residential communities and to gas and chemical plants making it a potential disaster if an accident happens (and they do happen).

488. janet isserlis (*zip code: 02906)*

489. Jane Vieira (*zip code: 02740)*

490. Janice Gan (*zip code: 02903)*

491. Janika Arel (*zip code: 02921)*

492. Janine Goetzen (*zip code: 02912)*

493. Janis Mooradian (*zip code: 02914)*
No! This is a terrible place to put this. Have any of you walked the area? This is such a terrible idea.

494. Jan Luby (*zip code: 02859)*

495. Jannelle Hurney (*zip code: 03240)*

496. Jaqueasja Chamblee (*zip code: 02907)*

497. Jared Moffat (*zip code: 02906)*

498. Jared Couton (*zip code: 02917)*

499. Jared Paul (*zip code: 02903)*

500. Jaron Browne (*zip code: 94619)*

501. Jason Bennett (*zip code: 02906)*
National Grid can't even restore our roads after endless work on new gas lines;why the hell would you even consider letting them do this project ?

502. Julia Tredeau (*zip code: 01603)*
NO LNG ANYWHERE!

503. Jean Ann Guliano (*zip code: 02818)*

504. Jessica beatty (*zip code: 02920)*

505. julio Berroa (*zip code: 02907)*

506. Ron Creamer (*zip code: 02879)*

507. Julia Hadley (*zip code: 02906)*

508. John D. Glasheen (*zip code: 02892)*

509. Jeremy Kelly (*zip code: 02915)*
Will cost the state money and will not add many permanent jobs. Also the dangers of these facilities far outweighs any advantages it would bring the state.

510. Jeannette Aames (*zip code: 02906)*

511. jean DePasquale (*zip code: 02860)*

512. Jeanne Loewenstein (*zip code: 02912)*
It's too dangerous to have a gas processing plant next to a waterway.

513. Julianne Edwards (*zip code: 02906)*

514. Jenny Boone (*zip code: 02906)*

515. Jennifer Burt (*zip code: 01609)*

516. Jenna Anders (*zip code: 02906)*

517. Jenna Legault (*zip code: 02909)*
I can't believe this is even being considered.

518. Jennifer Bonin (*zip code: 02914)*
I am against this and live extremely close.

519. Jennifer Martenson (*zip code: 02908)*

520. Jennifer Geller (*zip code: 02907)*

521. Jennifer Tsai (*zip code: 02906)*

522. jennifer deleon (*zip code: 02863)*

523. Jennifer Nardone (*zip code: 02878)*

524. Jenny Li (*zip code: 02906)*

525. Jenny Li (*zip code: 02906)*

526. Jennifer Rossi (*zip code: 02906)*

527. Jeremiah Cole (*zip code: 02909)*

528. Jeremy Rix (*zip code: 02888)*

529. Jessica Sherwood (*zip code: 02906)*

530. Jessie Justin (*zip code: 02905)*
No LNG in PVD

531. Jessica Roff (*zip code: 11215)*

532. Jesus Holguin (*zip code: 02909)*

533. Joseph Firmino (*zip code: 32501)*

534. Jenn Steinfeld (*zip code: 02908)*
I am a Providence taxpayer, and a National Grid customer and shareholder. I want to see more

investments in the long term health and wellbeing of our community; infrastructure that supports long term renewable energy and provides for our future; and an economy that moves us toward resilience and sustainability. This expansion does none of that, harming our communities at our expense and that of our neighbors and neighborhoods. No LNG!

535. Jamie Garuti *(zip code: 02144-1130)*

536. Jonathan Bonner *(zip code: 02906)*

537. Jo-Ann Gesterling *(zip code: 02910)*
Let's looks for other ways for more energy

538. John Gonzalez *(zip code: 02879)*

539. Jessica Irizarry *(zip code: 02909)*

540. John B. Jones *(zip code: 02906)*

541. Jieyi Cai *(zip code: 02912)*

542. Jill Rios *(zip code: 02905)*

543. james dealy *(zip code: 02906)*
This is a dangerous project and should not be allowed in Providence

544. James Barfoot *(zip code: 02906)*
Was this proposal made by ISIS?? I can't think of a more effective way to plant a bomb in downtown Providence.

545. An anonymous signer *(zip code: 02905)*

546. joan kenower *(zip code: 02904)*
thanks for this alert

547. Jenna Karlin *(zip code: 02908)*

548. Jodi Glass *(zip code: 02906)*

549. Judy Barrett Litoff *(zip code: 02906)*

550. Jeanne OBrien *(zip code: 91360)*
Fracked gas is toxic to the enviroment & to the people.

551. An anonymous signer *(zip code: 02907)*

552. John Larkin (*zip code: 02908)*

553. John Everson (*zip code: 07023)*

554. jonathan barry (*zip code: 02134)*
I grew up in Providence and have family in the town. I plan to send this petition to them as I know they also oppose this plan!

555. Julie Lyons (*zip code: 02893)*

556. joyce myrus (*zip code: 02906)*

557. Joan S Leland (*zip code: 02914)*

558. Joan Richards (*zip code: 02906-1518)*

559. Joanna Howard (*zip code: 02909)*

560. JoAnna Cassino (*zip code: 02903)*

561. Joanne Schneider (*zip code: 02865)*

562. Joanne Kaczowka (*zip code: 02066)*

563. joanne phillips (*zip code: 02889)*

564. Jo-Ann Huynh (*zip code: 02912)*

565. joanne ebbitt armenia (*zip code: 02840)*

566. Joe R. (*zip code: 02911)*

567. Joe Cardenas (*zip code: 02908)*

568. Joel Wool (*zip code: 02122)*

569. Johan Martinez (*zip code: 02907)*

570. John Arsenault (*zip code: 02906)*

571. John Harkey (*zip code: 02906)*
No. Absolutely NOT.

572. John Mangili (*zip code: 02905)*

573. John Mangili (*zip code: 02905)*

574. john white (*zip code: 02760)*
not a good idea!!!

575. Caroline jones (*zip code: 05482)*

576. Jordan Seaberry (*zip code: 02905)*

577. Jorge Glackman (*zip code: 92105)*

578. Jori Ketten (*zip code: 02903)*

579. Joseph DiZoglio jr. (*zip code: 02903)*

580. Joshua menard (*zip code: 02896)*

581. Joshua Schaeffer (*zip code: 02818)*

582. Joshua Taylor (*zip code: 02905)*

583. Josh Johnson (*zip code: 02906)*

584. Josh Catone (*zip code: 02907)*

585. Joshua Chao (*zip code: 02909)*

586. Jacqueline Ott (*zip code: 02906)*

587. Jovahni Hilaire (*zip code: 02860)*

588. Joy Zhou (*zip code: 02903)*

589. joel schapira (*zip code: 06039)*
please don't allow this. it's awful

590. Jenn Steinfield (*zip code: 02908)*

591. Julie Summersquash (*zip code: 02906)*

592. Jack Templin (*zip code: 02906)*

593. Juan Santoyo (*zip code: 02906)*

594. Manuel Rodriguez (*zip code: 02919)*

595. Judith Schrier (*zip code: 02906)*
This is an extremely bad idea!!!

596. Judy Byrnes (*zip code: 02840)*

597. Judy Kaye (*zip code: 02906)*

598. judy procaccini procaccini (*zip code: 02882)*

599. Eli Schwartz (*zip code: 02909)*
This is absolutely not the kind of industry and development we wish to see here in Providence. Rather than afford the city an opportunity, this proposed project preys on vulnerable populations and sacrifices health for corporate profit.

600. Julie RIDGE (*zip code: 02906-2602)*

601. Julia Lazarus (*zip code: 02906)*

602. Julian Rodriguez-Drix (*zip code: 02905)*

603. Juliana Rodriguez (*zip code: 02863)*

604. Julia Solomon (*zip code: 02906)*

605. Julie pham (*zip code: 14607)*

606. Julio Molina (*zip code: 02908)*

607. Justine Dunlap (*zip code: 02906)*

608. Jaye Watts (*zip code: 02908)*

609. Julio Molina (*zip code: 02909)*

610. Joe Almeida (*zip code: 02905)*

611. Kristina Jacobs (*zip code: 01801)*

612. Kaitlin Mcgovern (*zip code: 02908)*

613. Katharine Accola (*zip code: 02906)*
No LNG in Providence. It is TOO risky, TOO close to a large population, and TOO expensive.

614. Karen Whitehead (*zip code: 02908)*

615. Karen Blazer (*zip code: 02903)*

616. Karen Palmer (*zip code: 02864)*

617. Kari Malkki (*zip code: 02906)*

618. Karlo Berger (*zip code: 02906)*

619. Hunger Barbara (*zip code: 02907)*
Absolutely no.

620. Katie Scholl (*zip code: 90272)*

621. Kate Blacklock (*zip code: 02906)*
I totally agree with this petition, particularly with regard to the development of renewable energy and the negative effects that this facility would have on our community.

622. Katie Batchelder (*zip code: 02906)*

623. An anonymous signer (*zip code: 02906)*

624. Kathleen Odean (*zip code: 02852)*

625. Kathleen Rourke (*zip code: 02906)*

626. Kathy Black (*zip code: 02905)*

627. Kathy Jellison (*zip code: 02861)*

628. Katie Pivarnik (*zip code: 02906)*

629. Katie Chu (*zip code: 94010)*

630. Karishma Bhatia (*zip code: 02906)*

631. Karen McAninch (*zip code: 02906)*

632. Kevin Gilligan (*zip code: 02906)*

633. Kristin Re (*zip code: 02909)*

634. Kira Dekhayser (*zip code: 02903)*

635. Ken Diaz (*zip code: 02128)*

636. Karen Dingley (*zip code: 02906)*
Please do not build this unsafe facility.

637. Keally Cieslik (*zip code: 02909)*
Not in Our Backyard!

638. Kehben grier (*zip code: 04654)*

639. Keith Catone (*zip code: 02905)*

640. Kellie Brown (*zip code: 02835)*

641. Kelvin Moore Jr. (*zip code: 02912)*

642. Kenneth Rosenblad (*zip code: 02906)*
Please do not bring this archaic fuel source and highly dangerous processing facility to our city!

643. Kendra Monzon (*zip code: 02909)*

644. Kendra Winchester (*zip code: 02888)*

645. Kennedy Arias (*zip code: 02905)*

646. Kerri Kanelos (*zip code: 02905)*

647. An anonymous signer (*zip code: 02809)*

648. Kevin Barrios (*zip code: 02907)*

649. Katrina Avery (*zip code: 02885)*

650. Khalif Andre (*zip code: 10029)*

651. BRENT crisci (*zip code: 04330)*

652. Kiersten Sapp (*zip code: 02906*)

653. Kim Fraczek (*zip code: 11206*)
LNG is dangerous for any community. We must be thinking of the future of the residents of the nation, not the future of the corporations who have no allegiance to the public, our law, our land and water. We can build a renewable economy, and be a world leader again. Otherwise, to continue on with the fossil fuel fallacy is 20th century thinking when we are well into the 21st century now. This is absolutely absurd that we have to continue to reason with our leaders through petitions to protect the common good of our homes.

654. Kimberly Glerum (*zip code: 02906*)

655. arthur plitt (*zip code: 02860*)
Accidents waiting to happen with what protection and at what cost

656. Kinnari Patel (*zip code: 02906*)

657. Eric Kirkendall (*zip code: 66044*)

658. Kiza Jones (*zip code: 02863*)

659. Kate Schapira (*zip code: 02909*)

660. Klara Zimmerman (*zip code: 20008*)
In passing the Resilient Rhode Island Act, RI made a forward-thinking and much needed commitment to reduce greenhouse gas emissions and improve the state's resilience against climate impacts. Expanding liquefied natural gas is a step in the wrong direction. Not only will this project support fracking and increase the state's dependence on fossil fuels, it will also bring an environmental hazard to a community already negatively impacted by a chemical storage facility and an existing LNG storage tank. Do not let National Grid build the liquefaction facility.

661. Karen Laurie (*zip code: 02920*)

662. Paul Kinkman (*zip code: 02906*)

663. Ken Beatty (*zip code: 02920*)

664. Katherine Gibson (*zip code: 02812*)

665. Kt Ramsey (*zip code: 02909*)

666. Kolby Goryl (*zip code: 02903*)

667. Korie Sanchez (*zip code: 02906*)

668. Katherine Parsons (*zip code: 02906)*

669. Kira Wills (*zip code: 02905)*

670. Craig O'Connor (*zip code: 02909)*

671. Kristian Georgiev (*zip code: 02906)*

672. Kristina Brown (*zip code: RI)*

673. Katie Chung (*zip code: 02906)*

674. Karen Shugrue (*zip code: 02909)*

675. Karen Paley (*zip code: 02818)*
I am 68. This is the first public hearing I have attended. Why doesn't Natiomal Grid put all of these resources into renewable energy?

676. Kathleen Turley (*zip code: 02904)*
KEEP NATURALin the GROUND!

677. lalea bamba (*zip code: 02907)*

678. Lucy Ann Lepreau (*zip code: 02906)*

679. Laurie & Dave King (*zip code: 97203)*

680. linda peterson (*zip code: 02905)*

681. Lisa Reels (*zip code: 02907)*
No lng in providence

682. Laura Bozzi (*zip code: 02909)*

683. Laura Brion (*zip code: 02909)*

684. Laura Borth (*zip code: 02190)*

685. Lauren Williams (*zip code: 18045)*

686. Lauren lubeck (*zip code: 02912)*

687. An anonymous signer (*zip code: 02904)*

688. Irene Lawrence (*zip code: 02908)*
Absolutely NOT !

689. Lazaro Quezada (*zip code: 02907)*

690. Leslie Chazan (*zip code: 02906)*

691. Lorette Dussault (*zip code: 02906)*
Please stop this from occuring!

692. Leah Haykin (*zip code: 02906)*

693. Leah Cooke (*zip code: 02906)*

694. leanne burke (*zip code: 02906)*

695. Leann Letellier (*zip code: 02907)*

696. J. Everett LeCount (*zip code: 02906)*
Plant too risky, anti-fracturing of any kind.

697. Lee Clasper-Torch (*zip code: 02906)*

698. Lee Wesolowski (*zip code: 02861)*
no fracking in RI!!

699. Mindy W (*zip code: 02857)*

700. Benjamin Legg (*zip code: 02906)*

701. Leon Cooper (*zip code: 02912)*

702. Leon Andrews (*zip code: 02906)*
This would be a serious mistake !

703. Susan Arce (*zip code: 02906)*

704. Lesley McLaughlin (*zip code: 02864)*
This proposed facility is an affront to the community and illogical if we are serious about a sustainable future.

705. Lesley Levin (*zip code: 02920)*
There are enough dangers in Providence, don't add more.

706. Leslie Alvarez *(zip code: 02860)*

707. Leslie Cucino *(zip code: 02825)*

708. Liam Sullivan *(zip code: 02906)*

709. Liberty Goodwin *(zip code: 02906)*
Rep. Regunberg has told it "like it is". This project is a terrible idea, and deserves to be rejected.

710. Liberty Goodwin *(zip code: 02906)*

711. Liberty Goodwin *(zip code: 02906)*
This proposal is an awful, regressive, polluting one - indefensible in this age of environmental and health devastation. Do not degrade your reputations and our state by supporting it! (I voted for both of you - but like many others would have to reconsider that if you fail to support the public good in ways such as this project)

712. Ligia Fragoso *(zip code: 02906)*

713. Jennifer Medeiros *(zip code: 02721)*

714. Lillian Dominguez *(zip code: 02906)*

715. Linda M *(zip code: 02914)*

716. lindsey burda *(zip code: 02895)*

717. Lindsey Stapleton *(zip code: 02909)*

718. Ben Martel *(zip code: 20815)*

719. Lisa Scorpio *(zip code: 02909)*

720. Lisa Godin *(zip code: 87114)*
Although I currently live elsewhere, my family roots have been in RI since 1637, I still have people there, and plan to return. RI is my home. Please protect it from this project. It is not in our best interest. Thank you.

721. Lisa Garcia-Sampson *(zip code: 02903)*

722. Lisa stein *(zip code: 02906)*
no LNG in PVD.

723. Elisabeth McHenry (*zip code: 02879)*

724. Helen Dukes (*zip code: 02906)*

725. Liz Downing (*zip code: 02906)*
The well being of Our People and Natural Resources precede private profit, especially in the case of fossil fuel. Please help Providence and Rhode Island be a model for wise community and public planning. Say No to LNG.

726. Laura Gulley (*zip code: 02906)*
I live and work near this site and walk near here everyday. This location is densely populated and contains the vital hospital network that serves the city. Please exercise common sense and do not risk our lives and homes by placing this LNG facility here.

727. Linda Kushner (*zip code: 02906)*
I think building a facility in the port of Providence is a danger to the community.

728. Lauren Niedel-Gresh (*zip code: 02814)*
Time to stop the madness - NO TO NEW FRACKED GAS DEVELOPMENT! STOP THE INVENERGY PLANT IN BURRILLVILLE - STOP THE NEW LNG FACILITY!! ENOUGH IS ENOUGH!

729. Lois Brunelle (*zip code: 02842)*
This is yet another example of environmental racism and must stop!

730. Lois Blazer (*zip code: 02888)*

731. Lorna Steele (*zip code: 02806)*

732. Louise Zuckerman (*zip code: 02906)*

733. Lourdes De Jesus (*zip code: 02907)*

734. Lisa Beade (*zip code: 02860)*
National Grid has NEVER seen themselves as a vital service provider, but always as a corporation bent on punitive treatment of those who can't put cash on the barrelhead. They send out shut off letters like they were eating a bag of potato chips!
How to we rid ourselves of this horrid bloodsucking viper given the PUC's lack of interest in defending RI's citizens?

735. Liliana Sampedro (*zip code: 97402)*

736. Lisa Clark (*zip code: 02906)*

737. Leslie Price (*zip code: 02909)*

738. Lael Tucker (*zip code: 02907)*

739. Ly Dang (*zip code: 06110)*

740. Lydia Simas (*zip code: 02144)*

741. Lynda Gulley (*zip code: 02860)*

742. Lynn Lavallee (*zip code: 02830)*

743. Mary Ann Babinski (*zip code: 01085)*

744. Shelby Mack (*zip code: 02809)*

745. MacKenzie Brigham (*zip code: 02909)*

746. Madeline Pesec (*zip code: 02906)*

747. Magalie Boucher (*zip code: 02905)*
Please Mayor Elorza, consider not supporting this and helping the community that voted for you to veto this project. Building this facility so close to the city (capital of RI) and an hospital is just creating a risk that outweigh the benefit.

748. Martha Nielsen (*zip code: 02906)*

749. An anonymous signer (*zip code: 02906)*

750. Mandara MacKinnon (*zip code: 02903)*

751. James Root (*zip code: 06810)*
Just a goddamned minute!

752. Manuela Raposo (*zip code: 02905)*

753. Marcia Holguin (*zip code: 10466)*

754. M N (*zip code: 06039)*

755. Margarita Guedes (*zip code: 02904)*
No LNG in PVD

756. marguerite hall (*zip code: 02906)*

757. Margaret O'Donnell (*zip code: 02907*)
We are running out of time with regard to global warming having already passed the 350 ppm that was the maximum and now heading toward 400 ppm, perhaps a point of no return. Certain sectors in our economy will make billions of dollars on the fossil fuel infrastructure that is being pushed nation wide to support a dirty and dangerous product like fracked gas. Outlaw it, don't support it. NO LNG in PVD!!!!

758. Marguerite Suozzo-Gole (*zip code: 01060*)

759. Mark Baumer (*zip code: 02906*)

760. Zuleyka Marquez (*zip code: 93030*)

761. Carole Marshall (*zip code: 02915*)

762. Martha Yager (*zip code: 02771*)

763. Martin Keil (*zip code: 02882*)
There is a high potential of Rhode Island for building wind farms and tidal power stations along the cost to increase the mix of regenerative clean energy instead of using unsustainable fracking gas.

764. Marti Rosenberg (*zip code: 02905*)

765. Marti Rosenberg (*zip code: 02905*)

766. marjorie mann (*zip code: 02906*)

767. marvin pineda (*zip code: 02863*)
hannn

768. mary gwann (*zip code: 02910*)

769. Mary Walsh (*zip code: 02822*)

770. Mary Pendergast (*zip code: 02860*)
We demand alternatives and a Just Transition away from fossil fuels. If $100 million of our own money is being invested in energy, it should be invested in community owned renewable energy

771. Mathew Jodoin (*zip code: 02904*)

772. mary troeger (*zip code: 02909*)

773. Matthew Perry (*zip code: 02906*)

774. Matthew Rutz (*zip code: 02906)*

775. Matthew Myers (*zip code: 02906)*

776. Maya DeHart (*zip code: 02906)*

777. Courtney Williams (*zip code: 10566)*

778. Mark Baumer (*zip code: 02906)*

779. Marguerite Benoit (*zip code: 02906)*

780. Mark Beveridge (*zip code: 02882)*

781. Mary Blue (*zip code: 02904)*

782. Michele Boyd (*zip code: 02905)*
NO LNG. PERIOD.

783. Megan Breiding (*zip code: 02806)*

784. Michael Broder (*zip code: 02906)*

785. Mary Brower (*zip code: 02906)*

786. Margaret Mary McCormick (*zip code: 02905)*
We live in the area

787. Marcie Perskin (*zip code: 11358)*

788. Emma McCool-Guglielmo (*zip code: 02879)*

789. Mary Anne Clarke (*zip code: 02852)*

790. Megan Cresci-Johnson (*zip code: 02907)*

791. Maya Sandler (*zip code: 06511)*

792. Martin Driggs (*zip code: 01504)*
Frack no!

793. John Bazik (*zip code: 02906)*
No LNG in Narragansett Bay!

794. Meg Cresci-johnson *(zip code: 02905)*

795. Megan Gaynor Charette *(zip code: 02906)*

796. Megan Sanderson *(zip code: 02905)*
Unacceptable !!!

797. Megan Sanderson *(zip code: 02905)*

798. Meghan Kallman *(zip code: 02860)*

799. Melanie Symonds *(zip code: 02905)*
I OPPOSE THE GAS LIQUEFICATION FACILITY THAT NATIONAL GRID WANTS TO BUILD IN SOUTH PROVIDENCE!

800. Melissa Jenkins *(zip code: 02905)*
This is a residential neighborhood, not an industrial wasteland. Nearby healthcare facilities, medical school and planned nursing school are incompatible with plans to destroy the health and safety of southside residents. This area needs to be cleaned up, not further polluted. PEOPLE LIVE HERE!!!!!

801. Michelle Smith *(zip code: 95667)*

802. Lorraine Savard *(zip code: 02863)*

803. Richard Pescatore *(zip code: 02908)*

804. Mary Freet-Everson *(zip code: 07023)*

805. Lynda Fosco *(zip code: 02906)*
No liquefaction facility in the Port of Providence please!!!!

806. Mary Watson *(zip code: 02906)*

807. Molly Kitiyakara *(zip code: 02906)*

808. Mark Hengen *(zip code: 02905)*
Please vote no on locating the LNG plant at the Port of Providence

809. Mia Rivera *(zip code: 02865)*

810. Micah Salkind *(zip code: 02903)*

811. Michael Friedman *(zip code: 02818)*
This is not an appropriate nor safe use of our waterfront in Providence.

812. Michael Schwartz (*zip code: 37167)*

813. Michaela Stannard (*zip code: 02835)*

814. Michael Gore (*zip code: 02910)*
No way.

815. Michael Egan (*zip code: 02907)*

816. michelle LeBrun (*zip code: 02906)*
No thank you! No need to further poison the citizens!

817. Michelle Arpa (*zip code: 02720)*

818. Michelle McKenzie (*zip code: 02905)*

819. Michelle Merchant (*zip code: 02903)*

820. Michelle Wenderlich (*zip code: 01605)*

821. Michelle Olivo (*zip code: 02905)*
I support this petetion.

822. Michael Lefort (*zip code: 02852)*

823. Elwood Gay (*zip code: 02905)*

824. Lauren Craven (*zip code: 02911)*

825. Mika Zacks (*zip code: 98033)*

826. Michael Bucci (*zip code: 10036)*

827. dr. michael rubinstein (*zip code: 02906)*

828. Millie Valerio (*zip code: 02860)*

829. Alyssa St. Franc (*zip code: MCLA 375 Church Street Unit #6767 North Adams, MA 01247)*

830. Minna Choi (*zip code: 02907)*

831. Sophia Neirman (*zip code: 02879)*

832. misael delgado *(zip code: 02908)*

833. Delaney Brooks *(zip code: 34232)*

834. Donna Amatore *(zip code: 02905)*
NO and NO!!! I live in the Edgewood section of Cranston on the Bay and frequently in the morning the air ALREADY stinks of fuel, oil and other chemicals from the port. DO NOT add this toxic and dangerous operation to the Port of Providence.

835. Michael Jerry *(zip code: 01603)*
No fracking anywhere!!!

836. Maryellen Kurkulos *(zip code: 02720)*

837. milo winter *(zip code: 02903)*

838. Matthew Caswell *(zip code: 02909)*
Move to renewable energy!

839. Michael Lefort *(zip code: 02905)*

840. Mickey Mouse *(zip code: 02905)*

841. Marilyn Malina *(zip code: 02881)*

842. michelle lacey *(zip code: 02905)*

843. michelle lacey *(zip code: 02905)*

844. Margaret Thorsen *(zip code: 02864)*

845. Moira Hinderer *(zip code: 02906)*

846. Mollie Koval *(zip code: 02912)*

847. Molly Miner *(zip code: 02914)*

848. Marion Jordan *(zip code: 02906)*

849. Adrian Blount *(zip code: 02905)*

850. monica huertas *(zip code: 02905)*

851. Monica Goris (*zip code: 29545)*

852. Monica Huertas (*zip code: 02905)*

853. Monique Conway (*zip code: 02909)*

854. Maureen Lee (*zip code: 02906)*

855. Regina Kuecks-Morgan (*zip code: 02906)*

856. Jasmin Morillo (*zip code: 02908)*

857. Susan Asselin (*zip code: 02911)*
I own a business in Providence and many of my children live there. N one wants this and no one needs this.

858. Chuck Moua (*zip code: 02907)*

859. Michael Sperduti (*zip code: 02907)*

860. Wayne Brown (*zip code: 02905)*

861. Mary Gay (*zip code: 02903)*

862. Marie Schopac (*zip code: 02813)*

863. Mercedes Monteiro (*zip code: 02906)*

864. Marguerite Suozzo-Gole (*zip code: 02912)*

865. Michael Sutila (*zip code: 02906)*
NO liquefaction facility in the Port of Providence.

866. Jeremy Mudd (*zip code: 02906)*

867. Karen Murphy (*zip code: 02915)*

868. Christopher Murphy (*zip code: 02908)*

869. Maria Rose (*zip code: 02906)*

870. Morgan Victor (*zip code: 02908)*

871. Marlena Von Hoffer (*zip code: 02905)*

872. Margery Winter (*zip code: 02903)*
Not in Providence. Bild this in an unpopulated area,

873. Myra Braverman (*zip code: 02906)*
This must not happen. We can't afford the cost amd the potential danger.

874. Trrence Cummings (*zip code: 02860)*

875. Nicole (*zip code: 94925)*

876. Nada Samih-Rotondo (*zip code: 02906)*

877. Tenzin Namdol (*zip code: 06498)*

878. Nancy C Arthur (*zip code: 02720)*

879. Nancy Bailey (*zip code: 38017)*

880. Nancy Littell (*zip code: 02906)*

881. Nancy Singer (*zip code: 02906)*
No LNG in Providence, it's dangerous , bad for the environment and the economy.

882. Nari Sohn (*zip code: 02906)*
I am concerned about how construction and potential disasters can affect the vulnerable populations that live around the facility. I am concerned about the health of people and the environment.

883. An anonymous signer (*zip code: 02906)*

884. Graham Gardner (*zip code: 02908)*

885. Nina Berry (*zip code: 02906)*

886. Ariele Affigne (*zip code: 02906)*

887. NicholS Gabinet (*zip code: 02906)*

888. Naama Gidron (*zip code: 02906)*

889. Noel Healy (*zip code: 02116)*

890. Nickolas Faynshteyn (*zip code: 02067)*

891. Judith Nichtern (*zip code: 02906)*
No fracking way!

892. Nicholas Padula (*zip code: 02903)*

893. Nicole Anthony (*zip code: 02920)*

894. ninoshka perez (*zip code: 02908)*

895. Nicholas Schmader (*zip code: 02886)*

896. N Nicholson (*zip code: 02906)*
No more gas liquefaction facilities! And not in the middle of a densely populated urban area. On all fronts, it would be a catastrophe.

897. Elizabeth Cook (*zip code: 02879)*
This proposed plant is too dangerous and would adversely affect the neighborhood nearby! We don't need any more investments in fossil fuels!

898. noah ezer (*zip code: 02912)*

899. Emlyn Addison (*zip code: 02906)*
Wait--you're CHARGING us to expand YOUR business into FRACKING, then EXPORTING it? **** you.

900. Joseph Carvalho (*zip code: 02720)*
As the president of the Coalition for Responsible Siting of LNG Facilities since 2003, we are adamantly opposed to National Grid's ill conceived proposal. The Coalition proudly stands with all the concerned citizens of the area in their opposition!

901. Joanna Gradilone (*zip code: 06379)*

902. eleanor almond (*zip code: 02910)*

903. Aaron Kaplan (*zip code: 02909)*

904. Tonya Norftill (*zip code: 02859)*

905. Norine Duncan (*zip code: 02860)*

906. Nancy St Germain (*zip code: 02886)*

907. Teri Dignazio (*zip code: 10353)*
After multiple battles in PA, absolutely not - Massachusetts too small and water too important plus safety to hazard something not necessary. Do not move forward with your plans.

908. Joshua Willis (*zip code: 02905)*

909. olivea martin (*zip code: 02905)*

910. Olivia Prosak (*zip code: 02912)*

911. Angelina Olivo (*zip code: 02905)*

912. Tomi Onabanjo (*zip code: 02912)*

913. Joanne Hart (*zip code: 01602)*

914. Pamela Brightman (*zip code: 02915)*
No LNG in PVD ! The health and future of our children are worth more than profit.

915. Melissa Cruz (*zip code: 02909)*

916. Trot Ordonez (*zip code: 02860)*

917. Patricia Otillio (*zip code: 02915)*

918. winnie fan (*zip code: 90701)*

919. Tammy G (*zip code: 02904)*
No LNG in Providence!!! I was a city gal till I moved with my dog here last year, now we are all in!!! The city is amazing!! The people and area, amazing!!! Plus, we need desperately to get with current times and move away from outdated energy sources!!! It'll save on energy bills eventually,, which is why National Grid doesn't want any part in it, I'm sure!! We need to unite to push them forward!!!! THIS is the way!!!

920. Palmira Brummett (*zip code: 02906)*
Fracking damages communities. Pursue our good options with wind and solar. Palmira Brummett

921. Aparna das (*zip code: 02136)*

922. Patricia J Fontes (*zip code: 02833)*
Abandon fossil fuels. Get on with clean energy.

923. Pat Jaehnig (*zip code: 02818)*

924. Patricia Sung (*zip code: 11693)*

925. Patricia Henry (*zip code: 02906)*
Too dangerous. Why can't we be the first carbon free state & lead the nation!

926. Patrick Kelley (*zip code: 02906)*

927. Patrick Nigro (*zip code: 02903)*

928. Paul Tavarez (*zip code: 02903)*

929. Paul Beade (*zip code: 02906)*
No to this dangerous expensive and regressive mistake!!!!

930. patricia quimby (*zip code: 02906)*

931. Joseph Carvalho (*zip code: 02723)*

932. Pedro polanco (*zip code: 02905)*

933. Patricia Edwards (*zip code: 02906)*

934. Oliver Arias (*zip code: 02908)*

935. An anonymous signer (*zip code: 78041)*

936. Julia pena (*zip code: 77092)*

937. Kelsey Erickson (*zip code: 01741)*

938. Perry Buroker (*zip code: 02906)*

939. Matthew Perry (*zip code: 02748)*

940. Peter Avitable (*zip code: 02909-1912)*

941. Peter Enriquez (*zip code: 02912)*

942. Peter Frisch (*zip code: 02912)*

943. Peter Mattson (*zip code: 02906)*

944. Peter Deffet (*zip code: 02889)*

945. Peter Leviten (*zip code: 02874-0709)*

946. Peter Bodner (*zip code: 02906)*

947. Peter Lapchak (*zip code: 02191)*
LNG Storage facilities like pipelines explode. when they do it is catastrophic. No LNG storages facilities near towns. A full Environmental Impact Study as well as a full Health Risk Study completed by third parties with no financial interests is warranted before awarding certificates to start building.

948. Petros Linardos (*zip code: 02906)*

949. Pam Gibson (*zip code: 24421)*

950. Patricia Gifford (*zip code: 02906)*

951. P Wm HUTCHINSON (*zip code: 02917)*
Please stop this proposed madness.

952. pia ward (*zip code: 02908)*

953. Patricia Ward (*zip code: 01754)*

954. Priscilla Mason (*zip code: 02915)*

955. Pearl Holloway (*zip code: 02886)*

956. Stephanie Peramas (*zip code: 02881)*

957. Kelly Canavan (*zip code: 20607)*

958. Emily Mendez (*zip code: 02888)*

959. Phyllis Nauts (*zip code: 06796)*

960. Dara Pok (*zip code: 02910)*
This is why we are not progressing towards a future that is sustainable to us and the planet. These people need to grow up.

961. Annie Goldberg (*zip code: 02906)*

Senator Whitehouse, Rep. Regunberg, and Mayor Elorza, bless you all and THANK YOU for jumping on this! I will be happy to do anything I can to assist your efforts to oppose this horrifying proposal. Let me know. 401-274-7873

962. Paul Quintanilla (*zip code: 02906)*

963. Pranav Aurora (*zip code: 02903)*

964. Pranav Reddy (*zip code: 02906)*

965. Patricia Raub (*zip code: 02908)*

966. Keisha-Khan Perry (*zip code: 02907)*
If not in your backyard, then why in mine?

967. Kelly Shinners (*zip code: 02914)*

968. Priscilla Carrion (*zip code: 02908)*

969. James Marsden (*zip code: 02906)*

970. Philip Schuyler (*zip code: 02906)*

971. Peter Quesnel (*zip code: 02909)*
A liquified natural gas facility does not belong in a populated area where people would be endangered. The proposed site is close to neighborhoods and schools, including the school where I work. The students and the families of this low income neighborhood should not be exposed by the dangers and risks of this proposed facility.

972. Russell Ricci (*zip code: 02906)*

973. peter weinbeeg (*zip code: 02907)*

974. Paula Weindel (*zip code: 02906)*

975. Elizabeth Pannell (*zip code: 02860)*

976. Elliott B. Urdang (*zip code: 02906)*

977. Quatia Osorio (*zip code: 02904)*

978. Ed Gilbert (*zip code: 02905)*
Please ask for public forums on this.

979. Scott Canavan (*zip code: 01610)*

980. Bill Quigley (*zip code: 70118)*

981. Qualeasha Wood (*zip code: 02903)*

982. Robert Rustermier (*zip code: 02905)*
I agree entirely with this petition. As a country we DO NOT need to continue investing in fossil fuel-related technologies but rather sustainable, renewable energy technologies. It is up to our elected leaders to represent us in just ways; indeed, to lead.

983. Rachel Hill (*zip code: 02903)*

984. Rachel Schrier (*zip code: 02906)*

985. Rachel Myroniuk (*zip code: 02909)*

986. Rachel Bishop (*zip code: 02909)*

987. Rachel Playe (*zip code: 02906)*

988. Rachel Playe (*zip code: 02906)*
We need to focus on renewable energy like wind and solar power. We should not be investing in expensive and unhealthy forms of fuel.

989. Rachel Rodriguez (*zip code: 02907)*

990. Ralph Fortune (*zip code: 02813)*

991. Ramon Quinonez (*zip code: 02907)*

992. beth Nixon (*zip code: 02860)*

993. Jessica Rodrigues (*zip code: 02907)*

994. Andrea Gouze (*zip code: 02906)*
This is a dangerous and irresponsible decision on the part of National Grid and I would hope that you will place safety above profits.

995. Rachel Bell (*zip code: 02906)*

996. Rob Clarke (*zip code: 02907)*

997. Diane Hardy (*zip code: 02906)*
I definitely do NOT want this "liquefaction facility" in the Port of Providence!! I don't approve of fracking at all! I don't want the cost of this facility added to my bill! NO, NO, NO!!!

998. Ruth Horton (*zip code: 02906)*

999. Linda Reich (*zip code: 02906)*

1000. Rena Nathanson (*zip code: 02905)*

1001. Renata Mauriz (*zip code: 07876)*

1002. Patricia Smith (*zip code: 02806)*

1003. Grace Diaz (*zip code: 02907)*

1004. Steve Lamarre (*zip code: 02886)*

1005. Kathleen A Ricard (*zip code: 02919)*

1006. Richa Mishra (*zip code: 02908)*

1007. Richard Muto (*zip code: 02920)*

1008. Richard Gomes (*zip code: 02909)*

1009. Richard porter (*zip code: 02860)*

1010. Rick Richards (*zip code: 02906)*
Stop building infrastructure for carbon-based energy! Switch to green energy as quickly as possible.

1011. Louis Nielsen (*zip code: 02906)*

1012. Rita Webb (*zip code: 02882)*

1013. Robyn Peterson (*zip code: 02904)*

1014. Rebecca Kislak (*zip code: 02906)*
Please, do not build an expensive and irresponsible LNG facility in my city. We should be investing in alternatives to fossil fuels. As a rate payer I do not want to pay for this. I am additionally very concerned about the hazards this creates near where many people live, go to school, seek healthcare. It would increase the environmental burden on a low-income community of color that already faces a disproportionately high rate of asthma and other environmental related illnesses. Thank you!

1015. Romer Lagrange (*zip code: 02907)*

1016. Ruth Marris-Macaulay (*zip code: 02915)*

1017. Rachel Falk (*zip code: 02906)*

1018. Robert Hart (*zip code: 02806)*
Rhode Island should not be paying for this facility, and it should not be located in RI, especially not at this site.

1019. robbin hare (*zip code: 02906)*

1020. Roberta Kaufman (*zip code: 02915)*

1021. Barbara Roberts (*zip code: 02835)*

1022. Rosemary Quattrucci (*zip code: 02865)*

1023. Sheryl StPierre (*zip code: 02745)*

1024. Amanda Roig (*zip code: 02905)*

1025. Roland Harper (*zip code: 02907)*

1026. rosemarie santiesteban (*zip code: 10025)*
Fossil Fuels like gas are a dying fuel. Go Wind instead

1027. Ronald Lewis (*zip code: 02906)*

1028. Rudy Chen (*zip code: 02906)*

1029. Roseanne Camacho (*zip code: 02907)*

1030. Ruth Page (*zip code: 02906)*

1031. Robyn Noble (*zip code: 02906)*

1032. Randall Rose (*zip code: 02906)*

1033. Suzanne Ream (*zip code: 02860)*
Cleaner, safer (renewable) energy should be our goal, not gas fracked from our earth!

1034. Tammy Salisbury (*zip code: 06264)*

1035. Rebecca Siddons (*zip code: 02905)*
I live in this neighborhood and have a young child. I worry about existing environmental hazards in our community and do not want to see an additional hazard threatening my child's health.

1036. Rebecca More (*zip code: 02903)*
This is a BAD deal for the citizens of Providence and the entire state of Rhode Island. Please help make sure that such proposals are held to the highest environmental and social standards. Thank you.

1037. howard rubenstein (*zip code: 02906)*

1038. REVEN FELLARS (*zip code: 60614)*

1039. Douglas Ujifusa (*zip code: 95128)*

1040. Ruth Bamuwamye (*zip code: 02912)*

1041. RUTH PARKER (*zip code: 02906)*

1042. Bruce Ramphal (*zip code: 02912)*

1043. Rian Yalamanchili (*zip code: 02906)*

1044. Ryan Anderson (*zip code: 02912)*

1045. Ryan Harris (*zip code: 02822)*

1046. Ryan Greene (*zip code: 02906)*

1047. Ryan Ladds (*zip code: 02906)*

1048. R Zager (*zip code: 10019)*

1049. Seena Chhan (*zip code: 09209)*

1050. Sabrina Pernia (*zip code: 02909)*

1051. Sabine Adrian (*zip code: 02909)*

1052. Sabrina Pan (*zip code: 02909)*

1053. Susan Greene (*zip code: 02191)*

1054. Lynne Damiano (*zip code: 02889)*

1055. Sally Mendzela (*zip code: 02911)*

1056. Salina Tesfay (*zip code: 02912)*

1057. Sally Jane Wilson (*zip code: 02908)*

1058. Samantha Paul (*zip code: 02860)*

1059. Samantha Carroll (*zip code: 02915)*

1060. Samson Hampton (*zip code: 02906)*

1061. An anonymous signer (*zip code: 11211)*

1062. Sam Kiernan (*zip code: 06877)*

1063. Samuel LaFortune (*zip code: 02905)*

1064. Samantha Holguin (*zip code: 10466)*

1065. Sam Santiago (*zip code: 02909)*

1066. Samuel DiBella (*zip code: 02818)*

1067. Sana Siddiq (*zip code: 02906)*

1068. Stephanie Aponte (*zip code: 02905)*

1069. Sara Mersha (*zip code: 02119)*

1070. Sara Schaub (*zip code: 02903)*

1071. Sarafine Hammond (*zip code: 02840)*
Please do not allow this to occur. There is already enough health endangerment in this location/community and National Grid should not be allowed to add to it.

1072. Sarah Day Dayon (*zip code: 02906)*

1073. Sarah Lettes (*zip code: 02912)*

1074. Sarah Bourne (*zip code: 02903)*

1075. Sarah Hashem (*zip code: 02907)*

1076. Sally Barney (*zip code: 02881)*

1077. Stephan Brigidi (*zip code: 02809)*

1078. Jack Reynolds (*zip code: 02790)*

1079. Sebastian Ruth (*zip code: 02907)*

1080. Juan Pichardo (*zip code: 02907)*

1081. Sergius Paulus (*zip code: 02908)*

1082. stephen alves (*zip code: 02889)*

1083. Judith Day (*zip code: 02907)*

1084. Lydia Moore (*zip code: 02903)*

1085. Shana Klinger (*zip code: 02860)*

1086. Holly Hollenbach (*zip code: 02906)*

1087. Shannon Leary (*zip code: 02130)*

1088. Dena Quilici (*zip code: 02906)*

1089. Shardale McAfee (*zip code: 02919)*

1090. Shayla Durfey (*zip code: 02842)*

1091. Karen Sheahan (*zip code: 02906)*
This cannot happen!
The port of Providence sits right in the middle of residential neighborhoods, viable businesses and industrial operations. It is stones throws from our TF Green Airport.
This is a disservice to a state you are meant to supply with gas and electricity, safely.
I beg you to do the right thing and abandon this an insane idea.
Thanks for your consideration,
Karen Sheahan
671 Hope St.
Providence, RI 02906

1092. Sheila Mackintosh (*zip code: 02837)*

1093. Shirin Chen (*zip code: 02912)*

1094. Shannon Donahue (*zip code: 02909)*
We want to out live dinosaurs. Gas,oil, fracked gas are poisons. They contaminate land and drinking water.
Time to start thinking technology advancement, green energy and CLEANING UP the mess we've made for our progeny.

1095. Sara Huber (*zip code: 02907)*

1096. Sigal Gottlieb (*zip code: 02906)*

1097. Signe Swanson (*zip code: 10308)*

1098. Silvia Yanez (*zip code: 02865)*

1099. Simcha Davis (*zip code: 02909)*

1100. Simon Metcalf (*zip code: 02144)*

1101. Simone Ahlborn (*zip code: 02908)*

1102. Stephen Bourguet (*zip code: 02906)*

1103. Seungjun Kim (*zip code: 02906)*

1104. Sophie Kasakove (*zip code: 11215)*

1105. Marcy Feibelman (*zip code: 02906)*

1106. Seamus Slade (*zip code: 02874)*

1107. Samantha Faria (*zip code: 02809)*

1108. Maureen Farrell (*zip code: 02995)*

1109. Suzanne Affigne (*zip code: 02906)*

1110. Susan Feeley (*zip code: 02907)*

1111. Sophie Tan (*zip code: 02909)*

1112. Sofia Aronson (*zip code: 63146)*

1113. SOhum Chokshi (*zip code: 60172)*

1114. Sonya Kinney (*zip code: 02571)*

1115. Pauline Rodrigues (*zip code: 02726)*

1116. Sharon Ottey (*zip code: 02904)*
I definitely oppose such an operation. It would be much too dangerous for the people and businesses in that part of the city.

1117. Samantha DeAndrade (*zip code: 02912)*

1118. shirley Garcia (*zip code: 02909)*

1119. Steve Brightman (*zip code: 02906)*

1120. Sean Reed (*zip code: 02895)*
No LNG!!!! Keep our community clean and healthy

1121. An anonymous signer (*zip code: 02905)*

1122. Samuel Sayeh (*zip code: 02907)*

1123. Susan Stiles-Randak (*zip code: 02879)*

1124. sharon eisman (*zip code: 02886)*
enough!!! seek non toxic, environmentally and humanly safe forms of power!

1125. Stephanie Richardson (*zip code: 02904)*

1126. Jessica Stensrud (*zip code: 02860)*
Let's cut off fossil fuels for the health and safety of RI, our country and the world.

1127. Stephanie Chang (*zip code: 02903)*

1128. Stephanie Harty (*zip code: 02859)*

1129. Stephanie Maldonado (*zip code: 02906)*

1130. Stephanie pelletieR (*zip code: 02771)*

1131. Stephany Marsden *(zip code: 02907)*

1132. Stephen Dahl *(zip code: 02881)*

1133. Stephanie Salmon *(zip code: 02779)*

1134. Steve Fischbach *(zip code: 02905)*

1135. Steve Roberts *(zip code: 02909)*

1136. Steve Davis *(zip code: 01966)*

1137. Steven Dy *(zip code: 02893)*
No ING facility in Providence!!

1138. Steven Upritchard *(zip code: 02905)*

1139. Steven Holman *(zip code: 02906)*

1140. Servio Gomez *(zip code: 02907)*

1141. John Holscher *(zip code: 02831)*

1142. June Wing *(zip code: 02840)*

1143. Kyle Stumpe *(zip code: 02909)*

1144. SueEllen Kroll *(zip code: 02906)*

1145. Sue Walsh *(zip code: 02860)*

1146. Linda Suggs *(zip code: 27603)*

1147. Kathryn Eberstadt *(zip code: 02906)*

1148. Sundeep Sood *(zip code: 02888)*

1149. Kate Aubin *(zip code: 02905)*

1150. Surya Manickam *(zip code: 02903)*

1151. Susallin Chean (*zip code: 02909)*

1152. Susan Donovan (*zip code: 02809)*
This is a huge threat to public safety. Only an energy company with no ties to the area could propose such a dangerous project--thousands of people including schools and hospitals in the "vaporizing zone!"

1153. susan newkirk (*zip code: 02906)*

1154. Susan Friendson (*zip code: 02910)*
NO NO NO. 1. Do not be complicit with fracking. It's raping mother earth and totally unnecessary. 2. Stick with solar and wind energies, which are there for the taking without harming the planet we live on. Go forward! Think about your children and your children's children.

1155. Abel Collins (*zip code: 02869)*

1156. sydney fang (*zip code: 94606)*

1157. sylvia arredondo (*zip code: 90744)*

1158. Sylvia Mburu (*zip code: 02908)*

1159. Sylvia Petrie (*zip code: 02879)*

1160. Sylvia Ann Soares (*zip code: 02906)*

1161. Jeffrey Syme (*zip code: 02906)*

1162. Sabina Paneva (*zip code: 02908)*

1163. T. Gorman (*zip code: 02842)*

1164. Tricia Talbot (*zip code: 02878)*

1165. Taino Palermo (*zip code: 02905)*

1166. Alex Brown (*zip code: 02905)*

1167. Tamara Thornton (*zip code: 02906)*

1168. Tammy Yu (*zip code: 02903)*

1169. William Yediares (*zip code: 02919)*

Gina needs to go.

1170. Jael Rosario (*zip code: 02905)*

1171. taryn mazza (*zip code: 97206)*

1172. Alexandria Richardson (*zip code: 10701)*

1173. An anonymous signer (*zip code: 02879)*
Fracking is poisoning our water ~ just "fracking" stop it! It is suicide!

1174. Bank are Baer (*zip code: 02809)*

1175. Ann Riley (*zip code: 02919)*

1176. An anonymous signer (*zip code: 02863)*

1177. ALICE Terry (*zip code: 02904)*

1178. Thaylon Barreto (*zip code: 02914)*
Not near the hospital.

1179. Isaac Albanese (*zip code: 02910)*

1180. Thomas Kishkovich (*zip code: 02828)*

1181. Emma Thomas (*zip code: 02906)*

1182. Thomas tracy (*zip code: 02905)*

1183. thomas (*zip code: 02909)*

1184. Thor Island (*zip code: 85395)*

1185. Crow Grando (*zip code: 02860)*

1186. Tiffany Ho (*zip code: 02906)*

1187. Tim DeChristopher (*zip code: 02860)*

1188. Tim Lehnert (*zip code: 02910)*

1189. Marcia Nixon (*zip code: 02919)*

1190. Tanya Solberg (*zip code: 02906)*

1191. Ameera (*zip code: 02911)*

1192. Thomas Mills (*zip code: 02906)*
Not only do I prefer investment in alternative energies, but I strongly protest the building of an LNG plant in an area that is adjacent to so many sensitive facilities. In addition, Rhode Island has worked very hard to clean up Narragansett Bay - let's not add the potential to slide backwards quickly.

1193. Thomas Landry (*zip code: 02904)*

1194. Thomas Culver (*zip code: 59601)*

1195. Thomas Hoffman (*zip code: 02907)*

1196. Thomas M Gorman (*zip code: 13849)*

1197. Anthony Maselli (*zip code: 02906)*

1198. Torie Gehlmeyer (*zip code: 02818)*

1199. Henrietta White-Holder (*zip code: 02910)*

1200. Tatiana Pina (*zip code: 02905)*

1201. Taino Palermo (*zip code: 02903)*

1202. Karen Gilbert (*zip code: 02906-3817)*

1203. Travis Price (*zip code: 02906)*

1204. Trevor Culhane (*zip code: 02906)*

1205. Tricia Rose (*zip code: 02903)*

1206. Daniel Stern (*zip code: 02909)*

1207. Brienne Ellis (*zip code: 02906)*

1208. Tulani Tiah (*zip code: 02861)*

1209. Byron Monge (*zip code: 02908)*

1210. Olayinka Olasanoye (*zip code: 02909)*

1211. Everett Aubin (*zip code: 02907)*

1212. Tyson Bottenus (*zip code: 02840)*

1213. Uche Onwunaka (*zip code: 02169)*

1214. J. Mark Ryan (*zip code: 02871)*

1215. Alyce Santoro (*zip code: 02909)*

1216. Ivan Calderon (*zip code: 02909)*
Ejlri

1217. Anne Franklin (*zip code: 02906)*

1218. Ula Ward (*zip code: 02809)*
Enough is enough.

1219. Aketzali Villanueva (*zip code: 02920)*

1220. Valerie Chase (*zip code: 97401)*

1221. Christine Tarini (*zip code: 02743)*
I live in acushnet mass and Eversource wants to let spectra energy put 2 huge tanks and pipelines on that property. We are fighting this also!

1222. Linda Vanderveer (*zip code: 020906)*

1223. Vanessa Montes De Oca (*zip code: 02909)*

1224. Victoria Moutahir (*zip code: 02906)*

1225. Vernon Gomes (*zip code: 02905)*

1226. Steven Vessella (*zip code: 02865)*
Fracking is the worst. Keep that out of providence

1227. Viviane Saleh-Hanna (*zip code: 02905)*

1228. Vanessa Flores (*zip code: 02903)*

1229. Victor Terry (*zip code: 02903)*

1230. Victoria Brown (*zip code: 02906)*

1231. Victoria Ruiz (*zip code: 02907)*

1232. Mayra Paulino (*zip code: 02806)*

1233. Philip Smith (*zip code: 02907)*

1234. Eli Morowitz (*zip code: 94404)*

1235. VyVy Trinh (*zip code: 02909)*

1236. Wendy Aguasvivas (*zip code: 02907)*

1237. Wendy Holmes (*zip code: 02906-4217)*

1238. Wendy Holmes (*zip code: 029064217)*

1239. Carmela Wilkins (*zip code: 02860)*

1240. Ann Welch (*zip code: 02889)*

1241. Kevin Welch (*zip code: 02806)*

1242. Wendy Graca (*zip code: 02717)*
No LNG in Providence OR in the New England region. We don't NEED it!

1243. Wesley Herts (*zip code: 02912)*

1244. Gretchen Robinson (*zip code: 02703-1526)*
No LNG in Providence. No environmental racism.

1245. alisa hoban (*zip code: 02912)*

1246. William Lambek (*zip code: 02909)*

1247. Cathleen Mallorie Williams (*zip code: 02908)*

1248. Will Gowen *(zip code: 02912)*

1249. Williana Pimentel *(zip code: 02905)*

1250. Willie Thompson *(zip code: 02806)*

1251. william Shavers *(zip code: 02903)*
Why not put this in the more affluent community of Warwick or Davisville?

1252. Wilmette Santos *(zip code: 02906)*

1253. Nathaniel Jellinek *(zip code: 02906)*

1254. chris hasslinger *(zip code: 02906)*
We need to invest in real clean energy, not more LNG!

1255. scott herlihy *(zip code: 02906)*
Hell no.

1256. Juliana Rodriguez *(zip code: 02863)*

1257. Mary Vieira *(zip code: 02906)*
Since I am against "fracking" anyway , I am against this also!

1258. Dicairy Cespedes *(zip code: 02905)*

1259. Ka Ying Yang *(zip code: 02907)*

1260. Yao Liu *(zip code: 02906)*

1261. Yasmin Or *(zip code: 02888)*

1262. Jonilka Calcano *(zip code: 02909)*
It's irresponsible to build and to have a new facility using frack gas in an area that is highly populated and that can't realistic afford to have more pollution. And it's a health hazard.

1263. Yeralin Valdez *(zip code: 02863)*
Love you Jesus

1264. Yolande Riendeau *(zip code: 02906)*

1265. Yacine Niang *(zip code: 10037)*

1266. Yudiglenn Sena-Abreu (*zip code: 02907)*

1267. Yvette Koch (*zip code: 02907)*

1268. Yaritssa Virgil (*zip code: 02863)*

1269. Yamil Baez (*zip code: 02907)*

1270. Zachary Zuchowski (*zip code: 02906)*

1271. zack mezera (*zip code: 02906)*

1272. Zoe Anderson (*zip code: 02889)*

1273. Zachary and Jennie Fox (*zip code: 02906)*
NO No no . LNG has got too GO. Boston has it and they have to steak it into the Harbor under darkness of night. I wonder why. Ask the BFD how they like it.....Not.

1274. Steve Zielinski (*zip code: 08691)*

1275. Zak Mettger (*zip code: 02906)*

1276. Zoe Hansen-DiBello (*zip code: 02747)*

1277. Marc Anderson (*zip code: 02739)*

1278. Peter Nightingale (*zip code: 02881)*
Building new fossil fuel infrastructure in the US is a violation of the World Charter for Nature.

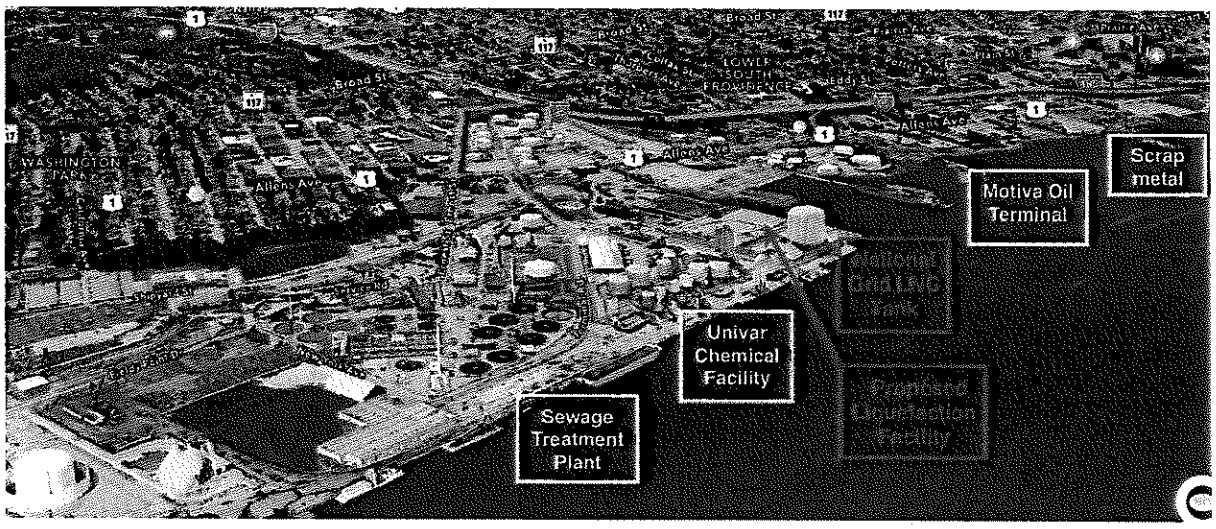
Environmental Justice League of Rhode Island

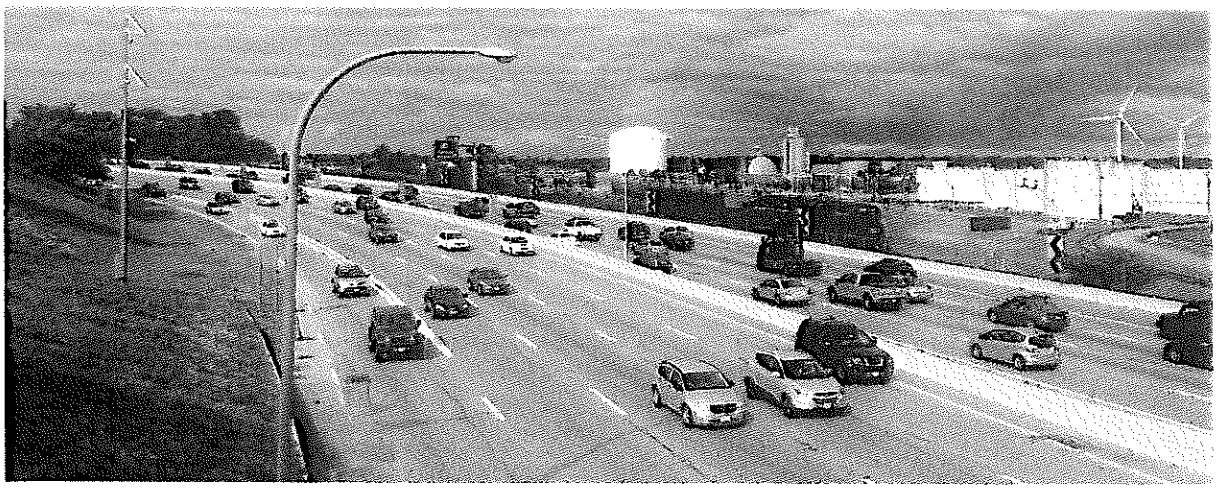
Environmental Justice League of Rhode Island
1192 Westminster St. Providence, RI 02909
Tel: (401) 383-7441 Fax: (401) 941-8156
questions@ejlri.org | http://www.ejlri.org

Position Paper

National Grid's Liquefied Natural Gas (LNG) Liquefaction Facility

Toxic Hazards in the Port of Providence: Proposals for a Just Transition





Introduction

This document is a detailed response to the many reasons to oppose National Grid's proposal to build a $100 million Liquefied Natural Gas (LNG) production plant in the Port of Providence. This project (also known as the "Fields Point Liquefaction Facility") is costly and dangerous, and it is being planned for an area with many existing environmental justice concerns.

Beyond the obvious problem of having ratepayers (all of us) pay the bill for National Grid to benefit their own bottom line, there many specific concerns about the project. This report groups these concerns into the following major categories:

- **Flawed Proposal:** Background info on National Grid's unnecessary project (page 3)
- **Potential Disasters:** dangerous facility in a high risk area (page 5)
- **Environmental Racism:** ongoing and underlying environmental justice issues (page 12)
- **Climate Change:** it causes climate change and is at risk from climate impacts (page 21)
- **Public Health:** health disparities and impacts on health care institutions (page 23)
- **Economic Inequality:** high cost project that will cause economic damage (page 26)
- **Alternatives and Solutions**: Strategies for Climate Justice & a Just Transition (page 29)

The goal of this report is to make the case for organizations, businesses, residents, agencies, and public officials to join us in rejecting National Grid's proposal, and supporting the alternatives and solutions highlighted at the end of the report.

To join this campaign, share your perspective, or ask questions, please contact:
Environmental Justice League of Rhode Island, 1192 Westminster St. Providence RI 02909
info@ejlri.org | (401) 383-7441 | Facebook.com/EJLRI | Twitter @EJLeague

Background on National Grid's proposal

According to National Grid, their proposal to build a Liquefied Natural Gas production facility in South Providence in necessary, safe, clean, and will have no major negative impact. We disagree on all these counts, and explain why throughout the remainder of this report.

National Grid's case for the project is available on their website: http://fieldspointngrid.com/ National Grid needs to get approval from the Federal Energy Regulatory Commission (FERC), and all of the documents submitted by National Grid and comments from any other stakeholder are available on FERC's website under Docket # PF15-28 (Search at https://elibrary.ferc.gov/). Since National Grid's perspective is detailed on websites, media stories taken directly from company press releases, and in hundreds of pages sent to FERC, we won't use much space here describing their project proposal. The main points are:

- Instead of delivering LNG to the storage facility in Providence via truck, National Grid wants to build a $100 million facility to produce LNG directly from a Spectra Energy pipeline that delivers gas from Marcellus Shale (Pennsylvania) to Providence.
- LNG is produced by cooling natural gas (methane) to -260 degrees, which reduces its volume by 600 times and puts it into liquid form
- LNG is currently only needed in RI for up to 9 days each year
- National Grid would then use LNG tanker trucks to export the LNG produced in Providence to other locations in Rhode Island and Massachusetts
- The production facility would require a gas compressor station and an electrical cooling system that would use 15 Megawatts. (for reference, this is half of the 30 megawatts that Deepwater Wind will generate off the coast of Block Island)

There is no justified need for the project. According to National Grid's own information, the existing LNG storage is only used up to 9 days each year, and is less than half of the gas used even on the coldest days with the highest demand. National Grid says the requests to increase the supply of LNG come from two storage customers: Narragansett Electric Company and Boston Gas Company[1]. Both of these companies are subsidiaries of National Grid.

National Grid's "Public Participation Plan" is incredibly flawed. In the document submitted to FERC, there no actual community groups on their listing of Environmental, Community, and Neighborhood Stakeholders. The only two groups included, the South Providence Neighborhood Association and the Washington Park Neighborhood Association, don't actually exist. When questioned about this, National Grid's spokesperson David Graves responded that "The stakeholder list was first developed when both of these groups were active in the

[1] National Grid Environmental Report, Resource Report No. 1. Submitted to FERC August 3, 2015 https://elibrary.ferc.gov/IDMWS/file_list.asp?document_id=14362548

neighborhood" which is also false, since neither group has never existed. David Graves also stated that National Grid "[has] not been successful in locating any other neighborhood groups in the area that have an organized board of directors or a published list of officers and, to my knowledge, we have not been contacted by any neighborhood groups asking to be included in the list of stakeholders."[2] This is despite the fact that there are many thriving organizations in Providence, include three local groups that came to National Grid's Open House on August 13, 2015 to speak out against the project (PrYSM: Providence Student Youth Movement, PSU: Providence Student Union, and EJLRI: Environmental Justice League of Rhode Island). There were numerous articles written about the protest at the open house.[3,4,5]

National Grid's internal review and list of impacted stakeholders is flawed and limited in multiple ways. Most of their documents only refer to a ½ mile radius from the project, at some points only a ¼ mile. Within this range are mostly other industrial projects and businesses, with only a few residential buildings considered. National Grid suppressed the addresses of who they have contacted, but stated they sent letters to affected landowners within ½ mile, which would only include industrial businesses and some landlords (not rental tenants). The required public Open House, held on August 13th 2015, was not well advertised. The time and date were printed once in the Providence Journal in July as part of the initial press release, but the time and date were not listed on National Grid's project website, which just listed the Open House as being "in August" and required emailing National Grid to ask for time and date. At the time of the Open House, the website and all materials were only in English, despite the fact that Spanish is a predominant language in the community where the facility is being proposed. It appears that National Grid has not made any effort to actually engage the community. Those community members who did participate in the poorly promoted Open House were racially profiled and threatened by an excessive police presence[6] and were ignored by National Grid in later correspondences with FERC and media inquiry.

In order to understand the impact of the project on the neighboring community, the analysis must use a radius of at least 1 mile from the proposed site. Cumulative impacts and evacuation plans for potential disasters must consider at least a 2 mile radius. Given the demographics of the community and the concentration of other industrial activity at the location, a full analysis of the cumulative impacts must be included, and issues such as public health, climate change, and environmental justice concerns need to be analyzed in depth.

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[2] RI Future. National Grid lists groups that don't exist in their Public Participation Plan. Sept 15, 2015. http://www.rifuture.org/national-grid-lists-groups-that-dont-exist-in-their-public-participation-plan.html
[3] Providence Journal. "Groups Protest LNG storage tank proposal at Fields Point in Providence." Aug 15, 2015. http://www.providencejournal.com/article/20150813/NEWS/150819647
[4] RI Future. Southside PVD Activists Speak Out Against Fields Point LNG Plant. Aug 15, 2015. http://www.rifuture.org/southside-pvd-activists-speak-out-against-fields-point-lng-plant.html
[5] EcoRI. Activists Rally Against Providence LNG Project. August 15, 2015. http://www.ecori.org/green-groups/2015/8/15/activists-rally-against-providence-lng-project
[6] RI Future. Environmental Racism and the Fields Point LNG Plant. August 15, 2015. http://www.rifuture.org/environmental-racism-and-the-fields-point-lng-plant.html

Potential Disasters

Despite what the gas industry says, LNG is a dangerous substance. Developing additional large scale LNG infrastructure in densely populated urban areas, and in particularly at Fields Point in the Port of Providence, poses a number of risks for potential disasters. This following section is an abbreviated summary of some of the risks and potentially dangerous scenarios.

The gas industry is quick to state that LNG isn't flammable or explosive, and that it isn't stored under under pressure. This is *somewhat* true, but it's a dangerous half-truth. LNG is stored at very cold temperatures (under -260°F), in double shelled containers without any air present. In these conditions, LNG is in stable liquid form and without air it is not flammable. The potential dangers with LNG occur if something goes wrong and it is leaves these conditions. At any temperature over -260°F it begins to boil and convert to methane gas, which causes it to expand by 600 times. At these temperatures, any sealed container would become rapidly pressurized. If LNG spills and begins mixing with air, it does become flammable between concentrations of 5%-15% gas to air. For comparison, propane is flammable at concentrations of 2.1%-9.5%, gasoline is flammable at 1.3%-7.1%. As leaking or spilled LNG boils and expands, at first it presents hazards of **cryogenic freezing** (due it's very cold temperature) and **asphyxiation** (due to it being heavier than air, displacing oxygen). If the expanding LNG cloud comes across an ignition source with enough air mixed in, it would become a **pool fire that can ignite back to the source of the spill.** If the spilled LNG is pressurized (for example during the re-vaporization process, when LNG is converted back to gas to reinject into the grid), it can cause a **jet fire**. If a vapor cloud of boiling and expanding LNG occurs within a confined structure, and catches fire, it can become overpressured and potentially explosive. Ignition of pressurized liquids can cause a **BLEVE: Boiling Liquid Expanding Vapor Explosion.**[7,8]

Relevant Past LNG Disasters

Washington State: March 31st, 2014. A rupture in one of the "pressure vessels" next to an LNG storage tank[9] was cited as the cause of an explosion that injured 5 workers, sent 250 pound fragments of steel shrapnel flying over 300 yards, punctured a double shell LNG storage tank, and caused an evacuation of people within two miles from the LNG storage facility. "Benton County sheriff's Deputy Joe Lusignan said Wednesday that it was 'a little bit of a miracle' that no one was killed. 'It was an extremely powerful explosion, the

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[7] National Association of State Fire Marshalls. "An Overview of the LNG Industry for Fire Marshals and Emergency Responders." June 2005.
https://primis.phmsa.dot.gov/comm/publications/LNG_for_Fire_Marshals_06-2005.pdf
[8] Exponent: Engineering and Scientific Consulting. "LNG - Fires and Explosions."
http://www.exponent.com/LNG_fires_explosions/#tab_overview
[9] http://www.naturalgasintel.com/articles/98039-source-of-washington-lng-storage-explosion-identified

initial explosion,' he said. 'Fortunately, we didn't have any subsequent ones after that.'"[10] The blast caused an evacuation within a 2 mile radius, far larger than the half-mile area that National Grid is considering for impacts in Providence. Luckily, the area in Washington was sparsely populated, with only 1000 residents and agricultural workers evacuated,[11] whereas a 2 mile radius from the LNG tank in Providence has a population of close to 80,000 people, which doesn't include additional people at work, school, or in RI Hospital and trauma center. According the Reuters, the LNG blast in Washington "could focus attention on the risk of storing massive gas supplies near population centers." [12]

Skikda Algeria, January 2004. The port city of Skikda Algeria suffered an explosion and deadly incident at an LNG Liquefaction Facility. A steam boiler exploded "after it probably drew flammable vapors from a hydrocarbon refrigerant leak into its air intake. This triggered a secondary, more massive vapor cloud explosion destroying a large portion of the plant. The incident killed 27 people, injured 74, and created an $800 million loss."[13] In the U.S, the 2004 incident spurred increasing opposition to LNG import facilities being proposed at the time. In response, "energy industry executives and regulatory officials have pointed out that the explosion in Skikda [was] attributed to a boiler that is not expected to be part of L.N.G. terminals in the United States, which are to be used for warming liquefied gas back into a vapor, then storing it. The Skikda plant did the opposite, chilling natural gas until it condensed into a liquid." [14] National Grid's proposed Liquefaction Facility in Providence would perform the same function as the Skikda plant in Algeria.

LNG Facility in Providence Denied in 2005 due to safety risks - In 2005, FERC denied an application from Keyspan (now National Grid) to expand the existing Fields Point LNG storage tank into an LNG import facility. FERC Commissioner Nora Brownell stated that the proposal was turned down because of safety risks and the "very real concerns made by the residents in communities and all of the towns nearby"[15]. The "Commission staff concluded that the

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[10] Seattle Times. "'Miracle' nobody died in blast at Eastern Washington LNG Plant." http://www.seattletimes.com/seattle-news/lsquomiraclersquo-nobody-died-in-blast-at-eastern-washington-lng-plant/

[11] EcoWatch. "Large LNG Explosion Displaces hundreds in Washington." April 1, 2014. http://ecowatch.com/2014/04/01/lng-explosion-washington/

[12] Reuters. "Blast at U.S. LNG Site casts spotlight on natural gas safety." April 6, 2014. http://www.reuters.com/article/2014/04/06/us-lng-blast-analysis-idUSBREA3506Y20140406

[13] National Association of State Fire Marshals. "Liquefied Natural Gas: An Overview of the LNG Industry for Fire Marshals and Emergency Responders."

[14] New York Times. "Algerian Explosion Stirs Foes of U.S. Gas Projects." February 12, 2004. http://www.nytimes.com/2004/02/12/business/algerian-explosion-stirs-foes-of-us-gas-projects.html

[15] Natural Gas Intelligence. "National Grid Gives Up on Rhode Island LNG Terminal." October 8, 2007. http://www.naturalgasintel.com/articles/17211-national-grid-gives-up-on-rhode-island-lng-terminal

KeySpan LNG conversion project would not meet current federal safety standards… [and] identified 75 specific environmental mitigation measures that must be met by KeySpan LNG and its accompanying pipeline project [CP04-223, CP04-193].[16] A report by former White House anti-terrorism advisor Richard Clarke concluded that "urban import terminals, such as Fields Point LNG, would be vulnerable to "catastrophic" terrorist attacks, and also make "extremely attractive" terrorist targets." [17] In the detailed 159-page report,[18] Clarke details multiple scenarios in which an attack on the LNG facility in Fields Point Providence results in an LNG pool fire and catastrophic mass casualties. The comprehensive report detailed neighboring industrial and chemical facilities that would be impacted by a LNG fire, but said that further study would be needed to assess the additional risks posed.

High Risk Neighbor: Univar Chemical Facility - The proposed LNG Liquefaction facility neighbors a chemical facility owned by Univar, a multinational chemical corporation that also happens to manufacture chemicals for hydraulic fracturing ("fracking"). Fracking is a controversial process used in extracting natural gas from shale and other unconventional formations; the process has been banned in New York State due to public health concerns raised by the NY Department of Health.[19] While it is unknown whether Univar's facility in Providence has a direct link with fracking, the facility is listed on EPA's Toxic Release Inventory due to onsite release 1,275 pounds of toxic chemicals in 2013. Chemicals listed on the EPA's Toxic Release Inventory database for the Univar site in Fields Point include but are not limited to:

> 1,1,1-TRICHLOROETHANE, ACETONE, AMMONIA, CHLORINE, CHLOROBENZENE, DI(2-ETHYLHEXYL) PHTHALATE, DIBUTYL PHTHALATE, ETHYLENE GLYCOL, FORMALDEHYDE, FREON 113, METHANOL, N,N-DIMETHYLFORMAMIDE, PHOSPHORIC ACID, SODIUM HYDROXIDE, STYRENE, TETRACHLOROETHYLENE, TOLUENE, TRICHLOROETHYLENE and TRIETHYLAMINE.[20]

Former White House Anti-Terrorism official Richard Clarke wrote in his 2005 report on LNG in Fields Point that

> "In the event of a [LNG] pool fire, temperatures would be high enough to compromise chemical storage tanks. Univar workers handle such chemicals as chlorine, sodium

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[16] Natural Gas Intelligence. "Two LNG Projects Pass Environmental Review; Keyspan Flunks Safety Test." May 23, 2005.
http://www.naturalgasintel.com/articles/12892-two-lng-projects-pass-environmental-review-keyspan-flunks-safety-test

[17] Natural Gas Intelligence. "National Grid Gives Up on Rhode Island LNG Terminal." October 8, 2007.
http://www.naturalgasintel.com/articles/17211-national-grid-gives-up-on-rhode-island-lng-terminal

[18] Richard Clarke, Principal Investigator. Good Harbor Consulting LLC. "LNG Facilities in Urban Areas: A Security Risk Management Analysis for Attorney General Patrick Lynch, RI."
http://www.goodharbor.net/media/images/books/pdf-liquid-natural-gas-report.pdf

[19] New York State Department of Health. December 17, 2014.
https://www.health.ny.gov/press/releases/2014/2014-12-17_fracking_report.htm

[20] Environmental Protection Agency. Facility Profile Report, 2014 Dataset.
http://oaspub.epa.gov/triexplorer/release_fac_profile?trilib=TRIQ1&FLD=&FLD=RELLBY&FLD=TSFDSP&OFFDISPD=&OTHDISPD=&ONDISPD=&OTHOFFD=&TRI=02905GRGMNHARBO&year=2013

hydroxide, hydrogen peroxide, and potassium hydroxide at the site. Chlorine leaks can be lethal. For example, a recent chlorine gas leak in South Carolina killed nine people and required evacuations for up to one mile from the site. We do not know all the effects of gas leaks on all these chemicals, or the potential consequences of explosion of these chemicals caused by high heat from an LNG pool-fire. Additional research into the safety of this chemical facility is needed in assessing the risks posed."[21]

14 mile hazard radius: 110,000 schoolchildren at risk - In 2014, the Center for Effective Government released a report titled "Kids in Danger Zones: One in Three U.S. Schoolchildren at Risk from Chemical Catastrophes" which investigated schools being located within the hazard radius of chemical facilities. Appendix III of the report shows the percentage of students in vulnerability zones, by state. **With 67% of students at risk from a chemical incident, Rhode Island is ranked 2nd highest nationwide,**[22] ranking above both Texas and Louisiana which are both known for welcoming petrochemical facilities in busy Gulf of Mexico ports. RI's high chemical risk ranking is due almost entirely to the Univar chemical facility in Providence, adjacent to the proposed LNG Liquefaction Facility. Within the 14 mile hazard radius of the facility there are 311 schools with approximately 110,000 children.[23]

Major Fuel Terminals and Fuel Transportation - The Port of Providence is the largest fuel port in Southern New England, and supplies oil products (gasoline, diesel, ethanol, jet fuel, etc) to all of Rhode Island, Eastern Connecticut, and Worcester County and South Coast Massachusetts. The fuels are transported in and out of South Providence by international tanker ships, heavy truck traffic, and and a railway line that travels between I-95 and Roger Williams Park and Zoo before connecting with the Amtrak and MBTA Commuter Train tracks in South Elmwood. Port of Providence has terminals operated by Sprague Energy, Global Partners LP, Enterprise Products (subsidiary of Duke Energy), New England Petroleum, and Motiva (a joint venture between Shell Oil and Saudi Arabia's Aramco). National Grid's LNG storage tank and proposed liquefaction facility is bordered by the Motiva terminal to the West and Northwest, and next to Global's terminal to the South and Southeast. Given the close proximity of highly flammable and potentially explosive substances, an incident at one facility could trigger a secondary incident at a neighboring facility. An incident, whether caused by natural disaster, human error, equipment malfunction, or terrorism, could quickly spread and cause much larger incidents. The presence of pipelines, tanker ships, fuel trucks, storage tanks, and ethanol trains each pose individual risks, their concentration in close proximity multiplies the potential

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[21] Richard Clarke, Principal Investigator. Good Harbor Consulting LLC. "LNG Facilities in Urban Areas: A Security Risk Management Analysis for Attorney General Patrick Lynch, RI." page 141-142. http://www.goodharbor.net/media/images/books/pdf-liquid-natural-gas-report.pdf

[22] Center for Effective Government. "Kids in Danger Zones." page 26. http://www.foreffectivegov.org/files/kids-in-danger-zones-report.pdf

[23] Center for Effective Government. "CEG-RMP Facilities. Schools and High Risk Chemical Facilities: Is Your Child At Risk?" http://tesla.foreffectivegov.org/KidsAndToxins/bin-release/

scenarios in which an incident could occur. The Thurbers Ave exit is one of the busiest set of highway ramps in Rhode Island, with sharp turns and confusing cross traffic patterns. This is the exit that the majority of truck traffic into and out of the port uses, including the LNG tanker trucks carrying "methane refrigerated liquid." ***Any potential accident, and the resulting disaster scenario, must be taken into consideration with National Grid's proposed Liquefaction Facility.***

Ethanol "bomb" trains - Ethanol trains docking at the Motiva terminal are within the half mile hazard radius of the proposed Liquefaction Facility, and are directly adjacent to the sharp turn on I-95 by the Thurbers Ave exit. It is not unfathomable to conceive of a potential disaster involving a traffic accident with a fuel tanker or train car containing explosive ethanol or toxic chemicals traveling into or out of the port. In preparation for a potential incident, RI Department of Environmental Management and the City of Providence hosted a Tri-State HAZMAT Full-Scale Response Exercise on September 10th, 2011 focusing on a scenario of an ethanol train derailment at the Motiva terminal in Port of Providence, requiring both land-based and marine response teams.[24] According to the joint press release, "Ethanol is a highly volatile, flammable, colorless clear liquid and unlike gasoline, is completely soluble in water rendering containment boom and absorbent boom virtually useless during a release. More than two million gallons of denatured ethanol move through the Port of Providence area by rail, barge, and tractor-trailer every week."[25] In 2014, community groups in Boston organized against ethanol trains coming through densely populated neighborhoods and sharing tracks with MBTA and commuter rail trains. Alternatives for Communities & Environment (ACE), Chelsea Collaborative, and Chelsea Creek Action Collaborative successfully won a statewide legislative moratorium against the dangerous ethanol "bomb" trains.[26,27]

Dangerous incidents occurring in the Port of Providence

The following are not just hypothetical scenarios to study, they have occurred in the past. Luckily, previous incidents have been contained and have not escalated to worst case scenarios, but that potential exists.

Lightning Strike - On July 19, 2006 lightning struck an oil tanker that was about to dock at the Motiva facility adjacent to National Grid's LNG tank. Associated Press reported that it resulted

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[24] RIDEM and City of Providence. "NEWS ADVISORY: Tri-State HAZMAT Full-Scale Response Exercise." September 9, 2011. http://www.dem.ri.gov/news/2011/pr/0909111.htm
[25] ibid
[26] Alternatives for Communities & Environment. "Residents secure moratorium on ethanol trains." http://www.ace-ej.org/residents_secure_moratorium_on_ethanol_trains
[27] Chelsea Collaborative. "Riding the Victory Train to Environmental Justice in Greater Boston." http://www.chelseacollab.org/news/press/riding-the-victory-train-to-environmental-justice-in-greater-boston

in a four alarm fire and that "every firefighter in Providence was on the scene."[28] A truck driver parked nearby said he "saw a bolt of lightning, followed by an explosion and a large fireball. [He] said he could feel the heat from the initial explosion several hundred feet away in a nearby parking lot. "I've never seen anything in the world like this," he said."[29] EPA responded by setting up air quality monitors nearby to check for toxic releases of airborne pollutants.[30]

Earthquake - On July 22, 2015 there was a 2.3 magnitude earthquake in Rhode Island which was felt in Johnston RI, and Bristol RI, and Fall River, MA. The epicenter was determined to be in the Port of Providence at Fields Point, the exact location of the existing LNG storage tank and proposed Liquefaction Facility. According to R.J. Heim, reporting for WJAR / NBC10, "the earthquake leaves many people wondering if it compromised infrastructure at the busy port or shake a cluster of fuel tanks located nearby."[31] National Grid reported that their facility was not compromised, but questions remain as to whether the outcome would have been different if the Liquefaction Facility were in operation at the time, or if a stronger earthquake were to hit along the same fault line.

Hurricane - Hurricane Sandy was devastating for New York City and parts of the southern coast of Rhode Island, but luckily was not a direct hit on Providence. The Port of Providence is at sea level, and is on the wrong side of the Hurricane Barrier. A significant storm surge coming up Narragansett Bay would be blocked at the Hurricane Barrier, protecting downtown Providence that would cause additional surge and impacting the port. Of three major tidally influenced rivers that flow into Narragansett Bay in Providence, the Hurricane Barrier would block a storm surge from entering the Woonasquatucket or Moshassuck Rivers, displacing that excess water into the Blackstone River and the narrow top of the bay, where this heavy industrial port is located. A joint research project by University of Rhode Island, the RI Department of Transportation, and the Federal Highway Administration recognizes that "hurricanes pose a significant threat" and is undertaking a vulnerability assessment of infrastructure at the Port of Providence. [32] However, most studies of storm impacts on the Port of Providence only consider the economic impact and how to make infrastructure more resilient; the impact on the communities of South Providence and Washington Park is often ignored.

Emergency Preparedness and Response

There are many potential disasters waiting to happen with the existing industries in Port of Providence, let alone with the proposed $100 million liquefaction facility. While there has been

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[28] http://royaldutchshellplc.com/2006/07/19/the-new-york-times-fire-engulfs-tanker-at-port-of-providence/
[29] ibid
[30] http://www.epaosc.org/sites/2419/files/motiva.pdf
[31] R.J. Heim NBC 10 News. "Earthquake jolts Rhode Island in early morning hours." http://www.turnto10.com/story/29603258/earthquake-jolts-rhode-island-in-early-morning-hours
[32] http://providenceri.iqm2.com/Citizens/FileOpen.aspx?Type=4&ID=6196&MeetingID=2724

at least one disaster response exercise focused on the port[33], and a large quantity of specialized foam was purchased following the lightning-induced fire at the Motiva terminal,[34] neither of these initiatives relate to the specialized disaster response scenarios required in the event of an LNG or a secondary Univar chemical facility incident. Given the high concentration of facilities in the Port that store toxic materials, discharge pollutants, and/or require a chemical risk management plan, there are major questions remaining about what the overall disaster response plan is, who would be able to respond, and whether those responders would have the proper training and equipment required.

Richard Clarke's 2005 report *LNG Facilities in Urban Areas* details many possible disaster scenarios that the state is ill equipped the handle.[35] While scenarios involving LNG import tankers no longer apply due to FERC's rejection of the previous 2005 proposal, the existing LNG incidents around the world have all been with Liquefaction Facilities, Peak Shaving storage tanks, or tanker trucks - all of which are or will be present in Port of Providence.

What would happen if an incident compromised the I-95 corridor near Thurbers Ave, or if an event impacted the state's only trauma center? How would a two mile radius evacuation of a densely populated area occur, with RI Hospital, Hasbro Children's Hospital, and Women and Infants all being within the two miles? What plans are in place to protect the children who attend schools within the hazard radius? Do any existing plans for disaster preparation and response take into account the high level of linguistic diversity within the community?

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[33] RIDEM and City of Providence. "NEWS ADVISORY: Tri-State HAZMAT Full-Scale Response Exercise." September 9, 2011. http://www.dem.ri.gov/news/2011/pr/0909111.htm
[34] "DEM, City of Providence Announce Port Protection Initiative: State Buys Large Supply of Foam for City Firefighters' Emergency Use." December 19, 2006. http://www.dem.ri.gov/news/2006/pr/1219063.htm
[35] Richard Clarke, Principal Investigator. Good Harbor Consulting LLC. "LNG Facilities in Urban Areas: A Security Risk Management Analysis for Attorney General Patrick Lynch, RI."

Environmental Racism

Beyond the potential disaster scenarios described in the previous section, there are many ongoing disasters that daily impact the frontline communities living next to Port of Providence. Business as usual under the current economic system is a state of disaster for marginalized communities, with concentrated poverty, mass incarceration, substandard housing conditions, and health disparities.

Environmental racism takes many forms, but is simply defined as the concentration of environmentally hazardous conditions in communities of color. A legal definition states "Environmental racism refers to intentional or unintentional targeting of minority communities or the exclusion of minority groups from public and private boards, commissions, and regulatory bodies. It is the racial discrimination in the enactment or enforcement of any policy, practice, or regulation that negatively affects the environment of low-income and/or racially homogeneous communities at a disparate rate than affluent communities."[36] The Supreme Court's recent decision upheld the Federal Housing Act's assertion that racism in housing policy does not need to be individually intentional if it can be shown as a systemic outcome of racial disparities. Similarly, environmental racism is evidence as the result of sets of institutional policies and practices, regardless of whether the intent to discriminate is apparent. As described by Charles Ellison in an article titled *Racism in the Air You Breathe,* **"where you live—down to your exact zip code—can determine how fast you get sick and how soon you die."**[37] The following section will take a detailed look at the frontline communities of Southside (upper and lower South Providence) and Washington Park, which are right next to the Port of Providence.

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[36] http://definitions.uslegal.com/e/environmental-racism/

[37] The Root. "Racism in the Air You Breathe: When Where You Live Determines how Fast You Die." http://www.theroot.com/articles/culture/2015/08/environmental_racism_when_where_you_live_determines_how_fast_you_die.html

Demographics and the Waterfront This map shows the "percentage non-white" (based on 2010 census data) in a block by block geography. The approximate area of the industrial Port of Providence is highlighted in red. The line between Providence and Cranston (south of Fields Point and Roger Williams Park) shows a dramatic shift in demographics from people of color to predominately white.

The frontline communities adjacent to the Port of Providence are a corporate sacrifice zone; areas of concentrated poverty and marginalization where polluting industries are allowed to be sited and conduct hazardous operations with little regard for health or environmental impacts on the neighborhoods. This comparison of waterfront areas paints a clear picture of eco-apartheid and de facto environmental racism. Downtown, Fox Point, and East Side / Blackstone neighborhoods in Providence, as well as Pawtuxet Village in Cranston and along the East Bay Bike Path in East Providence all have beautiful waterfront access with parks, biking, yachts, boating, sport fields, and festivals in relatively affluent and predominately white neighborhoods. Meanwhile South Providence, with concentrated poverty and communities of color, has little to no waterfront access in an area zoned for heavy industrial use with multiple polluting and hazardous facilities.

Environmental Justice Analysis - Environmental Justice involves looking at the intersection of environmental hazards and their health impacts, demographics, and social inequalities, and forges strategies to erase inequities and ensure that everyone has a healthy environment to live, work, pray and play. Due to deeply entrenched institutional racism and societal inequalities areas of concentrated and racialized poverty are often also pollution hot spots filled with refineries, landfills, lead paint, highways, etc and lacking in benefits such as green space, waterfront access, healthy food, and clean air. Public transportation travels more frequently through poorer communities- Rhode Island Public Transportation Authority (RIPTA) terminal is also located in this community. In fact, South Providence is one of the largest "environmental justice" communities where all of these factors are concentrated statewide.

Several tools from the Environmental Protection Agency (EPA) make it possible to use hard data to tell the story of Environmental Justice concerns in the areas around the Port of Providence. The tools used to generate the following analyses include the EPA's Toxic Release Inventory[38] (TRI) and the EJSCREEN[39] tools, the open source data mapping project JusticeMap.org[40] and the Center for Effective Government's national mapping tool for schools and high risk chemical facilities[41]. The area of analysis is primarily local, at the neighborhood level (Upper and Lower South Providence, Washington Park), zip code level (02905, 02907), and facility-specific (one mile radius from proposed facility).

It should be noted that while the one mile radius is used for the initial Environmental Justice impact analysis, a greater radius of two miles or more should be used to analyze cumulative and secondary impacts of the proposal.

The one mile radius around the proposed Liquefaction Facility, including a section of East Providence across the Bay which is more affluent and more white, has a combined demographic risk score calculated by EPA that is in the 90th percentile for Rhode Island, and 94th percentile for EPA Region 1 (New England). In other words, there are more at-risk demographics in this radius than in 90% of the rest of RI, and more than 94% of the rest of New England. That combined profile consists of the following:

75% "minority population" (in 91st percentile for RI; 93rd percentile for EPA region 1)
56% low-income (in 85th percentile for RI; 91st percentile for Region)
17% linguistically isolated (in 88th percentile for RI; 92nd percentile for Region)
31% with less than high school education (86th percentile for RI; 93rd percentile region)

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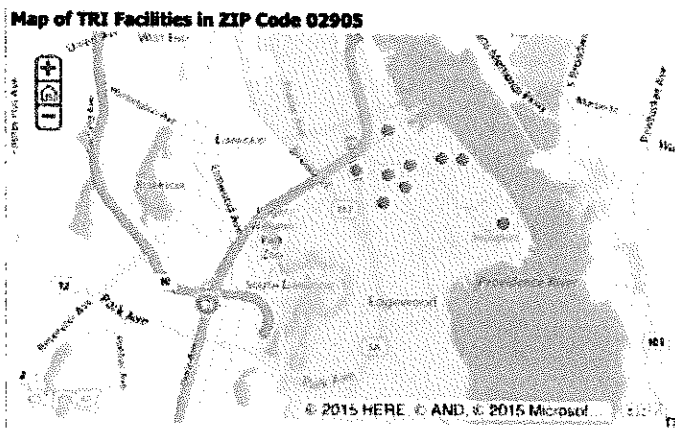
[38] http://www2.epa.gov/toxics-release-inventory-tri-program
[39] http://www2.epa.gov/ejscreen
[40] http://www.justicemap.org/
[41] Center for Effective Government. http://tesla.foreffectivegov.org/KidsAndToxins/bin-release/

Map of the one mile radius from proposed LNG Liquefaction Facility:

EPA Toxic Release Inventory - This EPA database catalogues releases of toxic chemicals. All 11 polluters listed for City of Providence are included in zip code 02905, which contains a greater number of polluting facilities than any other city or town in Providence County. All 11 of the polluters listed are within the one mile radius of the proposed Liquefaction Facility, both within the industrial area in the Port of Providence and but also in the neighborhood area between Eddy St. and Allens Ave in Washington Park.



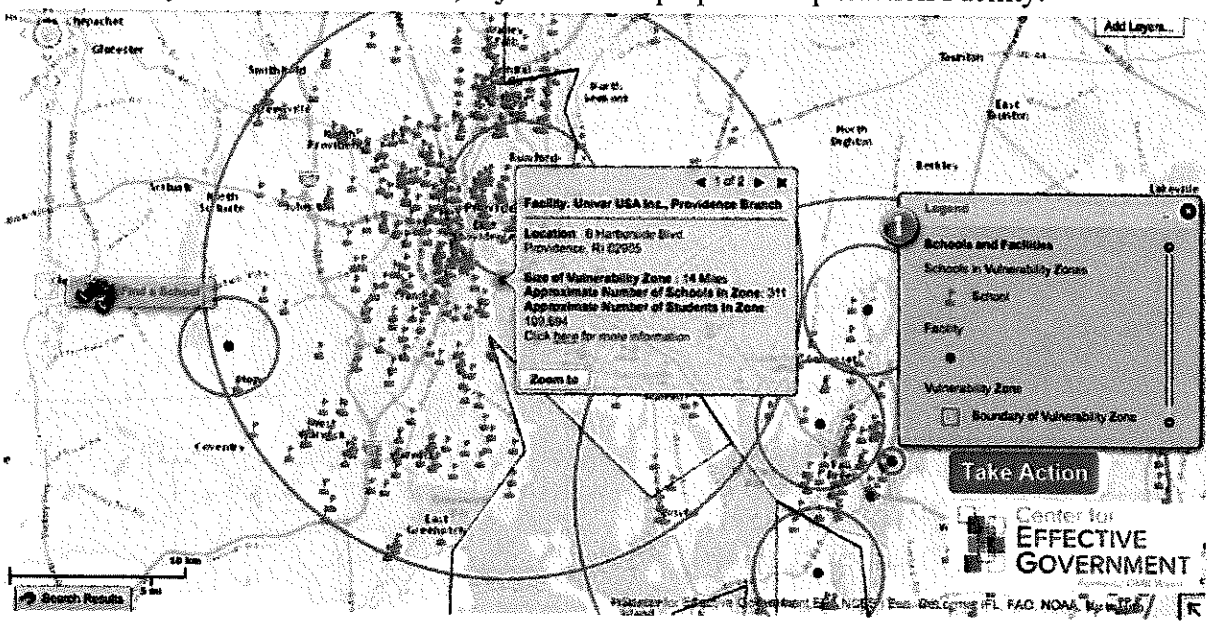
Quick Facts for 2013

Number of TRI Facilities:	**11**
Facilities Reporting Newly Implemented Source Reduction:	**2**
Total On-site and Off-site Disposal or Other Releases:	**15,229 lbs**
Total On-site:	**4,458 lbs**
• Air:	**4,455 lbs**
• Water:	**3 lbs**
• Land:	**0 lbs**
Total Off-Site:	**10,771 lbs**

According to EPA the industry that contributes most to on-site toxic releases in the 02905 zip code are Petroleum Bulk Terminals. The TRI facilities listed include many of the risks described in the previous section, such the Motiva fuel terminal (Petroleum Bulk Terminals) and Univar

USA Inc (Chemical Wholesalers), as well as facilities located even closer within residential communities: Monarch Metal Finishing Co (Fabricated Metals), Safety-Kleen Systems, Inc (Hazardous Waste/Solvent Recovery) and Mahr Federal, Inc. (Computers/Electronics Products).

Schools at Risk - As described earlier, the Univar chemical facility has a 14 mile hazard radius, pictured below as the large red circle. There are 311 schools within this zone, which are attended by approximately 110,000 children. The table below shows the national rankings of the percent of children within vulnerability zones. RI's high ranking is due almost entirely to the Univar facility in Port of Providence, adjacent to the proposed Liquefaction Facility.[42]



Rank	State	Percentage of Students in Vulnerability Zones	Number of Students in Vulnerability Zones	Total Number of Students in State
1	Utah	69%	424,701	614,495
2	Rhode Island	67%	108,777	162,402
3	Texas	61%	3,206,006	5,216,401
4	Louisiana	61%	502,349	818,310
5	Nevada	60%	275,914	458,147
6	Delaware	58%	87,471	150,634
7	Florida	51%	1,495,051	2,938,440
8	California	49%	3,317,846	6,714,357
9	Tennessee	48%	510,215	1,068,085
10	Illinois	47%	1,084,352	2,297,389

[42] Center for Effective Government. "Kids in Danger Zones: One in Three U.S. Schoolchildren At Risk from Chemical Catastrophes." http://www.foreffectivegov.org/files/kids-in-danger-zones-report.pdf

EPA's EJ SCREEN Tool - This new interactive mapping tool is a way to analyze the intersection of demographic risk profiles alongside environmental indicators such as air quality (particulate matter and ozone levels), lead paint, and proximity to traffic or facilities that require a chemical risk management plan, that store and process toxic materials, or that are water discharge polluters. The results can be mapped out and compared to the rest of the state, the rest of the EPA region, or nationally. In all of the following maps, the national percentile is displayed with the 95th-100th percentile in red and 90th-95th percentile in orange.

Proximity to Facilities Requiring a Chemical Risk Management Plan

The following map shows the Greater Providence area and highlights the areas that have close proximity to a large chemical facilities that require having a chemical Risk Management Plan (RMP). The area adjacent to the port is highlighted in red, meaning that it is in the 95th-99th percentile nationwide in a combined measure of chemical risk proximity and demographic risk.

The one mile radius around the proposed Liquefaction Facility ranks in the 97th percentile for the state, the 98th percentile for EPA Region 1 (New England), and 95th percentile nationally. This is an Environmental Justice community that is at high risk for exposure in a chemical incident.

Proximity to Water Discharger Facility

The following map for the combined EJ indicator for proximity to Major Direct Water Discharger Facilities and demographic risk. Again, the areas in Providence closest to the port are in the highest percentiles nationwide. In state, regional, and national comparisons, the one mile radius from the proposed facility is in the 97th percentile for this risk factor.

Traffic Proximity

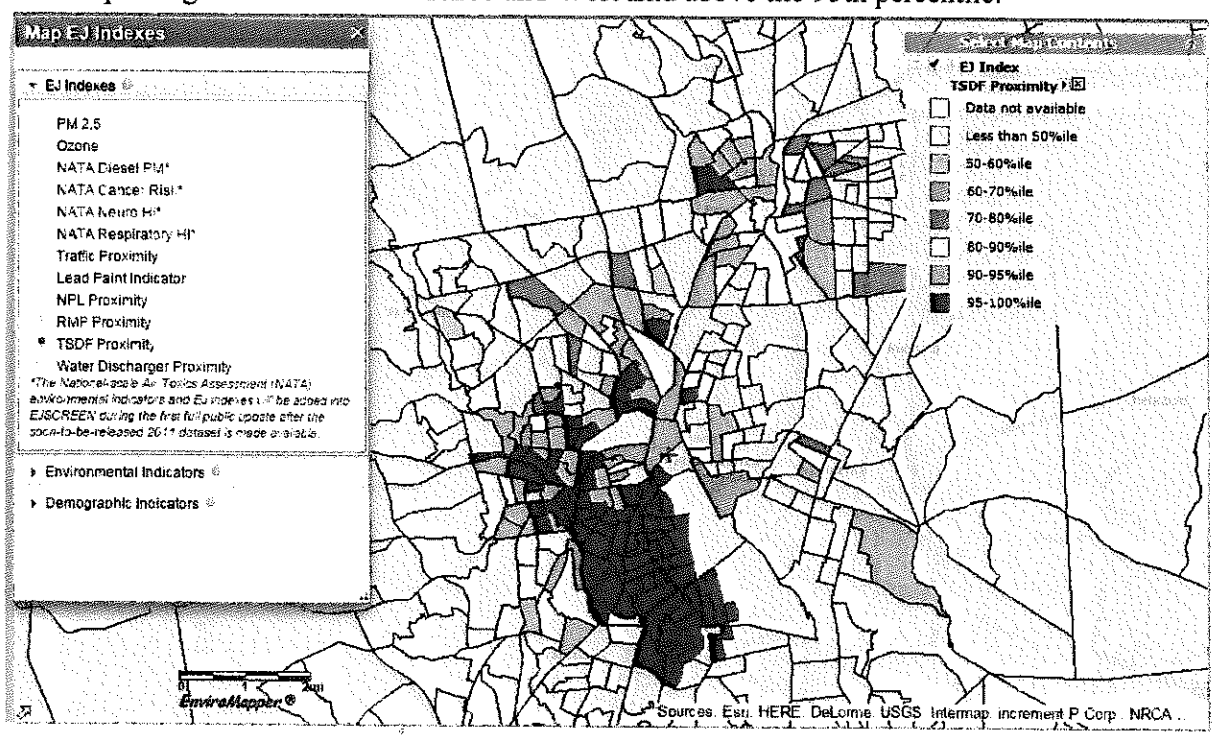
The following map shows the EJ SCREEN risk status for Traffic Proximity and Volume. The one mile buffer from the site is in the 96th percentile for both state and national comparisons, and in the 98th percentile compared to the rest of EPA Region 1.

Traffic proximity and volume is an issue that requires careful attention for the proposed liquefaction facility. The I-95 corridor is a major interstate roadway with heavy vehicle traffic. The Thurbers Ave exit, Eddy St. exit, and residential streets along Eddy St. and Allens Ave. carry most traffic in and out of the Port of Providence, and are located in some of the largest

asthma hot spots in the state. This asthma hotspot has a high concentration of people with asthma (impacting Black and Latino families most) and some of the highest rates of emergency room visits and hospitalizations due to asthma. Air pollution in the form of Volatile Organic Compounds (VOCs), particulate matter (PM), ultrafine particles, and black carbon are connected with heavy vehicle traffic and especially truck traffic. These air pollutants are known asthma triggers and are also linked to other respiratory health issues, certain cancers, and developmental disabilities. This is an existing burden that severely impacts Southside and Washington Park neighborhoods. The construction and operation of the liquefaction facility will be additional cumulative impacts in an area that is already overburdened. The proposed export of LNG via tanker trucks is a large concern: why should these communities now bear the burden of supplying the rest of RI and MA with LNG? National Grid says that there won't be a net change in truck traffic, with 16 tankers per day currently delivering LNG and an estimated 16 tankers per day exporting LNG once the facility is built. However, there are no binding guarantees this wouldn't increase later. National Grid's partners in Access Northeast are proposing major new LNG storage tanks near New Bedford, if these tanks are built would they be supplied with LNG from Fields Point? FERC should analyze the production capacity of this facility and determine if the supply produced would require additional tanker traffic to distribute. In either case, the two years of construction will have a significant impact on additional traffic in the community.

Toxic Storage and Discharge Facilities

Toxic materials are a major issue in these neighborhoods, and are some of the highest ranking EJ Indexes placing all of South Providence and West End above the 95th percentile.



For proximity to Toxic Storage and Disposal Facilities, communities in the one mile radius surrounding the proposed facility are in the 98th percentile for the state and the 99th percentile for EPA Region 1 and National comparisons.

Environmental Justice: working towards equitable healthy environments

In simplistic terms, environmental justice means guaranteeing equitable access for all people to have healthy environments where they live, work, play and pray. For a more detailed description of environmental justice, please read the EJ Principles[43]. The environmental justice movement has exposed the reality of the extent to which this equitable world does not exist. Because of ongoing legacies of racism, economic inequality, segregation, redlining, and other systemic injustices, someone's zip code is the greatest factor in their health and life expectancy.[44] Unfortunately, the frontline communities next to the Port of Providence, which are densely populated and filled with schools, daycares, home, and healthcare facilities, are a prime example of an area suffering from a concentration of pollution and a lack of environmental benefits such as parks, healthy food, and safe recreational areas. Many of the numerous schools in the community are crumbling and don't have funding to deal with issues such asbestos, lead paint, mold, and poor indoor air quality. At home, many residents are faced with substandard housing quality. The high percentage of older homes means that many are energy inefficient, have lead paint, and are likely to have mold, mildew, and other air quality issues. Homeowners in the community were and continue to be hard hit by the foreclosure crisis, and the high percentage of rental apartments means that many residents are dependant on landlords to improve housing quality and make home more energy efficient. For homes that aren't owner occupied, there is no financial incentive for the owner to make these upgrades, and the tenants are the ones who suffer from high energy costs and negative health impacts.

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[43] http://www.ejnet.org/ej/principles.html
[44] Huffington Post. "Why Your Zip Code May Be More Important To Your Health Than Your Genetic Code." http://www.huffingtonpost.com/james-s-marks/why-your-zip-code-may-be_b_190650.html

Climate Change

As a new fossil fuel facility involving methane, a potent greenhouse gas, this facility will create emissions that contribute to climate change. The source of the methane that would be liquefied is the Spectra Energy pipeline, which carries gas produced by hydraulic fracturing (fracking) from the Marcellus Shale into New England. As a result, the emissions and climate change impacts of the fracked gas lifecycle must be taken into account, from drilling to consumption. While the oil and gas industry and their supporters like to present "natural" gas as a "cleaner" alternative or a "bridge fuel" towards a renewable future, in reality gas produced by fracking is worse for the climate than coal.[45]

The proposed liquefaction facility is part of a much larger regional strategy to massively expand fracked gas infrastructure across the region, coordinated by the "Access Northeast" project linking Spectra Energy, National Grid, and Eversource Energy. In order to take climate science seriously and hopefully avert devastating runaway climate change, fossil fuel use must be rapidly scaled back not expanded. This is especially true for natural gas, given the much higher potency of methane as a greenhouse gas. Instead of investing in the build out of new fracked gas infrastructure, massive investments need to be made in energy efficiency and truly renewable energy.

National Grid's proposed facility would contribute to climate change emissions
National Grid will need a compressor station to take the incoming gas from the pipeline and bring it up to the needed pressure for liquefaction. This compressor would be powered by gas from the pipeline, contributing in addition to methane leaks throughout the natural gas pipeline, storage, and delivery system.

Running the liquefaction facility requires a large amount of energy and will use 15 Megawatts of electricity to liquefy the gas. For comparison sake, the Deepwater Wind offshore wind farm project will be generating 30 Megawatts of electricity, which means National Grid's proposal would essentially cut the benefits of this groundbreaking renewable energy development in half. In general, 98% of Rhode Island's electricity is generated from natural gas.[46]

Climate Adaptation?
In addition to contributing to climate change, the proposed facility and the Port of Providence in general is at high risk from climate-related impacts and severe weather events. It, along with the

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[45] Howarth, Robert W. "Bridge to nowhere: methane emissions and the greenhouse gas footprint of natural gas." Energy Science & Engineering. 2014. http://onlinelibrary.wiley.com/doi/10.1002/ese3.35/pdf
[46] RI Department of Administration, Division of Statewide Planning. "Energy 2035: RI State Energy Plan." http://www.planning.ri.gov/documents/LU/energy/Energy2035_All_Preliminary_06032015.pdf

rest of the Port, is at sea level and is at risk from climate change amplified hurricanes as well as from future sea level rise. In both projected scenarios, as well as in other major flood events, the proposed liquefaction facility would be underwater, along with the adjacent facilities storing hazardous, flammable and/or explosive substances. National Grid claims the facility will be built to withstand a 500 year flood - yet it also claims to have done outreach with community organizations that have never existed, which brings their trustworthiness into doubt.[47] In recent years, multiple 1000 year floods of occurred, supercharged by the overheated climate. While it may be poetic justice or karmic effect to have the major producers of climate change emissions be impacted by the effects of climate change, once again it would be the neighboring frontline communities that would be hurt most by any climate-related disaster.

Image source: slide from presentation by Austin Becker titled "Hurricane Consequences in the face of climate change: Case studies of two seaport clusters, Gulfport (MS) and Providence (RI). In the report, both ports are referred to as "highly vulnerable."[48]

Note: overlaid words show organizations involved, do not correlate with locations on map

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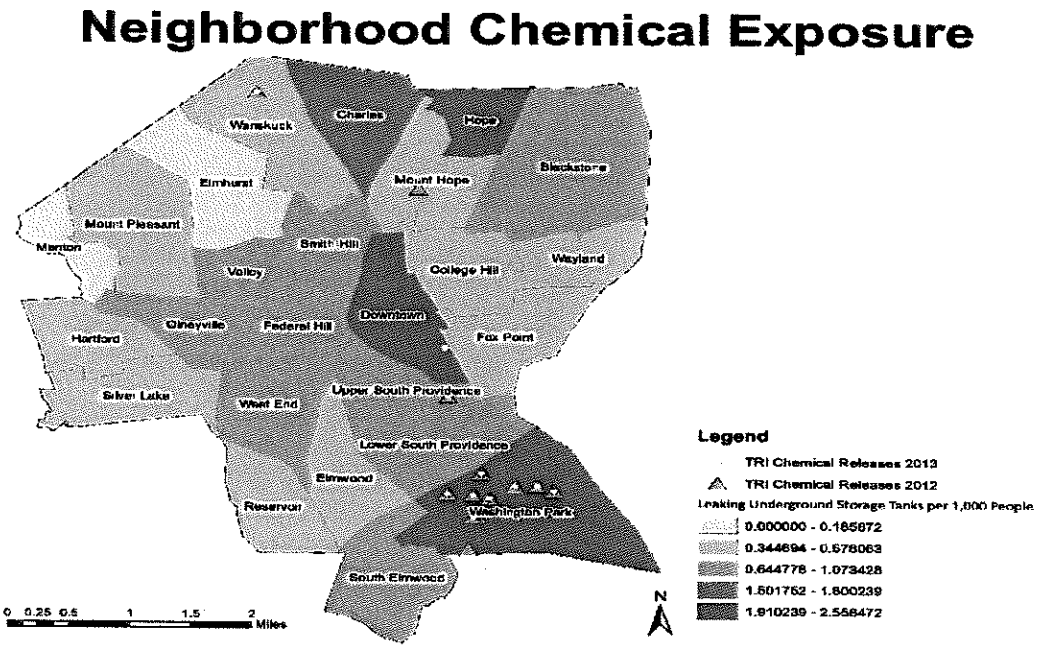
[47] RI Future. National Grid lists groups that don't exist in their Public Participation Plan. Sept 15, 2015. http://www.rifuture.org/national-grid-lists-groups-that-dont-exist-in-their-public-participation-plan.html

[48] Becker, Austin. "Hurricane Consequences in the face of climate change: Case studies of two seaport clusters, Gulfport (MS) and Providence (RI). Marine Law Symposium, Roger Williams University. Nov 14-15, 2012. http://law.rwu.edu/sites/law/files/rwu/MarineAffairs/pdf/Becker%2BPanel%2B5%5B1%5D.pdf

Public Health

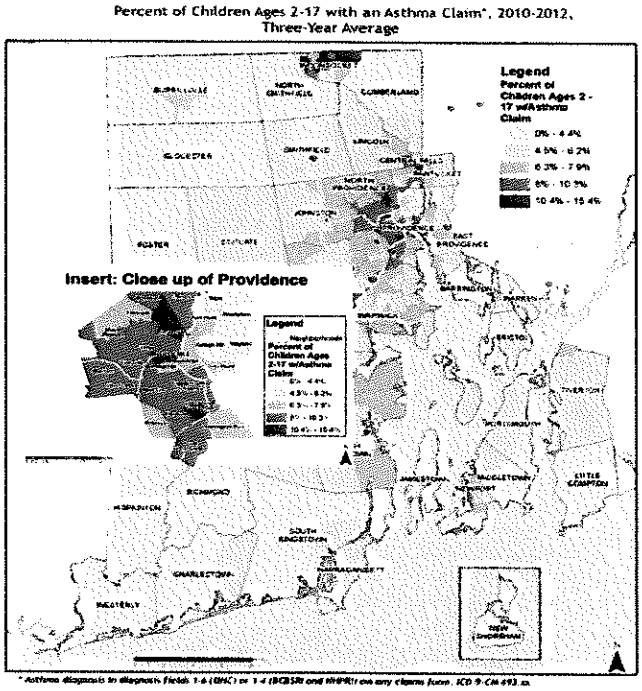
All of the above issues discussed in this position paper are also public health issues. In looking at the social and environmental determinants of health, public health paints a picture that helps explain why particular populations are more likely to be sick. Issues of potential disasters, environmental racism, climate change impacts, and economic inequality are all public health issues.

The EJ League is the backbone organization for COHEP: Community Organizing for Health Equity in Providence[49], a collaborative effort with DARE (Direct Action for Rights and Equity), PrYSM (Providence Youth Student Movement), and the RI Doula Collective. COHEP is funded through the RI Department of Health's "Health Equity Zones" (HEZ)[50]. As a place-based initiative that works to develop collective impact strategies to address health problems and health disparities, COHEP's HEZ work focuses on a few neighborhoods in South Providence including Washington Park, a frontline community to Port of Providence. Research and GIS mapping[51] conducted as part of the HEZ community assessment show that Washington Park has largest concentration by far of chemical exposures in Providence, and also has the highest concentration of leaking underground storage tanks:

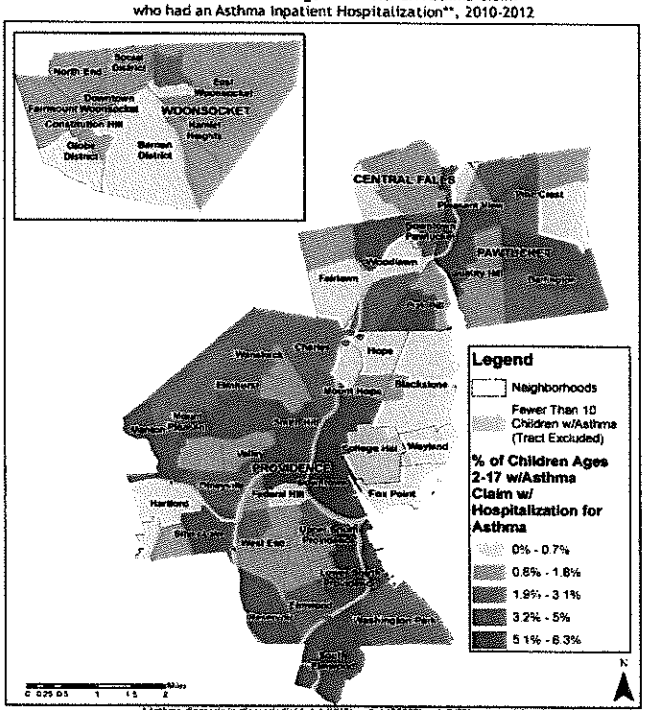


[49] EJLRI: Health Equity Zone. http://ejlri.org/health-equity-zone-5/
[50] RI Department of Health: Health Equity Zones. http://www.health.ri.gov/projects/healthequityzones/
[51] Culhane, Trevor. "Understanding Environmental Hazards & Resources in Providence Health Equity Zones." Brown University. https://www.dropbox.com/s/tm6do919e4ws7ly/GIS_Final_Poster.pdf?dl=0

At hearings and public events about the proposed liquefaction facility, multiple community members have spoken out about issues of high asthma rates in the community being a major concern. Public health data backs up this concern, and shows that the area is one of the state's largest asthma hot spots. While most of the state has asthma rates of 0-4.4% or 4.5-6.2%, most of Providence has asthma rates of 8-10.3% and the neighborhood next to I-95 and the Port has the highest levels in the state at 10.4-15.4%.[52]



On top of the high level of children with asthma, the frontline community and asthma hot spot next to the port also has some of the highest levels in the state for Emergency Department visits or Hospitalizations due to asthma. Among children with asthma living next to the Port of Providence, 15.5 - 24.1% have had an Emergency Department visit, compared to rates of 0-3.3% for more affluent neighborhoods in Providence.[53] Similarly with asthma-related hospitalizations, for frontline neighborhoods adjacent to the Port or Providence, children with asthma had inpatient hospitalizations at a rate of 5.1%-8.3% compared to the rate of 0-0.7% in the more affluent neighborhoods in Providence.[54]



[52] RI Department of Health. "Asthma Claims Data Book 2014." Figure 1 Percent of Children Ages 2-17 with an Asthma Claim. http://www.health.ri.gov/publications/databooks/2014AsthmaClaims.pdf
[53] ibid. Figure 7 Percent of Children Ages 2-17 with Asthma who had an Asthma Emergency Department Visit 2010-2012.
[54] ibid. Figure 12 Percent of Children Ages 2-17 with an Asthma Claim who had an Asthma Inpatient Hospitalization, 2010-2012.

In addition to the many health problems and health disparities impacting the neighborhoods of South Providence and Washington Park, there are also public health impacts relating to healthcare facilities in these communities. The Lifespan and RI Hospital complex is the largest and most visible concern, containing the state's only level 1 trauma center, Rhode Island Hospital, Women and Infants Hospital, and Hasbro Children's Hospital.

In addition to this major hospital complex, there are many other healthcare facilities within a close radius (1 to 2 miles) from the proposed liquefaction facility and close to the other hazardous facilities in Port of Providence. These include but are not limited to:

- Hasbro's Medicine Pediatrics Primary Care (245 Chapman St) - this facility offers primary care for children, and also offers specialty services for chronic conditions including asthma, diabetes, and hypertension, which exist at very elevated levels in this neighborhood. The facility also offers gender and sexual health services.[55] It falls within the one mile radius of the proposed liquefaction facility.
- Providence Community Health Centers (375 Allens Ave) - PCHC serves approximately 50,000 patients in Providence, many of whom are low-income, uninsured or underinsured, and suffering from health problems impacted by social determinants of health. This location has their administrative building for all 9 health centers in Providence, as well as the Chaffee Health Center which serves patients[56]. It is located within the half mile radius of the proposed liquefaction facility.
- Providence Community Health Centers Prairie Avenue complex (369 Prairie Ave) - this health center location also includes the asthma and allergy specialty clinic for the entire PCHC health center system across Providence.
- Fertility Solutions (758 Eddy St)[57] - specializes in fertility treatments and in vitro fertilization and other related services
- New Beginnings (717 Allens Ave) offers perinatal and ultrasound care

It is clear from this limited list, that any cumulative or emergency-related impacts from the proposed liquefaction facility would not only impact the whole state's health care system, but would particularly impact health care services related to maternal and child care, reproductive care, chronic disease care, and emergency response services. Ongoing background pollution and risks in this area should be seen as a public health crisis. Any potential future disaster impacting the port could cause a public health emergency of unimaginable proportions.

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[55] http://www.hasbrochildrenshospital.org/Medicine-Pediatrics-Services.html
[56] http://www.providencechc.org/Locations/Chafee
[57] https://www.fertilitysolutionsne.com/contact-us/providence-rhode-island

Energy Economics & Economic Inequality

This project takes advantage of, and will increase problems with economic inequality and economic injustice related to energy. First and foremost, the massive $100 million price tag for construction will be passed onto consumers as an added charge. National Grid tries to hide this fact by saying "the cost of the natural gas commodity on a customer's bill is a pass through cost. This project will allow National Grid and other companies who use the Fields Point facility to supply domestic LNG at a more stable cost."[58] But "pass through cost" means they pass that cost through to us, and there is no guarantee that prices of domestic fracked gas will be any more stable than prices of internationally-sourced LNG. If anything, the international prices of LNG have been steadily declining while domestic fracked gas prices are at historic lows and likely to increase as the industry builds LNG export terminals and fracked gas power plants that increase demand and lead to rising prices. There are existing plans and proposals to connect the Spectra Pipeline (the source of the fracked gas for this facility) to an LNG export facility in Canada[59,60] and to build a massive 900 MW power plant in Burrillville RI[61] that would be powered by gas from Spectra's "Algonquin" pipeline. Despite the industry's claims of needing to build these projects to lower prices, with power plants and other major purchasers getting preferential treatment with locked in prices in long term contracts, individual consumers in Rhode Island will see rising gas prices for home heating and cooking. The $100 million construction costs for the liquefaction facility will be added on top of the price of gas, and collectively we are the ones who will end up paying the bill. On a purely economic level, the proposed facility does not make sense and will be locking us into further dependency on fracked gas.

Income and wealth inequality in Rhode Island means increasing gas prices won't impact everyone equally. There are only four municipalities in RI that qualify as high poverty "core cities", with childhood poverty rates over 25% - Providence, Pawtucket, Central Falls, and Woonsocket. Providence as a whole as a 27.7% poverty rate, almost twice the national average of 12.8%, and the frontline communities close to the Port includes the census tracts with the greatest concentrations of poverty in the state, specifically census tracts 5, 7, and 12. Five of the twelve census tracts in the adjacent neighborhoods are within the top 10 poorest tracts in Rhode Island, ranking 1st, 2nd, 4th, 6th and 10th. The median family income is $31,800 with the poorest tracts having median family income as low as $14,067. On average, 35% of people in the community live below the poverty line and 63% are below the 200% poverty line. In the poorest census tracts, 64% live below the poverty line and 83% are below the 200% poverty line.[62]

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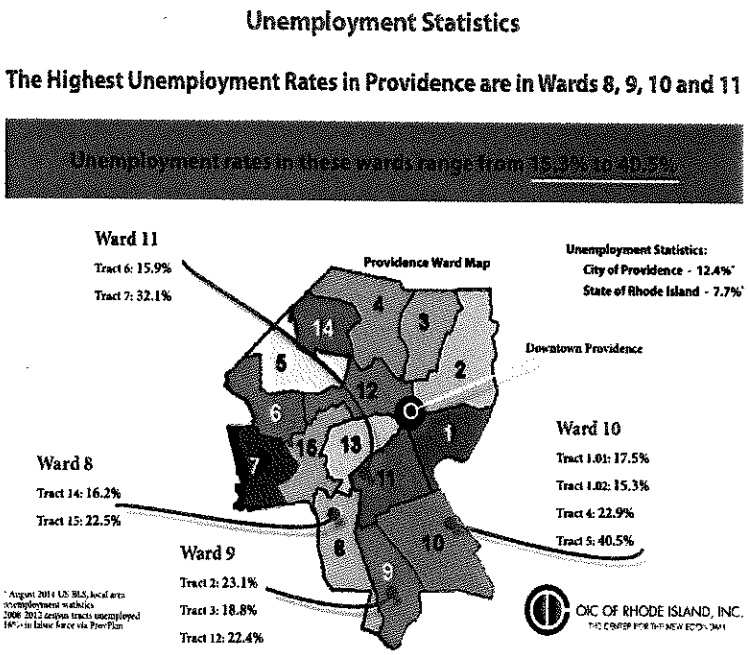
[58] National Grid LNG LLC. Frequently Asked Questions "Will This Affect My Bill?". http://www.fieldspointngrid.com/
[59] https://rbnenergy.com/movin-out-exporting-us-sourced-lng-from-the-maritimes
[60] http://energy.gov/sites/prod/files/2014/10/f18/14_179_lng.pdf
[61] http://www.providencejournal.com/article/20150731/NEWS/150739880
[62] ProvPlan. Rhode Island Community Profiles; Available from http://profiles.provplan.org/



The Providence unemployment rate of 12.4% is much higher than the statewide average of 7.7%, while the highest unemployment levels were found in Wards 8, 9, 10, and 11 (South Providence and Washington Park), where unemployment rates range from 15.3% to 40.5%. Ward 10, directly adjacent to the Port, has the highest unemployment levels including Census Tract 5 which is the highest at 40.5%.

Given this data, it is clearly a myth that expanding operations at the Port will create jobs to solve economic issues such as unemployment. There is no public data available on the workforce in the Port, but based on personal accounts and parallels with other comparable sectors, the jobs for work in Providence are not given to residents of Providence, let alone residents of the neighborhoods that are directly impacted. With the limited number of temporary jobs promised with the proposed LNG Liquefaction facility, the high-paying jobs requiring specialized skills will be going to Kiewit, a multinational corporation that has also worked on the Keystone XL pipeline.

The increased costs of home gas prices will have a devastating impact in Washington Park and South Providence, where families living in poverty are already dealing with the frequent impacts of National Grid terminating utility service. This is especially true in rental units which are often less energy efficient: because tenants pay utility costs, landlords have no incentive to invest in weatherization or energy efficiency, making heating costs higher. In violation of state and federal law, National Grid routinely shuts off utilities for low-income medically vulnerable people who are dependant on heat and/or electricity for medical needs. The RI Center for Justice filed a class action lawsuit against National Grid and the RI Division of Public Utilities and Carriers to stop these utility terminations.[63] The press release for the suit included the following:

[63] RI Future. "National Grid sued to stop illegal utility shutoffs" September 30, 2015. http://www.rifuture.org/national-grid-sued-to-stop-illegal-utility-shutoffs.html

> "In my work on behalf of medically vulnerable children and families, I have witnessed National Grid's routine disregard for health and safety considerations," says attorney Jeannine Casselman, legal program director of the RI Medical Legal Partnership at Hasbro Children's Hospital. "Even in cases involving children with severe illnesses and disabilities, we see utility shut offs happening on a regular basis. In some instances, this can lead to loss of housing altogether. Rather than provide a reasonable repayment plan for struggling families, National Grid too often shuts off services, causing further disarray and trauma to low-income households." [64]

In collaboration with the George Wiley Center's Lifeline Project[65], this effort is working to protect the health and welfare of families that are put in danger by National Grid's reckless and greedy energy policies. The EJ League endorses the George Wiley Center's campaign and the full demands described in the letter from health care professionals and delivered to the RI PUC:[66]

> *1. A one-year moratorium on termination for all accounts that are coded as 'medical'.*
>
> *2. The engagement of an independent third party monitor to review the Division of Public Utility's approval of petitions for permission to terminate for all accounts coded as medical. The monitor will be selected by a joint committee composed of members of the George Wiley Center, the medical community, the Department of Health and the Public Utilities Commission.*
>
> *3. The Public Utilities Commission immediately begin requiring data submissions from National Grid that are consistent with those requirements placed on the company in Massachusetts, as per the George Wiley Center's formal request from March of 2015.*
>
> *4. The Public Utilities Commission immediately begin accepting and thoroughly reviewing petitions for emergency restoration and providing timely responses to each request.*

There is no publically available address-specific data that shows geographic distribution of utility shut offs. Regardless, the concentration of extreme poverty and high levels of chronic disease and health problems in the frontline communities next to the Port make it highly likely that these neighborhoods are disproportionately impacted by utility terminations. Testimonials for grassroots membership-based organizations in the community confirms that utility termination is a major problem for many families living in frontline communities next to the fossil fuel energy complexes in Port of Providence which provide energy for the entire region. This is yet another sign of environmental injustice and systemic injustice that is built into the normal business operations of the fossil fuel industry.

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[64] http://www.centerforjustice.org/2015/09/29/disabled-consumers-file-suit-against-national-grid-and-state/
[65] http://www.georgewileycenter.org/#!lifeline-project/c1pw7
[66] RI Future. "PUC Protesters Repelled by Bureaucratic Disinterest," October 21, 2015. http://www.rifuture.org/puc-protesters-repelled-by-bureaucratic-disinterest.html

Solutions and Alternatives

The information presented in the previous sections show that in addition to not being necessary, National Grid's proposed LNG Liquefaction Facility would be dangerous and would contribute to existing environmental racism. LNG Liquefaction is not needed in Rhode Island in general, and it certainly should not be placed in the most toxic and most impoverished part of the state.

The immediate solution is to stop this facility from being built. The Federal Energy Regulatory Commission (FERC) needs to deny National Grid LNG LLC's application, and the RI Department of Environmental Management (RI DEM) and RI Coastal Resources Management Council (RI CRMC) need to deny the state level permits.

That being said - the proposed liquefaction facility is not the only problem outlined in this position paper. Even without the added significant risks of the liquefaction facility, the existing LNG storage tank, the Motiva oil terminal, the Univar chemical plant, the Enterprise LPG terminal, and other facilities in the area all pose significant environmental health hazards, and create the overall context of environmental racism. Toxic and hazardous facilities are dangerous for communities and dangerous for workers. Yet families are dependant on them for jobs, municipalities are dependent on them for tax income, and the way our socio-economic system is set up we are all collectively dependant on the products they produce. Regardless of our dependency, the reality of climate science is that the fossil fuel / petrochemical industry rapidly pushing our planet past its limits, producing present and future catastrophic impacts, and making people sick - especially frontline communities of color and indigenous communities. Our dependency on these industries is literally killing us.

As an organization, the EJ League is interested in big-picture long-term real solutions to interlocking crises that impact communities of color, marginalized communities, and planetary ecosystems. We are members of three national coalitions of grassroots membership-based organizations: Right to the City[67], Grassroots Global Justice[68], and Climate Justice Alliance[69]. Together, and lead by our members and our communities, we are developing and sharing solutions that address these intersecting crises from the grassroots. **These community-based solutions are in opposition to the corporate top-down false solutions that pretend to address a single symptom while reinforcing the underlying root causes of the problems.**

True solutions are rooted in the work is grassroots internationalism, and using the framework of a "Just Transition" we are collectively building a different context and a different system, an economy for people and the planet. The Just Transition framework emerged from partnerships

[67] http://righttothecity.org/
[68] http://ggjalliance.org/
[69] http://www.ourpowercampaign.org/cja/

between environmental justice and labor organizations. In the words of the Just Transition Alliance "together with frontline workers, and community members who live along the fence-line of polluting industries, we create healthy workplaces and communities. We focus on contaminated sites that should be cleaned up, and on the transition to clean production and sustainable economies."[70]

As part of the Climate Justice Alliance (CJA) Our Power Campaign, we are part of a collaborative that is:

> "uniting frontline communities to forge a scalable, and socio-economically just transition away from unsustainable energy towards local living economies to address the root causes of climate change.
>
> We are rooted in rooted in Indigenous, African American, Latino, Asian Pacific Islander, and working-class white communities throughout the U.S. We are applying the power of deep grassroots organizing to win local, regional, statewide, and national shifts. These communities comprise more than 100 million people, often living near toxic, climate polluting energy infrastructure or other facilities. As racially oppressed and/or economically marginalized groups, these communities have suffered disproportionately from the impacts of pollution and the ecological crisis, and share deep histories of struggle in every arena, including organizing, mass direct action, electoral work, cultural revival, and policy advocacy.
>
> Together we are strengthening relationships between community-based organizations, environmentalists, labor unions, food sovereignty/sustainable agriculture groups and other sectors of society.
>
> As CJA we are coalescing our power to reshape the economy and governance in the coming decades - we are communities united for a just transition.[71]

CJA's Our Power Campaign has the long term goals to: 1) End the Era of Extreme Energy, and 2) Implement a Just Transition to Local Living Economies. This will be achieved by:

- Building Local Living Economies with a model that that centers on: Zero Waste, Regional Food Systems, Public Transportation, Clean Community Energy, Efficient Affordable and Durable Housing, and Ecosystem Restoration and Stewardship
- Building Community Resilience: Creating climate jobs that will build stronger, resilient, and more equitable communities through Grassroots Economies (ex. worker owned cooperatives) and Rights to Land, Water, and Food Sovereignty.[72]

Economic strategies around Just Transition require strong partnerships between environmental justice community advocates and the labor movement. Too often the corporate 1% strategy of

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[70] http://www.jtalliance.org/docs/aboutjta.html
[71] **Who Is CJA?** http://www.ourpowercampaign.org/cja/
[72] http://www.ourpowercampaign.org/campaign/

divide and conquer is successful, but Just Transition pushes us to build powerful working class alliances to overturn the economic and political power structures that simultaneously harm workers, create widespread economic inequality and poverty, and destroy the planet's ability to sustain life. There is a growing international movement to change this, and the following reports outline some of the strategies to build strong labor/environmental alliances around energy systems and a Just Transition:

- Trade Unions for Energy Democracy[73] white paper: Power to the People: Toward Democratic Control of Electrical Generation [74]
- Labor Network for Sustainability[75] report: Clean Energy Future: Protecting the Climate, Creating Jobs, Saving Money[76]

Just Transition in Port of Providence

Working with our national alliances and using these strategic frameworks, EJ League will continue to convene local and regional coalitions to develop and implement Just Transition strategies in Rhode Island, focusing on the Port of Providence as an urgent need. Our goal is to develop concrete strategies and tactics to leverage a rapid transition away from natural gas and all fossil fuels, with democratic frontline community ownership over the development of the sectors for truly renewable energy and energy efficiency work. Through workshops, teach-ins, and hosting a Just Transition Assembly with Grassroots Global Justice in late summer / early fall, we will be doing the collective work of developing local solutions to massive social and planetary problems. We will share our joint understandings and perspectives on the problems, learn about the frameworks and strategies that are effective elsewhere, and will forge pathways to transform our oppressive realities.

There are too many solutions and alternatives to list, and most solutions will be built collectively through praxis and not through theory. As a starting point, one could easily envision how the $100 million price tag for the proposed liquefaction facility could be better spent in ways that would address energy needs, create jobs in the economically marginalized and oppressed frontline communities next to Port, support renewable energy and energy efficiency, and build greater community health instead of increased toxic risk. With the high percentage of old housing stock and rental units in low-income communities, there is a large need to improve housing quality with weatherization, energy efficiency, and improvements in indoor air quality, lead abatement, and other healthy housing requirements. This investment would reduce the need

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[73] http://unionsforenergydemocracy.org/

[74] Trade Unions for Energy Democracy. "Power to the People: Toward Democratic Control of Electrical Generation" Rosa Luxemburg Stiftung. June 2015.
http://www.rosalux-nyc.org/wp-content/files_mf/tuedworkingpaper4powertothepeople73.pdf

[75] http://www.labor4sustainability.org/

[76] Labor Network for Sustainability. "Clean Energy Future."
http://www.labor4sustainability.org/wp-content/uploads/2015/10/Climate-Jobs-Program.pdf

for heating fuels, improve health outcomes, and would be able to employ many people from the community. Job training programs around weatherization and housing work are already in place, and are focused on people of color, youth, and people with records who are excluded from many other sectors of the dominant economy. EJ League has a Board Member who is a weatherization job training specialist, energy auditor, and is working on seeking investors to build a production facility for cellulose to be used in blown-in insulations and home weatherizations. Worker-owned cooperative enterprises in the industries of energy efficiency would transform economic power dynamics, bring democratic control into the workplace, and build wealth at the local level. These types of economic developments would be community-owned, community-led, would employ community members, and would support true community wealth development in stark contrast with the corporate fossil fuel and petrochemical model developments that poison, displace, and extract wealth at the expense of community well-being.

In addition to worker owned businesses for energy efficiency, we need community-owned renewable energy development. National Grid is required to make a bare minimum level of investment into renewables, and is allowed to add a surcharge to all consumer bills to cover this. Despite the fact that everyone is paying for this, National Grid's limited investments into renewables have been in affluent white suburban communities. Frontline communities, which have been sacrifice zones for hazardous energy developments for generations, need massive investments in renewable energy. But these investments cannot operate like most investments in the dominant capitalist economy, which come in from outside with disregard for residents, take advantage of poverty conditions, lead to gentrification and displacement, and extract wealth for the investor's return on investment. We are also not asking for charity or handouts that would support public relations campaigns for polluting industries. We are demanding reparations.

We are exploring mechanisms to make it possible for renewable energy to benefit our communities, given that current capitalist market mechanisms favors larger corporations, municipalities with surplus budgets and strong tax bases, and families that are homeowners who can afford up-front costs in order to get the return on their solar/renewable energy investments. We are determined to make renewable energy a working reality that benefits low-income communities of color in multiple ways, from reduced toxic hazards, lowered bills, better jobs, and shifting away from energy sources that are literally killing us. We know this will not happen overnight, and it will be a massive cross-sector effort to manifest this vision. But we also know that we cannot afford to wait, and nothing is more urgent. We invite you to join us.

RHODE ISLAND
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT
235 Promenade Street, Providence, RI 02908-5767 TDD 401-222-4462

Public Involvement Plan Process Initiation Letter
File No. SR -28-1152
Formerly Case No. 98-004

September 6, 2016

Amy A. Willoughby
Lead Environmental Scientist
New England Site Investigation & Remediation Group
National Grid
40 Sylvan Road, E3.691
Waltham, MA 02451

RE: Providence Gas Co. – AA
A.k.a. Former New England Gas Company MGP property
642 Allens Avenue, Providence, Rhode Island
Plat Map 56 / Lot 5, Plat Map 101 / Lot 1

Dear Ms. Willoughby:

On November 9, 2011, the Rhode Island Department of Environmental Management (the Department) amended the Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases, (the Remediation Regulations). The purpose of these regulations is to create an integrated program requiring reporting, investigation and remediation of contaminated sites in order to eliminate and/or control threats to human health and the environment in an efficient manner.

In the matter of the above referenced "Site" (as defined in the Industrial Property Remediation and Reuse Act), the Department's Office of Waste Management (OWM) has received a written request in the form of a petition from the community, submitted in accordance with Rule 7.07.E (Public Involvement Plans) of the 2011 Remediation Regulations, that a Public Involvement Plan (PIP) be developed and approved for the Site. A copy of the petition, submitted to the Department on August 31, 2016, is included as an attachment to this letter.

The Department acknowledges that informal discussions with National Grid about the request for a PIP have already been conducted. This letter is a formal request from the Department asking National Grid to initiate the process of developing an approvable PIP associated with the planned environmental cleanup of the Providence Gas Co. – AA Site, and any other site redevelopment activities requiring remedial actions that fall under the jurisdiction of the Remediation Regulations.

30% post-consumer fiber

Please notify this office within seven days of the receipt of this letter of your plans and proposed schedule for conducting the PIP development process.

If you have any questions regarding this letter or would like the opportunity to meet with Department personnel, please contact me by telephone at (401) 222-2797, extension 7109 or by e-mail at joseph.martella@dem.ri.gov.

Sincerely,

Joseph T. Martella II
Senior Engineer
Rhode Island DEM
Office of Waste Management

cc: Ronald Gagnon, RIDEM/OCTA
Kelly J. Owens, RIDEM.OWM
Susan Forcier, Esq., RIDEM/OLS
Gregory Swift, RIDEM/OWR
Barbara Morin, RIDOH/Center for Healthy Homes & Environment
Rich Lucia, RI CRMC
Robert E. Azar, Providence Planning and Development
Julian Rodrigues-Drix, RIDOH & EJLRI
Margaret S. Kilpatrick, GZA

Attachment: Petition Requesting Public Involvement Plan

Petition to the Rhode Island Department of Environmental Management and National Grid to cease approval and implementation of any and all remediation work and related permitting activities at the Providence MGP site until a Public Involvement Plan is developed and approved.

Preamble:

The waterfront site of the former Providence Gas Company Manufactured Gas Plant (MGP) located at 642 Allens Avenue in Providence, RI (hereafter referred to as "Site") is known to have a long history of contamination from oil and/or hazardous materials (OHM). The Site extends from Allens Ave on the west to the Providence River on the east, and is bordered by the Motiva oil terminal on the north, Terminal Road on the southwest, and ProvPort tenants to the southeast (UNIVAR chemical company and New England Petroleum). MGP operations from 1910 to 1954 released byproducts including coke, coal tar, ammonia, toluene, and benzene.

B.P. Clapp operated an ammonia works at the property starting in 1910, the United States Government operated a toluene facility during 1918, and a liquefied petroleum gas (LPG/Propane) distribution plan began operations in 1952. In 1973, Algonquin Gas Transmission Company, LLC and Algonquin LNG, Inc., subsidiaries of Duke Energy, negotiated with Providence Gas Company to build a 600,000 barrel Liquefied Natural Gas (LNG) storage tank at the Providence MGP site, with Algonquin LNG providing regasified natural gas to the Providence Gas Company distribution network. In September 2000, the Southern Union Company purchased the Providence Gas Company and changed its name to the New England Gas Company (NEGC). In December 2002, KeySpan Energy Development Corporation purchased Algonquin LNG from Duke Energy Gas Transmission, making KeySpan LNG LLC a wholly-owned subsidiary operating as a tenant on the New England Gas Company property. St. Lawrence Cement Company was also a tenant of NEGC on the Providence MGP Site, changing its name to Holcim (Canada) Inc. in 2009. In February 2006, National Grid PLC acquired KeySpan Corp for $7.3 billion and also purchased New England Gas Company from Southern Union. National Grid, through its subsidiary National Grid LNG LLC is the current owner of the Providence MGP Site.

Numerous substances which pose a risk to public health, safety, and the environment have been recorded at the site, and include but are not limited to: complex mixtures of different polycyclic aromatic hydrocarbons (PAHs), total petroleum hydrocarbons (TPH), phenolic compounds, volatile organic compounds (VOCs) including benzene and naphthalene, polychlorinated biphenyls (PCBs), ferri- and ferrocyanide compounds, asbestos, and metals including lead and arsenic. Many locations in the site contained multiple hazardous substances at levels that exceed allowances.[1]

Since 1994, there have been some actions taken to remediate the site in order to facilitate expansion of the LNG storage facility.[2] Environmental Science Services (ESS) was contracted to conduct tests and prepare a Remedial Action Work Plan ("RAWP"), which was submitted to RIDEM in

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[1] "Remedial Action Closure Report: Former Manufactured Gas Plant, 642 Allens Ave" prepared by VHB/Vanasse Hangen Brusslin, Inc. for the New England Gas Company, and submitted to RIDEM November 2002.

[2] "Site Investigation Report: Former Manufactured Gas Plant, 642 Allens Ave" prepared by VHB/Vanasse Hangen Brusslin, Inc. for the New England Gas Company, and submitted to RIDEM April 2003.

December 1998. The RAWP defined objectives for objectives for surface soils, subsurface soils within 100 feet from Providence River, and subsurface soils more than 100 feet from shoreline. In June 1999 RIDEM issued a Temporary Remedial Action Permit (TRAP), and Algonquin LNG excavated part of the site by the LNG truck loading area and containment dike. Following Southern Union's acquisition of the site, RIDEM rejected the Draft Interim RAWP submitted by Environmental Operations, Inc. in July 2001 as well as a Modified RAWP submitted by Vanasse Hangen Brustlin, Inc in September 2001. RIDEM approved modifications in April 2002 and a new TRAP was issued, leading to excavation of contaminated soil and waste in six areas on the site, which was transported and disposed of at facilities in Dunmore Pennsylvania, Loudon New Hampshire, and Emelle Alabama. In total, 16,864 tons of material were excavated and removed, of which 9,558 tons were classified as hazardous. In addition, a wastewater treatment system designed to remove particulate solids, floating oils, dissolved organics, and cyanide treated and discharged 296,691 gallons of wastewater.[3]

While some specific areas of the Site were considered remediated following the activities described above, the remaining areas, which constitute a majority of the land, have not been remediated. In addition, records show releases of oil and/or hazardous materials (OHM) on all surrounding properties.[4] It must be noted that while active RIDEM oversight was present throughout the previously conducted remediation activities, this pre-dated the Public Involvement Plan regulations, amended in November 2011 as described below. As such, there was not sufficient public involvement in the planning, approval, or oversight of previously conducted remediations.

Current Activities:

On April 1, 2016, National Grid LNG LLC (NGLNG, the owner and responsible party for Site remediation), submitted an abbreviated application to the Federal Energy Regulatory Commission (FERC) seeking a Certificate of Public Convenience and Necessity to construct the *Fields Point Liquefaction Project* (hereinafter "Liquefaction Facility"). NGLNG is also submitting an additional application to FERC for a storage tank containment enhancement project, the "Bund Wall Project" to be constructed at the same time as the Liquefaction Facility. In Section 7.3.6 of Environmental Resource Report #7 (Soils) in NGLNG's application, it states:

While remedial actions have removed surficial contaminated soil from the Site to the extent practicable, some Site soils that exceed applicable RIDEM criteria remain, especially along the northern and eastern access roads that surround the LNG containment berm, within the truck offloading area, and within the southwestern-most portion of the Project Site. Soils in these areas are primarily contaminated by metals, semi-volatile organic compounds ("SVOCs"), and petroleum (FERC 2005). During explorations performed in the liquefaction work area of the Site, coal tar-like and fuel oil-like impacts were observed in the fill layer, as evidenced by elevated levels of Volatile Organic Compounds ("VOCs), Polycyclic Aromatic Hydrocarbons ("PAHs"), Total Petroleum Hydrocarbon ("TPH"), metals and cyanide. In addition, light non-aqueous phase liquids ("LNAPLs") were observed in some monitoring wells screened within the fill layer... Slight visual and olfactory evidence of fuel oil-like impacts were detected in the underlying upper

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[3] "Remedial Action Closure Report". November 2002.

[4] "Site Investigation Report". April 2003.

organic silt layer in two test borings within the proposed liquefaction work area. The horizontal extent of soil impacts covers the entire proposed liquefaction work area.[5]

NGLNG intends to remove portions of previously installed soil caps, excavate and store contaminated soils on site, and install foundation piles into contaminated soils as part of the construction of the facility. NGLNG anticipates "that soils will be stockpiled at the Site for approximately one month, although soils will continuously be generated during soil disturbance activities for approximately six months."[6] Protections planned by NGLNG include placing soil stockpiles on plastic sheets with 6 mil thickness, covering piles with plastic sheets at the end of each day, and use of hay bales. In order to conduct these activities, NGLNG has submitted a Short Term Remedial Action Plan (STRAP) to RIDEM for approval.

Community Concerns:

Community residents, organizations, and elected officials have expressed strong concerns and opposition to NGLNG's proposal through submitted comments and testimonies, published articles, community forums, and regular demonstrations, starting in August 2015 through the present. Broadly, concerns over the concentration of known historical contamination and currently operating polluting facilities in close proximity to low income communities of color have lead to charges of environmental racism. The U.S. Environmental Protection Agency's EJSCREEN tool confirms that the area surrounding the Site is ranked as high risk on numerous environmental justice indicators.[7] As such, there are paramount concerns over the cumulative impacts and risks of any additional release of toxins, in a community that is already overburdened by historical legacies of pollution and ongoing toxic releases recorded on the EPA Toxic Release Inventory. Specific to the Site at 642 Allens Ave, concerns include but are not limited to:

- Removal of parts of the existing soil cap installed during previous remediations, which undoes previous progress taken to improve the Site and risks spreading additional contamination.
- Disturbing soils that have not been previously remediated, opening up pathways for the release and spread of known contamination with potential for serious environmental and health impacts.
- Unsafe storage of excavated contaminated soils during construction, which are exposed and at risk to flooding, storm surges, and high winds.
- Lack of continual ongoing monitoring of air, soil, and groundwater.
- Potential for improper handling of materials that would violate the terms of the proposed soil management plan or STRAP, with a lack of external oversight to continually monitor activities.
- Potential for hazardous materials from the site to reach offsite through blowing dust, stormwater, or accidental offsite transport on vehicles or persons, resulting in potential impact to sensitive populations including but not limited to pedestrian or commuter traffic along Allens Ave,

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[5] Environmental Report, NGLNG Fields Point Liquefaction Project, Resource Report 7, Soils, Section 7.3.6. Submitted to the Federal Energy Regulatory Commission on April 1, 2016.

[6] ibid

[7] "Environmental Racism: ongoing and underlying environmental justice issues." Environmental Justice League of RI. http://www.rifuture.org/ejlri-3.html as accessed August 8, 2016.

patients or staff at Providence Community Health Centers, students or faculty at Meeting Street School, or workers at the Site or at neighboring facilities.

- Lack of public engagement and responsiveness to concerns by NGLNG, leading to a general lack of knowledge, understanding, or communication about hazards and risks to both community members and workers who could be negatively impacted.

Petition:

Based upon the information contained in the above sections for Preamble, Current Activities, and Community Concerns, the petition of certain community members with included signatures brings to the attention of the RI Department of Environmental Management's amended site remediation regulations, passed in November 2011. In regards to the requirement for a Public Involvement Plan (PIP):

E. Public Involvement Plans*: The Performing Party shall develop, and submit to the Department for review and approval in both hard copy and electronic format (as specified by the Department), a site-specific public involvement plan for any Contaminated-Site for which the Department has received a Notification of Release and for which a minimum of twenty-five (25) residents, local officials or other interested parties have requested, in writing and in the form of a petition, that a formal process be set up for their participation in cleanup planning. The Public Involvement Plan shall address all relevant and applicable requirements of Rule 7.07 A, B, C, and D.*

Based on this regulation, the petitioners request that approval and implementation of any and all remediation work is halted at the Providence MGP Site until a PIP is approved and implemented. This specifically includes, but is not limited to, the Short Term Remedial Action Plan that NGLNG is proposing for activities on the site, as well as other RIDEM permits for activities related to the Fields Point Liquefaction Facility proposed by NGLNG.

The PIP should provide a framework for the public to shape what the public meetings will look like, what their format would be, and how information and monitoring samples are communicated to the public, as well as how additional members of the public can become involved in the PIP process. More so, the PIP should recognize members of the community as mechanisms of oversight. To this end, it should include a clear mandate and protocol for investigating reports that community members make about emissions (i.e., individual complaints about dust clouds, soil disturbances, strong chemical smells, etc).

Petition Signatures to RIDEM and National Grid: Public Involvement Plan for Former Manufactured Gas Plant on 642 Allens Ave, Providence RI

Printed Name	Signature	Address	Email	Phone
1 C. Kelly Smith	C. Kelly Smith	103 Holden St. Prov 02908	Mesa4me@aol.com	401-274-2008
2 Michael Alston	Michael Alston	162 Miller Ave 02905	a.panther.4.life@gmail.com	401-248-5011
3 Viviane Hanna	[illegible]	162 Miller Ave	viv43@hotmail.com	401 441 1007
4 Leo Schulz	[illegible]	309 Montgomery Rd	Leo.Schulz2401@GM	401-545-1021
5 David Ramos	[illegible]	1266 Broad St (Quisqueya) Prov. RI. 02905	—	401.785.2077
6 Laura Feret	[illegible]	116 Bishop St Providence RI 02905	laura.feret856@Hotmail.com	(401) 545-0217
7 Julian Drix	[illegible]	93 Calla St. 02905	Julian@ejlri.org	607-280-2471
8 Gina Rodriguez	[illegible]	93 Calla St 02905	gina.ritesandreason@gmail.com	401 440 1856
9 Christopher Lauth	[illegible]	743 Westminster St	chris@youthpondert.org	401.[illegible].421.3626
10 Leann Letellier	Leann Letellier	67 Gallatin St	leann.letellier@gmail	401-688-3739
11 Charisma Sampson	Charisma Sampson	102 Westerave	Charismasampson2013@gmail	401-830-0171
12 Benjamin Chaplin	Benjamin Chaplin	181 California Ave Apt 2	Benjamin.chaplinpeta@gmail.com	Ø
13 Leslie Noriega	[illegible]	74 Gallatin St.	wlynoriega@live.com	(401) 785-2927
14 Justin Hernandez	Justin Hernandez	175 Roger Williams Ave	justinhernandez181@gmail.com	(401) 592-4947
15 Aleita Cook	Aleita Cook	85 Potter	aleitacook14@gmail.com	(347) - 347-5158
16 Seena Chhan	[illegible]	[illegible]	[illegible]	[illegible]
17 Jesus Holguin	Jesus Holguin	3 Bell St	jesus@ejlri.org	401 568 5695
36 Christina Ergas		39 Windmill St	Christina_Ergas@brown.edu	214-632-4971

Petition Signatures to RIDEM and National Grid: Public Involvement Plan for Former Manufactured Gas Plant on 642 Allens Ave, Providence RI

Printed Name	Signature	Address	Email	Phone
18 Teneta Cooke	[signature]	20 Spicer St	TenetaCooke24@gmail.com	385 7396
19 Ivan Calderon	[signature]	10 Priscilla Ave	UNK.POOCH@Gmail.com	965-8966
20 Sheila Calderon	[signature]	10 Priscilla Ave	sheila1666sc@gmail	225-9303
21 KEITH OLIVEIRA	[signature]	63 ROANOKE ST.	keitholiveira@verizon.net	401-757-7615
22 Erroll Lomsa	[signature]	41 Woodman St	Ejlomsa@gmail.com	401 359-1790
23 Angela Ankoma	[signature]	16 Vineyard street Prov	angie.bannerman@gmail.com	401-864-8166
24 Monica Huertas	[signature]	216 Ohio Ave	monicavchuertas@gmail.org	4012804059
25 [signature]	[signature]	216 Ohio Ave	Jhuertas0609@gmail.org	401-6991212
26 Justice Gaines	[signature]	304B Wickenden St	justicegaines7@gmail.com	908-678-7064
27 JARON BROWNE	[signature]	2817 BIRDVALL AVE	jaron@gjalliance.org	401 377-2822
28 Patrick Him	[signature]	177 Mowry St.	Partrick@prysm.us	401-332-5045
29 Sabine Adrian	[signature]	67 Rosedale St	sabine@providencestudentunion.org	401-952-1868
30 SVON KEO	[signature]	103 ALGER AVE.	svon@prysm.us	
31 Danny Svay	[signature]	649 Public St.	Danny5@prysm.us	401-592-9700
32 [illegible]	[signature]	[illegible] ST	[illegible]	401 [illegible]
33 KATE ANBIN	[signature]	39 MOORLAND AVE	SUPER@KATE@yahoo.com	401 374 3697
34 Tommy Svay	[signature]	649 Public St.	Tommy@prysm.us	[illegible]
35 Cristina Cabrera	[signature]	95 Park Pl Pawtucket, RI	cabrerafa@gmail.com	401-450-1486

No LNG in PVD Open Letter to the RI Department of Environmental Management

Janet Coit, Director
Rhode Island Department of Environmental Management
235 Promenade Street
Providence, RI 02908

November 1, 2016

Bureau of Environmental Protection
ATTN: Terry Gray, Associate Director

Office of Water Resources: Water Quality Certifications
ATTN: Neal Personeus
CC: Alisa Richardson, Supervisor
Jenna McIntyre, Senior Environmental Scientist, Permit Application Center
Brian Moore, Chief
Angelo Liberti, Chief
Sue Kiernan, Deputy Chief
Elizabeth Scott, Deputy Chief
Alicia Good, Assistant Director

Office of Waste Management
ATTN: Joe Martella, Senior Engineer
CC: Kelly Owens, Supervising Engineer, Site Remediation
Matthew DeStefano, Associate Supervising Engineer
Leo Hellested, PE, Chief

RE: NATIONAL GRID LNG – FIELDS POINT LIQUEFACTION PROJECT

To all whom it should concern,

We, impacted residents and organizations in the No LNG in PVD Coalition, along with our allies and supporters including our elected officials, are contacting you about our strong concerns and opposition to National Grid LNG's Fields Point Liquefaction Project. In particular, we are concerned at the response and follow up to the Public Involvement Plan in the Office of Waste Management, as well as the permit applications submitted for this project: Water Quality Certification and RIPDES Construction General Permit Application submitted to your office on September 12th by GZA, on behalf of National Grid LNG (File No. 03.0033554.60), and the General Permit for an Emergency Generator (Minor Air Source Permit), submitted October 18th.

We request that RIDEM deny permits related to the Fields Point Liquefaction Project based on environmental justice concerns. In reviewing these applications, RIDEM must create the conditions for the meaningful involvement of impacted environmental justice communities in order to give due consideration and investigation of the serious environmental justice issues related to this project.

There is significant community opposition to National Grid's plans for the site, which has resulted in the declared opposition of Mayor Jorge Elorza, a growing number of state legislators, 1225+ individuals, and dozens of community organizations, businesses, and churches. The attached position paper by the Environmental Justice League of Rhode Island details some but not all of the concerns being raised about this project and activities at the contaminated site. In August, community members successfully petitioned RIDEM to initiate a Public Involvement Plan (PIP)

for the site, based on regulations under state law, which was approved on September 6th 2016[1].

National Grid has essentially ignored the request for a PIP, and then argued in a legal memorandum from law firm Hinkley Allen[2] that PIP regulations do not apply since the liquefaction facility is regulated federally by FERC which pre-empts state and local laws. In the same memo, National Grid states that they are no longer planning to abide by plans to operate according to the Short Term Remedial Action Plans (STRAPs) issued by RIDEM and will instead operate under a 2012 Soil Management Plan (SMP) and will only take additional steps to manage soil and groundwater contamination if required by FERC. At the same time, National Grid has been engaging in construction and soil excavation activities at the site, and has told the public that we have no cause for concern and no justification for public involvement because the work is unrelated to the liquefaction facility. FERC has not yet issued an environmental document or any certificates for the project, and is not regulating current site activities. Yet National Grid's contractor for the liquefaction project is actively working at the site and erected a sign for the Fields Point Liquefaction Facility. There is a concerning lack of clarity on which projects on the site are (directly or indirectly) related to the liquefaction facility, and which regulatory agency has authority. There has been no documentation submitted to the FERC docket about the Public Involvement Plan request or National Grid's plans to no longer abide by STRAPs from RIDEM, as they had initially stated in their certificate application to FERC. National Grid is making seemingly contradictory statements to FERC, RIDEM, and the public, all while continuing to conduct activities on the site and defy requests for public involvement or enhanced state regulatory oversight. The signatories on the Public Involvement Plan petition have not received any follow up communication from either RIDEM or National Grid about the PIP in the two months since the petition was submitted on August 31st, yet construction at the site is ongoing.

Due to special considerations and need for enhanced involvement with Environmental Justice priority areas, the signatories of this letter and those who signed the Public Involvement Plan petition strongly believe that RIDEM needs to act in the full accordance of state law and regulations and enforce the PIP regulations for the entire property, including both the liquefaction facility and the other activities on the site which may or may not be related to the liquefaction project. We agree with RIDEM's assessment in the October 21st response to National Grid that the 2012 Soil Management Plan is not sufficient to regulate the activities on the site, but request that RIDEM use every means available to enforce full state regulations on the entire property. Given the current lack of FERC oversight and National Grid's stated plans to no longer abide by STRAPs and instead utilize the insufficient 2012 SMP, RIDEM should take immediate action to revoke or place the current STRAP permits on hold and issue a stop work order until a PIP is in place, or until it has been duly determined by the courts that FERC is pre-empting state regulations and actively regulating activities on the site. RIDEM also needs to submit all documentation and correspondences related to this site to the FERC docket CP16-121.

Regardless of legal debates over whether FERC approval of the liquefaction project, which has not yet been granted, would preempt state regulatory requirements for a PIP, permit applications to RIDEM under the Clean Air Act and Clean Water Act are required under this FERC administered NEPA review process, and are exempted from federal preemption. Therefore, in reviewing the Clean Water Act and Clean Air Act permit approvals for the Fields Point Liquefaction Project, RIDEM has full and delegated federal authority as a regulatory agency. The environmental justice concerns raised in the PIP petition around soil and

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[1] http://www.dem.ri.gov/programs/benviron/waste/Prov-Co/160906lt.pdf
[2] http://www.dem.ri.gov/programs/benviron/waste/Prov-Co/160926ha.pdf

groundwater contamination absolutely apply to the Clean Water Act and Clean Air permit applications submitted to RIDEM, and need to be considered as such. It is very concerning that National Grid considers the 2012 Soil Management Plan sufficient to manage the known soil and groundwater contamination at the site. This lack of concern demonstrated by National Grid, combined with their dismissal of environmental justice issues, should be considered as grounds for denying the permit applications submitted to RIDEM under the Clean Water Act.

We respectfully but forcefully request that RIDEM follow it's own "*Policy for Considering Environmental Justice in the Review of Investigation and Remediation of Contaminated Properties*". This policy, available on the RIDEM website[3], outlines a series of steps which RIDEM should be - but is not currently - conducting. This site and the proposed liquefaction project meet the definition, outlined in the EJ Policy, of "sites with very significant community involvement needs." The attached documents produced by the EPA's EJSCREEN tool shows that the communities impacted by the proposed liquefaction facility are already faced by numerous environmental justice concerns. The required processes and activities laid out in RIDEM's EJ policy for contaminated properties are not being conducted and there has not been meaningful involvement in decision making at any level. There is an urgent need for RIDEM to be proactive with community engagement, posted notices, information sharing, public meetings, technical assistance, and ensuring meaningful involvement of community participation in decision-making.

It should also be noted that National Grid has repeatedly petitioned regulators in order to avoid public participation and downplay environmental justice concerns. Repeated requests for public meetings and community involvement have been ignored, including a request by a unanimous resolution of the Providence City Council. The attached EJLRI comment letter was submitted to the FERC docket on August 11th, protesting National Grid's request to waive public hearings and responding to the faulty environmental justice analysis contained in their application to FERC.

We expect that you, as public servants and regulators, will do everything in your power to serve and protect the public interest and the needs of marginalized environmental justice communities, rather than private corporate interests.

We anticipate your timely response.

Signed,

No LNG in PVD Coalition, representing dozens of organizations, businesses, churches, and numerous impacted residents including Public Involvement Plan petition signatories
Environmental Justice League of Rhode Island
FANG Collective
Rhode Island Sierra Club
American Friends Service Committee – South East New England
Representative Edith Ajello
Representative Joseph Almeida
Representative Chris Blazejewski
Representative Grace Diaz
Representative Aaron Regunberg
Representative Anastasia Williams
Senator Paul Jabour

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[3] http://www.dem.ri.gov/envequity/pdf/ejfinal.pdf

No LNG in PVD Open Letter to the RI Department of Environmental Management

Attachments:

EJLRI LNG Position Paper
EPA EJSCREEN report for 1 mile radius
EJLRI comment to FERC – EJ and protest of expedited review
Resolution of the Providence City Council on Fields Point LNG

MASHAPAUG NAHAGANSET TRIBE

FROM:
Neesu Wushuwunoag
Pomham Sachem
Mashapaug Nahaganset Tribe

TO:
Janet Coit, Director
Rhode Island Department of Environmental Management
235 Promenade Street
Providence, RI 02908

Bureau of Environmental Protection
ATTN: Terry Gray, Associate Director

Office of Water Resources: Water Quality Certifications
ATTN: Neal Personeus
CC: Alisa Richardson, Supervisor
Jenna McIntyre, Senior Environmental Scientist, Permit Application Center
Brian Moore, Chief
Angelo Liberti, Chief
Sue Kiernan, Deputy Chief
Elizabeth Scott, Deputy Chief
Alicia Good, Assistant Director

Office of Waste Management
ATTN: Joe Martella, Senior Engineer
CC: Kelly Owens, Supervising Engineer, Site Remediation
Matthew DeStefano, Associate Supervising Engineer
Leo Hellested, PE, Chief

December 13th, 2016

Wigwosan Netomp. On behalf of the Mashapaug Nahaganset Tribe, a private foreign American Aborigine Tribal Trust and Nation comprised of the natural inhabitants of the territories known as Rhode Island, I am writing to formally express the Tribe's opposition to the issuance of any permits related to the development of the proposed Fields Point Liquefied Natural Gas Liquefaction Project (FPLNG) in the City of Providence and the proposed Clear River Power Plant (CRPP) in the Town of Burrilville.

In consideration of the expressed opposition to the project by City of Providence Mayor Jorge Elorza, numerous City of Providence, Town of Burrillville and State of Rhode Island residents, and the potential for

irreversible negative environmental impact on the lands and communities surrounding these proposed projects, the Mashapaug Nahaganset Tribe does now formally reject and oppose any and all efforts to further develop these projects.

In section 4.5.2 *Native American Context* and section 4.5.2.1 *Documented Native American Archaeological Sites in the Vicinity of the Project Area* of the FIELDS POINT LIQUEFACTION PROJECT ENVIRONMENTAL REPORT RESOURCE REPORT NO. 4 submitted by National Grid LNG, LLC in March 2016 it is acknowledged that the lands slated for development have been the habitation of Aboriginal peoples for thousands of years prior to European contact and that at least 6 sites containing aboriginal artifacts are located near the proposed FPLNG project. As such the Tribe is particularly concerned that no effort was made to engage specifically with the Mashapaug Nahaganset Tribe, the ancestral inhabitants of these lands, to gauge concerns about these projects or to seek approval to move forward with these initiatives on lands that are held in trust by the Tribe.

Please be advised that the Mashapaug Nahaganset Tribe is an American Aborigine Tribal Trust and Nation operating through private foreign American Aborigine tribal trust, in accordance with international Hague Trust Treaty standards. For further information regarding the legitimacy of the claims made in this communication please refer to Providence County Register of Deeds Doc No. 00122589 Book 11175 Page 10.

Per the doctrines of *Qui prior est tempore potior est jure* (he has better title who was first in point of time) and *Adversus extraneous vitiosa possessio prodesse solet* (prior possession is a good title of ownership against all who cannot show a better one) the Tribe has never relinquished or rescinded any of its aboriginal land titles or possessions. Further, the Mashapaug Nahaganset Tribe has entered into no agreement with any entity for recognition, is not categorized as a Native American Tribe, and as such neither the State of Rhode Island nor any of its arms or extensions, nor any private commercial entity possess any formal contract with the Tribe granting them authority to conduct any such development on ancestral tribal lands.

Further be advised that should the State of Rhode Island, any of its arms and/or extensions or any private commercial entity attempt to move forward with these projects without the expressed written consent of the Mashapaug Nahaganset Tribe Ahtuskowoag Circle, the Tribe will proactively pursue any and all actions deemed appropriate to safeguard the integrity of its ancestral lands for the protection and support of its posterity and all natural inhabitants and residents of the lands of Rhode Island.

In closing, on behalf of the Mashapaug Nahaganset Tribe, I thank you in advance for your timely attention to the matters expressed in this communication. If there are any questions or you would like to discuss these matters further, please feel free to reach out to Quenikun Pau Paukunawaw, Pinesse of the Mashapaug Nahaganset Department of State, at 401-286-8555 or mashapaugwompissacukclan@gmail.com

Katapatush Wuchee Ach8sutah kah Peesh Kunaush

In Peace, Harmony and Balance,

Neesu Wushuwunoag
Pomham Sachem

cstaff1@crmc.ri.gov

From: Deborah Fernandez <homestarchef@gmail.com>
Sent: Friday, December 23, 2016 4:39 PM
To: cstaff1@crmc.ri.gov
Subject: I oppose the Fields Point Liquefaction Project

To whom it my concern:
I am writing to register my opposition of the Fields Point Liquefaction Project proposed by National Grid. This project is too expensive, it is unnecessary, and the site is not safe. It will also contribute to climate change and presents a clear danger to the surrounding neighborhoods, including Rhode Island Hospital, Hasbro Childrens Hospital, and Women and Infants. It is a matter of economic and environmental justice that this project not be allowed to proceed.
Thank you,
Deborah Fernandez
232 Washington Ave.
Providence, RI 02905
401-467-4035

cstaff1@crmc.ri.gov

From: Mary Pendergast <mpendergast@mercyne.org>
Sent: Monday, November 28, 2016 8:16 PM
To: cstaff1@crmc.ri.gov; gfugate@crmc.ri.gov
Cc: NoLNGinPVD@gmail.com
Subject: Objection to 2016-10-099 National Grid Fields Point LNG

To Grover Fugate, CRMC Executive Director:

I am writing you to state my adamant opposition to National Grid's Fields Point LNG Liquefaction Facility. I object to their application to CRMC for a "Federal Consistency Certification" under the Coastal Zone Management Act (CRMC file number 2016-10-099). Building another LNG terminal in the Port expected to see serious sea level rise is extremely shortsighted. I am also quite sure that environmental racism and "disposable people" are part of this project placement.
I will be speaking at the hearing and would like to be added to the email distribution list for updates and notifications about this project. I am an intervener on the project.
Thank you.
Sister Mary Pendergast, RSM

cstaff1@crmc.ri.gov

From: Victoria M Ruiz <victoriamruiz@gmail.com>
Sent: Monday, November 28, 2016 4:19 PM
To: cstaff1@crmc.ri.gov; gfugate@crmc.ri.gov
Cc: NoLNGinPVD@gmail.com
Subject: Greetings and Objection to 2016-10-099 National Grid Fields Point LNG

To Grover Fugate, CRMC Executive Director:

I am writing you to state my opposition to National Grid's Fields Point LNG Liquefaction Facility. I object to their application to CRMC for a "Federal Consistency Certification" under the Coastal Zone Management Act (CRMC file number 2016-10-099).

I plan on speaking at the hearing and would like to be added to the email distribution list for updates and notifications about this project.

Thank you,

Victoria Ruiz

66 Vernon St

Providence, RI 02903

cstaff1@crmc.ri.gov

From:	Lauren Niedel <lniedel@gmail.com>
Sent:	Monday, November 28, 2016 5:34 PM
To:	cstaff1@crmc.ri.gov; gfugate@crmc.ri.gov
Cc:	NoLNGinPVD@gmail.com
Subject:	Objection to 2016-10-099 National Grid Fields Point LNG

To Grover Fugate, CRMC Executive Director:

I am writing you to state my opposition to National Grid's Fields Point LNG Liquefaction Facility. I object to their application to CRMC for a "Federal Consistency Certification" under the Coastal Zone Management Act (CRMC file number 2016-10-099).

Although I do not plan on speaking at the hearing I would still like to be added to the email distribution list for updates and notifications about this project. More fossil fuel infrastructure will just lead to more environmental disasters and will increase our dependency without increasing our security. We need to keep it in the ground!

Lauren Niedel

Deputy State Coordinator - RI Progressive Democrats

District 40 Dem Committeewoman

Glocester, RI 02814

401-487-2376

cstaff1@crmc.ri.gov

From: JOSEPH F CARVALHO <JCARVALHO02720@msn.com>
Sent: Monday, November 28, 2016 4:10 PM
To: cstaff1@crmc.ri.gov; gfugate@crmc.ri.gov

To Grover Fugate, CRMC Executive Director:
I am writing you to state my opposition to National Grid's Fields Point LNG Liquefaction Facility. I object to their application to CRMC for a "Federal Consistency Certification" under the Coastal Zone Management Act (CRMC file number 2016-10-099).
I plan on speaking at the hearing and would like to be added to the email distribution list for updates and notifications about this project.
Thank you.

Joseph F. Carvalho
President
Coalition for Responsible Siting of LNG Facilities
P.O. Box 9141
Fall River, MA 02720

cstaff1@crmc.ri.gov

From: Kerry Bergin <kbergin1@gmail.com>
Sent: Monday, November 28, 2016 2:59 PM
To: cstaff1@crmc.ri.gov; gfugate@crmc.ri.gov
Cc: NoLNGinPVD@gmail.com
Subject: Objection to 2016-10-099 National Grid Fields Point LNG

Dear Mr. Fugate,

I am writing you to voice my opposition to National Grid's Fields Point LNG Liquefaction Facility. I object to their application to CRMC for a "Federal Consistency Certification" under the Coastal Zone Management Act (CRMC file number 2016-10-099). I recognize that, by applying for this federal approval from FERC, they "will not be required to obtain state and local permits such as compliance under local zoning ordinances, and certain environmental permits." Even though the proposal goes on to say that other state agencies will play a role, I do not agree that this decision is being made in the interest of Rhode Islanders. Nothing should be skipped in this process, least of all the input from the local community.

I live in the Pawtuxet Village neighborhood, very close to the proposed site. While National Grid's website states that natural gas is one of the least dangerous forms of energy, it is still incredibly dangerous. Explosions and evacuations in Washington state and elsewhere make this undeniable. It is not worth the risk. This proposed project is deeply distressing to me. It is time to invest our time into other forms of energy and lowering consumption simultaneously.

I would like to be added to the email distribution list for updates and notifications about this project.

Thank you.

Kerry Bergin

cstaff1@crmc.ri.gov

From: Sabine Adrian <sabinecarlaadrian@gmail.com>
Sent: Monday, November 28, 2016 2:28 PM
To: cstaff1@crmc.ri.gov; gfugate@crmc.ri.gov
Cc: NoLNGinPVD@gmail.com
Subject: Objection to 2016-10-099 National Grid Fields Point LNG

To Grover Fugate, CRMC Executive Director:

I am writing you to state my opposition to National Grid's Fields Point LNG Liquefaction Facility. I object to their application to CRMC for a "Federal Consistency Certification" under the Coastal Zone Management Act (CRMC file number 2016-10-099).

I plan on speaking at the hearing and would like to be added to the email distribution list for updates and notifications about this project.

Thank you.

Sabine

cstaff1@crmc.ri.gov

From: crow grando <thundrwing@gmail.com>
Sent: Monday, November 28, 2016 3:26 PM
To: gfugate@crmc.ri.gov; cstaff1@crmc.ri.gov
Cc: NoLNGinPVD@gmail.com
Subject: Objection to 2016-10-099 National Grid Fields Point LNG

To Grover Fugate, CRMC Executive Director:

I am writing you to state my opposition to National Grid's Fields Point LNG Liquefaction Facility.
I object to their application to CRMC for a "Federal Consistency Certification" under the Coastal Zone Management Act (CRMC file number 2016-10-099).
I am considering speaking at the hearing and would like to be added to the email distribution list for updates and notifications about this project.
Thank you.

Sincerely,

Miss Crow Grando

thundrwing@gmail.com

cstaff1@crmc.ri.gov

From: Lisa Petrie <teonlisa@juno.com>
Sent: Monday, November 28, 2016 3:14 PM
To: cstaff1@crmc.ri.gov; gfugate@crmc.ri.gov
Cc: NoLNGinPVD@gmail.com
Subject: Objection to 2016-10-099 National Grid Fields Point LNG

To Grover Fugate, Executive Director of CRMC:

I'm writing to express my strong opposition to National Grid's proposal to build an LNG production facility in the Port of Providence and specifically to their application to CRMC for a "Federal Consistency Certification" under the Coastal Zone Management Act (CRMC file number 2016-10-099). The plan is yet another instance of environmental racism, targeting a low-income community of predominantly people of color for a toxic and dangerous industrial project. This community, which includes numerous day care facilities and several hospitals as well as residents' homes, is already overburdened with such facilities and their pollution, and as a result, it's one of the biggest asthma hot spots in the state.

In addition, this potentially explosive LNG production facility would be sited next to a Univar chemical facility with a hazard radius of 14 miles, putting tens of thousands of Rhode Island's school children at risk. The facility would also be highly vulnerable to storm surges, particularly as sea levels rise and storms become more severe due to global warming. At the same time, it would contribute to global warming by promoting an escalation of fracking to supply the gas for liquefaction.

I intend to speak at the hearing. Please add me to your email distribution list for updates and notifications regarding this project.

Sincerely Yours,
Lisa Petrie
Chair, Green Task Force of the Unitarian Universalist Congregation of South County

cstaff1@crmc.ri.gov

From: Jenkins, Melissa <melissa_jenkins@brown.edu>
Sent: Monday, November 28, 2016 3:23 PM
To: cstaff1@crmc.ri.gov; gfugate@crmc.ri.gov
Cc: NoLNGinPVD@gmail.com
Subject: Objection to 2016-10-099 National Grid Fields Point LNG

To Grover Fugate,
CRMC Executive Director

This is to state my opposition to National Grid's Fields Point LNG Liquefaction Facility. I object to their application to CRMC for a "Federal Consistency Certification" under the Coastal Zone Management Act (CRMC file number 2016-10-099).

I live in the area, and feel that my neighborhood and my home will be negatively impacted by the proposed project. The environmental impact and high risk nature of this project are such that it simply does not belong in a densely populated, residential neighborhood.

I plan on speaking at the hearing and would like to be added to the email distribution list for updates and notifications about this project.

Thank you.

--
Melissa Jenkins, Ph.D.
Clinical Neuropsychologist, BRAINWORKS RI
Clinical Assistant Professor, Alpert School of Medicine at Brown University
401-497-5841

cstaff1@crmc.ri.gov

From: Garry Bliss <garry.bliss@gmail.com>
Sent: Tuesday, November 29, 2016 5:32 AM
To: cstaff1@crmc.ri.gov; gfugate@crmc.ri.gov
Cc: NoLNGinPVD@gmail.com
Subject: Objection to 2016-10-099 National Grid Fields Point LNG

Dear Director Fugate:

I am writing to join the others who have voiced opposition to National Grid's Fields Point LNG Liquefaction Facility.

I object to their application to CRMC for a "Federal Consistency Certification" under the Coastal Zone Management Act (CRMC file number 2016-10-099).

I believe this project and the resulting activity, should this project be completed, represent a threat to the environmental quality of the bay and coastal areas.

It is noteworthy that this facility could not be constructed today under current federal safety and siting regulations. I oppose the expansion of a facility that does not adhere to today's safety standards for its current operation. Simply put: We should not expand what would not be permitted.

I plan on speaking at the hearing and would like to be added to the email distribution list for updates and notifications about this project.

Thank you.

Garry Bliss

8 Rhode Island Avenue

Providence, RI 02906

cstaff1@crmc.ri.gov

From:	Jed Hancock <jed.brain@googlemail.com>
Sent:	Tuesday, November 29, 2016 10:44 AM
To:	cstaff1@crmc.ri.gov; gfugate@crmc.ri.gov
Cc:	NoLNGinPVD@gmail.com
Subject:	Objection to 2016-10-099 National Grid Fields Point LNG

To Grover Fugate, CRMC Executive Director:

I am writing you to state my opposition to National Grid's Fields Point LNG Liquefaction Facility. I object to their application to CRMC for a "Federal Consistency Certification" under the Coastal Zone Management Act (CRMC file number 2016-10-099).
I plan on attending the hearing and would like to be added to the email distribution list for updates and notifications about this project.

Thank you, Jed Hancock-Brainerd

cstaff1@crmc.ri.gov

From: Ellen Tuzzolo <ellen.tuzzolo@gmail.com>
Sent: Tuesday, November 29, 2016 11:17 AM
To: cstaff1@crmc.ri.gov; gfugate@crmc.ri.gov
Cc: NoLNGinPVD@gmail.com
Subject: NO LNG in PVD - Please add me to any notifications about this project

TO: cstaff1@crmc.ri.gov, gfugate@crmc.ri.gov
CC: NoLNGinPVD@gmail.com
Subject: Objection to 2016-10-099 National Grid Fields Point LNG

To Grover Fugate, CRMC Executive Director:

I am writing you to state my opposition to National Grid's Fields Point LNG Liquefaction Facility. I object to their application to CRMC for a "Federal Consistency Certification" under the Coastal Zone Management Act (CRMC file number 2016-10-099).

I am outraged that this plan has gotten as far as it has considering the impact this facility would have on the surrounding neighborhoods. I plan on speaking at the hearing and would like to be added to the email distribution list for updates and notifications about this project.

Thank you,

Ellen Tuzzolo
154 Miller Avenue
Providence, RI 02905

--

"What is needed is a realization that power without love is reckless and abusive, and that love without power is sentimental and anemic. Power at its best is love implementing the demands of justice, and justice at its best is power correcting everything that stands against love." -MLK

cstaff1@crmc.ri.gov

From: Dulari Tahbildar <dularit@gmail.com>
Sent: Tuesday, November 29, 2016 12:09 PM
To: cstaff1@crmc.ri.gov; gfugate@crmc.ri.gov
Cc: NoLNGinPVD@gmail.com
Subject: Objection to 2016-10-099 National Grid Fields Point LNG

To Grover Fugate, CRMC Executive Director:

I am writing you to state my opposition to National Grid's Fields Point LNG Liquefaction Facility. I object to their application to CRMC for a "Federal Consistency Certification" under the Coastal Zone Management Act (CRMC file number 2016-10-099).

Please add me to the email distribution list for updates and notifications about this project.

Thank you.

Dulari Tahbildar

--

dulari tahbildar
dularit@gmail.com

cstaff1@crmc.ri.gov

From: susan rohwer <susanrohwer@gmail.com>
Sent: Tuesday, November 29, 2016 2:31 PM
To: cstaff1@crmc.ri.gov; gfugate@crmc.ri.gov
Cc: NoLNGinPVD@gmail.com
Subject: Objection to 2016-10-099 National Grid Fields Point LNG

To Grover Fugate, CRMC Executive Director:

I am writing you to state my opposition to National Grid's Fields Point LNG Liquefaction Facility. I object to their application to CRMC for a "Federal Consistency Certification" under the Coastal Zone Management Act (CRMC file number 2016-10-099).

Thank you.

--
Susan A. Rohwer

p: 6175296188 | e: susanrohwer@gmail.com | t: @susanrohwer

cstaff1@crmc.ri.gov

From: Moira Hinderer <moira.hinderer@gmail.com>
Sent: Tuesday, November 29, 2016 5:37 PM
To: cstaff1@crmc.ri.gov; gfugate@crmc.ri.gov
Subject: Objection to 2016-10-099 National Grid Fields Point LNG

This message is for Grover Fugate, CRMC Executive Director

Dear Director Fugate,

I am writing to share my opposition to National Grid's Fields Point LNG Liquefaction Facility. I object to NG's application to CRMC for a Federal Consistency Certification under the Coastal Zone Management Act (CRMC file number 2016-10-099).

I plan on speaking at the hearing and would like to be added to the email distribution list for updates and notifications about this project.

Thank you for your time and assistance.
Moira Hinderer
(503) 869-6493

cstaff1@crmc.ri.gov

From:	Aaron Jaehnig <aaron.jaehnig@gmail.com>
Sent:	Tuesday, November 29, 2016 11:27 PM
To:	cstaff1@crmc.ri.gov; gfugate@crmc.ri.gov
Cc:	NoLNGinPVD@gmail.com
Subject:	Objection to 2016-10-099 National Grid Fields Point LNG

To Grover Fugate, CRMC Executive Director:
I am writing you to state my opposition to National Grid's Fields Point LNG Liquefaction Facility. I object to their application to CRMC for a "Federal Consistency Certification" under the Coastal Zone Management Act (CRMC file number 2016-10-099). The proposed facility is dangerous and unnecessary and it is completely unacceptable to issue a variance to build such a facility within 50 feet of the coastline, considering its location on the wrong side of the hurricane barrier in a densely populated urban area.
I plan on speaking at the hearing and would like to be added to the email distribution list for updates and notifications about this project.
Thank you.
Aaron Jaehnig
RI Sierra Club - Chair
aaron.jaehnig@gmail.com
401-345-5797

cstaff1@crmc.ri.gov

From:	Julian Rodriguez-Drix <julian@ejlri.org>
Sent:	Wednesday, November 30, 2016 9:53 AM
To:	cstaff1@crmc.ri.gov; gfugate@crmc.ri.gov
Cc:	NoLNGinPVD@gmail.com
Subject:	Objection to 2016-10-099 National Grid Fields Point LNG

Dear Director Fugate,

I am writing you to voice my opposition to National Grid's Fields Point Liquefaction Facility and to file my objection to their application to CRMC for a Federal Consistency Certification under the Coastal Zone Management Act (CRMC file number 2016-10-099).

I will be preparing more detailed comments to submit before the deadline, and will plan on speaking at the public hearing. Please add me to the notification list for this project.

I have grave concerns about the environmental justice impacts of this project, which is located on a site with known contamination, in an industrial area with a concentration of some of the highest risk and most polluting facilities in the state, next to low income communities of color in Washington Park and South Providence. National Grid LNG has avoided all requests to have meaningful engagement with impacted community members, ignoring requests from Providence City Council to hold public forums and rejecting a request from the RI Department of Environmental Management to create a Public Involvement Plan for project based on DEM's Site Remediation Regulations. Given the high levels of known contamination in the soil and groundwater at the site, I am extremely concerned that construction activities could result in the release and/or vertical migration of buried contaminants which could impact coastal waters which are already impaired. National Grid did not provide CRMC with any analysis of the cumulative impacts of this project, and ignored the historical and ongoing environmental burdens negatively impacting the area. Based on these reasons, and the fact that the site is highly vulnerable to sea level rise and hurricane storm surge, I am urging CRMC to deny National Grid's application. Do not issue the requested variance, there is no reason to allow construction within 50 feet of the coastline for an unnecessary project that carries such risk. CRMC should be helping to ensure that the Providence waterfront is made to be more resilient in the face of climate change, not adding unnecessary and vulnerable fossil fuel infrastructure and additional impervious surfaces.

Thank you,
Julian

--
Julian Rodriguez-Drix
Board Member
Environmental Justice League of Rhode Island
www.EJLRI.org

cstaff1@crmc.ri.gov

From: Monica Huertas <monicavchuertas@gmail.com>
Sent: Wednesday, November 30, 2016 9:42 AM
To: cstaff1@crmc.ri.gov; gfugate@crmc.ri.gov
Cc: NoLNGinPVD@gmail.com
Subject: Objection to 2016-10-099 National Grid Fields Point LNG

To Grover Fugate, CRMC Executive Director:
I am writing you to state my opposition to National Grid's Fields Point LNG Liquefaction Facility. I object to their application to CRMC for a "Federal Consistency Certification" under the Coastal Zone Management Act (CRMC file number 2016-10-099).
I plan on speaking at the hearing and would like to be added to the email distribution list for updates and notifications about this project.
Thank you.

cstaff1@crmc.ri.gov

From: Sally Mendzela <salgalpal@hotmail.com>
Sent: Wednesday, November 30, 2016 4:38 PM
To: gfugate@crmc.ri.gov
Cc: cstaff1@crmc.ri.gov
Subject: National Grid, LNG Liquefaction Facility proposal

Grover Fugate, CRMC Executive Director:

I am writing to express my vehement opposition to National Grid's Fields Point LNG Liquefaction Facility. The year is 2016 Mr. Fugate, countries around the world are spending their time researching, discussing and experimenting with renewable energy. They do this out of a commitment to leave a sustainable planet Earth for future generations.

Unfortunately here in the US, something very different and very dark is happening. The fossil fuel cartel assumes no accountability to future generations or even those of us here now. It simply cannot be all about greed, can it? These are not stupid people. They don't even bother with the charade of being climate deniers. So why do they persist?

But even more inexplicable and troubling is why local, state and federal regulatory agencies are not demanding them to be accountable. Why are they capitulating to the likes of National Grid who apparently feel that this is a done deal. Seriously?

This is not a project that will serve Rhode Island, New England or any citizen of the US. This is about the cartel building an infrastructure that will benefit themselves and their shareholders for the next 40-50 years while the rest of the world has long since converted their fossil fuel infrastructure dinosaurs into amusement parks and museums demonstrating how lame fossil fuels truly turned out to be in the long run and how the people of the world and the planet suffered irreparably because of greed.

I object to National Grid's application to CRMC for a "Federal Consistency Certification" under the Coastal Zone Management Act (CRMC file number 2016-10-099).

I plan on speaking at the hearing and would like to be added to the email distribution list for updates and notifications about this project.

Thank you.
Sally Mendzela
salgalpal@hotmail.com

Sent from Outlook

cstaff1@crmc.ri.gov

From: Anya Klepacki <anyaklepacki@gmail.com>
Sent: Wednesday, November 30, 2016 9:36 PM
To: cstaff1@crmc.ri.gov; gfugate@crmc.ri.gov
Cc: NoLNGinPVD@gmail.com
Subject: Objection to 2016-10-099 National Grid Fields Point LNG

To Grover Fugate, CRMC Executive Director:

I am writing you to state my opposition to National Grid's Fields Point LNG Liquefaction Facility. I object to their application to CRMC for a "Federal Consistency Certification" under the Coastal Zone Management Act (CRMC file number 2016-10-099).

I plan to speak at the hearing and would like to be added to the email distribution list for updates and notifications about this project.

Thank you.

cstaff1@crmc.ri.gov

From: Kaeli Sutton <kaeli@motioncenter.com>
Sent: Wednesday, November 30, 2016 11:39 PM
To: cstaff1@crmc.ri.gov; gfugate@crmc.ri.gov
Cc: NoLNGinPVD@gmail.com
Subject: Objection to 2016-10-099 National Grid Fields Point LNG

To Grover Fugate, CRMC Executive Director:

I am writing you to state my opposition to National Grid's Fields Point LNG Liquefaction Facility. I object to their application to CRMC for a "Federal Consistency Certification" under the Coastal Zone Management Act (CRMC file number 2016-10-099).

I am a longtime resident of the Washington Park area of Providence, and my work regularly looks at the health disparities of families and communities who are forced to live near industrial facilities such as the one you propose adding to an area already thick with environmental health hazards.

I plan on speaking at the hearing and would like to be added to the email distribution list for updates and notifications about this project.

Thank you,

Kaeli Sutton
Director

Open Circle: Wellness + Education for Growing Families Motion Center Mom + Baby

401-338-5466
www.opencircleri.com
www.motioncenter.com

cstaff1@crmc.ri.gov

From: Tina Cane <tinacane@aol.com>
Sent: Thursday, December 01, 2016 8:52 AM
To: cstaff1@crmc.ri.gov; gfugate@crmc.ri.gov
Cc: NoLNGinPVD@gmail.com

To Grover Fugate, CRMC Executive Director:

I am writing you to state my opposition to National Grid's Fields Point LNG Liquefaction Facility.

I object to their application to CRMC for a "Federal Consistency Certification"

under the Coastal Zone Management Act (CRMC file number 2016-10-099).

Thank you.

Tina Cane

cstaff1@crmc.ri.gov

From: Elena Lledo <lledo.elena@gmx.de>
Sent: Thursday, December 01, 2016 8:44 AM
To: cstaff1@crmc.ri.gov; gfugate@crmc.ri.gov
Cc: NoLNGinPVD@gmail.com
Subject: Objection to 2016-10-099 National Grid Fields Point LNG

To Grover Fugate, CRMC Executive Director:

I am writing you to state my opposition to National Grid's Fields Point LNG Liquefaction Facility. I object to their application to CRMC for a "Federal Consistency Certification" under the Coastal Zone Management Act (CRMC file number 2016-10-099).
I would like to be added to the email distribution list for updates and notifications about this project.
It is not at all acceptable that those people with fewer ressources are subjected to poorly regulated or controlled industrial waste and manufacturing.

Thank you,

Dr. Elena Lledo

cstaff1@crmc.ri.gov

From:	Hoover, Elizabeth <elizabeth_m_hoover@brown.edu>
Sent:	Thursday, December 01, 2016 12:33 AM
To:	cstaff1@crmc.ri.gov; gfugate@crmc.ri.gov
Cc:	NoLNGinPVD@gmail.com
Subject:	Objection to 2016-10-099 National Grid Fields Point LNG

To Grover Fugate, CRMC Executive Director:

I am writing you to state my opposition to National Grid's Fields Point LNG Liquefaction Facility. I object to their application to CRMC for a "Federal Consistency Certification" under the Coastal Zone Management Act (CRMC file number 2016-10-099).

I plan on speaking at the hearing and would like to be added to the email distribution list for updates and notifications about this project.

Thank you.

--
****

Elizabeth Hoover, PhD
Manning Assistant Professor of American Studies and Ethnic Studies
Director of Undergraduate Studies, Ethnic Studies

Sign up for Wednesday office hours, 3:00-5:00 here
Sign up for Thursday Office hours, 2:30-4:30 here

Native American and Indigenous Studies at Brown http://brown.edu/academics/native-american-and-indigenous-studies/
Co-leader of Community Engagement Core (CEC), Brown's Superfund Research Program (SRP)
http://www.brown.edu/research/projects/superfund/cores/core-e

Box 1886 Brown University, Providence RI 02912

cstaff1@crmc.ri.gov

From: Camille Williams <camillewilliams8@gmail.com>
Sent: Thursday, December 01, 2016 9:50 AM
To: cstaff1@crmc.ri.gov; gfugate@crmc.ri.gov
Cc: NoLNGinPVD@gmail.com
Subject: Objection to 2016-10-099 National Grid Fields Point LNG

To Grover Fugate, CRMC Executive Director:
I am writing you to state my opposition to National Grid's Fields Point LNG Liquefaction Facility. I object to their application to CRMC for a "Federal Consistency Certification" under the Coastal Zone Management Act (CRMC file number 2016-10-099).
I would like to be added to the email distribution list for updates and notifications about this project.

Thank you.

--
Camille

cstaff1@crmc.ri.gov

From: Tobias Haller <tobiasjonhaller@icloud.com>
Sent: Thursday, December 01, 2016 2:55 PM
To: cstaff1@crmc.ri.gov; gfugate@crmc.ri.gov
Cc: NoLNGinPVD@gmail.com
Subject: Objection to 2016-10-099 National Grid Fields Point LNG

Sent from my iPhone

Dear Mr. Grover Fugate, CRMC Executive Director,

I am writing to you because I am opposed to National Grid's proposed Field's Point LNG liquefaction facility in Providence. I urge you to deny their Federal Consistency Certification application.

I plan on speaking at the hearing and would like to be added to the email distribution list for updates and notifications about this project.

Thank you,

Tobias Haller=

cstaff1@crmc.ri.gov

From:	Ergas, Christina <christina_ergas@brown.edu>
Sent:	Thursday, December 01, 2016 1:03 PM
To:	cstaff1@crmc.ri.gov; gfugate@crmc.ri.gov
Cc:	NoLNGinPVD@gmail.com
Subject:	Objection to 2016-10-099 National Grid Fields Point LNG

To Grover Fugate, CRMC Executive Director:

I am writing you to state my opposition to National Grid's Fields Point LNG Liquefaction Facility. I object to their application to CRMC for a "Federal Consistency Certification" under the Coastal Zone Management Act (CRMC file number 2016-10-099).

I would like to be added to the email distribution list for updates and notifications about this project.

Thank you.

Christina

--

Christina Ergas, PhD

State Agencies Liaison
Brown University Superfund Research Program
85 Waterman St. Rm 246
Brown University
Providence, RI 02912-1951
(401) 863-5851

RECEIVED
DEC - 1 2016
COASTAL RESOURCES MANAGEMENT COUNCIL

cstaff1@crmc.ri.gov

From:	Nick Katkevich <nkatkevich@gmail.com>
Sent:	Thursday, December 01, 2016 4:57 PM
To:	cstaff1@crmc.ri.gov; gfugate@crmc.ri.gov
Cc:	NoLNGinPVD@gmail.com
Subject:	Objection to 2016-10-099 National Grid Fields Point LNG

To Grover Fugate, CRMC Executive Director:

I am writing you to state my opposition to National Grid's Fields Point LNG Liquefaction Facility. I object to their application to CRMC for a "Federal Consistency Certification" under the Coastal Zone Management Act (CRMC file number 2016-10-099).

I plan on speaking at the hearing and would like to be added to the email distribution list for updates and notifications about this project.

Thank you.

-Nick

--
Nick Katkevich

FANG
@NickyTheKat

cstaff1@crmc.ri.gov

From: joseph@ecori.org
Sent: Thursday, December 01, 2016 7:33 PM
To: cstaff1@crmc.ri.gov; gfugate@crmc.ri.gov
Subject: Objection to 2016-10-099 National Grid Fields Point LNG

To Grover Fugate, CRMC Executive Director:

I am writing you to state my opposition to National Grid's Fields Point LNG Liquefaction Facility. I object to their application to CRMC for a "Federal Consistency Certification" under the Coastal Zone Management Act (CRMC file number 2016-10-099).

I plan on speaking at the hearing and would like to be added to the email distribution list for updates and notifications about this project.

Thank you.

Joseph Rand

cstaff1@crmc.ri.gov

From: Justyna St.onge <bronkj@yahoo.com>
Sent: Thursday, December 01, 2016 11:24 PM
To: cstaff1@crmc.ri.gov; gfugate@crmc.ri.gov
Cc: NoLNGinPVD@gmail.com
Subject: Objection to 2016-10-099 National Grid Fields Point LNG

To Grover Fugate, CRMC Executive Director:

I am writing you to state my opposition to National Grid's Fields Point LNG Liquefaction Facility. I object to their application to CRMC for a "Federal Consistency Certification" under the Coastal Zone Management Act (CRMC file number 2016-10-099).
I plan on speaking at the hearing and would like to be added to the email distribution list for updates and notifications about this project.
Thank you.

Justyna Stonge

Sent from my iPhone=

cstaff1@crmc.ri.gov

From:	Karlo Berger <Karlo@karloberger.com>
Sent:	Friday, December 02, 2016 6:03 PM
To:	cstaff1@crmc.ri.gov; gfugate@crmc.ri.gov
Cc:	NoLNGinPVD@gmail.com
Subject:	Objection to 2016-10-099 National Grid Fields Point LNG

To Grover Fugate, CRMC Executive Director:

I am writing you to state my opposition to National Grid's Fields Point LNG Liquefaction Facility. In this time of climate crisis, we must put developing new LNG infrastructure to a halt.

I object to their application to CRMC for a "Federal Consistency Certification" under the Coastal Zone Management Act (CRMC file number 2016-10-099).

I would like to be added to the email distribution list for updates and notifications about this project.

Thank you.

Karlo Berger

--

Karlo Berger
Whole Health Solutions LLC
236 Fourth Street
Providence, RI 02906 USA
401-477-2845
Karlo@KarloBerger.com
www.KarloBerger.com

Join the Rhode Island
Holistic and Integrative
Healthcare Leadership Network:
The Future of Healthcare
www.facebook.com/groups/548538431943863

cstaff1@crmc.ri.gov

From: Lisa Gendron <lgendron1115@gmail.com>
Sent: Friday, December 02, 2016 6:24 PM
To: cstaff1@crmc.ri.gov; gfugate@crmc.ri.gov
Cc: NoLNGinPVD@gmail.com
Subject: Objection to 2016-10-099 National Grid Fields Point LNG

To Grover Fugate, CRMC Executive Director:

I am writing you to state my opposition to National Grid's Fields Point LNG Liquefaction Facility. I am a long time resident of Providence in the Washington Park Area.

I object to their application to CRMC for a "Federal Consistency Certification" under the Coastal Zone Management Act (CRMC file number 2016-10-099). I am concerned about the environmental impact of this facility and health of the residents in the area.

I would like to be added to the email distribution list for updates and notifications about this project.
Thank you.

Lisa Gendron
169 Bartlett Ave Providence RI 02905

cstaff1@crmc.ri.gov

From: Naama Gidron <ngidron5@gmail.com>
Sent: Friday, December 02, 2016 6:28 PM
To: cstaff1@crmc.ri.gov
Cc: NoLNGinPVD@gmail.com
Subject: Objection to 2016-10-099 National Grid Fields Point LNG

To Grover Fugate, CRMC Executive Director:
I am writing you to state my opposition to National Grid's Fields Point LNG Liquefaction Facility. I object to their application to CRMC for a "Federal Consistency Certification" under the Coastal Zone Management Act (CRMC file number 2016-10-099).
I plan on speaking at the hearing and would like to be added to the email distribution list for updates and notifications about this project.
Thank you. Naama

--
Motion Center Yoga
at Hope Artiste Village
1005 Main St, suite 8116
Pawtucket, RI 02860

http://www.motioncenteryoga.com

cstaff1@crmc.ri.gov

From:	Emily Eisenstein <eeisenstein@gmail.com>
Sent:	Friday, December 02, 2016 9:39 PM
To:	cstaff1@crmc.ri.gov; gfugate@crmc.ri.gov
Cc:	NoLNGinPVD@gmail.com
Subject:	Objection to 2016-10-099 National Grid Fields Point LNG

Dear Mr. Fugate:

I am writing to state my opposition to National Grid's Fields Point LNG Liquefaction Facility. I object to their application to CRMC for a "Federal Consistency Certification" under the Coastal Zone Management Act (CRMC file number 2016-10-099).

I would like to be added to the email distribution list for updates and notifications about this project.

Thank you,

Emily Eisenstein

cstaff1@crmc.ri.gov

From: oliviasauerwein@gmail.com
Sent: Saturday, December 03, 2016 8:11 AM
To: cstaff1@crmc.ri.gov; NoLNGinPVD@gmail.com
Subject: Objection to 2016-10-099 National Grid Fields Point LNG

To Grover Fugate, CRMC Executive Director:

I am writing you to state my opposition to National Grid's Fields Point LNG Liquefaction Facility. I object to their application to CRMC for a "Federal Consistency Certification" under the Coastal Zone Management Act (CRMC file number 2016-10-099).
I plan on speaking at the hearing and would like to be added to the email distribution list for updates and notifications about this project.

Thank you.

Olivia

Sent from my iPhone

cstaff1@crmc.ri.gov

From:	Ben Weilerstein <ben@toxicsaction.org>
Sent:	Saturday, December 03, 2016 5:17 PM
To:	cstaff1@crmc.ri.gov; gfugate@crmc.ri.gov
Cc:	NoLNGinPVD@gmail.com
Subject:	Objection to 2016-10-099 National Grid Fields Point LNG

Dear Grover Fugate, CRMC Executive Director,

I am writing you to state my opposition to National Grid's Fields Point LNG Liquefaction Facility. I object to their application to CRMC for a "Federal Consistency Certification" under the Coastal Zone Management Act (CRMC file number 2016-10-099).

Have a date and time been chosen for the hearing? I would like to be added to the email distribution list for updates and notifications about this project.

Thank you.
--

Ben Weilerstein
Eastern Mass & Rhode Island Organizer
Toxics Action Center

o: 617-747-4358
c: 215-740-9296

cstaff1@crmc.ri.gov

From: Greg Gerritt <gerritt@mindspring.com>
Sent: Tuesday, December 06, 2016 7:30 AM
To: cstaff1@crmc.ri.gov; gfugate@crmc.ri.gov
Cc: NoLNGinPVD@gmail.com; Greg Gerritt
Subject: LNG facility

Der CRMC, I do not believe that Providence needs an LNG compressor fac ility, and the location for the proposed plant is inappropriate for any such facility. I do not think the facility planning takes into account the Resilient Rhode Island Act, nor sea level chgange over the life of the planet. Adding fuel tot he fire, it definitley does not take into account the sea level changes that will occur if we continue to build fossil fuel infrastructure and bake in evefr more emissions. Please hold public hearings on this facility. I intend to testify. Please place me on a list to receive email updates on this process.,

Greg Gerritt
37 6th St Providence RI 02906 401-331-0529 gerritt@mindspring.com

cstaff1@crmc.ri.gov

From: MK Winter <mkwinter3@gmail.com>
Sent: Tuesday, December 06, 2016 5:09 PM
To: cstaff1@crmc.ri.gov; gfugate@crmc.ri.gov
Cc: NoLNGinPVD@gmail.com
Subject: Objection to 2016-10-099 National Grid Fields Point LNG

To Grover Fugate, CRMC Executive Director:

I am writing you to state my opposition to National Grid's Fields Point LNG Liquefaction Facility. I object to their application to CRMC for a "Federal Consistency Certification" under the Coastal Zone Management Act (CRMC file number 2016-10-099).
I would like to be added to the email distribution list for updates and notifications about this project.

Thank you,
Milo Winter=

cstaff1@crmc.ri.gov

From:	Andrew Poyant <andrewpoyant@gmail.com>
Sent:	Wednesday, December 07, 2016 9:21 AM
To:	cstaff1@crmc.ri.gov; gfugate@crmc.ri.gov
Cc:	NoLNGinPVD@gmail.com
Subject:	Objection to 2016-10-099 National Grid Fields Point LNG

Dear Mr. Grover Fugate, CRMC Executive Director:
I am writing to state my opposition to National Grid's Fields Point LNG Liquefaction Facility. I object to their application to CRMC for a "Federal Consistency Certification" per the Coastal Zone Management Act (CRMC file number 2016-10-099). At a time where the state needs to be moving away from fossil fuels we should not be building more fossil fuel infrastructure that will last decades. It will add to the increase in sea level rise that our low lying state significant coastline will have a dramatic economic and social impact. If a spill were to occur either at the site or from the increased barge traffic, it would be devastating to Rhode Islands coastal resources. In addition, the proposed LNG Liquefaction Facility is located will adversely impact a low income neighborhood with increased air pollution. I recommend that National Grid complete an Environmental Justice analysis. I plan on speaking at the hearing and would like to be added to the email distribution list for updates and notifications about this project.

Sincerely,
Andrew R Poyant, PWS

Lisa Turner

From: Grover Fugate <gfugate@crmc.ri.gov>
Sent: Friday, December 09, 2016 12:38 PM
To: Lisa Turner
Subject: FW: Objection to 2016-10-099 National Grid Fields Point LNG

Grover J. Fugate
Executive Director
State of Rhode Island
Coastal Resources Management Council
4808 Tower Hill Road, Rm 116
Wakefield, Rhode Island 02879
401-783-3370
www.crmc.ri.gov

From: Adeola Oredola [mailto:adeola.oredola@gmail.com]
Sent: Thursday, December 08, 2016 1:34 PM
To: gfugate@crmc.ri.gov
Subject: Objection to 2016-10-099 National Grid Fields Point LNG

Dear Grover Fugate,
I'm writing to state my opposition to National Grid's Fields Point LNG Liquefaction Facility. I object to their application to CRMC for a "Federal Consistency Certification" under the Coastal Zone Management Act (CRMC file number 2016-10-099). I plan on speaking at the hearing and would like to be added to the email list for updates and notifications about this project.
Thank you.
Adeola

cstaff1@crmc.ri.gov

From:	Mikaila Mariel Lemonik Arthur <mmlarthur@gmail.com>
Sent:	Friday, December 09, 2016 3:21 PM
To:	cstaff1@crmc.ri.gov; gfugate@crmc.ri.gov
Cc:	NoLNGinPVD@gmail.com
Subject:	Objection to 2016-10-099 National Grid Fields Point LNG

To Grover Fugate, CRMC Executive Director:

I am writing you to state my opposition to National Grid's Fields Point LNG Liquefaction Facility. I object to their application to CRMC for a "Federal Consistency Certification" under the Coastal Zone Management Act (CRMC file number 2016-10-099).

Thank you.

--
Mikaila Mariel Lemonik Arthur
mmlarthur@gmail.com

cstaff1@crmc.ri.gov

From:	Sheila Resseger <sress2001@yahoo.com>
Sent:	Friday, December 09, 2016 7:32 PM
To:	cstaff1@crmc.ri.gov; gfugate@crmc.ri.gov
Cc:	NoLNGinPVD@gmail.com
Subject:	Objection to 2016-10-099 National Grid Fields Point LNG

Objection to 2016-10-099 National Grid Fields Point LNG

To Grover Fugate, CRMC Executive Director:

I am a long time resident of the Edgewood section of Cranston. I am writing you to state my opposition to National Grid's Fields Point LNG Liquefaction Facility. I object to their application to CRMC for a "Federal Consistency Certification" under the Coastal Zone Management Act (CRMC file number 2016-10-099).

Please consider the short term and long term interests of the surrounding community and the environment and deny National Grid this facility. Thank you

Sincerely,

Sheila Resseger, retired teacher

a quote from Jonathan Kozol:
"Instead of seeing these children for the blessings that they are, we are measuring them only by the standard of whether they will be future deficits or assets for our nation's competitive needs."

cstaff1@crmc.ri.gov

From:	Elizabeth Grossman <eggbdk@gmail.com>
Sent:	Friday, December 09, 2016 9:20 PM
To:	cstaff1@crmc.ri.gov
Cc:	NoLNGinPVD@gmail.com
Subject:	Objection to 2016-10-099 National Grid Fields Point LNG

To Grover Fugate, CRMC Executive Director:

I am writing you to state my opposition to National Grid's Fields Point LNG Liquefaction Facility. I object to their application to CRMC for a "Federal Consistency Certification" under the Coastal Zone Management Act (CRMC file number 2016-10-099).

I am not able to come to the hearing because I will not be in Providence on Dec 13 but I want to be on record as vehemently opposing this project which is not in the interest of the citizens of Providence, the health of our beautiful bay, or of the environment which is threatened by overuse of fossil fuels. LNG tanks are a dangerous fire hazard as well as a general risk for pollution. To put them at Fields Point is unconscionable. This is an unwise and unnecessary project.

Thank you.

Elizabeth Grossman
130 8th Street Providence RI 02906

cstaff1@crmc.ri.gov

From:	Carol J Craig <teachercjcraig@aol.com>
Sent:	Friday, December 09, 2016 5:06 PM
To:	cstaff1@crmc.ri.gov; gfugate@crmc.ri.gov
Cc:	NoLNGinPVD@gmail.com
Subject:	Objection to 2016-10-099 National Grid Fields Point LNG

To Grover Fugate, CRMC Executive Director:

I am writing you to state my opposition to National Grid's Fields Point LNG Liquefaction Facility. I object to their application to CRMC for a "Federal Consistency Certification" under the Coastal Zone Management Act (CRMC file number 2016-10-099).

I plan on unable to speak at the hearing but would like to be added to the email distribution list for updates and notifications about this project.

Thank you.

Carol J Craig
25 Eastern View Avenue,
Wakefield, RI 02879
Sent from my iPad

cstaff1@crmc.ri.gov

From: Elizabeth <elizabeth.watts@verizon.net>
Sent: Saturday, December 10, 2016 10:14 PM
To: cstaff1@crmc.ri.gov; gfugate@crmc.ri.gov
Cc: NoLNGinPVD@gmail.com
Subject: Objection to 2016-10-099 National Grid Fields Point LNG

To Grover Fugate, CRMC Executive Director:

I am writing you to state my opposition to National Grid's Fields Point LNG Liquefaction Facility. I object to their application to CRMC for a "Federal Consistency Certification" under the Coastal Zone Management Act (CRMC file number 2016-10-099).

I would like to be added to the email distribution list for updates and notifications about this project.

Thank you.

Sincerely,

Elizabeth Watts

16 Starks Place

Lynbrook, NY 11563

cstaff1@crmc.ri.gov

From: Colin Kent-Daggett <c.kentdaggett@gmail.com>
Sent: Monday, December 12, 2016 10:29 AM
To: cstaff1@crmc.ri.gov; gfugate@crmc.ri.gov
Subject: Opposition to 2016-10-099 Fields Point LNG Facility

To Grover Fugate, CRMC Executive Director:

I am writing you to state my opposition to National Grid's Fields Point LNG Liquefaction Facility. I object to their application to CRMC for a "Federal Consistency Certification" under the Coastal Zone Management Act (CRMC file number 2016-10-099).

I plan on speaking at the hearing and would like to be added to the email distribution list for updates and notifications about this project.

Thank you.

cstaff1@crmc.ri.gov

From: Kate Aubin <kateaubin@gmail.com>
Sent: Monday, December 12, 2016 12:00 PM
To: cstaff1@crmc.ri.gov; gfugate@crmc.ri.gov
Cc: NoLNGinPVD@gmail.com
Subject: Objection to 2016-10-099 National Grid Fields Point LNG

To Grover Fugate, CRMC Executive Director:

I am writing you to state my opposition to National Grid's Fields Point LNG Liquefaction Facility. I object to their application to CRMC for a "Federal Consistency Certification" under the Coastal Zone Management Act (CRMC file number 2016-10-099).

I plan on speaking at the hearing and would like to be added to the email distribution list for updates and notifications about this project.

Thank you,

Kate Aubin

Lisa Turner

From: Grover Fugate <gfugate@crmc.ri.gov>
Sent: Monday, December 12, 2016 1:06 PM
To: Lisa Turner
Subject: FW: Statement of Opposition to 2016-10-099 National Grid Fields Point LNG

Grover J. Fugate
Executive Director
State of Rhode Island
Coastal Resources Management Council
4808 Tower Hill Road, Rm 116
Wakefield, Rhode Island 02879
401-783-3370
www.crmc.ri.gov

From: Jennifer Fishman [mailto:jxfishman@gmail.com]
Sent: Saturday, December 10, 2016 3:45 PM
To: cstaff1@crmc.ri.gov; gfugate@crmc.ri.gov
Subject: Statement of Opposition to 2016-10-099 National Grid Fields Point LNG

Mr. Fugate,

I am opposed to the construction of a natural gas liquefaction facility by National Grid at their Field Point property. Neighborhoods surrounding the property should not be burdened with the additional health and safety risks that this project would create. Thank you for your time and consideration.

Sincerely,
Jen Fishman

cstaff1@crmc.ri.gov

From: Kate Wells <kwells@provlib.org>
Sent: Tuesday, December 13, 2016 4:21 PM
To: cstaff1@crmc.ri.gov; gfugate@crmc.ri.gov
Cc: NoLNGinPVD@gmail.com
Subject: Objection to 2016-10-099 National Grid Fields Point LNG

To Grover Fugate, CRMC Executive Director:

I am writing you to state my opposition to National Grid's Fields Point LNG Liquefaction Facility. I object to their application to CRMC for a "Federal Consistency Certification" under the Coastal Zone Management Act (CRMC file number 2016-10-099).

I am a resident of Cranston just south of Field's Point in the Edgewood neighborhood and commute along Allens Avenue daily to work in downtown Providence. The installation of the LNG Liquefaction Facility so close to a high density residential neighborhood and placed in an area of in-fill in a low coastal zone with high danger of flooding or storm damage is unacceptable. The resulting risks to the environment and adjacent neighborhoods is too great to consider.

I am unable to attend this evening's public hearing, but would like to be added to the email distribution list for updates and notifications about this project.

Thank you.

--
Kate Wells
Curator of Rhode Island Collections
Providence Public Library

Lisa Turner

From: Grover Fugate <gfugate@crmc.ri.gov>
Sent: Thursday, December 15, 2016 11:43 AM
To: Lisa Turner
Subject: FW: Objection to 2016-10-099 National Grid Fields Point LNG

Grover J. Fugate
Executive Director
State of Rhode Island
Coastal Resources Management Council
4808 Tower Hill Road, Rm 116
Wakefield, Rhode Island 02879
401-783-3370
www.crmc.ri.gov

From: Genesis Garcia [mailto:genesisgarciaa07@gmail.com]
Sent: Thursday, December 15, 2016 5:40 AM
To: cstaff1@crmc.ri.gov; gfugate@crmc.ri.gov
Cc: NoLNGinPVD@gmail.com
Subject: Objection to 2016-10-099 National Grid Fields Point LNG

To Grover Fugate, CRMC Executive Director:

I am writing you to state my opposition to National Grid's Fields Point LNG Liquefaction Facility. I object to their application to CRMC for a "Federal Consistency Certification" under the Coastal Zone Management Act (CRMC file number 2016-10-099).

I plan on speaking at the hearing and would like to be added to the email distribution list for updates and notifications about this project.

Thank you.

-Genesis

cstaff1@crmc.ri.gov

From: Robert Medeiros <robert_medeiros@brown.edu>
Sent: Friday, December 16, 2016 12:44 PM
To: cstaff1@crmc.ri.gov; gfugate@crmc.ri.gov
Subject: Thoughts?

To Grover Fugate, CRMC Executive Director:

I am writing you to state my opposition to National Grid's Fields Point LNG Liquefaction Facility. I object to their application to CRMC for a "Federal Consistency Certification" under the Coastal Zone Management Act (CRMC file number 2016-10-099).

I plan on speaking at the hearing and would like to be added to the email distribution list for updates and notifications about this project.

Thank you.

Robert Medeiros | Systems Manager
Brown University Centers for Epidemiology and Environmental Health and the Center for Statistical Sciences
121 South Main Street G-S712 | Providence, RI 02912

401 863 2729 (p) | Robert_Medeiros@brown.edu

The **Brown University Centers for Epidemiology and Environmental Health and the Center for Statistical Sciences** staff will *NEVER* ask you for your password, nor will Brown University send you email requesting your password information. Ignore all email messages requiring you to provide such information.

cstaff1@crmc.ri.gov

From: Robert Rutley <Robert.Rutley@raveis.com>
Sent: Saturday, December 17, 2016 11:03 AM
To: gfugate@crmc.ri.gov; cstaff1@crmc.ri.gov
Subject: Please. Stop the industrialization of my neighborhood! NO LNG

To Grover Fugate, CRMC Executive Director:

I am writing you to state my opposition to National Grid's Fields Point LNG Liquefaction Facility. I object to their application to CRMC for a "Federal Consistency Certification" under the Coastal Zone Management Act (CRMC file number 2016-10-099).

I plan on speaking at the hearing and would like to be added to the email distribution list for updates and notifications about this project.

Thank you.

Robert Rutley, Realtor®

Mobile: (401) 830-0994
Fax: (401) 274-8830
Email: Robert.Rutley@raveis.com
Website: http://www.robertrutley.com
RI #0041299, MA #9536573

cstaff1@crmc.ri.gov

From: Raub, Patricia <PRAUB@providence.edu>
Sent: Sunday, December 18, 2016 9:12 AM
To: cstaff1@crmc.ri.gov; gfugate@crmc.ri.gov
Cc: NoLNGinPVD@gmail.com
Subject: Objection to 2016-10-099 National Grid Fields Point LNG

To Grover Fugate, CRMC Executive Director:

I am writing you to state my opposition to National Grid's Fields Point LNG Liquefaction Facility. I object to their application to CRMC for a "Federal Consistency Certification" under the Coastal Zone Management Act (CRMC file number 2016-10-099).

I would like to be added to the email distribution list for updates and notifications about this project.

Thank you.

Patricia Raub
Providence RI=

Lisa Turner

From: Grover Fugate <gfugate@crmc.ri.gov>
Sent: Monday, December 19, 2016 12:51 PM
To: Lisa Turner
Subject: FW: Objection to 2016-10-099 National Grid Fields Point LNG

Grover J. Fugate
Executive Director
State of Rhode Island
Coastal Resources Management Council
4808 Tower Hill Road, Rm 116
Wakefield, Rhode Island 02879
401-783-3370
www.crmc.ri.gov

From: SueEllen Kroll [mailto:sueellenkroll@gmail.com]
Sent: Monday, December 19, 2016 10:22 AM
To: gfugate@crmc.ri.gov
Cc: NoLNGinPVD@gmail.com
Subject: Objection to 2016-10-099 National Grid Fields Point LNG

Dear Mr. Fugate,
I am writing to voice my objection to the 2016-10-099 National Grid Fields Point LNG in favor of investing in green/renewable sources as a solution to the state's energy needs. The harmful effects imposed on our public health and quality of life far outweigh the short-term and near-sighted economic gains you think will result from this project. Rhode Island is poised to be a national leader in determining long-term, sustainable solutions to energy needs as opposed to wasting money to poison it citizens and environment. Let's stop "solving" problems with the civic foresight of 5-10 years and start thinking about the future generations and the national and local urgency for sustainability.
Sincerely,
SueEllen Kroll
Providence, RI

Lisa Turner

From: Grover Fugate <gfugate@crmc.ri.gov>
Sent: Monday, December 19, 2016 1:18 PM
To: Lisa Turner
Subject: FW: LNG plant in south Prov

Grover J. Fugate
Executive Director
State of Rhode Island
Coastal Resources Management Council
4808 Tower Hill Road, Rm 116
Wakefield, Rhode Island 02879
401-783-3370
www.crmc.ri.gov

From: shoe shoe [mailto:kflorshoe@yahoo.com]
Sent: Friday, December 16, 2016 2:11 PM
To: gfugate@crmc.ri.gov
Subject: LNG plant in south Prov

Fear Grover,

I am writing to object to the installation of the LNG plant in south Providence. No such facility should be sited in an urban area because of the hazards inherent in such as structure. LNG is explosive, and any sort of accident in a densely packed neighborhood would be catastrophic. I am particularly concerned about this because my home is in the blast zone. Similar installations have been proposed for similar locations in the Port of Providence, and for the above reasons, have been rejected. I urge the CRMC, likewise, to reject this proposal.
Kathie Florsheim

KATHIE FLORSHEIM
Independent Professional Photographer + Writer
Providence, RI
401 / 751-7991
http://www.kathieflorsheimphotography.com

cstaff1@crmc.ri.gov

From: Dina Dolbec <Dina@bananagrams.com>
Sent: Friday, December 23, 2016 1:28 PM
To: NOLNGinPVD@gmail.com
Cc: gfugate@crmc.ri.gov; cstaff1@crmc.ri.gov
Subject: Objection to National Grid's application
Attachments: CRMC Letter.docx

Hello,

Please see attached letter sent on behalf of Rena Nathanson, President of Bananagrams, Inc.

Thanks,

Dina Dolbec | Accounts Receivable Assistant
BANANAGRAMS, INC.

845 Allens Avenue | Providence, RI | 02905
E | dina@bananagrams.com
T | 401.781.9649 ext. 225
F | 401.461.4321
Direct Fax | 401.223.5559
www.bananagrams.com

Check out our brand new My First Bananagrams. It's a fresh introduction for the younger, greener, gamer. Utilizing lowercase letters and word-building, combo-letter tiles, My First Bananagrams helps nurture your child's love for wordplay and word games.

We love scrambling letters but, anagrams aside, there has to be a bit of copy down here with CRUDE GORILLA EMAILS. No, wait; that's not it! OUR LLAMA'S ICE GIRDLE – no, that's not it either...OUR LEGAL DISCLAIMER, that's it! The information contained in this e-mail message is confidential information intended only for the use of the individual or entity named above. If you are not the intended recipient, you are hereby notified that any dissemination, distribution, copying or other use of this communication is strictly prohibited. If you have received this communication in error, please immediately notify us by telephone or e-mail, and delete all copies of the message. That said, it's back to the anagrams: 'copies of the message' is an anagram of CHIEF SEES GOATS MOPE!

Bananagrams, Inc.
845 Allens Avenue
Providence, RI 02905
(401) 781-9649

December 23, 2016

To Whom It May Concern:

This is a formal objection against National Grid's Fields Point LNG proposal on Allens Avenue in Providence, RI. The reasons are as follows:

- Not needed: there is no justification for the need of this project, which is required based on CRMC's 1978 Energy Amendments (CRMP Section 640-2.2)
- Climate change and sea level rise: the proposal goes against the policies to proactively plan for climate change and sea level rise (CRMP Section 145)
- Cumulative impact: National Grid does not account for the cumulative impact of the project on coastal waters or communities. The application does not meet the criteria required for the requested variance. (CRMP Section 120)
- Setback requirements: National Grid should be held to the regulations and not be allowed to do construction less than 50 feet from the coastline, especially since it is contaminated soil and groundwater. (CRMP Section 140)

We would like to be added to the notification list regarding this proposal.

Sincerely,

Rena Nathanson
President, Bananagrams Inc.

SAVE THE BAY®
NARRAGANSETT BAY

December 22, 2016

Grover Fugate, Executive Director
Rhode Island Coastal Resources Management Council
Stedman Government Center - Suite 3
4808 Tower Hill Road
Wakefield, RI 02879

Re: CRMC #2016-10-099; National Grid Consistency Determination

Dear Mr. Fugate:

Save The Bay reviewed the CZMA-Federal Consistency Review for the Liquefaction Facility prepared for National Grid LNG LLC (the applicant) , by GZA GeoEnvironmental, Inc. (National Grid Request) and submits that the project should be revised as it is not "consistent to the maximum extent practicable" with the Coastal Resources Management Program (CRMP). In accordance with 15 CFR § 930.32(a)(1), " [t]he term "consistent to the maximum extent practicable" means fully consistent with the enforceable policies of management programs unless full consistency is prohibited by existing law applicable to the Federal agency." The project should be revised to be consistent with the enforceable policies and goals set forth in the CRMP with respect to the requirements for public access (CRMP § 335) and a coastal buffer zone (CRMP § 150 D. 3). In addition, if the project will be operational beyond 25 years, the project should be redesigned to meet the goals in the CRMP for preparing in advance for expected sea level rise for this long-lived structure in a threatened location (CRMP § 140 B. 29).

THE BAY CENTER
100 Save The Bay Drive
Providence, RI 02905
phone: 401-272-3540
fax: 401-273-7153

EXPLORATION CENTER
Easton's Beach
P.O. Box 851
Newport, RI 02840
phone: 401-324-6020
fax: 401-324-6022

SOUTH COUNTY
COAST OFFICE
Riverside Building
8 Broad Street
Westerly, RI 02891
phone/fax: 401-315-2709

savebay@savebay.org
SAVEBAY.ORG

Public Access.

Save The Bay submits that National Grid should submit a Public Access Plan for an off-site location in accordance with CRMP §335.E (1-6) and that a determination of consistency should not be rendered without a public access plan.

In the findings of Section 335 of the CRMP, the Council recognizes that the public has a constitutional right to use and enjoy Rhode

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Island's coastal resources and the Council, as trustee of those resources has a duty to "...ensure that public access to the shore is protected,

maintained and, where possible, enhanced for the benefit of all." CRMP § 335 B. 2. Generally,
an applicant is required to provide on-site public access but the site in question is not
suitable for physical access by the public due to safety and security concerns. However, to
be "consistent to the maximum extent practicable" with the CRMP, the applicant should create,
or enhance existing, public access offsite, as set forth in CRMP § 335 D. 3.

Coastal Buffer Zones.

In accordance with CRMC's mandate to preserve and where possible restore ecological systems, the CRMP requires a coastal buffer zone. "A coastal buffer zone is an area of land adjacent to a Shoreline (Coastal) Feature that is, or will be, vegetated with native shoreline species and which acts as a natural transition zone between the coast and adjacent upland development..... [it] establishes a natural area adjacent to a shoreline feature that must be retained in, or restored to, a natural vegetative condition." CRMP § 150 A.1. The CRMP states that "[t]he Council shall require Coastal Buffer Zones in accordance with the requirements of this section for...commercial and industrial development;... and activities subject to section 300.8 [energy related activities and structures]..." CRMP § 150 D.2 " The vegetation within a buffer zone must be either retained in a natural, undisturbed condition, or properly managed in accordance with the standards contained in this section. In cases where native flora (vegetation) does not exist within a buffer zone, the Council may require restoration efforts which include, but are not limited to, replanting the Coastal Buffer Zone with native plant species." CRMP § 150 D. 3. In order to be "consistent to the maximum extent practicable" with the CRMP National Grid should propose a buffer of native plantings to enhance the coastal habitat. For example, enhancement through plantings may be possible on the parcel to the west of the facility, along the tidal creek.

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Save The Bay was unable to locate a plan for a coastal buffer zone. Save The Bay submits that if a plan for a buffer zone is not submitted and implemented, the application is not consistent with the policies and requirements of the CRMP. When development is proposed along the coast CRMC should insist on improving coastal habitat whenever possible.

Climate Change and Operational Life.

"[T]he Council relies upon the most recent NOAA sea level rise data to address both short- and long-term planning horizons and the design life considerations for public and private infrastructure....As of 2015 the range in sea level rise change is projected by NOAA to be a maximum of approximately 1.0 foot in 2035, 2.0 feet in 2050 and 7.0 feet in 2100." CRMP §145 C.4.

The project is located within a FEMA AE flood zone, in an area subject to inundation by a 100-

year storm event. The applicant represented that the design life of the facility is 25 years but
also stated the storage tanks have a long design life when properly maintained. It is unclear why the design life of the facility is only 25 years and whether the design life is consistent with the expected operational life of the project. The existing facility has been in operation at the site for 40 years.

Save The Bay submits that the applicant's selection of a design life of 25 years is not adequate if there is any possibility that the facility will operate for a longer period of time. National Grid chose a short design life for the project and proposed development accordingly (e.g. using small rip rap for slope armoring sized to withstand the 100-year storm event and 25-year sea level rise of 1.5 feet).

Given the location of the facility, the use of the 1.5' estimate of sea level rise over a limited life of 25 years, and the inherent danger in liquefaction operations, the policies of the Council require the applicant to consider "the retrofit cost of modifying the structure at some point in the future. Most long-lived infrastructure in the threatened areas is sufficiently sensitive to rising sea level to warrant at least an assessment of the costs and

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benefits of preparing for rising sea level rise[1]." Further, "[t]he Council recognizes that sea level rise is ongoing and its foremost concern is the accelerated rate of rise and the associated risks to Rhode Island coastal areas today and in the future. *The Council recognizes that the lower the sea level rise estimate used, the greater the risk that policies and efforts to adapt to sea level rise and climate change will prove to be inadequate. Therefore, the policies of the Council may take into account different risk tolerances for differing types of public and private coastal activities.* In addition, this long- term sea level change base rate will be revisited by the Council periodically to address new scientific evidence (emphasis provided)." CRMP 145 C. 3.

As set forth in Section 145, Findings of the CRMP, "[F]uture increases in relative sea level will displace coastal populations, threaten infrastructure, intensify coastal flooding and ultimately lead to the loss of recreation areas, public space, and coastal wetlands." CRMP § 145 B.16. "Coastal infrastructure will become increasingly susceptible to complications from rising sea levels, as the upward trend continues...." CRMP§ 145 B. 17. "Future increase in relative sea level rise will increase the extent of flood damage over time. Lower elevations will become increasingly susceptible to flooding as storm surge reaches further inland due to sea level rise in concert with a probable increase in the intensity of storms predicted from climate change. As a result, more coastal lands will be susceptible to erosion." CRMP § 145 B. 19.

Save The Bay submits that if the Council determines that the operational life of project may be longer than the projected 25 design life, it should require the applicant to design the project

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[1] Section 145, B. Finding 30, provides as follows. According to a USGS report (Titus et al., 2009), preparing in advance for expected sea level rise is justifiable for several types of impacts, as it may be less costly to react now than to react to an adverse condition in the future. Some examples:...
• *Some long-term infrastructure*. Whether it is beneficial to design coastal infrastructure to anticipate rising sea level depends on economic analysis of the incremental cost of designing for a higher sea level now, and the retrofit cost of modifying the structure at some point in the future. Most long-lived infrastructure in the threatened areas is sufficiently sensitive to rising sea level to warrant at least an assessment of the costs and benefits of preparing for rising sea level rise.

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using the most recent NOAA data on sea level rise for the potential operational life of the project.

Thank you for considering our comments. Please contact me if you need any additional information.

Sincerely,

Topher Hamblett
Director of Advocacy

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Connecting People with Nature

Audubon Society of Rhode Island

December 12, 2016

Grover Fugate, Executive Director
RI Coastal Resources Management Council
Oliver H. Stedman Government Center
4808 Tower Hill Rd., Suite 3
Wakefield, RI 02879

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DEC 14 2016
COASTAL RESOURCES MANAGEMENT COUNCIL

Re: 2016-10-099

Dear Mr. Fugate:

Audubon Society of Rhode Island is concerned about National Grid's plans to construct a natural gas liquefaction facility at 121 Terminal Road in Providence and believes that the proposal contradicts several elements of the enforceable policies of Rhode Island's federally approved coastal program.

CRMC Section 145 – Climate and Sea Level Rise provides the framework under which CRMC reviews projects and how they are impacted by future climate change. The policies state, "The Council will review its policies, plans and regulations to proactively plan for and adapt to climate change and sea level rise. The Council will integrate climate change and sea level rise scenarios into its programs to prepare Rhode Island for these new, evolving conditions and make our coastal areas more resilient."

National Grid is requesting a variance to the CRMC minimum 50 foot setback requirement for proposed filling and grading on the project site. CRMC established the set backs to protect water quality. Buffers are a critical component of water quality protection measures and are even more critical when the project is evaluated in light of future impacts from climate change. The proposed facility is currently in the 100 year flood zone as shown by the RI Floodplain Mapping Tool. It is susceptible to damage from extreme storms and sea level rise. During storm events, spillage from the LNG facility may be washed into the Providence River. With rising seas, the chances for flooding of the site increase substantially.

The LNG falls under CRMC regulations Section 300.8. "Energy-Related Activities and Structures" which is defined to apply to "Energy-related activities include all operations and structures involved in power generation and petroleum processing, transfer, and storage on a shoreline feature or its contiguous area or within tidal waters". These regulations state that "Applicants must demonstrate that all relevant local zoning ordinances, building codes, flood hazard standards, and all state safety codes, fire codes, and environmental requirements have or will be met". National Grid must demonstrate how this facility will meet current and future flood hazard standards and be compatible with local ordinances. The Mayor of Providence has issued a statement in opposition to the plant, in part due to concerns about the current and future risks posed by the plant, "The proposed plant would process liquid natural gas that is extracted through hydraulic fracking, which is devastating to the environment and the surrounding communities," "Providence does not want to perpetuate or expand fracking, nor do we want to be

12 Sanderson Road ~ Smithfield, RI 02917-2600 ~ Phone: (401) 949-5454 ~ Fax: (401) 949-5788
www.asri.org email: Audubon@asri.org

burdened by the risks associated with a liquefaction plant in Providence." (Providence Journal, August 25, 2016).

The opposition of the mayor is in contradiction to CRMC's "Providence Harbor SAMP Harbor policy 2: Enlisting the involvement of municipalities in harbor revitalization. CRMC is committed to actively working with municipalities on harbor renewal plans".

The 2006 and 2011 Amendments to the Providence Harbor SAMP, the Urban Coastal Greenways Policy, identifies this area as part of the Development Zone. In this zone, the policy is to establish a continuous Urban Coastal Greenway. Developers have options for a standard buffer (25 ft.), standard UCG buffer width (100 ft.), compact buffer (50 ft.) or a small lot exemption. This development does not fit the definition of a small lot, so should be required to meet the CRMC requirements for one of these buffer areas.

We recognize that this site is not within CRMC's Ocean SAMP planning area. However, the Ocean SAMP establishes a policy framework that Audubon requests be applied to this project:

1150.2. Global Climate Change (4) states: "The Council will prohibit those land-based and offshore development projects which based on a sea level rise scenario analysis will threaten public safety or not perform as designed resulting in significant environmental impacts. The U.S. Army Corps of Engineers has developed and is implementing design and construction standards that consider impacts from sea level rise. These standards and other scenario analyses should be applied to determine sea level rise impacts."

If permitted, the LNG facility be subject to a careful analysis of sea level rise scenarios to ensure that the facility does not endanger public health.

Sincerely,

Meg Kerr

Meg Kerr
Senior Director of Policy

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COASTAL RESOURCES
MANAGEMENT COUNCIL

12 Sanderson Road ~ Smithfield, RI 02917-2600 ~ Phone: (401) 949-5454 ~ Fax: (401) 949-5788
www.asri.org email: Audubon@asri.org

From: Sherrie Andre [mailto:lngcampaign@ejlri.org]
Sent: Monday, May 23, 2016 1:43 PM
To: gfugate@crmc.ri.gov
Subject: Inquiry: Fields Point LNG Facility

Hello,

I am writing to you in regards to National Grid's proposed Fields Point LNG Facility -- The Environmental Justice League of RI has launched a campaign opposing the Fields Point project and has been contacting the Coastal Resource Management Council's office (the past month) to see if National Grid has submitted the application needed for their permits.

Since we began this campaign we have acquired over 1,000 signatures on our petition and 25 local, regional, and national groups have signed onto our opposition letter.

I am hoping that through this correspondence, I can be kept up to date on whether or not National Grid has submitted their permits (I can continue to call and email weekly) -- but also be notified when the CRMC intends to host public hearings about the project. Please let me know if this is a possibility.

I have attached our sign on letter that we are continuously circulating.

Thank you for your time,
Sherrie'Anne Andre
LNG Campaign Coordinator, EJLRI

Sign-on Letter Opposing Fields Point LNG Liquefaction Facility

To: Federal Energy Regulatory Commission (FERC), RI Department of Environmental Management (RIDEM), RI Coastal Resources Management Council (RICRMC), Governor Gina Raimondo, Senator Sheldon Whitehouse, Senator Jack Reed, Congressman David Cicciline, Congressman Jim Langevin, Mayor Jorge Elorza, and all other relevant parties and elected officials:

We, the undersigned organizations and individuals, oppose National Grid's proposal to build the Fields Point Liquefaction Facility in the Port of Providence. For the numerous reasons outlined below, we call upon the Federal Energy Regulatory Commission (FERC), the RI Department of Environmental Management (RIDEM), and the RI Coastal Resources Management Council (RICRMC) to reject National Grid's applications. We also call upon our elected and appointed officials to support the residents of Rhode Island they are sworn to protect and serve, and join us in asking the federal and state regulatory bodies to reject National Grid's Fields Point Liquefaction Facility proposal. We insist that FERC, RIDEM, and RICRMC take the following issues into consideration in the review of National Grid's proposal, and reject the proposal based on this community opposition.

• It is a high-risk facility with numerous potential disasters including but not limited to earthquakes, hurricanes, storm surges, industrial accidents, fires, explosions, and chemical incidents.

• The proposed facility would be adjacent to numerous toxic industrial facilities, located in a densely populated community of color with many environmental justice concerns. According to the EPA, the neighboring community is ranked over the 95th percentile on numerous environmental justice indicators including: traffic proximity and volume; proximity to chemical facilities requiring a risk management plan; proximity to facilities storing and transferring toxic and hazardous waste; and proximity to major water discharge polluters.

• The proposed facility is next to to a chemical facility that has a 14-mile hazard radius.

• Rhode Island's only trauma and hospital complex including RI Hospital, Hasbro Children's Hospital, and Women and Infants is less than two miles away, within the potential evacuation zone of the proposed facility. Providence Community Health Center, Hasbro Medicine Pediatric Primary Care, and other medical facilities are even closer, which is unacceptable.

• The proposal will increase the price of gas by adding the $180 million cost of the facility to customer's bills. It will not lead to more stable and predictable natural gas costs, as National Grid claims, because domestic natural gas prices have a history of extreme volatility.

• There is no need to increase the supply of LNG. The existing LNG storage tank serves RI's needs; there are three LNG import terminals already built near Boston. Our focus needs to be on energy conservation, weatherization, and reducing demand, not increasing our supply unnecessarily.

• The LNG produced at the facility would be from gas extracted by the controversial process of hydraulic fracturing, which has been banned in New York State due to public health risks. The dangerous chemicals used in the extraction process are contained in the produced gas and may be emitted during the LNG production process when "impurities" in the gas are removed.

• The Liquefaction Facility would be a massive waste of electricity, requiring 15 Megawatts which is half of all the electricity that will be produced by the Deepwater Wind project.

• National Grid's public participation plan is extremely flawed. They contacted certain officials, industrial neighbors, and a handful of homeowners but ignored the residents and tenants who will be negatively impacted by the project. The only two community organizations listed by National Grid were fictitious neighborhood organizations that have never existed.

• National Grid's Fields Point Liquefaction Facility is unnecessary, costly, and risky. It's a bad idea for everyone in Rhode Island, but the negative effects will be felt more directly and severely by the poorer and non-white residents in Providence. The area where the project is planned is one of the state's most polluted. Building this plant will contribute to the pollution, not cut back. In a state where 67% of pre-K through 12th-grade students attend schools in high-risk zones that threaten chemical leaks, gas clouds and explosions, we need clean, renewable and non-polluting energy that is equitable for marginalized communities. We need investments in renewable energy, not dangerous fossil fuels, to be directed into low-income communities of color.

We are calling on FERC and our elected and appointed officials in Rhode Island to listen to this widespread community opposition to National Grid's proposal, and reject the application.

Sincerely,

1, 107 individuals who have signed the online No LNG in PVD petition as of May 13, 2016, as well as the following organizations:

Local / Providence
The Environmental Justice League of RI
Bell Street Chapel, Governing Board
The FANG Collective
BASE: Burrillville Against Spectra Expansion
Camilo Viveiros, George Wiley Center
emPOWER (Brown University)
Occupy Providence

Providence Student Union
PRYSM: Providence Youth Student Movement
The White Noise Collective
Representative Aaron Regunberg

Statewide (Rhode Island)
Clean Water Action (RI)
Fossil Free RI
The Green Party of RI
Humanists of RI
RI Sierra Club

Regional/National:
Climate Action Now (MA)
Climate Justice Alliance (National)
Coalition for Responsible Siting of LNG Facilities (Fall River, MA)
Food and Water Watch (National)
Grassroots Global Justice (National)
Hampshire College Climate Justice League (MA)
Popular Resistance (National)
People, Not Pipelines (New England)
Beyond Extreme Energy (National)
No Sharon Gas Pipeline (MA)

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Sign-on Letter Opposing Fields Point LNG Liquefaction Facility

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Popular Resistance (National)
People, Not Pipelines (New England)
Beyond Extreme Energy (National)
No Sharon Gas Pipeline (MA)

Mayor of Providence

Jorge O. Elorza

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COASTAL RESOURCES MANAGEMENT COUNCIL

October 17, 2017
2016-10-099
Governor Gina M. Raimondo
82 Smith Street
Providence, RI 02903

CC: Janet L. Coit, Director
Department of Environmental Management
235 Promenade Street
Providence, RI 02908

Grover Fugate, Executive Director
RI Coastal Resources Management Council
Oliver H. Stedman Government Center
4808 Tower Hill Road, Suite 3
Wakefield, RI 02879-1900

RE: LNG Liquefaction Facility

Dear Governor Raimondo, Director Coit, and Executive Director Fugate,

I am writing to reiterate my concerns with the proposed National Grid LNG facility at Fields Point. Not only does the facility present great danger to the neighborhood, especially in the face of a changing climate, but the investment is inconsistent with the carbon reduction and climate commitments we have set at both the city and state level. Furthermore, the permitting process has been opaque and left out the community members that will be most impacted by the facility. I am asking that you work with your state agencies to ensure a proper review of the permitting process. I am confident that a thorough review and full enforcement of the state's regulations will not permit this project to move forward.

The LNG facility requires the approval of both the Coastal Resources Management Council (CRMC) and the Department of Environmental Management (DEM) and DEM appears positioned to approve a Short Term Response Action Plan (STRAP) soil remediation permit. With these approvals, the project will likely move forward under the Trump Administration. State action is the only mechanism that can put a stop to this project.

The community has spoken. Elected officials have spoken. We have declared carbon reduction goals, set aggressive resilience agendas, invested in renewable energy, and are leading the country in energy efficiency programs and policies. We've doubled down on this in the face of the Paris Agreement withdrawal. There is clear consensus across Rhode Island that we want a future that is clean, healthy, and resilient--a future that is free of fossil fuels. Let's send a message to President Trump that we are serious about realizing this vision and reject the status quo. Hurricanes Harvey, Irma, and Maria should serve a wake-up call for us all. The health and safety of our businesses and residents depends on it.

Sincerely,

Jorge O. Elorza
Mayor

City Hall, 25 Dorrance Street, Providence, RI 02903
Phone (401) 421-7740 Fax (401) 274-8240

NO LNG

http://NoLNGinPVD.org | NoLNGinPVD@gmail.com | #NoLNGinPVD

October 17, 2017

Governor Gina M. Raimondo
82 Smith Street
Providence, RI 02903

CC: Janet L. Coit, Director
Department of Environmental Management
235 Promenade Street
Providence, RI 02908

CC: Grover Fugate, Executive Director
RI Coastal Resources Management Council
Oliver H. Stedman Government Center
4808 Tower Hill Road, Suite 3
Wakefield, RI 02879-1900

RE: Fight Climate Change and Improve Resilience by Rejecting the LNG Liquefaction Facility

Dear Governor Raimondo, Director Coit, and Executive Director Fugate,

As you well know, climate change is the greatest long term threat facing our state. It is already knocking at our door and causing damaging impacts in our state, across this nation, and around the world. We need to act urgently to do everything possible to reduce emissions, have a rapid and just transition off of our dependency on fossil fuels, and plan for adaptation and resilience. There is one immediate action that would help with all of these - stopping National Grid from building a new fossil fuel facility in a vulnerable and populated coastal area.

We, the No LNG in PVD Coalition, The Mashapaug Nahagansett Tribe and a group of twelve elected officials, are writing you to urgently request that you join us in rejecting National Grid's Fields Point Liquefaction Facility. The proposed liquefied natural gas (LNG) production and export facility is unnecessary, risky, and short-sighted. At a time when Rhode Island should be investing in renewable

energy, improving coastal resiliency, and growing an economy of the future, this LNG facility would be a $180 million step in the wrong direction, paid for out of the pockets of public ratepayers.

The LNG facility requires the approval of RI state agencies. The timing is urgent, with decisions on crucial permits pending over the next couple of months. The Department of Environmental Management (DEM) posted documents[1] on October 6th that show it is poised to approve a Short Term Response Action Plan (STRAP) soil remediation permit. This permit will allow National Grid to conduct construction work at the contaminated site, which has high levels of carcinogenic and hazardous materials. Next, the Coastal Resources Management Council (CRMC) will be holding a hearing about the facility on October 24th and issuing a decision before the end of the year. FERC has been known as a rubber stamp agency, even before the Trump regime. Federal approval is very likely, which means that it will be up to RI state agencies to take action to stop this LNG facility.

On September 15th - midway through a devastating month that set the record for greatest Atlantic hurricane energy - FERC announced the timeline of moving towards a final decision. Despite numerous requests, FERC will not be doing a comprehensive Environmental Impact Statement and will only issue a limited Environmental Assessment, which means that there will be no public hearings.

Coincidently, September 15th was also the date of the Governor's Executive Order "Action Plan to Stand Up to Climate Change." We applaud the Governor for announcing these proactive steps and prioritizing climate change action alongside our entire federal delegation. But rhetoric is meaningless without actions, and now is the time to take action. Allowing a major new fossil fuel facility to be built in a densely-populated disaster-prone area, near schools and hospitals, paid for and subsidized by Rhode Island ratepayers, is unacceptable. It is also incompatible with the Governor's and the State of Rhode Island's stated goals of climate mitigation, adaptation, and resiliency.

Hurricanes Harvey, Irma, and Maria are a wake up call. Storms are becoming increasingly violent, and frontline communities are the most vulnerable for the worst impacts and the slowest recoveries. We cannot pretend that catastrophic 500 or 1000 year storms only happen every 500 to 1000 years. The "new normal" we are entering is uncharted territory without reference points, and we need to be prepared for our own worst case scenarios. The LNG facility is part of our worst-case scenario.

Major hurricanes have hit Rhode Island in the past, with devastating impacts. It's not a question of if but when the next major storm will make a direct hit. This LNG liquefaction facility would be connected to an existing LNG storage tank that is almost half a century old, and in 2005 FERC rejected the Keyspan LNG import facility proposal because that tank did not meet the current safety standards. National Grid has discarded their initial plans to construct a protective barrier around the tank. The Shell Terminal, on the northern side of National Grid's site, is being sued by the Conservation Law Foundation for being dangerously unprepared for the impacts of climate change[2]. On the southern side of National Grid's LNG

[1] http://www.dem.ri.gov/programs/wastemanagement/site-remediation/Providence-Gas-Co.php
[2] Case 1:17-cv-00396 - https://www.clf.org/wp-content/uploads/2017/08/2017-08-28-Dkt-1-Complaint.pdf

tank is Univar, which stores millions of pounds of dangerous chemicals including chlorine gas, and has a worst-case impact of a 14 mile hazard radius. This is all on the wrong side of the hurricane barrier, at the mouth of Narragansett Bay where a hurricane storm surge would be amplified by a funnel effect. Any debris accumulated from the Bay, like boats, trees, or pieces of metal would be turned into battering rams. This is known as the Achilles Heel of New England, and our state's only level one trauma center, our major highway, our schools, and our neighborhoods are too close for comfort. Let's learn from Harvey's impacts on Houston and not make planning and development decisions that increase our risk and put frontline communities in greater harm. Let's learn from the tragedies in Puerto Rico and understand that the Trump regime does not care about communities of color. Local and state government needs to step in and do what's needed.

Governor Raimondo, you are fully aware how dangerous and reckless Donald Trump's climate and energy policies are. We are grateful for your decision to affirm Rhode Island's adherence to the Paris Climate Agreement. Climate science is clear on how dire our situation is and how little time we have left to make the dramatic changes necessary to avoid catastrophic runaway climate change. No matter what, adaptation is an urgent priority for a vulnerable coastal state like Rhode Island. Given the current federal administration's policies and actions, it is incumbent upon state and city governments to take greater action on climate change. Mayor Jorge Elorza recognizes that this LNG facility in incompatible with Providence's climate goals, and has actively opposed the proposed facility for over a year, along with dozens of state legislators and local elected officials. But our Governor and federal delegation have remained silent, while pledging lip service to statewide climate goals. Your leadership is urgently needed to protect our state from this federally regulated facility.

FERC is known as a rubber-stamp agency and is likely to grant an approval for the LNG facility, but we still have the power to stop this facility. States can and do have power to decide the fate of facilities under federal jurisdiction. The New York State Department of Environmental Conservation recently denied water quality permits for Millenium's Valley Lateral pipeline, and did so based on the fact that FERC's environmental review was inadequate and did not account for downstream greenhouse gas emissions from other connected projects[3]. While the Valley Lateral decision has been contested in court, New York recently won an appeal before the US Court of Appeals that upholds the state's rejection of the Constitution Pipeline. The Constitution was a FERC-approved project, which sets precedence for states' rights to assert authority in decision-making even if a facility is approved by federal authorities.[4]

Rhode Island has full authority to stop the proposed LNG facility as the project requires the following state approvals (*additional details attached*)

- ➔ Coastal Resources Management Council (CRMC) - Federal Consistency Certification, under federal authority of Coastal Zone Management Act
- ➔ Department of Environmental Management (DEM) - 401 Water Quality Certification, under federal authority of Clean Water Act

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[3] NYS DEC - Valley Lateral Project http://www.dec.ny.gov/permits/110485.html

[4] earthjustice.org/news/press/2017/court-upholds-new-york-state-s-rejection-of-the-constitution-pipeline

→ Department of Environmental Management (DEM) - Short Term Response Action Plan (STRAP) soil management permit, under state authority of rules and regulations[5]

Governor Raimondo, Director Coit, and Executive Director Fugate - do not approve National Grid's applications for the Fields Point Liquefaction Facility. You are responsible for ensuring that your agencies protect the residents of Rhode Island from climate change. Join us in opposing National Grid's dangerous and unnecessary LNG project.

Signed,

Senator Gayle Goldin District 3
Senator Jeanine Calkin, District 30
Representative Edith Ajello, District 1
Representative Chris Blazejewski, District 2
Representative Aaron Regunberg, District 4
Representative Marcia Ranglin-Vassell, District 5
Representative John Lombardi, District 8
Representative Grace Diaz, District 11
Representative Joseph Almeida District 12
Representative Susan Donovan, District 69
Providence City Councilman Seth Yurdin, Ward 1
Providence City Councilwoman Nirva Lafortune Ward 3

The Mashapaug Nahagansett Tribe

No LNG in PVD - A Collective of Frontline Community Members, Grassroots Organizations and Nonprofit Organizations. Core groups:
Environmental Justice League of RI
The FANG Collective
Sierra Club - Rhode Island Chapter

[5] http://www.dem.ri.gov/pubs/regs/regs/waste/remreg11.pdf

The following text and attached comment letters provide detail on the status on justification of denying the three permits required for the Fields Point Liquefaction Facility that fall under state jurisdiction:

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Lisa Turner

From:	No LNG in PVD <nolnginpvd@gmail.com>
Sent:	Monday, October 16, 2017 10:56 PM
To:	Gina.Raimondo@governor.ri.gov; janet.coit@dem.ri.gov; gfugate@crmc.ri.gov
Cc:	leo.hellested@dem.ri.gov; Martella, Joseph (DEM); Owens, Kelly (DEM); terry.gray@dem.ri.gov; sorourke@riib.org; Lisa Turner; Monica Huertas; chair@risierraclub.org; gaylegoldin@mac.com; jeanine@jeaninecalkin.com; Edith Ajello; Christopher Blazejewski; Moira Walsh; Aaron Regunberg; marci5216@yahoo.com; gdiaz@providenceri.gov; jzalmeida@verizon.net; susandonovanbristol@gmail.com; seth@yurdin.com; nirva.lafortune@gmail.com
Subject:	Elected Officials tell Governor and State Agencies "No LNG in PVD"
Attachments:	NoLNGinPVD Letter to Governor Raimondo.pdf; 2017.01.23 Federal Consistency Review Comments to RICRMC.pdf; No LNG in PVD Comments on STRAP.pdf

Dear Governor Raimondo,

To follow up on our attempt to meet with you today, the No LNG in PVD Coalition, the Mashapaug Nahagansett Tribe and a group of fourteen elected officials urge you and your agencies to stop National Grid's dangerous Fields Point Liquefaction Facility. Today we were able to discuss our concerns with DEM Director Coit, Mr. Gray of DEM, Shaun O'Rourke Chief Resiliency Officer, and Rico Vota your Community Affairs & Outreach Manager. Throughout our correspondence with DEM we have heard of the broad discretion the agency has with implementing the regulations. This discretion continues to be used to favor National Grid; we strongly urge you to use this discretion to block the Liquefaction Facility. Other states have allowed their agencies, such as NYSDEC, to use their discretion to block similar projects, we ask you to do the same. Below is the email we hand delivered today with attachments of our comment letters to DEM and CRMC with justification for these agencies to reject the Fields Point LNG facility. It is your responsibility to protect this environmental justice community - a working class community of color - from an additional hazardous facility, and take real climate action by rejecting this project.

http://NoLNGinPVD.org | NoLNGinPVD@gmail.com | #NoLNGinPVD

October 16, 2017

Governor Gina M. Raimondo
82 Smith Street
Providence, RI 02903

CC: Janet L. Coit, Director
Department of Environmental Management
235 Promenade Street
Providence, RI 02908

CC: Grover Fugate, Executive Director
RI Coastal Resources Management Council
Oliver H. Stedman Government Center
4808 Tower Hill Road, Suite 3
Wakefield, RI 02879-1900

RE: Fight Climate Change and Improve Resilience by Rejecting the LNG Liquefaction Facility

Dear Governor Raimondo, Director Coit, and Executive Director Fugate,

As you well know, climate change is the greatest long term threat facing our state. It is already knocking at our door and causing damaging impacts in our state, across this nation, and around the world. We need to act urgently to do everything possible to reduce emissions, have a rapid and just transition off of our dependency on fossil fuels, and plan for adaptation and resilience. There is one immediate action that would help with all of these - stopping National Grid from building a new fossil fuel facility in a vulnerable and populated coastal area.

We, the No LNG in PVD Coalition, The Mashapaug Nahagansett Tribe and a group of fourteen elected officials, are writing you to urgently request that you join us in rejecting National Grid's Fields Point Liquefaction Facility. The proposed liquefied natural gas (LNG) production and export facility is unnecessary, risky, and short-sighted. At a time when Rhode Island should be investing in renewable energy, improving coastal resiliency, and growing an economy of the future, this LNG facility would be a $180 million step in the wrong direction, paid for out of the pockets of public ratepayers.

The LNG facility requires the approval of RI state agencies. The timing is urgent, with decisions on crucial permits pending over the next couple of months. The Department of Environmental Management (DEM) posted documents on October 6th that show it is poised to approve a Short Term Response Action Plan (STRAP) soil remediation permit. This permit will allow National Grid to conduct construction work at the contaminated site, which has high levels of carcinogenic and hazardous materials, while only cleaning up a small portion of the site. Next, the Coastal Resources Management Council (CRMC) will be holding a hearing about the facility on November 14th and issuing a decision before the end of the year. FERC has been known as a rubber stamp agency, even before the Trump regime. Federal approval is very likely, which means that it will be up to RI state agencies to take action to stop this LNG facility.

On September 15th - midway through a devastating month that set the record for greatest Atlantic hurricane energy - FERC announced the timeline of moving towards a final decision. Despite numerous requests, FERC will not be doing a comprehensive Environmental Impact Statement and will only issue a limited Environmental Assessment, which means that there will be no public hearings.

Coincidently, September 15th was also the date of the Governor's Executive Order "Action Plan to Stand Up to Climate Change." We applaud the Governor for announcing these proactive steps and prioritizing climate change action alongside our entire federal delegation. But rhetoric is meaningless without actions, and now is the time to take action. Allowing a major new fossil fuel facility to be built in a densely-populated disaster-prone area, near schools and hospitals, paid for and subsidized by Rhode Island ratepayers, is unacceptable. It is also incompatible with the Governor's and the State of Rhode Island's stated goals of climate mitigation, adaptation, and resiliency.

Hurricanes Harvey, Irma, and Maria are a wake up call. Storms are becoming increasingly violent, and frontline communities are the most vulnerable for the worst impacts and the slowest recoveries. We cannot pretend that catastrophic 500 or 1000 year storms only happen every 500 to 1000 years. The "new normal" we are entering is uncharted territory without reference points, and we need to be prepared for our own worst case scenarios. The LNG facility is part of our worst-case scenario.

Major hurricanes have hit Rhode Island in the past, with devastating impacts. It's not a question of if but when the next major storm will make a direct hit. This LNG liquefaction facility would be connected to an existing LNG storage tank that is almost half a century old, and in 2005 FERC rejected the Keyspan LNG import facility proposal because that tank

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Governor Raimondo, you are fully aware how dangerous and reckless Donald Trump's climate and energy policies are. We are grateful for your decision to affirm Rhode Island's adherence to the Paris Climate Agreement. Climate science is clear on how dire our situation is and how little time we have left to make the dramatic changes necessary to avoid catastrophic runaway climate change. No matter what, adaptation is an urgent priority for a vulnerable coastal state like Rhode Island. Given the current federal administration's policies and actions, it is incumbent upon state and city governments to take greater action on climate change. Mayor Jorge Elorza recognizes that this LNG facility in incompatible with Providence's climate goals, and has actively opposed the proposed facility for over a year, along with dozens of state legislators and local elected officials. But our Governor and federal delegation have remained silent, while pledging lip service to statewide climate goals. Your leadership is urgently needed to protect our state from this federally regulated facility.

FERC is known as a rubber-stamp agency and is likely to grant an approval for the LNG facility, but we still have the power to stop this facility. States can and do have power to decide the fate of facilities under federal jurisdiction. The New York State Department of Environmental Conservation recently denied water quality permits for Millenium's Valley Lateral pipeline, and did so based on the fact that FERC's environmental review was inadequate and did not account for downstream greenhouse gas emissions from other connected projects. While the Valley Lateral decision has been contested in court, New York recently won an appeal before the US Court of Appeals that upholds the state's rejection of the Constitution Pipeline. The Constitution was a FERC-approved project, which sets precedence for states' rights to assert authority in decision-making even if a facility is approved by federal authorities.

Rhode Island has full authority to stop the proposed LNG facility as the project requires the following state approvals (*additional details attached*)

- Coastal Resources Management Council (CRMC) - Federal Consistency Certification, under federal authority of Coastal Zone Management Act
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Governor Raimondo, Director Coit, and Executive Director Fugate - do not approve National Grid's applications for the Fields Point Liquefaction Facility. You are responsible for ensuring that your agencies protect the residents of Rhode Island from climate change. Join us in opposing National Grid's dangerous and unnecessary LNG project.

Signed,

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Senator Jeanine Calkin, District 30
Representative Edith Ajello, District 1
Representative Chris Blazejewski, District 2
Representative Moira Walsh, District 3
Representative Aaron Regunberg, District 4

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[2] Case 1:17-cv-00396 - https://www.clf.org/wp-content/uploads/2017/08/2017-08-28-Dkt-1-Complaint.pdf
[3] NYS DEC - Valley Lateral Project http://www.dec.ny.gov/permits/110485.html
[4] earthjustice.org/news/press/2017/court-upholds-new-york-state-s-rejection-of-the-constitution-pipeline

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Oliver H. Stedman Government Center
4808 Tower Hill Road, Suite 3
Wakefield, RI 02879-1900

RE: 2016-10-99, National Grid Fields Points Liquefaction Facility

Dear Mr. Fugate,

"No LNG in PVD" is a growing coalition of residents, community organizations, businesses, churches, health care practitioners, students, educators, and elected officials who oppose National Grid's plans to build the "Fields Point Liquefaction Facility". These written comments are compiled and submitted on behalf of all of the individuals and organizations who have signed below. We are also including our general petition to the RI Coastal Resources Management Council (CRMC) and other regulatory agencies (see Appendix A).

There are many reasons that we are opposed to National Grid's LNG facility; not all of them fall within the scope of CRMC's regulations and enforceable policies. However, they do provide important background information for CRMC to consider while conducting the federal consistency review of National Grid's application. The Environmental Justice League of Rhode Island published a position paper in October 2015 (see Appendix B), that goes in depth into issues around potential disasters from LNG liquefaction, environmental racism, climate change, public health, economic inequality, and alternatives to the proposed project.

We also have strong concerns about the existing contamination at the site, with high levels of toxic, hazardous, and cancer-causing substances in the soil and the tidally influenced groundwater. We successfully petitioned the RI Department of Environmental Management (RIDEM) for a Public Involvement Plan (PIP), based on RI's site remediation regulations.[1] The PIP initiation letter from RIDEM and the full text of the petition is attached as Appendix C. National Grid has ignored multiple requests to hold public meetings about the project and concerns about contamination and community impacts. After RIDEM initiated the Public Involvement Plan process, National Grid decided to no longer go through RIDEM to receive the Short Term Remedial Action Plan (STRAP) soil management permits for construction work on the Fields Point Liquefaction Facility. Instead, FERC will be in charge of oversight and management of the contaminated soils, with National Grid proposing to use a generic 2012 Soil Management Plan which is not intended for the intensive construction activity of this project.

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[1] RI Gen. Laws §§ 23-19.14, Rhode Island Industrial Property Remediation and Reuse Act,("IPRRA")

No LNG in PVD recognizes that the controversy around site contamination and which agencies have authority and oversight is more applicable to the regulatory reviews being conducted by FERC and RIDEM. No LNG in PVD submitted an open letter to RIDEM, attached here as Appendix D, which discusses these issues as they directly relate to National Grid's application for a 401 Water Quality Certification and RIPDES Construction General Permit being reviewed by RIDEM. These issues are being raised here, as the introduction to these written comments for the CRMC Federal Consistency Review, because they provide crucial context in two key areas. First, it shows the lack of transparency and lack of goodwill displayed by National Grid with respect to this project, in relation to the general public and impacted communities and even towards another state agency. Second, the issues of site contamination also have the potential to impact areas that are subject to the jurisdiction of CRMC's enforceable policies.

Based on these areas of National Grid's proposed project that are subject to RI's federally approved coastal management program, the primary problems and inconsistencies with the application for the proposed LNG Facility are:

* It is not needed: There is not sufficient justification for the need for this facility, and available data does not support National Grid's claim that the facility is needed. Demonstrating need is a requirement under CRMP Section 642-2.2 within the 1978 Energy Amendments.

* Climate change and sea level rise: The proposed project goes against the enforceable policies in CRMP Section 145 that require proactively planning for the impacts of climate change and sea level rise.

* Cumulative impact: National Grid does not account for the cumulative impact of the project on coastal waters or communities. The application makes the unfounded claim that there are no cumulative impacts, but does not provide any justification or evidence for this claim. There are in fact many cumulative impacts that need to be taken into account, which is one of the criteria required for granting a variance in CRMP Section 120.

* Setback requirements: National Grid should be held to the standards set forth in CRMP Section 140, and should not be allowed to do construction including any grading or filling less than 50 feet from the coastline. This is especially important given that there is known contamination that exceeds industrial standards in the soil and the tidally influenced groundwater. The setback requirements need to be enforced, the requested variance denied.

It is abundantly clear that the proposed LNG facility is not consistent with the guidelines and enforceable policies contained within the RI Coastal Resources Management Program (aka the "Redbook"), including the 1978 Energy Amendments. The following sections detail the numerous ways that National Grid's application is inconsistent, incomplete, and should be denied by CRMC under the authority of the federal Coastal Zone Management Act (CZMA), 16 USC §§ 1451-1464, and the CZMA's implementing regulations at 15 CFR Part 930 Subpart D – Consistency for Activities Requiring a Federal License or Permit.

Section 120 - Variances

The variance requested by National Grid should be denied and not be granted an Assent because it does not meet all six criteria as required.

(1) The proposed alteration, along with the overall application, does not conform with the applicable goals and policies in Parts Two and Three of the Coastal Resources Management Program, as is discussed more detail in the following sections. It does not adequately plan for climate change or adapt to sea level rise, and it makes the coastline less, not more resilient. The proposed alteration is not for a water-dependent industry and is not a priority use for Type 6 Industrial Waterfronts. The filling and grading activities create unnecessary risk of releasing contaminants known to be in the soil and groundwater at the site. The proposed facility does not meet the requirements for Energy-Related Activities and Structures and the applicant did not address environmental impacts, social impacts, economic impacts, alternative sites, alternative means to fulfill the need for the facility, demonstration of need, or consistency with state energy policies.

(2) The applicant does not provide sufficient justification that the proposed alteration would not result in significant adverse environmental impacts, and does not discuss the potential impacts from releasing the known contaminants within the soil and groundwater, such as the potential for vertical migration of contaminants. A major flood event or storm surge during the lengthy construction process could have the potential to wash unknown quantities of contaminated soil into the Providence River, directly across from the East Bay Bike Path. The applicant copied and pasted the phrase from the criteria guidelines "*will not result in significant adverse environmental impacts or use conflicts, including but not limited to, taking into account cumulative impacts*" and just changed "will not" to "does not". However, the applicant provides no justification and does not show any evidence of having taken cumulative impacts into account. The presence of high levels of contamination and hazardous substances at the site is the result of more than a century of industrial pollution and significant negative environmental impacts at the site and at nearby properties. The waters of the Providence River and sediment within Corliss Cove are impaired. The proposed alteration would be an additional construction project which would be adding to the cumulative impacts of a waterfront property which is already degraded and negatively impacts the adjacent communities without providing any benefit such as public access.

(3) The applicant makes the argument that no other location at the site is suitable, but the project itself is not suitable for the site and does not need to be built.

(4) The applicant makes the case that alternative locations to set the liquefier farther inland would require additional construction such as additional piping, moving an access road, and further raising the level of the stormwater treatment system. This appears to contradict their statement for the previous criteria, and also appear to be safer options given that raising the level of the stormwater treatment system would better protect it from storm surge or other severe weather events.

(5) The applicant states that the alteration is not the result of any actions by National Grid LNG or The Narragansett Electric Company, yet the responses given for criteria (3) and (4) detail a list of reasons why the proposed site is the only possible location given the existence and locations of equipment and manmade structures which were built by the applicant and/or its predecessors in title.

(6) The reasons stated in the applicants response to this criteria do not constitute undue hardship. The guidelines clearly state that "mere economic diminution, economic advantage, or

inconvenience does not constitute a showing of undue hardship that will support the granting of a variance."

An Assent for a variance should only be granted if all six criteria are met. There are valid questions of whether the applicant met *any* of the criteria, but there are certainly strong concerns on criteria (1) and (2) given the complete lack of justification or discussion around existing contamination and cumulative impacts of the proposed alteration. Therefore, the variance should be denied.

Section 140 - Setbacks

Part B. of Section 140 clearly maintains that setbacks should be maintained, including on existing manmade shorelines, for categories of alterations that include (1) Filling, removal, or grading, except when part of an approved alteration involving a water-dependent activity or structure (Section 300.2), or (4) Industrial structures, commercial structures, and public recreation structures that are not water dependent (Section 300.3).

The proposed liquefier is not water dependent and does not meet the criteria for a variance, so the 50 foot setback should be maintained.

Section 145 - Climate Change and Sea Level Rise

While the applicant acknowledges that climate change and sea level rise will impact the proposed facility, and planned the facility for a height that incorporates 1.5 feet sea level rise and the wave action of a 100 year storm, this is not sufficient to address the enforceable policies of Section 145. In Part C, the policies state that: *(emphasis added)*

(1) "The Council will review its policies, plans and regulations to *proactively plan for and adapt to climate change and sea level rise*. The council will integrate climate change and sea level rise scenarios into its operations to prepare for these new, evolving conditions and *make our coastal areas more resilient*."
(2) The Council's sea level rise policies are based upon the *CRMC's legislative mandate* to preserve, protect, and where possible, *restore* the coastal resources of the state through *comprehensive and coordinated long-range planning*.
(3) "... *the policies of the Council may take into account different risk tolerances for differing types of public and private coastal activities*. In addition, this long term sea level change base rate will be revised by the Council periodically to address new scientific evidence."

Part of proactively planning for climate change needs to include an especially high level of scrutiny for any new fossil fuel infrastructure which is subject to CRMC's enforceable policies, especially when the facility is not needed and would lock Rhode Islander's into using (and paying for) climate change causing fossil fuels for the next 25 years.

Planning for a 100-year storm is no longer sufficient, climate change means increased frequency and intensity of storms. The risk factors and probabilities used to determine what a 100, 500, or 1,000 year storm are no longer valid as more sever storms are happening more frequently. As is noted in the findings of Section 210, the head of funnel shaped embayments like Narragansett Bay are especially susceptible to storm surge. The 1938 hurricane was 13 feet over the mean

high water mark, with waves 10 feet high and more above the storm surge level. CRMP regulations outline a clear mandate to make coastal areas more resilient to climate change, not more high risk. With the proposed facility, the question is not just whether the facility would be submerged, but how a severe hurricane and storm surge could impact a facility that contains complex processes involving hazardous materials. As a storm surge travels up Narragansett Bay it gathers debris from boats, trees, buildings, scraps of metal, etc which then act like battering rams, striking stationary objects in the storm surge path. The Port of Providence sits at sea level and is filled with high risk and vulnerable fossil fuel and chemical facilities. The challenge of making this crucial and highly vulnerable section of coastline more resilient to the impacts of climate change is a tremendous and urgent task. Adding LNG liquefaction would add risk factors and does not improve resiliency.

There is no need for LNG liquefaction in Rhode Island or in New England. National Grid does not demonstrate the need because there is no data to support the claim. Even if there was a need for additional LNG supply, this proposal would not meet that need in the state because it does not change the storage capacity and would not provide any additional LNG beyond what is already available. Finally, even if the proposal did produce additional LNG and if there were a need for it (which there isn't), it would still not be a water-dependent facility and would not have to be placed along the coastline in such a high risk location. These arguments are for illustrative purposes only, given that there is no demonstrated need for LNG liquefaction in the first place.

RI Coastal Resources Management Council is mandated to conduct comprehensive and long-range planning for all coastal waters and adjacent lands, ranging from pristine protected areas to industrial waterfronts. An industrial waterfront does not need to be filled with climate-causing, health risk inducing, hazardous fossil fuel infrastructure. Comprehensive long-range planning around climate change and industrial ports such as the Port of Providence could utilize the industrial waterfront for activities which increase climate resilience and adaptation, promote renewable energy development, and support a Just Transition off of fossil fuels into green industries and green manufacturing that promote responsible and equitable economic development. The Just Transition framework is a long range comprehensive plan, but the immediate first step is to stop building out unnecessary new fossil fuel infrastructure.

Section 200.6 Type 6 Industrial Waterfronts and Commercial Navigation

The proposed liquefier is not dependent on water, is not related to shipping or commercial fisheries, does not require being on lands adjacent to Type 6 waters, and is therefore inconsistent with Section 200.6. Part C states that the Council's policies are:

(1) The Council's goals for Type 6 waters and adjacent lands under Council jurisdiction are to encourage and support modernization and increased commercial activity related to shipping and commercial fisheries.
(2) Highest priority uses of Type 6 waters and adjacent lands under Council jurisdiction are: (a) berthing, loading and unloading, and servicing of commercial vessels; (b) construction and maintenance of port facilities, navigation channels, and berths; and (c) construction and maintenance of facilities required for the support of commercial shipping and fishing activities.

The proposed facility is not consistent with any of the priority uses listed. The applicants characterization of the proposal as a modernization of the facility is also inaccurate, and it will not increase the "efficiency" of the existing storage tank. While it's true that it will replace incoming truck traffic by filling the storage tank with LNG produced on site from the pipeline, National Grid's application to FERC makes it clear that the purpose of the proposed facility is to be primary source for LNG across National Grid's network. The liquefier will produce far more LNG than can be stored in the existing tank, and the tanker trucks exporting LNG out to all of the other storage tanks across the region will be equal to, if not greater than, the incoming trucks that currently fill the tank. Actual improvements in efficiency would reduce our demand for the LNG currently stored in the tank, and would therefore reduce the amount of trucks needed to fill it. Instead, the proposed facility would contractually obligate the continued production and export of large amounts of LNG for the next 25 years.

As is addressed under Section 300.8, the facility itself is not needed. Within Section 200.6, it is clear that the the proposed facility does not need to be sited in a coastal area and is not the priority for Type 6 Industrial Waterfronts. In the event of an LNG spill or accident, the proposed facility would severely interfere with activity at nearby water-dependent industries, and could even trigger secondary incidents at other facilities. The Keyspan LNG application for an LNG import facility at this location was denied by FERC due to safety concerns. While it is true that there has never been an accident on an LNG tanker ship, there have been accidents with LNG storage tanks, LNG trucks, and LNG liquefaction facilities, such as the massive explosion in Skikda Algeria which killed 23, injured 74 others, and extended a large distance off site.

An enforceable policy in Section 200.6 says that "The Council shall prohibit activities that substantially detract from or interfere with these priority uses." The Council would be justified in stating that the proposed facility has the potential to substantially detract from or interfere with other priority uses, and on these grounds should be prohibited.

Section 210 Shoreline Features, Section 210. 6 Manmade Shorelines

Part A of Section 210 acknowledges that storm surge flooding is a principal concern of waterfront property owners, and states: "Storm surge occurs when a combination of low atmospheric pressure and the force of high winds over a large expands of open water cause sea level to rise dramatically along the coast, *particularly at the head of funnel-shaped embayments like Narragansett Bay.*" (emphasis added, due to the fact that this is where the proposed project is located, on the wrong side of the hurricane barrier). It also notes that during the 1938 hurricane, the storm surge in Providence forced water levels 13 feet above mean high water, with waves 10 feet high or more measured on top of the surge level. It goes on to state "such events are not rare; the state has been struck by 73 hurricanes in the past 350 years, 13 of which have causes severe flooding and erosion." Part B of Section 210.6 indicates that as of 1978, 25% of the Narragansett Bay shoreline has been sheathed in manmade features, but many would not survive a major hurricane.

The applicant states that "the slope protection/armoring has been designed to withstand the 100-year storm event." This is woefully inadequate, given the noted history of previous hurricane storm surges and the reality of climate change which will bring more frequent and more intense

storms. 100 year storms will happen much more frequently, and unfortunately it is not unlikely that we will experience storm events which are more severe than a 100 year storm.

Section 210.6 Part B-2 also states that "manmade shorelines usually have a major impact on the appearance of the shore, interfere with public access to and along the coast, and may alter erosion-accretion processes on neighboring beaches." The applicant proposes to conduct construction activity in contaminated soil over an extended period of time, proposes grading and filling to be conducted over a large areas, and is requesting a variance on the setback requirements to engage in these activities within 50 feet from the coastline. Even without a major storm event, the proposed activities do pose a risk to alter erosion-accretion processes on nearby beaches, and must also be considered as significant cumulative impacts on top of the existing impacts of the current manmade shoreline (see comments related to Section 120.2 above).

Section 220. Areas of Historic and Archaeological Significance

Within Section 220, Part B Findings, it is stated that "the coastal zone contains an abundant and diverse number of Native American Indian settlements, some dating back at least 3,000 years. The bulk of the information still to be obtained concerning Rhode Island's prehistory is associated with sites in the coastal zone." In Part C. Policies, it states "The Council's goal is to, where possible, preserve and protect significant historic and archaeological properties in the coastal zone. Preservation of significant historic and archaeological properties is a high priority use of the coastal region. Activities which damage or destroy important properties shall be considered a low priority."

The applicant does not include Section 220 within the federal consistency review application, and makes no reference to any discussion of potential impact to sites with historic or archaeological significance. However, in National Grid's application to FERC, under Docket CP16-121, Resource Report 4 Cultural Resources, there is extensive discussion and documentation of archaeological findings.

The Sassafras Point Station, a building on the property which was part of a former manufactured gas plant, had also been under consideration for inclusion on the National Registry as a historic property, though it was later deemed to be to not be eligible due to degradation. National Grid's archaeological consultant, "Public Archaeology Laboratory" (PAL) determined that coastal areas around the confluence of the Providence and Seekonk Rivers were "optimal conditions for the location of prehistoric settlements" and that "the variety of fresh and saltwater resources close to such areas would have made them attractive to prehistoric groups." (page 4-4 section 4.3.2).

On December 13th 2016, Neesu Wushuwunoag, Pomham Sachem of the Mashapaug Nahaganset Tribe, submitted a letter to the RI Department of Environmental Management expressing the Tribe's opposition to National Grid's LNG facility. The letter, included in full as Appendix E, states in part:

> "In section 4.5.2 *Native American Context* and section 4.5.2.1 *Documented Native American Archaeological Sites in the Vicinity of the Project Area of the* FIELDS POINT LIQUEFACTION PROJECT ENVIRONMENTAL REPORT RESOURCE REPORT NO. 4

submitted by National Grid LNG, LLC in March 2016 it is acknowledged that the lands slated for development have been the habitation of Aboriginal peoples for thousands of years prior to European contact and that at least 6 sites containing aboriginal artifacts are located near the proposed FPLNG project. As such the Tribe is particularly concerned that no effort was made to engage specifically with the Mashapaug Nahaganset Tribe, the ancestral inhabitants of these lands, to gauge concerns about these projects or to seek approval to move forward with these initiatives on lands that are held in trust by the Tribe."

"Further be advised that should the State of Rhode Island, any of its arms and/or extensions or any private commercial entity attempt to move forward with these projects without the expressed written consent of the Mashapug Nahaganset Tribe Ahtuskowoag Circle, the Tribe will proactively pursue any and all actions deemed appropriate to safeguard the integrity of its ancestral lands for the protection and support of its posterity and all natural inhabitants and residents of the lands of Rhode Island."

The applicant's lack of inclusion of any discussion of Areas of Historic and Archaeological Significance under Section 220 is evidence of an incomplete application and part of the grounds to deem the application inconsistent with the regulations and enforceable policies.

Section 300.1 Category B Requirements

National Grid's proposed project requires a Category B Assent under Section 300.1 Category B Requirements, which requires applicants to address each of eleven (11) topics in writing along with additional requirements listed for specific Category B activities and alterations in following sections (Sections 300.2, 300.3, 300,6, and 300.8). In addressing the 11 required topics for a Category B Assent, National Grid includes only a simple paragraph with 11 sentences, and does not sufficient address or demonstrate what is required, especially with topics 1, 2, 8, 9, 10, or 11:

1. Demonstrate the need for the proposed activity or alteration;

National Grid wrote that "the proposed liquefaction facility capacity has been fully subscribed by customers and enhances the use of the LNG facility and promotes economic growth." The customers National Grid refers to are Narragansett Electric Company and Boston Gas Company, both of which are National Grid subsidiaries. National Grid having a contract with itself does not constitute a need, and increased profitability for a private utility corporation does not equal economic growth, especially when ratepayers will be the ones paying for the entirety of the construction. National Grid does not demonstrate the need for the facility because it is not needed.

2. Demonstrate that all applicable local zoning ordinances, building codes, flood hazard standards, and all safety codes, fire codes, and environmental requirements have or will be met; **local approvals are required for activities as specifically prescribed for non tidal portions of a project in Sections 300.2, 300.3, 300.6, 300.8 (etc)**

National Grid wrote that the project will require FERC approval and will adhere to federal standards. This has not yet been determined, and a 2005 FERC ruling on the Keyspan LNG import facility proposal deemed that the existing storage tank did not meet federal safety standards. Furthermore, National Grid did not demonstrate that local standards have or will be

met, and does not demonstrate local approvals. In fact, National Grid has expressly refused to abide by RI's Public Involvement Plan requirements as stipulated in RI Gen. Laws §§ 23-19.14, Rhode Island Industrial Property Remediation and Reuse Act,("IPRRA") and is no longer seeking RIDEM approval of Short Term Remedial Action Plans (STRAPs) for construction activities in the contaminated soils. Finally, Mayor Jorge Elorza has expressly opposed the facility and will not be granting any local approvals.

8. Demonstrate that there will be no significant deterioration in the quality of the water in the immediate vicinity as defined by DEM;

National Grid's response discusses stormwater runoff but does not mention potential risks of runoff from contaminated soil or the potential for vertical migration of contaminants from the polluted and tidally influenced groundwater known to be present on the site. These are issues and concerns that have been brought before DEM, which has not yet released a public notice for the review of National Grid's 401 Water Quality Certification or RIPDES permit.

9. Demonstrate that the alteration or activity will not result in significant impacts to areas of historic and archaeological significance;

As described above, National Grid did not include any discussion on Section 220 previously in the application, and similarly failed to respond to the requirement to address this topic in writing under Section 300.1. With no answer given, National Grid clearly failed to demonstrate no significant impact.

10. Demonstrate that the alteration or activity will not result in significant conflicts with water-dependent uses and activities such as recreational boating, fishing, swimming, navigation, and commerce, and;

National Grid does not respond to this topic in writing and fails to demonstrate that the proposed facility will not result in significant conflicts with the water-dependent uses and activities listed. The written comments in response to Section 200.6 above show that the facility is not water-dependent and that there is the potential to conflict with other water-dependent uses.

11. Demonstrate that measures have been taken to minimize any adverse scenic impact (see Section 330).

National Grid also does not respond in writing to this topic and fails to demonstrate any measures taken to minimize the adverse scenic impact of the facility. Section 330 states that "In all areas adjacent to Type 3 and Type 5 waters and, where appropriate, adjacent to Type 6 waters, the public should, where possible, be provided a sense of the water from within the townscape. Views to and across the water through yards, between houses, and from roadways should be preserved and, where possible, created." There is no public access around the existing or proposed LNG facility, and the existing industrial infrastructure significantly blocks views of the water. The lack of waterfront access and public use of the coastal waters in South Providence stands in stark contrast to the ample waterfront views and activities available in downtown Providence, Fox Point, East Side Providence, and Blackstone Boulevard. The demographic differences, disparities, and lack of equity between these neighborhoods is part of what could be considered environmental racism or at least an socio-environmental disparity. National Grid does not acknowledge this, does not take any steps to minimize or mitigate the adverse scenic

impacts of their existing or proposed facility, and does not even take the time to respond to this required topic even if only to reject and dismiss it.

Based on the above comments for the required written comments and demonstrations in response to topics 1, 2, 8, 9, 10, and 11, No LNG in PVD believes that CRMC needs to deny National Grid's request for a Category B Assent. While there are additional comments to be made about inadequacies in National Grid's application under Sections 300.2, 300.3, and 300.6, the additional requirements listed in these specific Category B activities are effectually irrelevant because the applicant did not meet the basic demonstration requirements for a Category B Assent in the first place.

Section 300.8 Energy-Related Activities and Structures

As an energy related (generation, transfer, processing, or storage) activity, the proposed LNG liquefier is a Tier 3 facility under CRMC's Federal Consistency Manual, and is subject to additional requirements under Section 300.8 as well as the 1978 Energy Amendments to the Rhode Island Coastal Resources Management Program, discussed below. As was discussed in written comments responding to previous sections (Section 145, Section 210, and Section 210.6), National Grid's proposal does not adequately prepare for flood hazards when considering the potential for the combination of accelerating sea level rise, massive storm surge, and additional wave action on top of the storm surge level. The fact that the facility is a high risk energy facility compounds the risk, which also must be taken into the context of the surrounding area which contains numerous other high risk energy-related facilities. The proposed facility is also adjacent to a high risk chemical facility which stores seven (7) different substances regulated under the EPA's Risk Management Program (RMP), at quantities which are orders of magnitude above the trigger level that induces RMP regulations.

Under Part D. Additional Category B Requirements for Section 300.8, it states: "Shorefront sites shall demonstrate the need for access to navigable waters for cooling and/or process water." National Grid does not address or demonstrate this need; the facility is not water-dependent and does not need to be cited along navigable waters. The applicant also does not address or discuss the additional requirements of: "(a) environmental impacts, (b) social impacts, (c) economic impacts, (d) alternative sites, (e) alternative means to fulfill the need for the facility, (f) demonstration of need, and (g) consistency with state and national energy policies."

CRMP 1978 Energy Amendment, as amended February 23rd, 1982

Section 610.2 - Siting of Energy Facilities

Under the Policies and Regulations of Section 610.2-2 of the CRMP 1978 Energy Amendment, applicants such as National Grid are given the following requirements:

B. Applicants shall be further required to demonstrate by reliable and probative evidence that:

1. Alternative sites have been considered and rejected for environmental, economic and/or operational reasons.
2. Construction and/or operation will be in conformance with all applicable environmental standards, guidelines and objectives.

3. Siting will not cause secondary developments that are inconsistent with the State Guide Plan or approved municipal master plans.
4. Operation will not degrade aquifers or water bodies utilized for public water supply, and
5. Adequate procedures for the safe transport and/or disposal of products, materials and/or wastes hazardous to land or the coastal environment will be taken, including emergency containment and cleanup.

C. Applicants shall be further required to demonstrate by reliable and probative evidence that:

1. There is a need for the proposed facility, and
2. Impacts on public service requirements and in-state employment opportunities have been identified and considered.

D. Where on the basis of such evidence and/or demonstrations the Council finds a reasonable probability of noncompliance with any applicable Policy or Regulation, including B and C above, it shall require appropriate modification of or shall deny the application in question.

In response to requirement B-1, National Grid only states that "Constructing the liquefaction facility in an alternative location would require additional pipelines and land disturbance." There is no evidence provided of this, and no specific alternative sites were discussed or dismissed.

Under B-2, these written comments previously discussed how National Grid is not operating in conformance with applicable statewide environmental standards (RIDEM Site Remediation regulations).

In response to requirement B-5, National Grid only states that "the operation of the liquefaction facility will not result in the production of hazardous wastes at the facility" yet fails to discuss plans related to the safe management of the various hazardous wastes known to exist on site in the soil and groundwater.

National Grid fails to mention or respond to requirement C-1 and does not demonstrate the need for the proposed facility at all, let alone with reliable and probative evidence. This is because there is no evidence available to support the claim that the facility is needed. On these grounds alone, the application should be dismissed and deemed inconsistent. Instead of addressing or discussing this fundamental weakness of the application, National Grid makes vague claims such as "the proposed liquefaction facility will support and maintain the public welfare and the state's economy," and tries to focus attention on requirement C-2 stating that "the construction and operation of the liquefaction facility will create in-state employment opportunities." This does not address the fundamental fact that National Grid did not and can not demonstrate need for the facility. An equivalent investment of ratepayers dollars into weatherization and energy efficiency, especially for low-income tenants living in rental properties, would do far more to create in-state employment opportunities and improve public welfare and the state's economy.

Based on the failure to address requirements in both Part B and Part C of Section 610.2-2, noncompliance has been demonstrated and CRMC has the authority to deny the application in question according to Part D.

Section 640.2 Storage and Processing of Liquefied Gases
This section of the Coastal Resources Management Plan refers to the potential for proposals to import LNG via tanker ships into the Port of Providence. This was in fact proposed with the Keyspan LNG proposal over a decade ago, and was determined by FERC in 2005 to be unsafe. CRMP regulations to not discuss the potential for LNG liquefaction from domestic sources, which is only made possible due to the massive boom in domestic gas production levels which was brought about due to fracking.

The CRMP guidelines in Section 640.2 do acknowledge the risks and dangers related to LNG, stating: "As with other forms of highly concentrated energy, special scrutiny must be given to the location, design and operation of LNG/LPG facilities. Accidental releases of LNG could pose a public safety hazard" (640.2-1, Part C) and "little research has been completed on the long term environmental effects of an accidental release of LNG." (640.2-1, Part F) It states:

> "Should LNG accidentally spill on land or water it vaporizes rapidly forming a cold plume of flammable natural gas. If ignited quickly, LNG pools burn as very intense fires in a manner similar to gasoline. If ignition does not occur quickly, a flammable (explosive if confined) vapor plume may be carried downwind until a source of ignition is encountered or until the gas vapor-to-total volume is less than 5%."

Under Policies and Regulations, Section 640.2-2, it is clearly stated that

> "Applicants for such a permit shall be required to meet all permit and regulatory requirements set forth under Section 610.2-2, and to further demonstrate by a fair preponderance of evidence that facility siting and operation will be consistent with preservation of the health and safety of nearby populations."

Given the hazards inherent to LNG, and the following factors that risk the health and safety of nearby populations, including the:

- Risk of spill, leak, fire, or catastrophic vapor cloud explosion;
- Risk of placing a liquefaction facility (which is not water-dependent) in a coastal zone with expected sea level rise and potential for storm surge impact unmitigated by any hurricane barrier;
- Risk of placing a liquefaction facility adjacent to other high risk facilities including a chemical facility with very large quantities of hazardous substances regulated under the EPA's Risk Management Program;
- Risk of cumulative impacts being disproportionately carried by an Environmental Justice community which is already subject to numerous environmental hazards, socioeconomic inequalities, and health disparities;
- Risk of siting a liquefaction facility within close proximity of a federally qualified health center and the state's primary birthing center, children's hospital, and level one trauma center hospital;
- Risk of construction activity releasing known contaminants in the soil and groundwater which include, but are not limited to: complex mixtures of different polycyclic aromatic hydrocarbons (PAHs), total petroleum hydrocarbons (TPH), phenolic compounds, volatile organic compounds (VOCs) including benzene and naphthalene,

polychlorinated biphenyls (PCBs), ferri and ferrocyanide compounds, asbestos, and metals including lead and arsenic; with many locations in the site containing multiple hazardous substances at levels that exceed industrial allowances;

- Risk of expanding upon an old and oversized storage tank which was built in the 1970s and which was deemed not up to current safety standards in the 2005 Keyspan LNG decision;
- Risk of building out unnecessary new fossil fuel infrastructure when climate science demands a rapid transition to renewable energy;

It is thereby clear that the siting and operation of the facility will not be consistent with the preservation of the health and safety of nearby populations.

Section 400 Federal Consistency Review

Based on the sum total of all the individual issues, omissions, inaccuracies, and inconsistencies contained in the application and proposed facility, and raised within these written comments, the required response from the Rhode Island Coastal Resources Management Council is clear. **National Grid's proposed Fields Point Liquefaction Facility is not consistent with Rhode Island's federally approved Coastal Resources Management Program.**

Signed,

Elected Officials:

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Environmental Justice League of Rhode Island, 3 Bell St, Providence RI 02909 email@ejlri.org
The FANG Collective: 545 Pawtucket Ave, Pawtucket, RI 02860 contact@thefangcollective.org
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Appendix A: No LNG in PVD Petition
Appendix B: Position Paper
Appendix C: Public Involvement Plan Petition
Appendix D: No LNG in PVD Open Letter to RIDEM
Appendix E: Mashapaug Nahaganset Tribe letter to RIDEM

http://NoLNGinPVD.org | NoLNGinPVD@gmail.com | #NoLNGinPVD

August 10, 2017

Office of Waste Management
ATTN: Joe Martella, Senior Engineer
Rhode Island Department of Environmental Management
235 Promenade Street
Providence, RI 02908

RE: NATIONAL GRID LNG - COMMENTS ON PROPOSED LIQUEFACTION PROJECT AND HOLCIM DRIVEWAY STRAPs

No LNG in PVD is a coalition of residents, community organizations, businesses, churches, health care practitioners, students, educators, and elected officials opposed to National Grid's plans to build the "Fields Point Liquefaction Facility". We are writing to comment on the Short Term Response Action Plans (STRAPs) for the Proposed Liquefaction Project (RIDEM File Number SR-28-1152) and Holcim Driveway submitted May 12, 2017 and May 30, 2017 respectively.

We respectfully request that the Rhode Island Department of Environmental Management (RIDEM) holds no permit applicant above the environmental regulations it is charged to enforce. As the property owner, National Grid assumed responsibility for a historically contaminated property and is subject to regulatory limitations of restricted land use, overseen and enforced by RIDEM. Documents on the online docket for the former New England Gas Company MGP at 642 Allens Ave[1] show a disturbing attempt by National Grid[2,3] to avoid adhering to RIDEM's Remediation Regulations[4], and an even more disturbing pattern of RIDEM deferring to National Grid and allowing this.[5] This continued until the Federal Energy Regulatory Commission (FERC) informed National Grid that they are in fact required to comply with RIDEM's Remediation Regulations[6]. This has been covered in previous letters submitted by No LNG in PVD to RIDEM on November 1, 2016 and February 10, 2017, and confirmed by FERC in April 2017, but is being re-emphasized again due to comments by Joseph Martella at the community meeting held on

[1] http://www.dem.ri.gov/programs/wastemanagement/site-remediation/Providence-Gas-Co.php
[2] http://www.dem.ri.gov/programs/benviron/waste/Prov-Co/160926ha.pdf
[3] https://elibrary.ferc.gov/idmws/common/opennat.asp?fileID=14592397
[4] http://www.dem.ri.gov/pubs/regs/regs/waste/remreg11.pdf
[5] http://www.dem.ri.gov/programs/benviron/waste/Prov-Co/161021lr.pdf
[6] http://www.dem.ri.gov/programs/benviron/waste/Prov-Co/170407fl.pdf

August 9, 2017. At this meeting, Mr. Martella told community members and members of No LNG in PVD that the site in question is private property owned by National Grid and that RIDEM doesn't have authority over how a company chooses to use their property. The following comments are a reminder that National Grid does in fact need to comply with the Remediation Regulations, and RIDEM does in fact have the authority to approve or deny an applicant's proposals, and the authority to require property owners to consider other remedial alternatives instead of the applicant's proposal remedial actions (DEM-DSR-01-93 Section 7.09).

Based on the Remediation Regulations, No LNG in PVD asserts that RIDEM should <u>DENY</u> the STRAPs to National Grid, as the proposed activities do not qualify for a STRAP. If National Grid wishes to proceed they must fully remediate the contaminated site with a comprehensive Remedial Action Work Plan per DEM-DSR-01-93 Section 9 approved by RIDEM (DEM-DSR-01-93 Section 10). The following describes how National Grid does not qualify for a STRAP:

"Emergency or Short-Term Response Action shall mean any activities undertaken immediately following the discovery of a Release of Hazardous Material in order to completely or partially contain clean up or treat the Released Material and/or remove an Imminent Hazard if it exists (DEM-DSR-01-93 Section 3.18)."

> Per the definition of an Emergency or Short-Term Response Action in the Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases, to qualify a project must occur immediately following the discovery of a release, or the removal of an Imminent Hazard. Section 2.2 of the Liquefaction Project STRAP states that RIDEM issued a Letter of Responsibility on February 13, 1998 and site poses no Imminent Hazard, therefore this project does NOT qualify for a STRAP.

"No Emergency or Short-Term Response Action undertaken by the Responsible Party may be conducted in a manner which increases the potential for harm, either short-term or long-term, to human health or the environment (DEM-DSR-01-93 Section 6.01)." In addition the analysis of whether the proposed STRAP will have an increase in the potential for harm to human health or the environment can not be segmented from what the end use of the site is per DEM-DSR-01-93 Section 7.07(C)(2): "Community Meetings: The purpose of the meeting is to document community comments and concerns about the investigation, clean-up, and *reuse of the Contaminated-Site.*"

> 1. The proposed construction work would create the potential for harm to human health and the environment. During the proposed construction period contaminated soil and groundwater will be handled and stockpiled. The location of the project is on the Port of Providence which is subject to high winds and within the floodplain for a 100-year coastal storm (see figure 1), leading to a potential for release of contaminants. While the immediate area surrounding the existing LNG storage tank *might* not be flooded during a 100 year storm event, the location of the proposed construction activities is clearly within the flooding risk zone as determined by the RI Coastal Resources Management Council. Due to climate change, 100 year (1%) storms are becoming more likely and occurring more frequently. National Grid does not have control over

the likelihood or timing of a storm, and would not be able to sufficiently fortify an active construction site in advance of a storm. The proposed activities therefore represent an increase in the potential for harm for both human health and the environment.

Figure 1. STORMTOOLS map, developed by RI Coastal Resources Management Council and University of Rhode Island, showing the depth of water during a 100 year coastal storm.

2. Proposed construction activities will occur near existing fossil fuel infrastructure including an existing high pressure natural gas pipeline. The proposed activities include digging and operation of heavy machinery, as well as driving steel piles into the bedrock to create the foundation for the proposed liquefaction facility. Pile driving poses an increased potential for harm in three distinct ways. First, there is a slight chance it could increase the potential for seismic activity - on July 22, 2015 there was a 2.3 magnitude earthquake with an epicenter at Fields Point[7], almost directly at the location of the proposed pile driving, which is surrounded by sensitive and high risk fossil fuel and chemical facilities. Second, there is the potential for vertical migration of hazardous contaminants known to be present in the tidally influenced groundwater. Third, and most importantly, the major gas leak that occurred at National Grid's substation further down Allens Ave on March 29, 2017 was determined to have been caused by vibrations from nearby construction.[8] It is therefore not conjecture or hyperbole to state that construction activity, especially heavy machinery construction and vibrations from pile driving, would increase the risk of a major gas leak and therefore increase the potential for harm. Furthermore, it was later revealed that the gas leak resulted in the sprayed release of polychlorinated biphenyl (PCB)[9], a banned substance which is also present at 642 Allens Ave. In combination, the combined set of risks related to construction activities proposed in National Grid's STRAP application represent increases in the potential harm to both humans and the environment, and are grounds for denial.

[7] http://turnto10.com/archive/earthquake-jolts-rhode-island-in-early-morning-hours
[8] providencejournal.com/news/20170330/officials-construction-caused-gas-line-rupture-in-providence
[9] http://www.rifuture.org/pipeline-rupture-remediation/

3. It is impossible to separate the proposed STRAP activities from the overall project, the proposed liquefaction facility. There are immediate short-term risks and hazards related to liquefying natural gas and exporting LNG by truck, and long term risks and hazards related to climate change caused by human consumption of fossil fuels. The proposed facility would increase the potential for harm to human health and the environment in an Environmental Justice Focus Area that has already been overburdened by over a century of pollution related to fossil fuels. An additional facility represents additional potential for harm, and the community has very clearly expressed strong opposition to the proposed reuse of of the contaminated site.

"Emergency Permits shall not exceed ninety (90) days in duration (DEM-DSR-01-93 Section 6.05)."

The STRAP for the proposed Liquefaction Plant indicates: "The schedule for implementation of the work described herein will depend on receipt of the STRAP Approval for the RIDEM and receipt of other necessary permits and approvals. The Project is Projected to begin in 2017 and continue through 2019. Earth disturbing activities are not expected to begin until early 2018." As the duration is longer than 90 days, the work does not constitute short-term remediation and does not meet the duration requirements for an Emergency or Short-Term permit.

As described above, the Project does NOT meet the requirements of a Short-Term Response Action Plan. No LNG in PVD Coalition strongly requests that RIDEM DENY National Grid's STRAP applications. Any future earthwork on the site in contaminated soils must only be conducted under the full remediation of the site per DEM-DSR-01-93 Section 9 and all other applicable sections of the Rules and Regulations for the Investigation and Remediation of Hazardous Material Releases as amended November 2011.

Before making a final decision on this permit application, RIDEM should conduct and publish a Health Risk Assessment and include a comment period on the findings. No LNG in PVD expects that all submitted comments, whether verbal or written, will be posted by RIDEM along with responses from National Grid to all comments.

Enclosed below please find additional related comments on how this project is impacting an Environmental Justice community and how RIDEM is implementing their Environmental Justice policy for these STRAPs, as well as additional comments on technical aspects of the proposed STRAP activities. It remains No LNG in PVD Coalition's position that the STRAPs must be denied by RIDEM.

Signed,

Elected Officials:

Representative Edith Ajello, District 1
Representative Chris Blazejewski, District 2
Representative Moira Walsh, District 3
Representative Aaron Regunberg, District 4
Representative Marcia Ranglin-Vassell, District 5
Representative John Lombardi, District 8
Representative Grace Diaz, District 11
Senator Josh Miller, District 28
Senator Jeanine Calkin, District 30
Representative Susan Donovan, District 69
Providence City Councilman Sam Zurier, Ward 2

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Enclosure A) Additional technical comments

In addition to finding that the STRAP does NOT meet the requirements of an Emergency or Short-Term Response Action therefore requiring denial of the permit, the No LNG in PVD Coalition has compiled the following additional comments on the STRAP:

Inadequate notice and communication:

"The notice shall contain, at a minimum, the following information:" (DEM-DSR-01-93 Section 6.06)

- "A Brief description of Hazardous Waste Involved (DEM-DSR-01-93 Section 6.06(B))"

  Both the first and second public meeting notices had no mention of which hazardous waste is involved.

- "A brief description of the treatment action and/or other actions authorized by the permit (DEM-DSR-01-93 Section 6.06(C))."

  The description is limited to soil and groundwater management, and earthwork.

- "The duration and effective dates of the permit (DEM-DSR-01-93 Section 6.06(E))."

  The duration of work associated with the requested permits was not included in either notices.

National Grid did not hold a public meeting per RIDEM's regulations. "Community Meetings: The purpose of the meeting is to: 1) disseminate information about the Department's Site Remediation program and the specific *Contaminated-Site* of interest; 2) document community comments and concerns about the investigation, clean-up, and *reuse of the Contaminated-Site*, and 3) *engage in a dialogue with the public about the Contaminated-Site*. Community meetings will be organized by the Performing Party and will be *accessible* to those who wish to attend (considering public transportation and access for disabled. All "*equal participation*" among all involved should be established – avoiding panels, head tables, or auditorium presentations. Translation assistance for non-English speakers shall be provided by the Performing Party when appropriate (DEM-DSR-01-93 Section 7.07(C))."

National Grid refused to discuss the Reuse of the Contaminated-Site, the liquefaction facility, during the community meeting, which is stated in the purpose of a community meeting.

During the community meeting National Grid refused to acknowledge that there is any risk with the soil and groundwater. Effects from potential exposure to the contaminated material being handled were not discussed and were quickly dismissed. The words Contaminated, Carcinogenic,

Excess Lifetime Cancer Risk, Hazardous Material, Hazardous Substance and Hazardous Waste were absent from the dialogue, instead such contaminated material was referred to as "compounds". Even National Grid's poster on "What is a STRAP and What is a PIP" does not include the word Hazardous which is in RIDEM's definition of a STRAP. National Grid was engaging in public relations not in real engagement and dialogue with the public about a contaminated site.

Monitoring and Safety:

"The Responsible Party shall, throughout the implementation of that action, monitor and evaluate the performance, effectiveness and completeness of the action in abating, preventing or eliminating contamination and more specifically, the Imminent Hazard (DEM-DSR-01-93 Section 6.08)."

As National Grid has a history of non-compliance with safety regulations. Soil work conducted on the southwestern portion of the site for the "Holder 18-21" project was approved under a previous STRAP and was conducted in another area in the site known to have high levels of hazardous substances. A video[10] taken during the work in September 2016 shows visible dust blowing both on and off of the property, from uncovered piles of soil. After news came out about PCB contamination at the site of the major gas leak on Allens Ave in March 2017, another video[11] was taken that showed a soil stockpile being moved into a truck parked on Allens Ave, directly across from a parking lot for Rhode Island Hospital. None of the workers were wearing protective equipment other than hard hats, and there was no supervisor from National Grid immediately on site.

The No LNG in PVD coalition requests that an independent environmental monitor is allowed on site throughout the construction period of the STRAPs, and that the No LNG in PVD Coalition is reimbursed on a weekly basis for the cost of the independent monitor. The monitor will report back to the coalition and the public.

Section 4.1 of the STRAP states "In general, the fill consists of sands and gravels with cinders, cinder ash, coke and coal fragments."

Several of the borings indicate the soil is a silt or fine sand, both of which are significantly more susceptible to becoming airborne than a just sands and gravel. There is no discussion of how likely the cinder ash, coke and coal fragments may become airborne. In addition during the first public meeting National Grid indicated there was no threat to the soil having dust impacts. It is concerning that National Grid is downplaying the potential dust threat by what material they claim is predominant especially at a coastal site with potential for high winds.

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[10] **Video available:** https://drive.google.com/file/d/0ByoLfjPIG7k4b0xzOVdBcmswWGM/view?usp=sharing
[11] **Video available:**
https://drive.google.com/file/d/0B4mUxl7HhXyEbThtUmdDWk5GTTg/view?usp=sharing

RIDEM should require that National Grid provide copies of all air monitoring (Section 6.6.1 of STRAP) results to the No LNG in PVD Coalition on a daily basis.

Section 6.7 Decontamination Protocol lacks requirements to keep construction workers and their families safe. There is no discussion about workers cleaning up prior to eating or leaving the site, about not allowing food or drinks near where work is occurring with contaminated soil and groundwater.

- Will the person overseeing construction oversight have had OSHA Hazardous Waste Operations and Emergency Response Standard (HAZWOPER) Supervisor training?
- Will the construction workers have been HAZWOPER trained?
- What Personal Protective Equipment will the construction workers use?
- Will the construction workers be informed of the material they are working with?

Section 6.8 Soil Stockpile Management Requirements describes the contaminated soil being moved a minimum of three times before either being shipped off-site or buried beneath the cap.

- As this project is located on the coast, which is prone to high winds, stormwater and floodwater, No LNG in PVD Coalition requests that the contaminated soil is immediately stored in liquid tight containers that can be shipped when excavated, therefore limiting the migration of the contaminated soil to impact human health or the environment.

The STRAP lacks mitigation measures that will adequately prevent the spread of the contaminated material.

- Will trenches in be properly covered if rain is forecasted to prevent water from entering the contaminated material?
- Will work stop if it is raining or there are high winds?
- As the project is located on the coast, which adds the potential for high winds, it is requested that additional air monitoring occur along the perimeter of the site.

Ecological concerns

The project is located in potential habitat for the federally listed threatened red knot (*Calidris canutus rufa*). In addition 19 bird species that are protected by the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act may be potentially affected by the proposed activities according to U.S. Fish and Wildlife Service (USFWS) IPaC on July 5, 2017. It is requested that an Ecological Risk Assessment is conducted per (DEM-DSR-01-93 Section 8.05A) and report (DEM-DSR-01-93 Section 8.05B)

- "An Environmentally Sensitive Area shall mean any of the following areas: Areas which provide habitat for Federally endangered or threatened species as determined by the U.S. Department of Fish and Wildlife (DEM-DSR-01-93 Section 3.21)."
    - Please coordinated with the USFWS to determine if the Site provides habitat for red knot.
    - If it is determined the site does provide habitat, National Grid must comply with the Endangered Species Act.
    - If determined to be an Environmentally Sensitive Area, National Grid must meet the more stringent thresholds of Method 3 during any remediation work. "Method 3 shall mean the determination of appropriate remedial objectives based on the concentrations of

Hazardous Substances developed in accordance with Rule 8.04 (Method 3 Remedial Objectives) and Rule 8.05 (ecological Protection) of the Remediation Regulations (DEM-DSR-01-93 Section 3.49)."

Enclosure B) Environmental Justice Focus Area

National Grid's Public Involvement Plan, approved by RIDEM on June 28, 2017, states that "this Site is not located within an EJ Focus Area, therefore, the requirements of Rule 7.07B (fact sheets and enhanced communications) do not apply." The development of fact sheets and use of enhanced communication is an essential part of the Remediation Regulations and should not be cut out. Other elements of the regulations are also ignored due to this fundamental problem. Section 1.04 (Environmental Justice and Public Involvement) and Section 7.01 D (sign requirements) are applicable elements of the Remediation Regulations and need to be applied fully to the entirety of the property at 642 Allens Ave.

The static map of EJ Focus areas used by RIDEM is an outdated interpretation of the definition of Environmental Justice Focus Areas included in the Remediation Regulations: "Section 3.20 (Definitions) Environmental Justice Focus Areas shall mean areas defined by United States Census block groups that are in the highest fifteen percent (15%) of all Census block groups in Rhode Island with respect to the percent population identified as racial minorities or the highest fifteen percent (15%) of Rhode Island census block groups with respect to percent population with income identified as being twice the federal poverty level or below (utilizing the most recent and readily available data from the United States Census)."

A report generated by the EPA's EJSCREEN tool[12], which uses more recent and more readily available census data than the static EJ areas map on the RIDEM website[13] indicates that the demographics of the half mile radius around the 642 Allens Avenue site are:

- 87th percentile in Rhode Island for minority population
- 86th percentile in Rhode Island for low income population

This therefore meets the definition of Environmental Justice Focus Area in the Remediation Regulations. In addition, the population impacted by the site within a half mile radius is in the 83rd percentile for linguistic isolation, and in the 86th percentile for percentage of the population with less than a high school degree.

According to Section 1.04 of the Remediation Regulations: *"the Department will promote public participation based on the beliefs that individuals should have a timely, meaningful way to participate in decisions that impact them, and that public participation in its best form is an ongoing, two-way process that benefits both the public and the agency. The Department defines public participation as people getting timely and accurate information, being heard at meaningful times, and if interested,* ***contributing to the development of workable solutions****... Department's objective is to provide for proactive consideration of environmental justice concerns in order to help ensure that all* ***communities have a strong voice in environmental decision-making relative to the investigations and remediation of property regardless of race, color national origin, English language proficiency, or income.****"* (emphasis added)

[12] https://drive.google.com/file/d/0B4mUxl7HhXyEWU1nZDVHQmF0Qlk/view?usp=sharing
[13] http://www.dem.ri.gov/envequity/graphics/ejareas.jpg

In Environmental Justice Focus Areas, and especially with communities with limited english language proficiency and educational background, there is an even greater onus and responsibility for enhanced communication and ensuring that impacted communities understand the risks and are meaningfully involved in decision-making. This includes decisions related to Section 7.04 (development of at least two remedial alternatives) and Section 7.09 (Remedy Selection), which therefore justify comments made in opposition to the LNG Facility (National Grid's selected remedy) as well as the community demands for remedial alternatives that include 1) no action (not allowing for construction) and 2) full and comprehensive remediation of the entire property.

The following technical comments are additional argument, based on census data, refuting National Grid claims that there this is not an environmental justice site, and justifying that the site in question does in fact need to be considered an Environmental Justice Focus Area by RIDEM. Note that the following analysis focuses on the *percentage* of "minority population" in census tracts and uses the EPA definition of greater than 50% qualifying as Environmental Justice community, whereas RIDEM regulations define EJ areas as the top 15 percentile. The state as a whole has 25% "minority" population, while the half mile radius around the property is 66% "minority", which translates to the 87th percentile in the state (e.g. top 13 percentile).

> In the overall application to FERC, National Grid LNG (NGLNG) manipulated the analysis of demographic data by omitting key census tracts and block groups. There are six (6) Census Tracts, containing a total of 18 Block Groups, that fall within the 1 mile radius of the proposed facility. NGLNG incorrectly selects just two block groups (Census Tract 1.0.1, Block Group 1 and Census Tract 6, Block Group 1 as "the block groups closest to the project." While it is true that Census Tract 1.0.1, Block Group 1 is the only block group which contains the project site, it is misleading to state that this block group and Census Tract 6 Block Group 1 are "the block groups closest to the project." Both of these block groups cover a relatively large area, and at their furthest points are much further from the project site than the entirety of other block groups such as Census Tract 1.01 Block Groups 2, 3, and 4; Census Tract 1.02 Block Group 1; and Census Tract 5 Block Groups 1 and 3. When the traffic impacts of the project construction and operation are taken into account, the project activities directly impact the residential census blocks that include Ernest Street, Eddy Street, and Thurbers Ave: Census Tract 1.01 Block Group 3, Census Tract 1.02 Block Group 1, and Census Tract 5 Block Groups 1 and 3.
>
> After incorrectly selecting Census Tract 1.0.1 Block Group 1, and Census Tract 6 Block Group 1 as "the block groups closest to the project", NGLNG emphasizes multiple times that these block groups "have an overall 'minority' population less than the general USEPA guideline of 50 percent" with 'minority' populations of "42.3% and 31.3% respectively, as compared to the city average of 63.3%." This is also a misrepresentation of demographic data, which NGLNG uses to intentionally mischaracterize the area as having "majority White and affluent populations."
>
> NGLNG states that Census Tract 1.01 Block Group 1 has a population of 1,422 people and is 42.3% 'minority' based on data from U.S. Census Bureau, 2009-2013 5-Year American Community Survey. Additional demographic census data available from ProvPlan's Rhode Island

Community Profiles shows that this block group includes College/University Dorm population of 1,1752. This is based on Johnson and Wales University (JWU) building dormitories in the mid to late 2000s. In 2000, this census block group had a population of 682 which was 54% 'minority', by 2010 the addition of 1,175 college students led to a population of 1,812 which was 42.3% 'minority.' This additional data complicates NGLNG's conclusions. First, it was only due to the recent infusion of a majority (~65%) white resident student body that this block group no longer meets the 50% threshold set by USEPA, the remaining long term residential neighborhood is still over the 50% threshold. Furthermore, youth - including college students - should be a group in need of special attention and protection from the harms of negative environmental impacts. NGLNG used misleading data, based on the JWU student body demographics, to claim that there are no environmental justice impacts from the project, when in reality there is both a residential community of color, and a community of undergraduate students, that are directly impacted within Census Tract 1.01 Block Group 1. Both of these groups are EJ populations.

The other area highlighted by NGLNG as being in most directly impacted and less than 50% 'minority' is Census Tract 6 Block Group 1. This block group has a very low population size of 336, and a very large area stretching all the way to the Jewelry District in downtown Providence. The farthest point within this block group is over 1.5 miles away from the proposed project location. ProvPlan Community Profiles Data for this block group_ shows that the majority of the people in it live in group quarters (211 people) or are also college / university dorm residents (94 people), according to 2010 census data. The area includes at least one substance abuse rehabilitation facility, Meeting Street School for children with developmental disabilities (2,750 feet from the facility site), Providence Community Health Center's Chaffee Health Center (2,250 feet from the facility site), and the Hospitals complex including RI Hospital and Women and Infants Hospital (just over 1 mile from the project site). Once again, while NGLNG uses the block group's 'minority' population percentage of 31.3% to conclude that there is no environmental justice impact, in fact this block group contains a large number of very sensitive populations.

Meanwhile, in only focusing on these two block groups (which happen to be the only two block groups within the 1 mile radius from the proposed facility that have overall 'minority' populations less than 50% USEPA threshold), NGLNG excluded other directly impacted census tracts and block groups outlined above. Specifically, in Census Tract 5, the entirety of both block groups 1 and 3 are closer to the project site than large sections than the two block groups highlighted by NGLNG. Census Tract 5 includes the busy intersection of Eddy St and Thurbers Ave which carries the majority of truck traffic in and out of Port of Providence. All trucks leaving the project site and heading south on I-95 travel on residential Eddy Street through this Census Tract. This Census Tract is an asthma hotspot that is tied with the highest asthma rates anywhere in Rhode Island. Block group 1 is 93.7% 'minority' and block group 3 is 97.5% 'minority.' And yet this is omitted from NGLNG's so-called environmental justice "analysis" in order to make false statements, mischaracterize the community they are impacting, and attempt to hide the reality that the proposed project includes large environmental justice impacts and concerns.

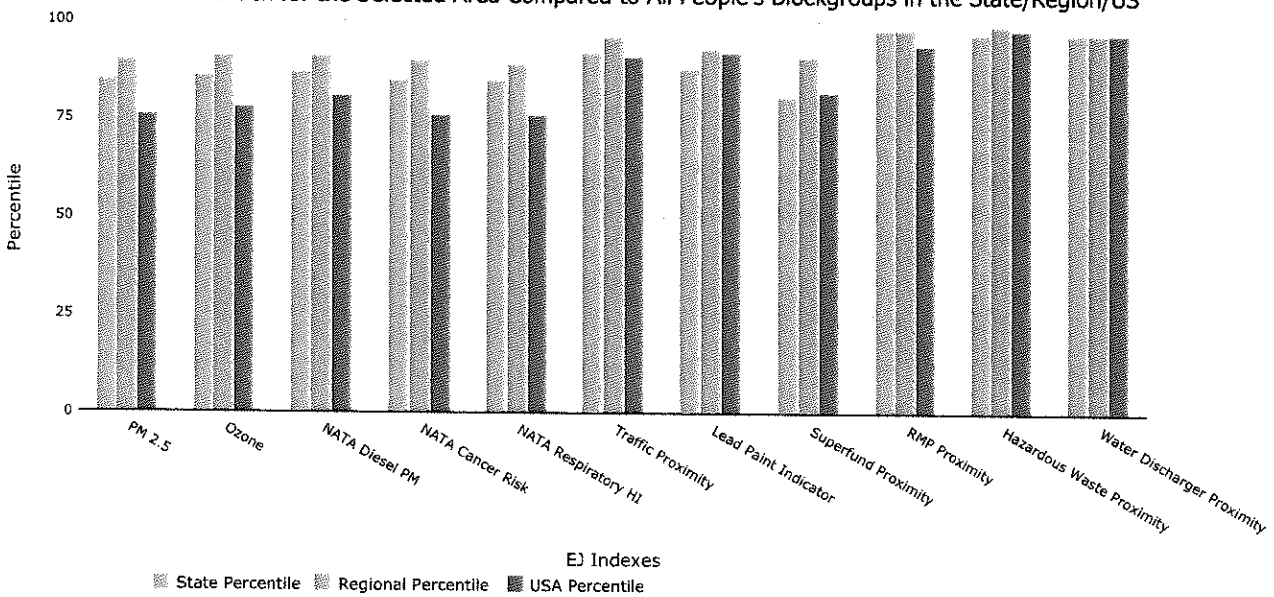
Save as PDF

EJSCREEN Report (Version 2016)

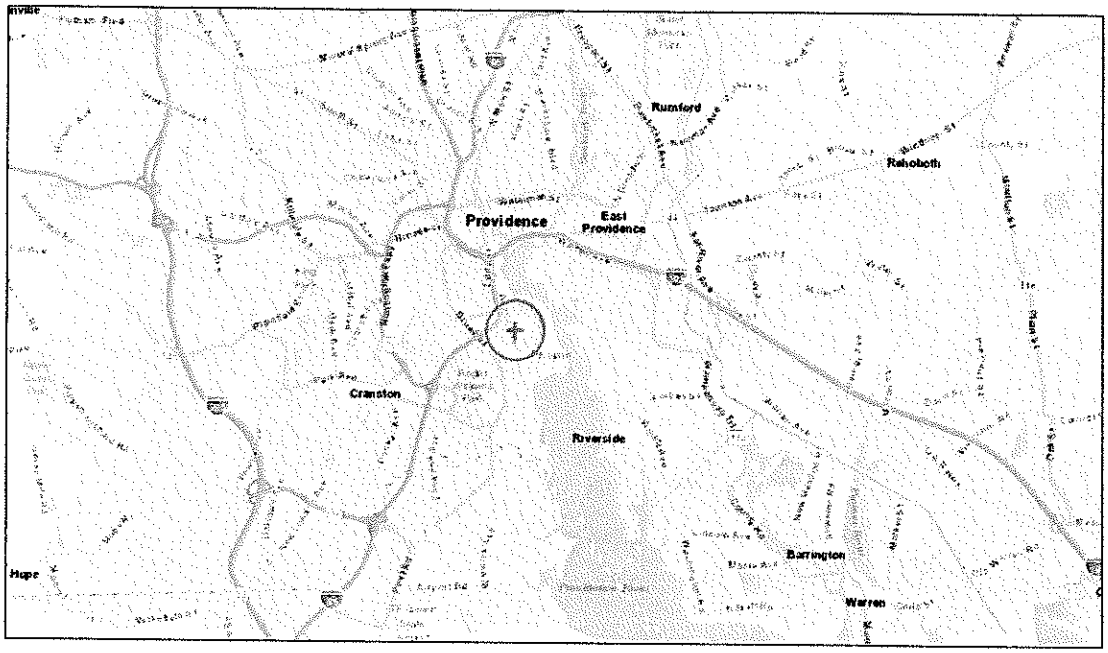
0.5 mile Ring Centered at 41.795673,-71.397639
RHODE ISLAND, EPA Region 1
Approximate Population: 3,717
Input Area (sq. miles): 0.79

Selected Variables	Percentile in State	Percentile in EPA Region	Percentile in USA
EJ Indexes			
EJ Index for Particulate Matter (PM 2.5)	85	90	76
EJ Index for Ozone	86	91	78
EJ Index for NATA* Diesel PM	87	91	81
EJ Index for NATA* Air Toxics Cancer Risk	85	90	76
EJ Index for NATA* Respiratory Hazard Index	85	89	76
EJ Index for Traffic Proximity and Volume	92	96	91
EJ Index for Lead Paint Indicator	88	93	92
EJ Index for Superfund Proximity	81	91	82
EJ Index for RMP Proximity	98	98	94
EJ Index for Hazardous Waste Proximity+	97	99	98
EJ Index for Water Discharger Proximity	97	97	97

EJ Index for the Selected Area Compared to All People's Blockgroups in the State/Region/US



This report shows the values for environmental and demographic indicators and EJSCREEN indexes. It shows environmental and demographic raw data (e.g., the estimated concentration of ozone in the air), and also shows what percentile each raw data value represents. These percentiles provide perspective on how the selected block group or buffer area compares to the entire state, EPA region, or nation. For example, if a given location is at the 95th percentile nationwide, this means that only 5 percent of the US population has a higher block group value than the average person in the location being analyzed. The years for which the data are available, and the methods used, vary across these indicators. Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on appropriate interpretations and applications of these indicators. Please see EJSCREEN documentation for discussion of these issues before using reports.



June 29, 2017
Buffer Area
Digitized Point

1:144,448

Sites reporting to EPA	
Superfund NPL	0
Hazardous Waste Treatment, Storage, and Disposal Facilities (TSDF)	0
National Pollutant Discharge Elimination System (NPDES)	1

Selected Variables	Value	State Average	Percentile in State	EPA Region Average	Percentile in EPA Region	USA Average	Percentile in USA
Environmental Indicators							
Particulate Matter (PM 2.5 in $\mu g/m^3$)	7.76	7.65	54	8.06	29	9.32	17
Ozone (ppb)	45	44.8	65	42.8	72	47.4	31
NATA* Diesel PM ($\mu g/m^3$)	1.19	0.666	95	0.711	80-90th	0.937	70-80th
NATA* Air Toxics Cancer Risk (risk per MM)	38	34	73	33	70-80th	40	<50th
NATA* Respiratory Hazard Index	1.6	1.4	68	1.5	60-70th	1.8	<50th
Traffic Proximity and Volume (daily traffic count/distance to road)	800	550	83	320	90	590	84
Lead Paint Indicator (% pre-1960s housing)	0.77	0.53	78	0.46	83	0.3	90
Superfund Proximity (site count/km distance)	0.095	0.21	24	0.16	56	0.13	65
RMP Proximity (facility count/km distance)	2.5	0.43	99	0.3	99	0.43	97
Hazardous Waste Proximity (facility count/km distance)+	0.91	0.18	97	0.12	99	0.11	99
Water Discharger Proximity (count/km)	2	0.56	98	0.43	97	0.31	98
Demographic Indicators							
Demographic Index	61%	28%	86	24%	92	36%	82
Minority Population	66%	25%	87	22%	90	37%	77
Low Income Population	59%	31%	86	26%	91	35%	84
Linguistically Isolated Population	12%	5%	83	5%	87	5%	86
Population with Less Than High School Education	31%	15%	86	10%	94	14%	89
Population under Age 5	6%	5%	61	5%	61	6%	49
Population over Age 64	6%	15%	15	15%	11	14%	18

*The National-Scale Air Toxics Assessment (NATA) is EPA's ongoing, comprehensive evaluation of air toxics in the United States. EPA developed the NATA to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that NATA provides broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. More information on the NATA analysis can be found at: https://www.epa.gov/national-air-toxics-assessment.

+The hazardous waste environmental indicator and the corresponding EJ index will appear as N/A if there are no hazardous waste facilities within 50 km of a selected location.

For additional information, see: www.epa.gov/environmentaljustice

EJSCREEN is a screening tool for pre-decisional use only. It can help identify areas that may warrant additional consideration, analysis, or outreach. It does not provide a basis for decision-making, but it may help identify potential areas of EJ concern. Users should keep in mind that screening tools are subject to substantial uncertainty in their demographic and environmental data, particularly when looking at small geographic areas. Important caveats and uncertainties apply to this screening-level information, so it is essential to understand the limitations on

appropriate interpretations and applications of these indicators. Please see EJSCREEN documentation for discussion of these issues before using reports. This screening tool does not provide data on every environmental impact and demographic factor that may be relevant to a particular location. EJSCREEN outputs should be supplemented with additional information and local knowledge before taking any action to address potential EJ concerns.

CRMC HEARING PLAN SET

PROPOSED LIQUEFACTION FACILITY
PROVIDENCE, RHODE ISLAND

SECTION 1: Figures from *"CZMA – Federal Consistency Review, Liquefaction Facility, National Grid LNG LLC, 121 Terminal Road, Providence, Rhode Island"* dated October 2016, prepared by GZA and submitted to CRMC

1- Liquefaction Plant Project Locus MAP October 2016
2- Existing Conditions Plan
3- Existing Impervious Conditions Plan
4- Temporary Laydown Area Erosion and Sediment Controls
5- Temporary Sedimentation and Erosion Controls Details
6- Soil Storage Area Plan
7- Liquefaction Work Area Erosion and Sediment Controls
8- Liquefaction work Area- Existing Revetment and Cross Sections
9- Liquefaction Work Area- Proposed Slope Armoring, Existing Revetment and Cross Sections
10- Stormwater Management Plan
11- Stormwater Management Details Sand Filter
12- Stormwater Management Details Concrete Forebay
13- Proposed Monitoring Well Re-Installation Plan
14- Proposed Final Conditions Plan
15- Proposed Impervious Conditions Plan
16- Liquefaction Work Area-Proposed Revetment and Cross Sections

SECTION 2: Figures from *"Response to Comments, Proposed Liquefaction Project, Providence, Rhode Island"* dated March 15, 2017, prepared by National Grid and submitted to CRMC

17- Overall Aerial
18- Proposed Liquefaction Laydown Area
19- Proposed Final Conditions Plan
20- Site Plan
21- Remediated Areas
22- Liquefaction Plant Project Locus Map September 2016
23- Existing Conditions Plan
24- Existing Impervious Conditions Plan
25- Temporary Laydown Area Erosion and Sedimentation Controls
26- Temporary Sedimentation and Erosion Control Details
27- Soil Storage Area Plan
28- Liquefaction Work Area Erosion and Sedimentation Controls
29- Liquefaction Work Area- Existing Revetment Wall and Cross Sections
30- Liquefaction Work Area-Proposed Slope Armoring, Existing Revetment and Cross Sections
31- Stormwater Management Plan
32- Stormwater Management Details Sand Filter
33- Stormwater Management Details Concrete Forebay
34- Proposed Monitoring Well Re-Installation Plan

RECEIVED
OCT 06 2017
COASTAL RESOURCES MANAGEMENT COUNCIL

35- Proposed Final Conditions Plan
36- Proposed Impervious Conditions Plan

SECTION 3: Figures from *"Information Concerning Variance Request and Handling of Major Weather Events"* dated June 14, 2017, prepared by National Grid and submitted to CRMC

37- Aerial Photograph
38- 50-Foot Setback
39- Liquefaction Work Area- Proposed Revetment and Cross Sections
40- Proposed Liquefaction Equipment Over Aerial Photograph

SECTION 4: Miscellaneous Figures

41- Proposed Liquefaction Equipment Over Aerial Photograph

SECTION 1

Figures from "CZMA – Federal Consistency Review, Liquefaction Facility, National Grid LNG LLC, 121 Terminal Road, Providence, Rhode Island" dated October 2016, prepared by GZA and submitted to CRMC

NATIONAL GRID
LIQUEFACTION PLANT
642 ALLENS AVENUE PROVIDENCE, RHODE ISLAND

OCTOBER 2016

PREPARED FOR:

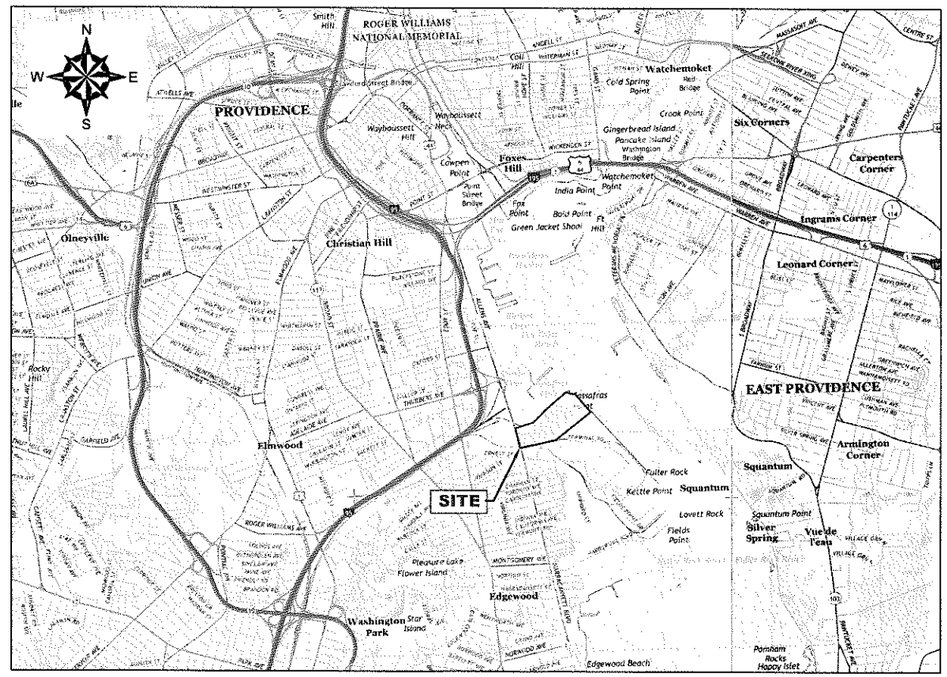
nationalgrid

PREPARED BY:

GZA GEOENVIRONMENTAL, INC.
530 BROADWAY
PROVIDENCE, RHODE ISLAND 02909

DESIGNED BY:

KIEWIT ENGINEERING AND DESIGN CO.
9401 RENNER BOULEVARD
LENEXA, KANSAS 66219



PROJECT LOCUS MAP

SOURCE: USGSSTORE.GOV

0 1000' 2000' 4000' 6000'
SCALE: 1 INCH = 2000 FEET

INDEX OF DRAWINGS	
Sheet #	Sheet Title
1	COVER
2	EXISTING CONDITIONS PLAN
3	EXISTING IMPERVIOUS CONDITIONS PLAN
4	TEMPORARY LAYDOWN AREA EROSION AND SEDIMENTATION CONTROLS
5	TEMPORARY SEDIMENTATION AND EROSION CONTROL DETAILS
6	SOIL STORAGE AREA PLAN
7	LIQUEFACTION WORK AREA - EROSION AND SEDIMENTATION CONTROLS
8	LIQUEFACTION WORK AREA - EXISTING REVETMENT AND CROSS SECTIONS
9	LIQUEFACTION WORK AREA - PROPOSED SLOPE ARMORING, EXISTING REVETMENT AND CROSS SECTIONS
10	STORMWATER MANAGEMENT PLAN
11	STORMWATER MANAGEMENT DETAILS - SAND FILTER
12	STORMWATER MANAGEMENT DETAILS - CONCRETE FOREBAY
13	PROPOSED MONITORING WELL RE-INSTALLATION PLAN
14	PROPOSED FINAL CONDITIONS PLAN
15	PROPOSED IMPERVIOUS CONDITIONS PLAN

FOR PERMITTING ONLY

THE INFORMATION SHOWN ON THE DRAWING IS SOLELY FOR USE BY NATIONAL GRID OR THE NATIONAL GRID'S DESIGNATED REPRESENTATIVE FOR THE SPECIFIC PROJECT AND LOCATION IDENTIFIED ON THE DRAWING. THE DRAWING SHALL NOT BE TRANSFERRED, REUSED, COPIED, OR ALTERED IN ANY MANNER FOR USE AT ANY OTHER LOCATION OR FOR ANY OTHER PURPOSE WITHOUT THE PRIOR WRITTEN CONSENT OF GZA AND NATIONAL GRID. ANY TRANSFER, REUSE, OR MODIFICATION TO THE DRAWING BY OTHERS, WITHOUT THE PRIOR WRITTEN EXPRESS CONSENT OF GZA AND NATIONAL GRID, WILL BE AT THE USER'S SOLE RISK AND WITHOUT ANY RISK OR LIABILITY TO GZA AND NATIONAL GRID.

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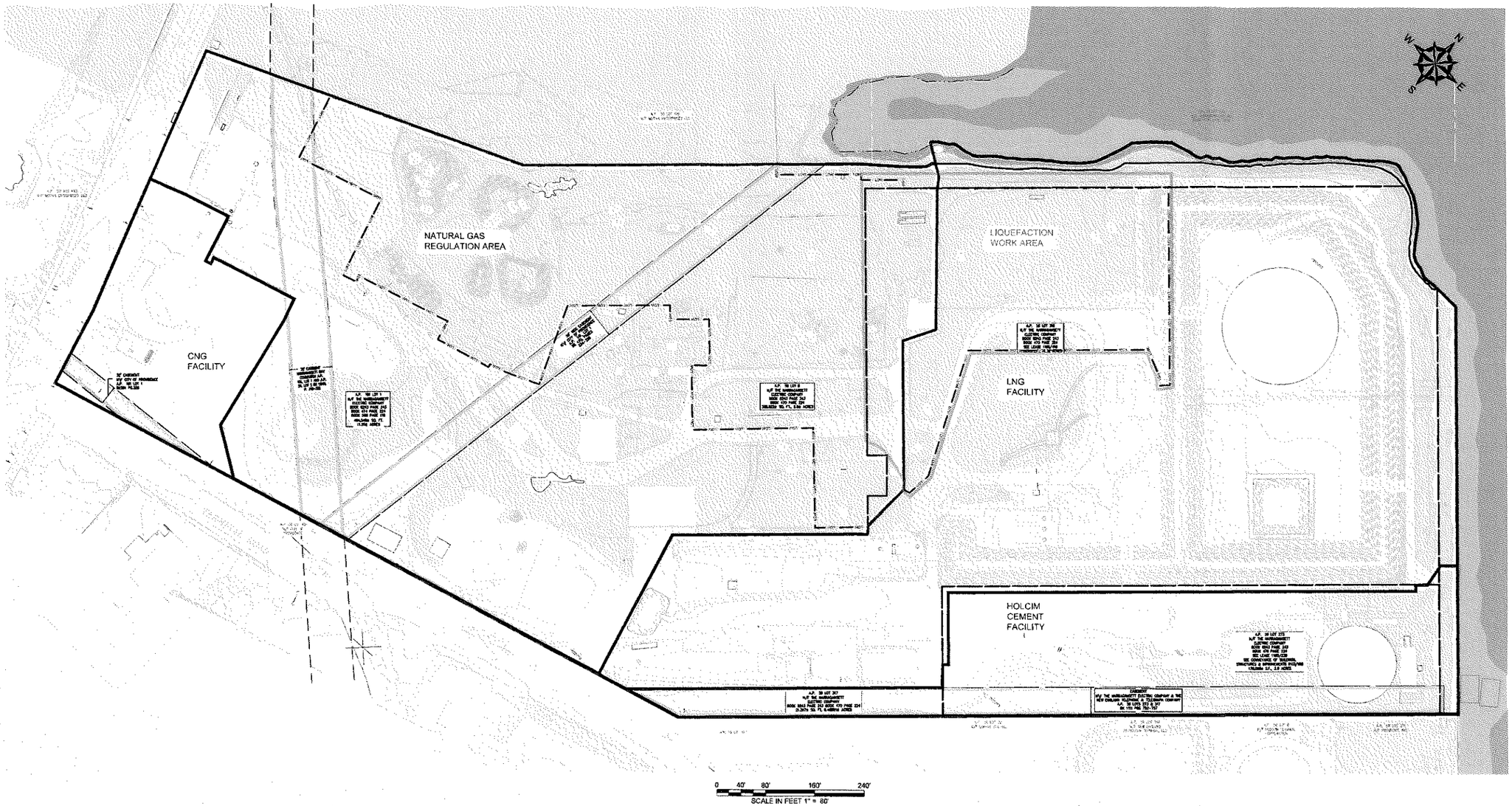

NOT TO SCALE

GENERAL NOTES:

1) BASE MAP DEVELOPED FROM THE FOLLOWING:

- ELECTRONIC CAD FILE "ACAD-7257PL.DWG" PROVIDED BY VANASSE HANGEN BRUSTLIN (VHB) ENTITLED "EXISTING CONDITIONS PLAN," PROJECT TITLE "NATIONAL GRID LNG TERMINAL ROAD LNG FACILITY" DATED MARCH 10, 2014. ORIGINAL SCALE 1" = 50'. DRAWING NO. SV-1 THROUGH SV-3 AND AERIAL MAPPING BY WSP TRANSPORTATION AND INFRASTRUCTURE DATED JANUARY 15, 2014 PREPARED FOR NATIONAL GRID LAND SURVEYING DEPARTMENT, WALTHAM, MASSACHUSETTS AND CAD FILE NO. 09303023.052-1.DWG. PLANS PROVIDED BY NATIONAL GRID.
- DESCRIPTIONS PROVIDED IN THE CITY OF PROVIDENCE DEED BOOK (BK) 470 PAGES 224 - 229, BK 561 PAGES 325 - 328, BK 1111 PAGES 752 -756 AND BK 5249 PAGES 219 - 322.
- ELECTRONIC CAD FILE14-152_SU1_REV2.DWG, TITLED "TOPOGRAPHIC SURVEY PLAN, PORTION OF A.P. 56 LOT 5" DATED OCTOBER 27, 2014 AND PROVIDED BY NATIONAL GRID.
- ELECTRONIC CAD FILE 5153_COO.DWG, TITLED "EXISTING CONDITIONS PLAN" PREPARED BY PROCESS PIPELINE SERVICES, DATED DECEMBER 18, 2014 AND PROVIDED BY NATIONAL GRID.

2) HORIZONTAL DATUM IS BASED ON NAD 1983 FROM BASE MAPPING PROVIDED BY VHB.

3) VERTICAL DATUM IS BASED ON NAVD 1988 FROM BASE MAPPING PROVIDED BY VHB.

4) ON-SITE INVESTIGATIONS AND SURVEYS BY GZA PERSONNEL DURING VARIOUS SITE VISITS BETWEEN 2011 AND 2016.

5) PARCEL DATA PROVIDED BY THE CITY OF PROVIDENCE PLANNING AND DEVELOPMENT DEPARTMENT. PARCELS OF REAL ESTATE ASSESSED AS OF DECEMBER 31, 2012. GIS DATA ARE FOR PLANNING PURPOSES ONLY. THESE DATA DO NOT REPRESENT A LEGALLY RECORDED PLAN, DEED, SURVEY OR ENGINEERING SCHEMATIC AND ARE NOT INTENDED TO BE USED AS SUCH.

6) SITE BOUNDARIES ARE APPROXIMATE.

7) FLOOD ZONE HAZARD AREA DATA WERE PROVIDED BY RHODE ISLAND GEOGRAPHIC INFORMATION SYSTEM (RIGIS) AND DERIVED FROM STATEWIDE DIGITAL FLOOD INSURANCE RATE MAP (DFIRM) DATABASE, ORIGINALLY PUBLISHED BY FEMA IN OCTOBER 2015.

LEGEND:

- EXISTING BUILDING
- EXISTING CONTOUR (MAJOR 5 FOOT INTERVAL)
- EXISTING CONTOUR (MINOR 1 FOOT INTERVAL)
- PAVEMENT
- EASEMENT AREA
- PROPERTY LINE
- INTERIOR PROPERTY LINE
- LIMIT OF WORK
- ABUTTING PROPERTY LINE
- EDGE OF WATER
- EXISTING RAILROAD TRACKS
- EXISTING FENCE
- OPERATIONS BOUNDARY
- LIQUEFACTION WORK AREA
- EXISTING CONCRETE PAD
- UTILITY POLE
- LIGHT POLE
- HYDRANT

FLOOD HAZARD AREAS:

- FLOOD ZONE VE (EL. 14)
- FLOOD ZONE AE (EL. 12)
- FLOOD ZONE X (EL. 14)

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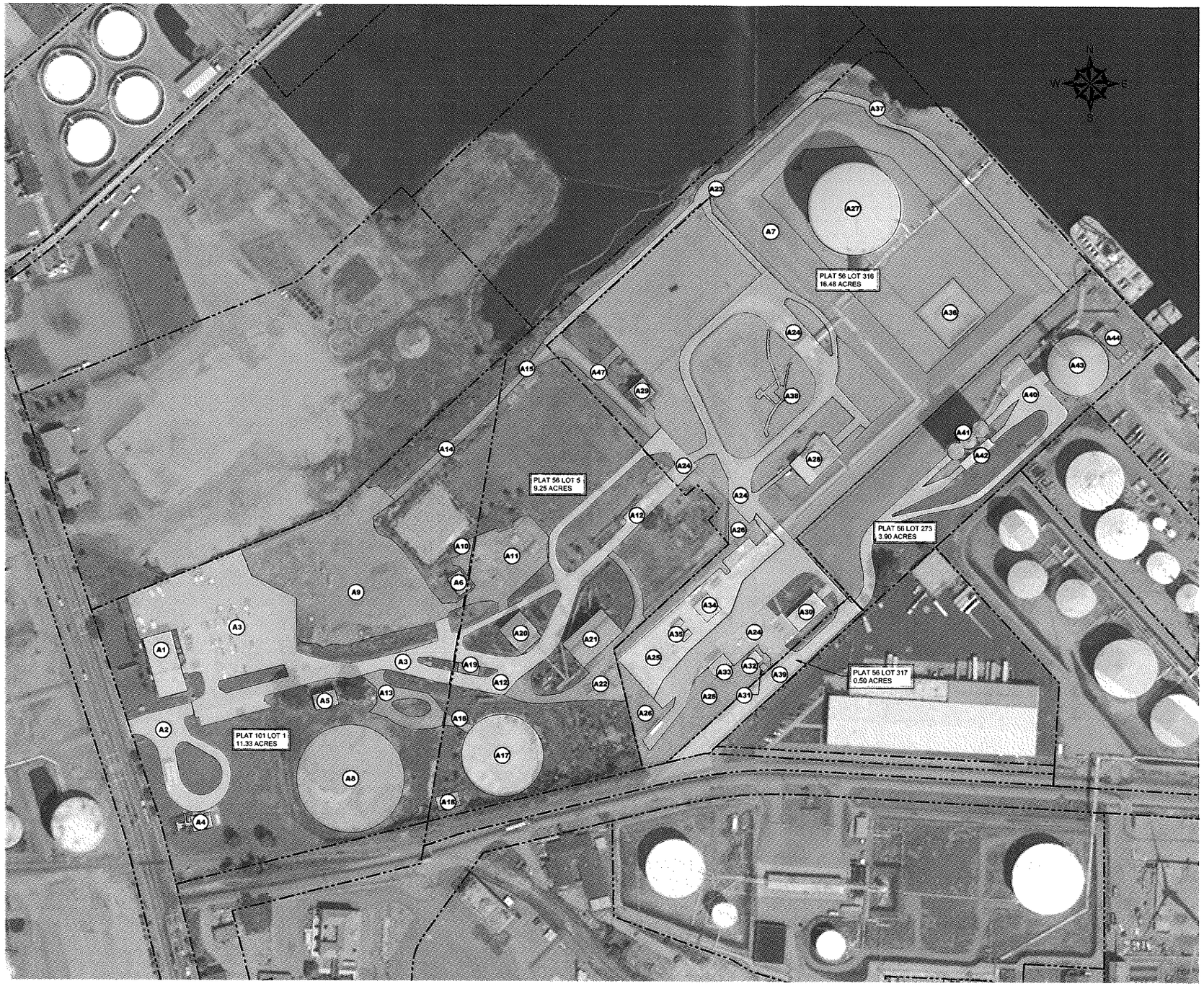
NATIONAL GRID
LIQUEFACTION PLANT
642 ALLENS AVENUE PROVIDENCE, RHODE ISLAND

EXISTING CONDITIONS PLAN

PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com

PREPARED FOR: nationalgrid

PROJ MGR: MSK	REVIEWED BY: SJH	CHECKED BY: IR	FIGURE 2
DESIGNED BY: SJH	DRAWN BY: LDT	SCALE: AS NOTED	
DATE: OCTOBER, 2016	PROJECT NO.: 33554.60	REVISION NO.: 1	SHEET NO. 2 OF 15



LEGEND

PROPERTY LINES

STRUCTURE

ASPHALT

OTHER

REFERENCE NOTES:

1. THIS MAP CONTAINS THE ESRI ARCGIS ONLINE BING MAPS AERIAL LAYER PACKAGE. IMAGE COURTESY OF USGS EARTHSTAR GEOGRAPHICS SIO © MICROSOFT CORPORATION 2015.
2. PARCEL DATA PROVIDED BY THE CITY OF PROVIDENCE PLANNING AND DEVELOPMENT DEPARTMENT. PARCELS OF REAL ESTATE ASSESSED AS OF DECEMBER 31, 2012. GIS DATA ARE FOR PLANNING PURPOSES ONLY. THESE DATA DO NOT REPRESENT A LEGALLY RECORDED PLAN, DEED, SURVEY OR ENGINEERING SCHEMATIC AND ARE NOT INTENDED TO BE USED AS SUCH.
3. SITE BOUNDARIES ARE APPROXIMATE.

IMPERVIOUS AREAS

PLAT	LOT	NO.	AREA (SQ. FT.)	SURFACE TYPE
101	1	A1	9,037.44	ROOF
101	1	A2	17,913.35	ASPHALT
101	1	A3	90,156.79	ASPHALT
101	1	A4	1,786.65	STRUCTURE
101	1	A5	1,840.44	ROOF
101	1	A6	1,445.11	STRUCTURE
56	1	A7	156,852.04	CONTAINMENT DIKE
101	1	A8	39,796.73	TANK FOUNDATION
101	1	A9	79,909.64	COMPACTED GRAVEL
101	1	A10	1,933.34	COMPACTED GRAVEL
56	5	A11	21,898.19	COMPACTED GRAVEL
56	5	A12	33,764.16	ASPHALT
101	1	A13	8,857.25	COMPACTED GRAVEL
101	1	A14	5,114.04	COMPACTED GRAVEL
56	5	A15	2,880.86	COMPACTED GRAVEL
56	5	A16	1,196.51	COMPACTED GRAVEL
56	5	A17	23,127.00	TANK FOUNDATION
56	5	A18	1,425.31	STRUCTURE
56	5	A19	896.87	ROOF
56	5	A20	4,099.05	ROOF
56	5	A21	7,273.42	ROOF
56	5	A22	16,442.64	COMPACTED GRAVEL
56	5	A23	11,249.94	ASPHALT
56	316	A24	93,429.89	ASPHALT
56	316	A25	29,735.26	CONCRETE
56	316	A26	40,494.92	COMPACTED GRAVEL
56	316	A27	29,930.34	LNG TANK
56	316	A28	6,084.97	STRUCTURE
56	316	A29	1,686.87	ROOF
56	316	A30	3,197.19	ROOF
56	316	A31	164.24	ROOF
56	316	A32	638.42	ROOF
56	316	A33	1,346.21	ROOF
56	316	A34	1,845.52	ROOF
56	316	A35	712.24	ROOF
56	316	A36	10,912.10	SUMP PIT
56	316	A37	10,655.36	ASPHALT
56	316	A38	2,392.36	STRUCTURE
56	317	A39	18,586.35	ASPHALT
56	273	A40	28,823.42	ASPHALT
56	273	A41	3,112.29	STRUCTURE
56	273	A42	1,576.65	ROOF
56	273	A43	12,924.79	TANK
56	273	A44	1,893.69	STRUCTURE
56	316	A47	10,294.60	COMPACTED GRAVEL
TOTAL IMPERVIOUS			847,918.45	

$$\frac{847918.45 \text{ SQ. FT. IMPERVIOUS AREA}}{1807724.79 \text{ SQ. FT. TOTAL AREA}} = 46.91\% \text{ IMPERVIOUS}$$

NOT TO SCALE

0 50' 100' 200' 300'

SCALE IN FEET 1" = 100'

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NATIONAL GRID
LIQUEFACTION PLANT
642 ALLENS AVENUE PROVIDENCE, RHODE ISLAND

EXISTING IMPERVIOUS CONDITIONS PLAN

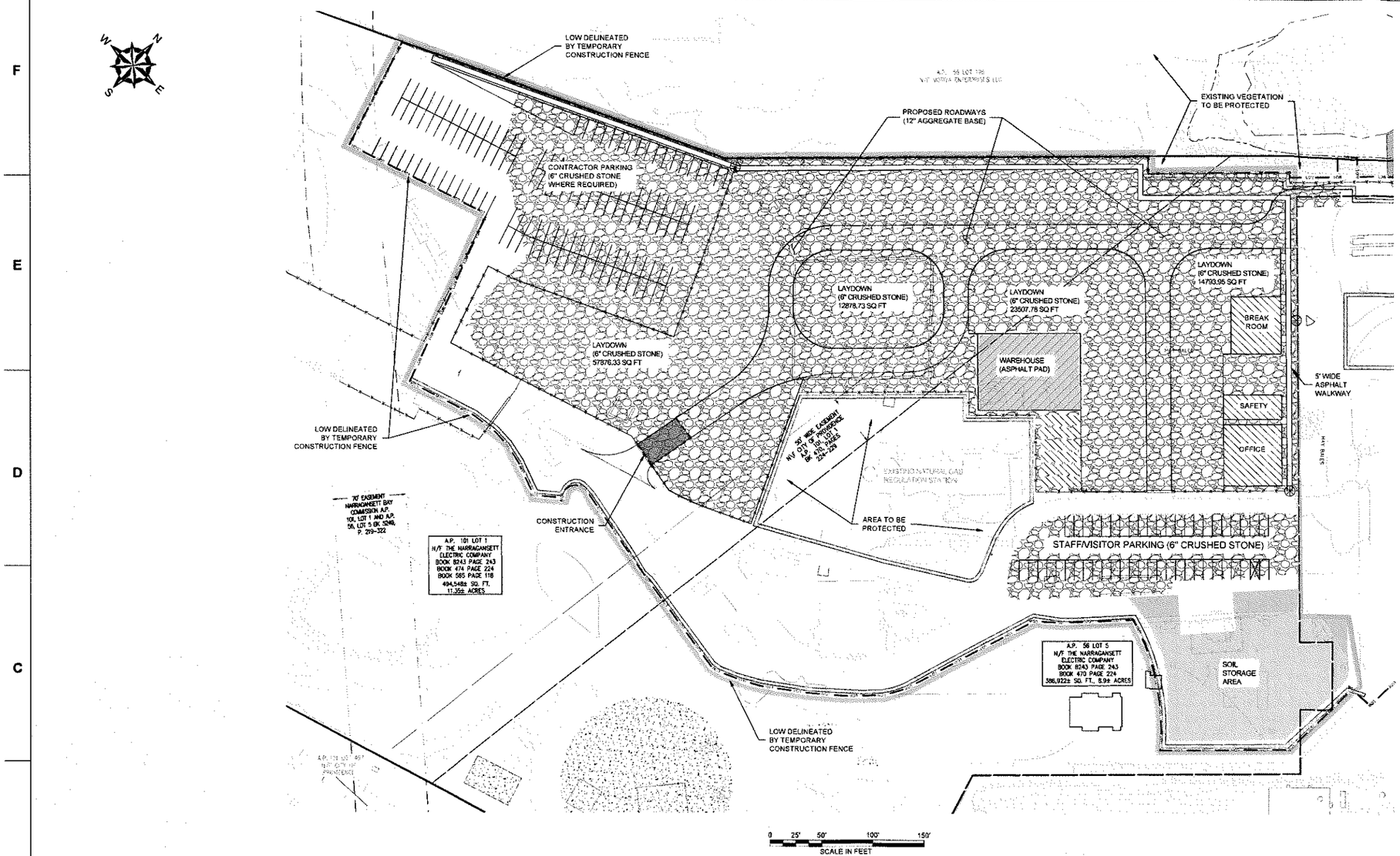
PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com

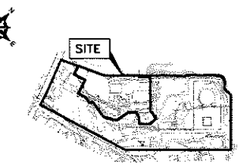
PREPARED FOR: nationalgrid

PROJ MGR. MSK	REVIEWED BY: SJH	CHECKED BY: IR	FIGURE 3
DESIGNED BY: SJH	DRAWN BY LDT	SCALE: AS NOTED	
DATE: OCTOBER, 2016	PROJECT NO 33554.60	REVISION NO. 0	SHEET NO 3 OF 15

FOR PERMITTING ONLY

©2015 - GZA GeoEnvironmental, Inc. GZA-J:\JAN\33554.60 NGK\FIGURES\CAD\DWG\33554.60_F3_IMPERVIOUS_AREAS.DWG IMPERVIOUS OCTOBER 12, 2016 1:32 PM J.Gh THERMALT





KEY PLAN:
SCALE: 1"=800'

LEGEND:

- EXISTING BUILDING
- EXISTING CONTOUR (MAJOR 10 FOOT INTERVAL)
- EXISTING CONTOUR (MINOR 1 FOOT INTERVAL)
- EXISTING PAVEMENT
- EASEMENT AREA
- UTILITY POLE
- LIGHT POLE
- HYDRANT
- PROPERTY LINES
- INTERIOR PROPERTY LINE
- TEMPORARY LAYDOWN AREA
- PROPOSED PERMANENT PAVEMENT
- PROPOSED TEMPORARY PAVEMENT
- PROPOSED TEMPORARY BUILDING
- PROPOSED CRUSHED STONE
- STAKED FILTREXX SOXX (SEE DETAIL ON SHEET 5)
- LIMIT OF WORK
- CONSTRUCTION ENTRANCE

NOT TO SCALE

GENERAL NOTES:

1) BASE MAP DEVELOPED FROM THE FOLLOWING:

- ELECTRONIC CAD FILE "ACAD-7257PL.DWG" PROVIDED BY VANASSE HANGEN BRUSTLIN (VHB) ENTITLED "EXISTING CONDITIONS PLAN," PROJECT TITLE "NATIONAL GRID LNG TERMINAL ROAD LNG FACILITY" DATED MARCH 10, 2014, ORIGINAL SCALE 1" = 50', DRAWING NO. SV-1 THROUGH SV-3 AND AERIAL MAPPING BY WSP TRANSPORTATION AND INFRASTRUCTURE DATED JANUARY 15, 2014 PREPARED FOR NATIONAL GRID LAND SURVEYING DEPARTMENT, WALTHAM, MASSACHUSETTS AND CAD FILE NO. 09303023.052-1.DWG. PLANS PROVIDED BY NATIONAL GRID.
- DESCRIPTIONS PROVIDED IN THE CITY OF PROVIDENCE DEED BOOK (BK) 470 PAGES 224 - 229, BK 561 PAGES 326 - 328, BK 1111 PAGES 752 -756 AND BK 5249 PAGES 219 - 322.
- ELECTRONIC CAD FILE14-152_SU1_REV2.DWG, TITLED "TOPOGRAPHIC SURVEY PLAN, PORTION OF A.P. 56 LOT 5" DATED OCTOBER 27, 2014 AND PROVIDED BY NATIONAL GRID.
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- ELECTRONIC CAD FILES PROVIDED BY KIEWIT
  1. "ACAD-102761-CIV_SITE.DWG"
  2. "2007EXP_102761-CIV_LAYDOWN.DWG"
  3. "102761_MEC_STR_BASE.DWG"
  4. "102761-SURVEY_SITE.DWG"
  5. "A2007EXP_102761-CIV_STORM.DWG"
  6. "ACAD-102761-CIV_SURFACING.DWG"
  7. "ACAD-102761-PROP-CONT_.DWG"
  8. "POST DEVELOPMENT DRAINAGE MAP.DWG
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2) HORIZONTAL DATUM IS BASED ON NAD 1983 FROM BASE MAPPING PROVIDED BY VHB.

3) VERTICAL DATUM IS BASED ON NAVD 1988 FROM BASE MAPPING PROVIDED BY VHB.

4) SELECT PRESENTED SITE UTILITIES WERE TAKEN FROM HISTORIC FIGURES PROVIDED BY NATIONAL GRID. ALL UTILITY LOCATIONS ARE APPROXIMATE AND HAVE BEEN ALIGNED AND ADJUSTED FOR THE "BEST FIT" AND THESE DATA SHOULD BE CONSIDERED ACCURATE ONLY TO THE DEGREE IMPLIED BY THE METHOD USED. UTILITIES ARE SHOWN FOR REFERENCE ONLY. **OTHER LOCATIONS MAY EXIST.**

5) ON-SITE INVESTIGATIONS AND SURVEYS BY GZA PERSONNEL DURING VARIOUS SITE VISITS BETWEEN 2011 AND 2016.

6) PARCEL DATA PROVIDED BY THE CITY OF PROVIDENCE PLANNING AND DEVELOPMENT DEPARTMENT. PARCELS OF REAL ESTATE ASSESSED AS OF DECEMBER 31, 2012. GIS DATA ARE FOR PLANNING PURPOSES ONLY. THESE DATA DO NOT REPRESENT A LEGALLY RECORDED PLAN, DEED, SURVEY OR ENGINEERING SCHEMATIC AND ARE NOT INTENDED TO BE USED AS SUCH.

7) SITE BOUNDARIES ARE APPROXIMATE.

CONFIDENTIAL

THESE DRAWINGS ARE CONFIDENTIAL IN NATURE. ANY MISUSE OR UNAUTHORIZED DISTRIBUTION OF THE DRAWINGS CONTAINED HEREIN WILL BE A VIOLATION OF THIS CONFIDENTIALITY AGREEMENT AND SUBJECT THE VIOLATOR TO LIABILITY. REVIEW OF THESE MATERIALS BY RECIPIENT SHALL CONSTITUTE AN ACCEPTANCE OF THESE TERMS AND THE TERMS OF ANY UNDERLYING CONFIDENTIALITY AGREEMENT RECIPIENT MAY HAVE EXECUTED IN OBTAINING THIS INFORMATION FROM A THIRD PARTY. IF THE RECIPIENT IS NOT IN AGREEMENT WITH THE OBLIGATION OF CONFIDENTIALITY THEN THE DRAWINGS SHALL BE RETURNED TO THE ORIGINATOR.

REV	DATE	REVISION INFORMATION	BY	CHK	APP.
0	10-25-16	ISSUED FOR PERMIT	NES	AMS	AMS

GENERAL NOTES AND COMMENTS:

nationalgrid

Kiewit
Kiewit Engineering and Design
2601 Kanter Boulevard
Lenexa, Kansas 66219

SEAL AND STAMP:
ASHLEY STUTZMAN
No. 11512
REGISTERED PROFESSIONAL ENGINEER CIVIL

LICENSE NO. 11512
EXPIRATION DATE 06/30/2017

ENG/DESIGN ORIG:	A. STUTZMAN
LEAD ENG:	A. STUTZMAN
ENG. MGR:	J. BOCKELMAN
PROJ. MGR:	T. PARRACK

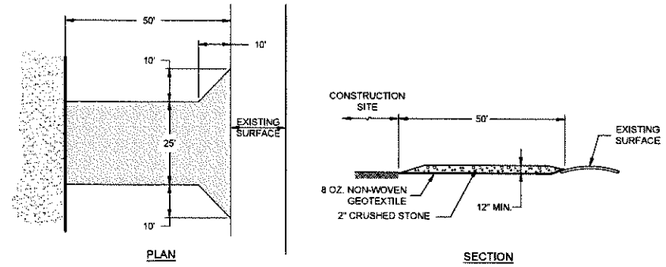
NATIONAL GRID LNG LLC
FIELDS POINT LIQUEFACTION PROJECT
TEMPORARY LAYDOWN AREA
EROSION AND SEDIMENT CONTROLS

DRAWING NO:	PROJECT NO:	SHT:	REV.
FIGURE 4	33554.60	040F15	0

OCT 25, 2016 - 10:36am DRAWING NAME: J:\102761-National_Grid_Liquefaction\CIV\CAD Exchange\in\2016-10-24 GZA Revised Permit\33554.60_CRMC-PERMITTING_FOR STAMPING_Kiewit.dwg

WHEEL WASH/CONSTRUCTION ENTRANCE NOTES

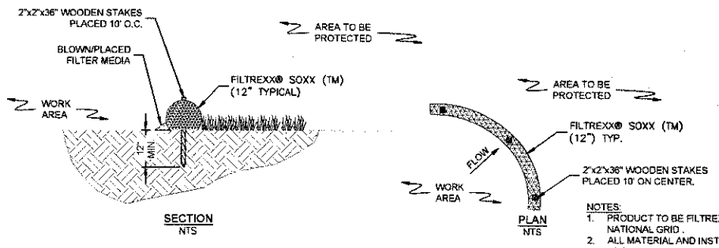
1. ENTRANCE WIDTH SHALL BE TWENTY-FIVE (25) FEET MINIMUM.
2. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH SHALL PREVENT TRACKING OR FLOWING OF SEDIMENT OUT OF THE LIMITS OF WORK. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED OUT OF THE LIMITS OF WORK MUST BE REMOVED IMMEDIATELY. PERIODIC INSPECTION AND MAINTENANCE SHALL BE PROVIDED AS NEEDED.



PLAN

SECTION

WHEEL WASH/CONSTRUCTION ENTRANCE/EXIT
NOT TO SCALE

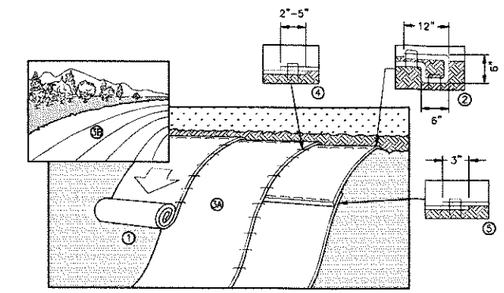


SECTION
NTS

PLAN
NTS

NOTES:
1. PRODUCT TO BE FILTREXX SILT SOXX OR APPROVED EQUAL BY NATIONAL GRID .
2. ALL MATERIAL AND INSTALLATION TO MEET FILTREXX® SPECIFICATIONS.
3. FILTER MEDIA FILL TO MEET APPLICATION REQUIREMENTS.
4. COMPOST MATERIAL TO BE DISPERSED ON SITE AS DETERMINED BY NATIONAL GRID .

FILTREXX® SOXX SEDIMENT CONTROL DETAIL
NOT TO SCALE



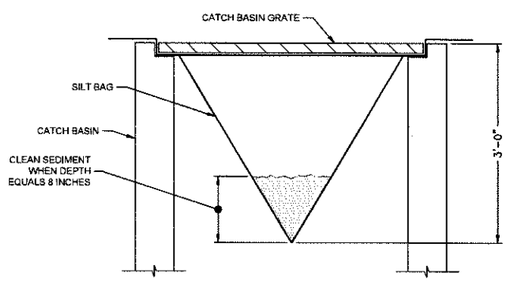
SLOPE INSTALLATION DETAIL OF EROSION CONTROL BLANKET
NOT TO SCALE

NOTES:

1. PRODUCT TO BE NORTH AMERICAN GREEN EROSION CONTROL BLANKET OR APPROVED EQUAL BY NATIONAL GRID.
2. IN LOOSE SOIL CONDITIONS, THE USE OF STAPLES OR STAKE LENGTHS GREATER THAN 6" (15 cm) MAY BE NECESSARY TO PROPERLY SECURE THE RECP's.

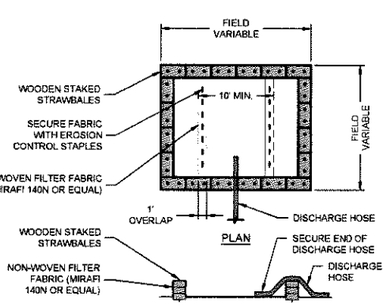
INSTALLATION NOTES:

1. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP's). INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED. NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE RECP's IN A 6" (15cm) DEEP x 6" (15cm) WIDE TRENCH WITH APPROXIMATELY 12" (30cm) OF RECP's EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE RECP's WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30cm) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30cm) PORTION OF RECP's BACK OVER SEED AND COMPACTED SOIL. SECURE RECP's OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30cm) APART ACROSS THE WIDTH OF THE RECP's.
3. ROLL THE RECP's (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE. RECP's WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECP's MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE(tm). WHEN USING THE DOT SYSTEM, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
4. THE EDGES OF PARALLEL RECP's MUST BE STAPLED WITH APPROXIMATELY 2'-6" (5cm - 12.5cm) OVERLAP DEPENDING ON RECP's TYPE.
5. CONSECUTIVE RECP's SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" (7.5cm) OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" (30cm) APART ACROSS ENTIRE RECP's WIDTH.



NOTE:
SEDIMENT BAG INLET PROTECTION TO BE SILTSACK MANUFACTURED BY ATLANTIC CONSTRUCTION FABRICS INC. RICHMOND, VA OR APPROVED EQUAL.

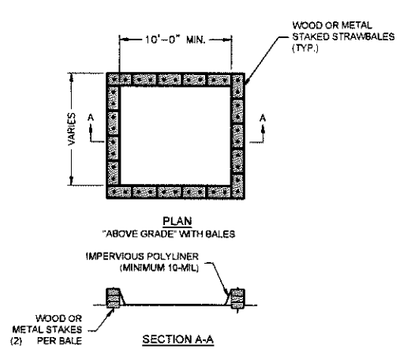
SILT SACK DETAIL
NOT TO SCALE



PLAN

SECTION

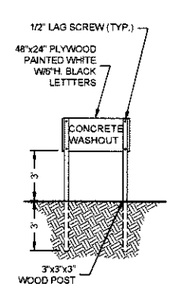
DEWATERING BASIN (SMALL SCALE)
NOT TO SCALE



PLAN
"ABOVE GRADE" WITH BALES

SECTION A-A

CONCRETE WASHOUT
NOT TO SCALE



CONCRETE WASHOUT
SIGN DETAIL
(OR EQUIVALENT)

CONCRETE WASHOUT NOTES

CONCRETE WASHOUT SPECIFICATIONS

1. LOCATE WASHOUT AREA AT LEAST 50 FEET FROM SENSITIVE AREAS SUCH AS STORM DRAINS, OPEN DITCHES, OR WATER BODIES INCLUDING JURISDICTIONAL WETLANDS.
2. ALLOW CONVENIENT TRUCK ACCESS.
3. THE NUMBER OF FACILITIES SHOULD DEPEND ON THE DEMAND FOR STORAGE CAPACITY.
4. CONCRETE WASHOUT FACILITIES SHALL BE CONSTRUCTED AND MAINTAINED IS SUFFICIENT QUANTITY AND SIZE TO CONTAIN ALL LIQUID AND CONCRETE WASTE GENERATED.

CONCRETE WASHOUT INSTALLATION REQUIREMENTS

1. THE CONCRETE WASHOUT SHOULD BE A MINIMUM OF 10 FOOT BY 10 FOOT AREA.
2. THE WASHOUT WILL BE CONSTRUCTED WITH STRAW BALES ARRANGED AROUND THE PERIMETER AND LINED WITH TWO LAYERS OF 10 MIL POLYETHYLENE SHEETING. THE POLYETHYLENE SHEETING WILL WRAP OVER THE STRAW BALES (OR APPROVED EQUAL) AND WILL BE SECURED WITH SAND BAGS.
3. THE WASHOUT SHALL BE SIZED TO ACCOMMODATE ALL OF THE WASHOUT WATER AND CONCRETE AND SHOULD INCLUDE 12-INCHES OF FREEBOARD ABOVE THE WASHOUT WASTE.

CONCRETE WASHOUT MAINTENANCE

1. INSPECT AND VERIFY THAT THE CONCRETE WASHOUT HAS BEEN PROPERLY CONSTRUCTED PRIOR TO THE COMMENCEMENT OF CONCRETE WORK.
2. INSPECT DAILY FOR DAMAGE OR ISSUES.
3. CHECK REMAINING CAPACITY.
4. VERIFY THAT LINERS ARE INTACT.
5. WASHOUT FACILITIES MUST BE CLEANED, OR NEW FACILITIES MUST BE CONSTRUCTED ONCE THE WASHOUT IS 75% FULL.
6. IF WASHOUT IS NEARING CAPACITY, VACUUM AND DISPOSE OF THE WASTE MATERIAL IN AN APPROVED MANNER.
7. DO NOT DISCHARGE LIQUID OR SLURRY TO WATERWAYS, STORM DRAINS, OR ONTO THE GROUND SURFACE.
8. COVER THE WASHOUT WITH A NON-WATER COLLECTING COVER PRIOR TO STORM EVENTS TO PREVENT OVERFLOW.
9. REMOVE AND DISPOSE OF HARDENED CONCRETE AND RETURN THE WASHOUT TO FUNCTIONAL CONDITION.

NOT TO SCALE

FOR PERMITTING ONLY

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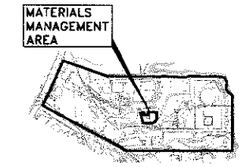
NATIONAL GRID
LIQUEFACTION PLANT
642 ALLENS AVENUE PROVIDENCE, RHODE ISLAND

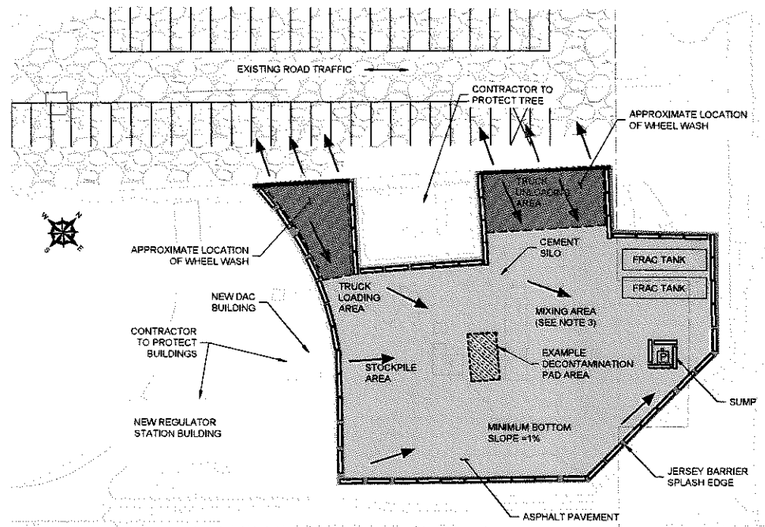
TEMPORARY SEDIMENTATION AND EROSION CONTROL DETAILS

PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		PREPARED FOR: nationalgrid	
PROJ MGR: MSK	REVIEWED BY: SJH	CHECKED BY: IR	FIGURE
DESIGNED BY: SJH	DRAWN BY: LDT	SCALE: AS NOTED	5
DATE: OCTOBER, 2016	PROJECT NO. 33554.60	REVISION NO. 0	SHEET NO. 5 OF 15

2016 - GZA GeoEnvironmental, Inc. GZA-J:\ENV\33554.60\ENV\FIGURES\CAD\DWGS\33554.60_CNMC_REMEDIAL_2-2-2016.DWG EXPS SET-UP: 5 OCTOBER 12, 2016 1:06 PM, GZA THEMALLT



KEY PLAN:
SCALE: 1"=800'



MATERIALS MANAGEMENT AREA: PLAN VIEW
SCALE: 1"=30'

LEGEND:

- EXISTING BUILDING
- EXISTING CONTOUR (MAJOR 5 FOOT INTERVAL)
- EXISTING CONTOUR (MINOR 1 FOOT INTERVAL)
- EXISTING PAVEMENT
- UTILITY POLE
- LIGHT POLE
- HYDRANT
- PROPERTY LINES
- INTERIOR PROPERTY LINE
- PROPOSED PERMANENT PAVEMENT
- PROPOSED CRUSHED STONE
- PROPOSED GRAVEL
- EXISTING FENCE
- JERSEY BARRIERS
- JERSEY BARRIER SPLASH EDGE
- WHEEL WASH
- PROPOSED GRADING
- DECONTAMINATION PAD

NOT TO SCALE

0 15' 30' 60' 90'
SCALE IN FEET

0 400' 800' 1600' 2400'
KEY PLAN - SCALE IN FEET

GENERAL NOTES:

1) BASE MAP DEVELOPED FROM THE FOLLOWING:

- ELECTRONIC CAD FILE "ACAD-7257PL.DWG" PROVIDED BY VANASSE HANGEN BRUSTLIN (VHB) ENTITLED "EXISTING CONDITIONS PLAN." PROJECT TITLE "NATIONAL GRID LNG TERMINAL ROAD LNG FACILITY" DATED MARCH 10, 2014, ORIGINAL SCALE 1" = 50'. DRAWING NO. SV-1 THROUGH SV-3 AND AERIAL MAPPING BY WSP TRANSPORTATION AND INFRASTRUCTURE DATED JANUARY 15, 2014 PREPARED FOR NATIONAL GRID LAND SURVEYING DEPARTMENT, WALTHAM, MASSACHUSETTS AND CAD FILE NO. 09303023.052-1.DWG. PLANS PROVIDED BY NATIONAL GRID.
- DESCRIPTIONS PROVIDED IN THE CITY OF PROVIDENCE DEED BOOK (BK) 470 PAGES 224 - 229, BK 561 PAGES 326 - 328, BK 1111 PAGES 752 -756 AND BK 5249 PAGES 219 - 322.
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  3. "102761_MEC_STR_BASE.DWG"
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  5. "2007EXP_102761-CIV_STORM.DWG"
  6. "ACAD-102761-CIV_SURFACING.DWG"
  7. "ACAD-102761-PROP-CONT.DWG"
  8. "POST DEVELOPMENT DRAINAGE MAP.DWG
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3) VERTICAL DATUM IS BASED ON NAVD 1988 (MSL) FROM BASE MAPPING PROVIDED BY VHB.

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7) SITE BOUNDARIES ARE APPROXIMATE.

MATERIALS MANAGEMENT AREA NOTES:

1. REGRADE LAND TO FACILITATE DRAINAGE TO THE SUMP. REMOVE EXISTING PAVEMENT AS NEEDED. THE MINIMUM BOTTOM SLOPE OF THE PAVED SURFACE SHALL BE 1%.
2. TRUCK LOADING AND UNLOADING AREAS SHALL BE USED AS WHEEL WASH AREAS. AS NECESSARY TRUCK UNLOADING AREA SHALL BE CONSTRUCTED WITH A MINIMUM BOTTOM SLOPE OF 1% TO DRAIN INTO SUMP.
3. MIXING AREA SHALL BE USED AS DECONTAMINATION PAD. PRIOR TO USE AS A DECONTAMINATION PAD, THE SURFACE SHALL BE POWER WASHED TO REMOVE ANY REMAINING MATERIAL.
4. IF THE MIXING AREA IS NOT USED AS A DECONTAMINATION PAD, CONSTRUCT STAND-ALONE DECONTAMINATION PAD, AS SHOWN IN DETAIL ON SHEET ENV-3 .

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NATIONAL GRID
LIQUEFACTION PLANT
642 ALLENS AVENUE PROVIDENCE, RHODE ISLAND

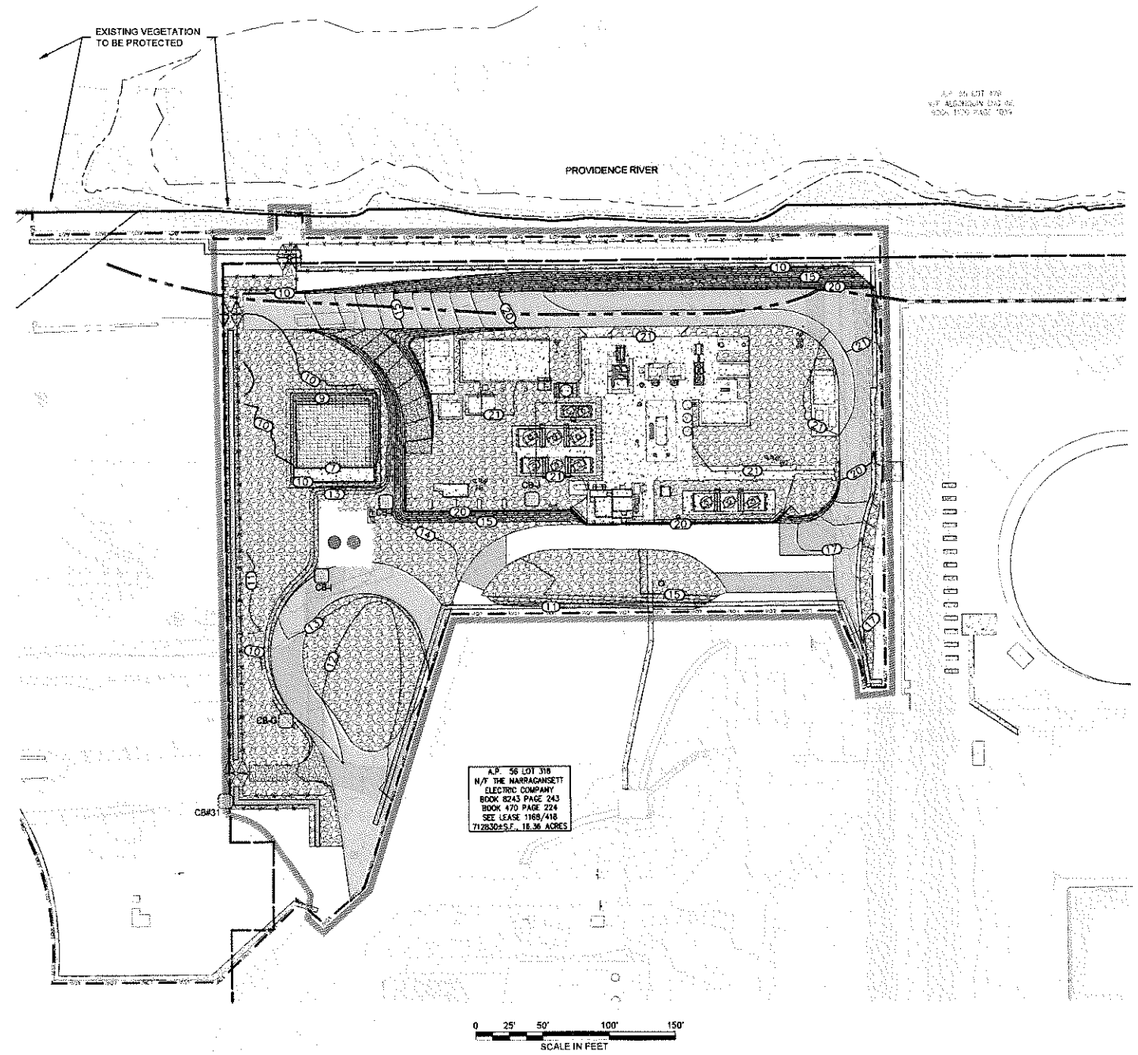
SOIL STORAGE AREA PLAN

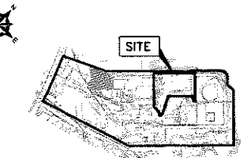
PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com

PREPARED FOR: nationalgrid

PROJ MGR: MSK	REVIEWED BY: SJH	CHECKED BY: IR	FIGURE 6
DESIGNED BY: SJH	DRAWN BY: LDT	SCALE: AS NOTED	
DATE: OCTOBER, 2016	PROJECT NO. 33554.60	REVISION NO. 0	SHEET NO. 6 OF 15

2016 - GZA GeoEnvironmental, Inc. - Z:\VAX\33554.60\DRAWINGS\CAD\DRAWING\MANAGEMENT AREA\33554.60_SOIL MANAGEMENT.DWG SOIL STORAGE - FRI OCTOBER 14, 2016 1:43 PM LISA THIBAULT





KEY PLAN:
SCALE: 1"=800'

LEGEND:

- EXISTING BUILDING
- EXISTING CONTOUR (MAJOR 5 FOOT INTERVAL)
- EXISTING CONTOUR (MINOR 1 FOOT INTERVAL)
- CRMC 50-FOOT SETBACK
- EXISTING PAVEMENT
- EASEMENT AREA
- UTILITY POLE
- LIGHT POLE
- HYDRANT
- PROPERTY LINES
- INTERIOR PROPERTY LINE
- LIQUEFACTION WORK AREA
- PROPOSED PERMANENT PAVEMENT
- PROPOSED CONTOUR (MAJOR 5 FOOT INTERVAL)
- PROPOSED CONTOUR (MINOR 1 FOOT INTERVAL)
- PROPOSED GRAVEL
- STAKED FILTREXX SOXX (SEE DETAIL ON SHEET 5)
- LIMIT OF WORK
- PROPOSED CONCRETE
- PROPOSED SAND FILTER
- CATCH BASIN FRAME AND GRATE
- CATCH BASIN TO BE PROTECTED WITH SILT SACK DURING CONSTRUCTION (SEE DETAIL ON SHEET 5)
- MHW — MEAN HIGH WATER
- MLW — MEAN LOW WATER

GENERAL NOTES:

1) BASE MAP DEVELOPED FROM THE FOLLOWING:

- ELECTRONIC CAD FILE "ACAD-7257PL.DWG" PROVIDED BY VANASSE HANGEN BRUSTLIN (VHB) ENTITLED "EXISTING CONDITIONS PLAN," PROJECT TITLE "NATIONAL GRID LNG TERMINAL ROAD LNG FACILITY" DATED MARCH 19, 2014, ORIGINAL SCALE 1" = 50', DRAWING NO. SV-1 THROUGH SV-3 AND AERIAL MAPPING BY WSP TRANSPORTATION AND INFRASTRUCTURE DATED JANUARY 15, 2014 PREPARED FOR NATIONAL GRID LAND SURVEYING DEPARTMENT, WALTHAM, MASSACHUSETTS AND CAD FILE NO. 09303023.052-1.DWG. PLANS PROVIDED BY NATIONAL GRID.
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  5. "2007EXP_102761-CIV_STORM_.DWG"
  6. "2007EXP-102761-CIV_SURFACING.DWG"
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NOT TO SCALE

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GENERAL NOTES AND COMMENTS:

REV	DATE	REVISION INFORMATION	BY	CHK	APP.
0	10-25-16	ISSUED FOR PERMIT	NES	AMS	AMS

nationalgrid

Kiewit
Kiewit Engineering and Design
2601 Rodner Boulevard
Lawrence, Kansas 66046

DOCUMENT CONTROL
ASHLEY STUTZMAN
No. 11512
REGISTERED PROFESSIONAL ENGINEER CIVIL

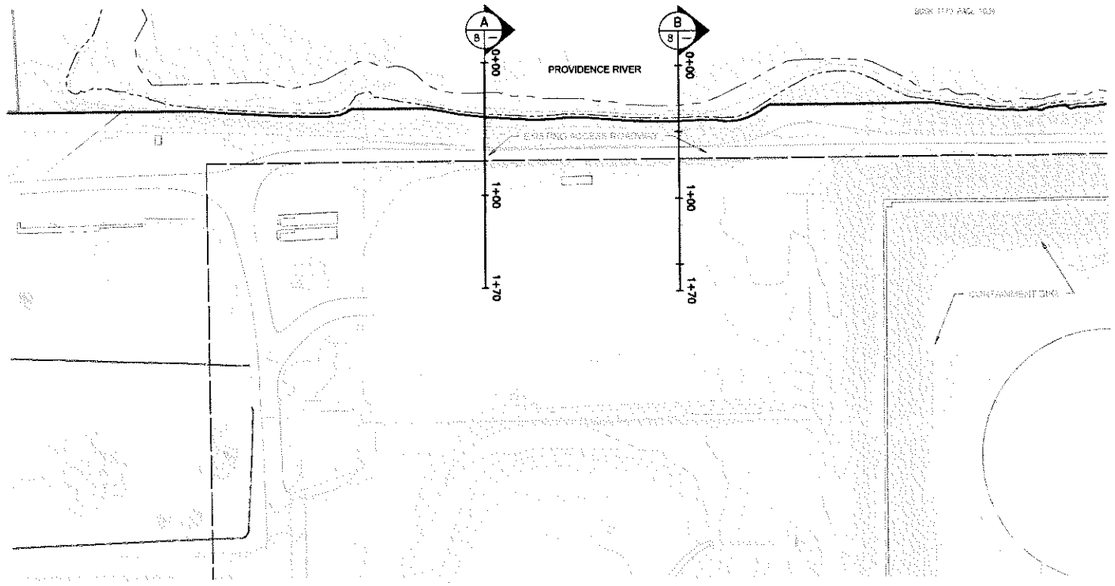
LICENSE NO. 11512
EXPIRATION DATE 06/30/2017

ENG/DESIGN ORIG:	A. STUTZMAN
LEAD ENG:	A. STUTZMAN
ENG. MGR:	J. BOOSELMAN
PROJ. MGR:	T. PARRACK

NATIONAL GRID LNG LLC
FIELDS POINT LIQUEFACTION PROJECT
LIQUEFACTION WORK AREA
EROSION AND SEDIMENT CONTROLS

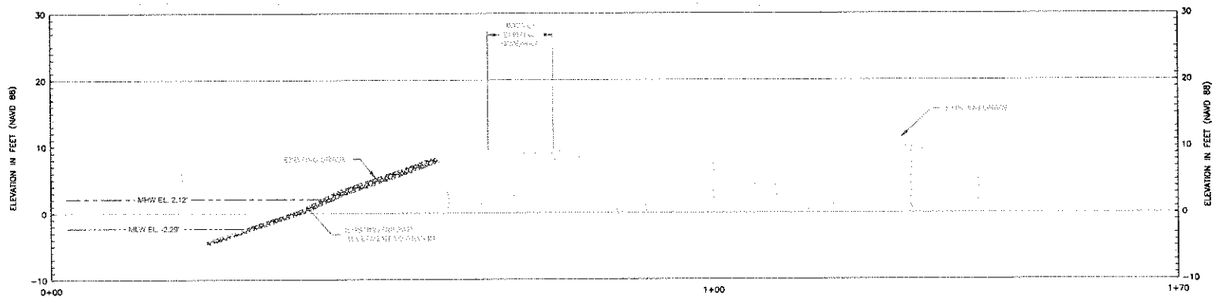
DRAWING NO:	PROJECT NO:	SHT:	REV.
FIGURE 7	33554.60	07OF15	0

OCT 25, 2016 - 10:37am DRAWING NAME: I:\102761-National_Grid_Liquefaction\CIV\CAD Exchange\in\2016-10-24 GZA Revised Permit\33554.60_CRMC PERMITTING_FOR STAMPING_Kiewit.dwg



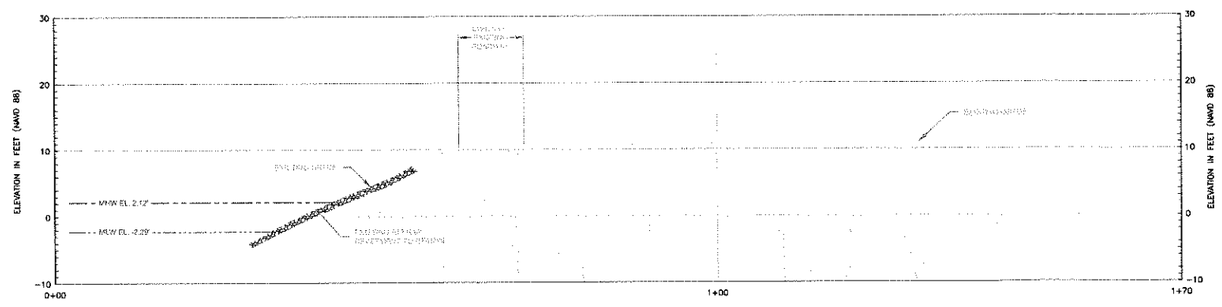
PLAN VIEW OF EXISTING REVETMENT

SCALE: 1"=50'



A TYPICAL REVETMENT SECTION

SCALE: 1"=10'

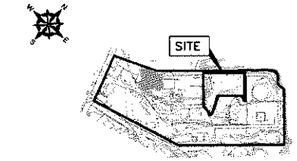


B TYPICAL REVETMENT SECTION

SCALE: 1"=10'

LEGEND:

- EXISTING BUILDING
- EXISTING CONTOUR (MAJOR 5 FOOT INTERVAL)
- EXISTING CONTOUR (MINOR 1 FOOT INTERVAL)
- EXISTING PAVEMENT
- UTILITY POLE
- LIGHT POLE
- HYDRANT
- PROPERTY LINES
- INTERIOR PROPERTY LINE
- MHW — MEAN HIGH WATER
- MLW — MEAN LOW WATER
- EASEMENT AREA



KEY PLAN:

SCALE: 1"=800'

GENERAL NOTES:

1) BASE MAP DEVELOPED FROM THE FOLLOWING:

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  6. "ACAD-102761-CIV_SURFACING.DWG"
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  8. "POST DEVELOPMENT DRAINAGE MAP.DWG
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NOT TO SCALE

0 5' 10' 20' 30'
SCALE IN FEET

0 25' 50' 100' 150'
SCALE IN FEET

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NATIONAL GRID
LIQUEFACTION PLANT
642 ALLENS AVENUE PROVIDENCE, RHODE ISLAND

LIQUEFACTION WORK AREA - EXISTING REVETMENT AND CROSS SECTIONS

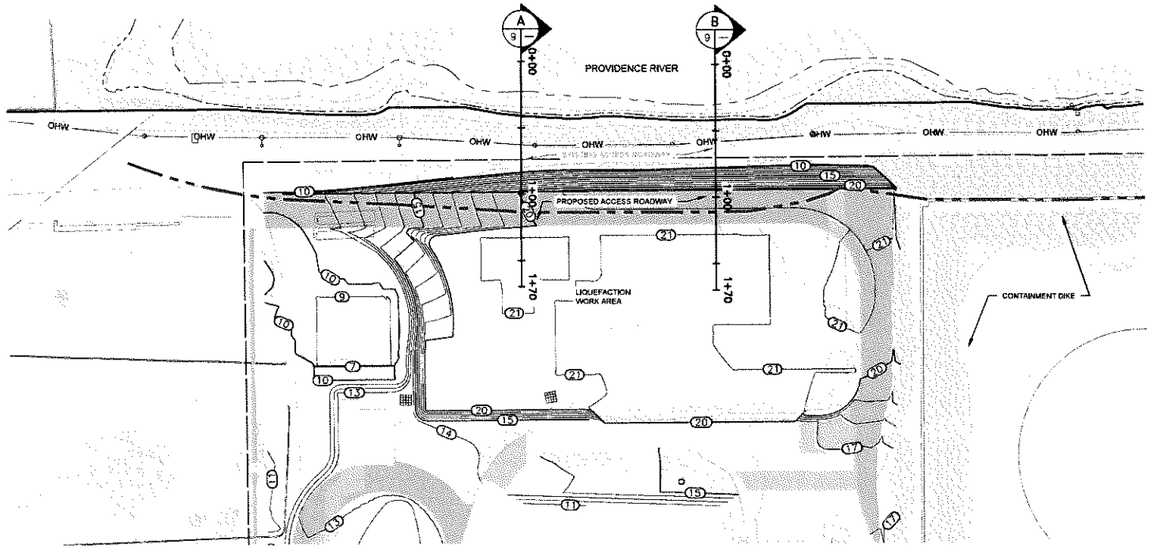
PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com

PREPARED FOR: nationalgrid

PROJ MGR. MGK	REVIEWED BY: SJH	CHECKED BY: IR	FIGURE
DESIGNED BY: SJH	DRAWN BY: LDT	SCALE AS NOTED	8
DATE OCTOBER, 2015	PROJECT NO. 33554.60	REVISION NO. 0	SHEET NO. 8 OF 15

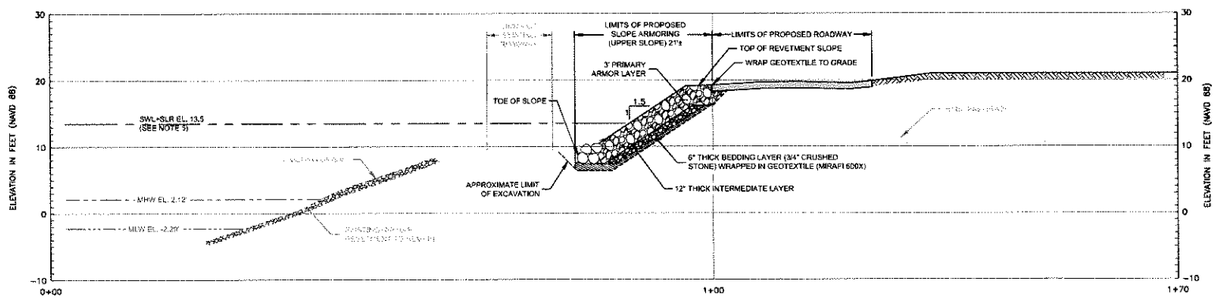
FOR PERMITTING ONLY

2016 - GZA GeoEnvironmental, Inc. - GZA-\\LDW\33554.60\MDP\FIGURES\DWG\DWG\33554_60_GRAC_PERMITTING_2-3-2016.DWG LOUP-FRI 5 OCTOBER 24, 2016 11:47 AM USA, NORMALIT



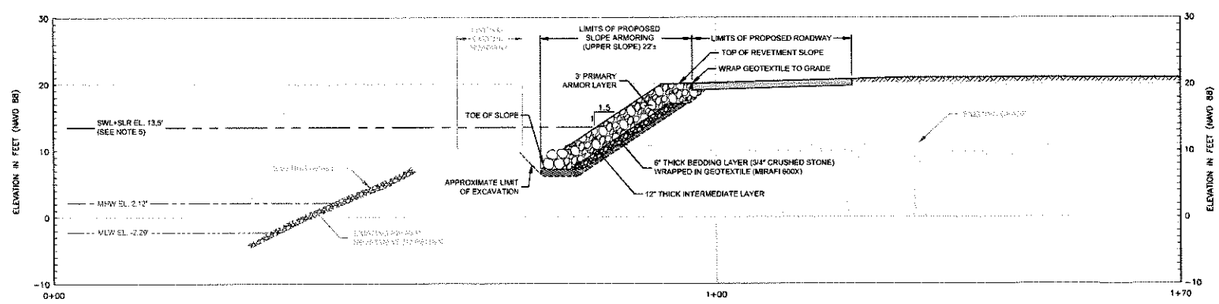
PLAN VIEW OF PROPOSED SLOPE ARMORING AND REVETMENT IMPROVEMENTS

SCALE: 1"=50'



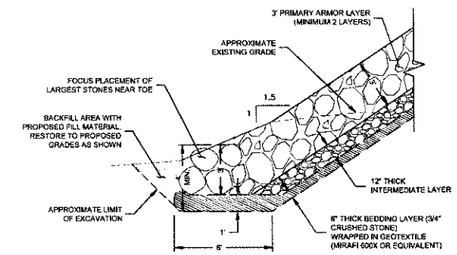
A 9 TYPICAL REVETMENT SECTION

SCALE: 1"=10'



B 9 TYPICAL REVETMENT SECTION

SCALE: 1"=10'



PROPOSED REVETMENT (UPPER SLOPE) (TYP.)

SCALE: 1"=4'

RIP RAP GRADATION REQUIREMENTS			
PRIMARY ARMOR LAYER		INTERMEDIATE LAYER	
RIDOT R-6		RIDOT R-2	
% LESS THAN	STONE SIZE (IN.)	% LESS THAN	STONE SIZE (IN.)
0-15%	8	0-15%	1
0-50%	13	0-50%	2
100%	26	100%	4

3/4" CRUSHED STONE GRADATION REQUIREMENTS	
% LESS THAN	SIEVE SIZE
100	3/4 INCH
90-100	1/2 INCH
30-60	3/8 INCH
0-15	No. 4
0-5	No. 8

LEGEND:

- EXISTING BUILDING
- EXISTING CONTOUR (MAJOR 5 FOOT INTERVAL)
- EXISTING CONTOUR (MINOR 1 FOOT INTERVAL)
- CRMC 50-FOOT SETBACK
- EXISTING PAVEMENT
- UTILITY POLE
- LIGHT POLE
- HYDRANT
- PROPERTY LINES
- INTERIOR PROPERTY LINE
- MHW — MEAN HIGH WATER
- MLW — MEAN LOW WATER
- EASEMENT AREA
- 10 — PROPOSED CONTOUR (MAJOR 5 FOOT INTERVAL)
- 11 — PROPOSED CONTOUR (MINOR 1 FOOT INTERVAL)
- STILL WATER LEVEL AND PREDICTED SEA LEVEL RISE (SEE NOTE #5)
- OHW — EXISTING OVERHEAD WIRE
- LIMIT OF PROPOSED REVETMENT (UPPER SLOPE)
- PROPOSED PERMANENT PAVEMENT

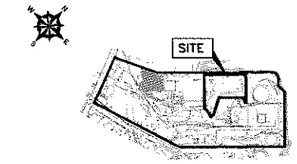
TIDAL DATUM

NOTE:

1. TO CONVERT FROM NAVD88 TO MLW ADD 2.29 FT.
2. TIDAL DATUM BASED UPON NOAA STATION 8454000.

NAVD 88	MLW
+2.37' (MHHW)	+4.66' (MHHW)
+2.12' (MHW)	+4.41' (MHW)
0.0' (NAVD 88)	+2.29'
-2.29' (MLW)	0.0' (MLW)
-2.47' (MLLW)	-0.18' (MLLW)

FOR PERMITTING ONLY



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0 2' 4' 8' 12'
SCALE IN FEET 1"=4'

0 5' 10' 20' 30'
SCALE IN FEET 1"=10'

0 25' 50' 100' 150'
SCALE IN FEET 1"=50'

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NATIONAL GRID
LIQUEFACTION PLANT
642 ALLENS AVENUE PROVIDENCE, RHODE ISLAND

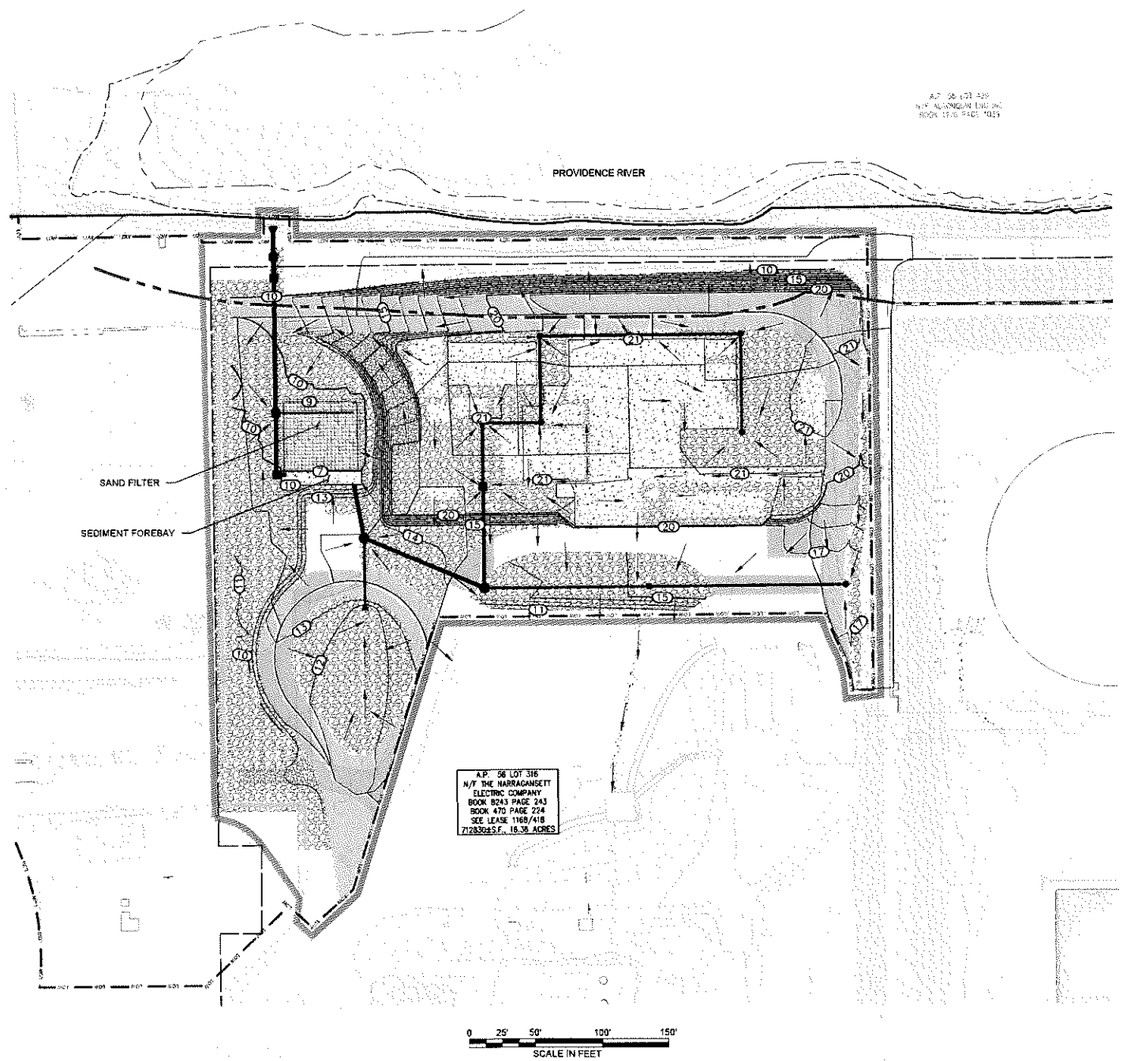
LIQUEFACTION WORK AREA - PROPOSED SLOPE ARMORING, EXISTING REVETMENT AND CROSS SECTIONS

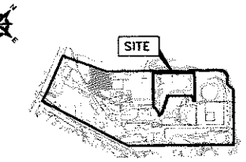
PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com

PREPARED FOR: nationalgrid

PROJ MGR: MSK	REVIEWED BY: SJH	CHECKED BY: IR	FIGURE 9
DESIGNED BY: SJH	DRAWN BY: LDT	SCALE: AS NOTED	
DATE: OCTOBER, 2016	PROJECT NO. 33554.60	REVISION NO. 0	SHEET NO. 9 OF 15

2016 - GZA GeoEnvironmental, Inc. GZA-J:\DWG\33554.60\MSK\PROJFILES\CAD\DWGS\33554.60_CIVIC FORMTITLE_2-3-2015.DWG LAYOUT: 9 OCTOBER 24, 2016 11:49 AM LDT, INGRALT





KEY PLAN:
SCALE: 1"=800'

LEGEND:

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- EXISTING CONTOUR (MAJOR 5 FOOT INTERVAL)
- EXISTING CONTOUR (MINOR 1 FOOT INTERVAL)
- CRMC 50-FOOT SETBACK
- EXISTING PAVEMENT
- EASEMENT AREA
- UTILITY POLE
- LIGHT POLE
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- PROPOSED PERMANENT PAVEMENT
- PROPOSED GRAVEL
- PROPOSED CONCRETE
- PROPOSED SAND FILTER
- LIQUEFACTION WORK AREA
- LIMIT OF WORK
- FLOW DIRECTION
- MHW — MEAN HIGH WATER
- MLW — MEAN LOW WATER
- PROPOSED RECTANGULAR CATCH BASIN
- PROPOSED ROUND CATCH BASIN

GENERAL NOTES:

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GENERAL NOTES AND COMMENTS:

nationalgrid

Kiewit
Kiewit Engineering and Design
9401 Renner Boulevard
Lenexa, Kansas 66219

SEAL AND STAMP
ASHLEY STUTZMAN
No. 11512
REGISTERED PROFESSIONAL ENGINEER CIVIL

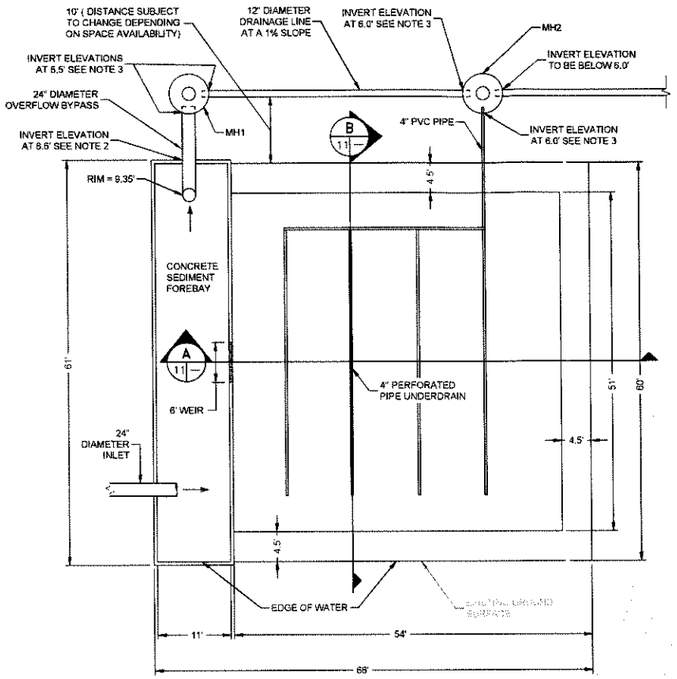
LICENSE NO. 11512
EXPIRATION DATE 08/30/2017

ENG/DESIGN ORIG: A. STUTZMAN
LEAD ENG: A. STUTZMAN
ENG. MGR: J. BOCKELMAN
PROJ. MGR: T. PARRACK

NATIONAL GRID LNG LLC
FIELDS POINT LIQUEFACTION PROJECT
STORMWATER MANAGEMENT PLAN

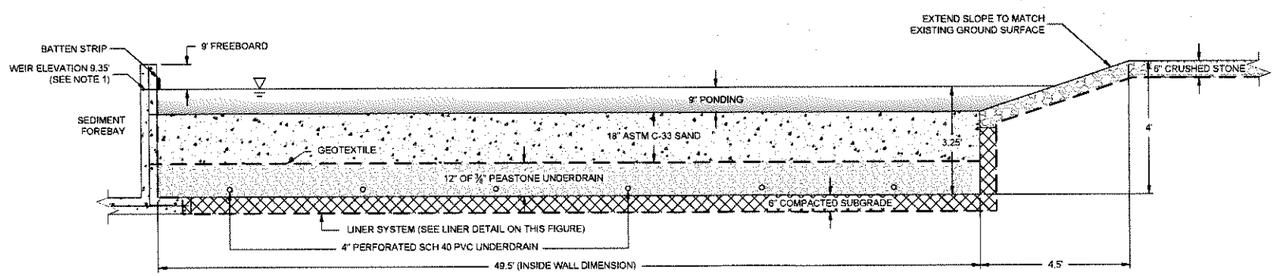
DRAWING NO:	PROJECT NO:	SHT:	REV.
FIGURE 10	33554.60	100F15	0

OCT 25, 2016 - 10:38am DRAWING NAME: J:\102761-National_Grid_Liquefaction\CIV\CAD Exchange\in\2016-10-24 GZA Revised Permit\33554.60_CRMC PERMITTING_FOR STAMPING_Kiewit.dwg



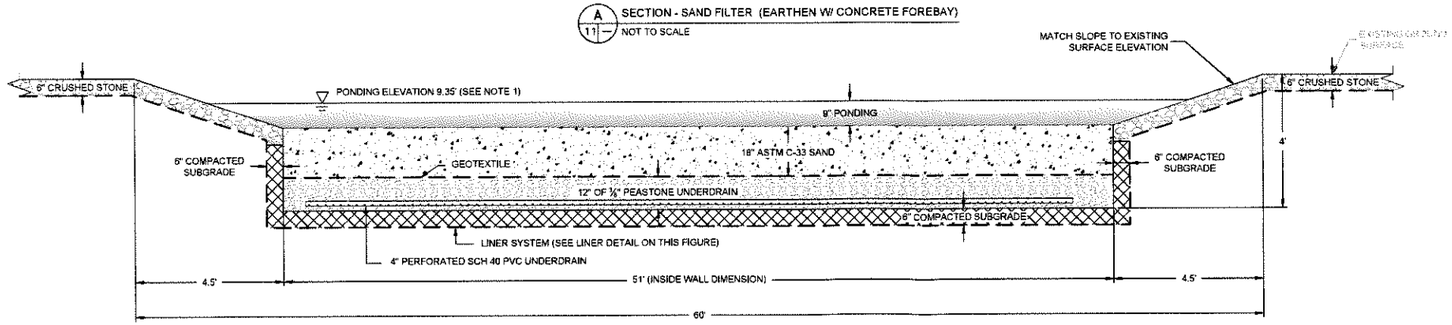
PLAN VIEW - SEDIMENT FOREBAY AND SAND FILTER

SCALE: 1"=10'



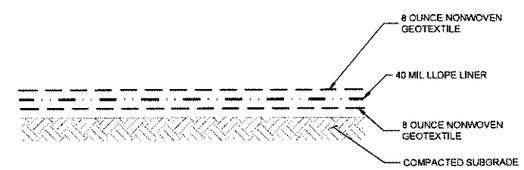
A 11 SECTION - SAND FILTER (EARTHEN W/ CONCRETE FOREBAY)

NOT TO SCALE



B 11 SECTION - SAND FILTER (EARTHEN)

NOT TO SCALE



SECTION - LINER DETAIL

NOT TO SCALE

NOTES:

1. PONDING ELEVATION TO BE SET AT INLET INVERT ELEVATION (CURRENTLY SET AT 9.35' BASED ON AUGUST 31, 2016 DRAINAGE CALCULATIONS.
2. OUTLET INVERT ELEVATION FOR 24" OVERFLOW BYPASS TO BE 2.75' BELOW PONDING ELEVATION.
3. INVERT ELEVATIONS TO BE SET BASED ON AUGUST 31, 2016 DRAINAGE CALCULATIONS.

0 5' 10' 20' 30'

SCALE IN FEET

NOT TO SCALE

THE INFORMATION SHOWN ON THE DRAWING IS SOLELY FOR USE BY NATIONAL GRID OR THE NATIONAL GRID'S DESIGNATED REPRESENTATIVE FOR THE SPECIFIC PROJECT AND LOCATION IDENTIFIED ON THE DRAWING. THE DRAWING SHALL NOT BE TRANSFERRED, RE-USED, COPIED, OR ALTERED IN ANY MANNER FOR USE AT ANY OTHER LOCATION OR FOR ANY OTHER PURPOSE WITHOUT THE PRIOR WRITTEN CONSENT OF GZA AND NATIONAL GRID. ANY TRANSFER, REUSE, OR MODIFICATION TO THE DRAWING BY OTHERS, WITHOUT THE PRIOR WRITTEN EXPRESS CONSENT OF GZA AND NATIONAL GRID, WILL BE AT THE USER'S SOLE RISK AND WITHOUT ANY RISK OR LIABILITY TO GZA AND NATIONAL GRID.

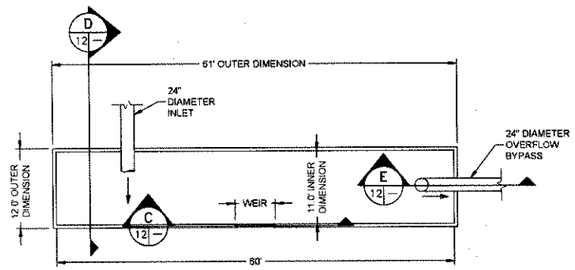
FOR PERMITTING ONLY

NATIONAL GRID
LIQUEFACTION PLANT
642 ALLENS AVENUE PROVIDENCE, RHODE ISLAND

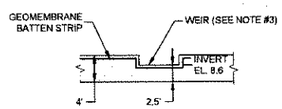
STORMWATER MANAGEMENT DETAILS
SAND FILTER

PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		PREPARED FOR: nationalgrid	
PROJ MGR: MSK	REVIEWED BY: SJH	CHECKED BY: IR	FIGURE 11
DESIGNED BY: SJH	DRAWN BY: LDT	SCALE: AS NOTED	
DATE: OCTOBER, 2016	PROJECT NO. 33554.60	REVISION NO. 0	SHEET NO. 11 OF 15

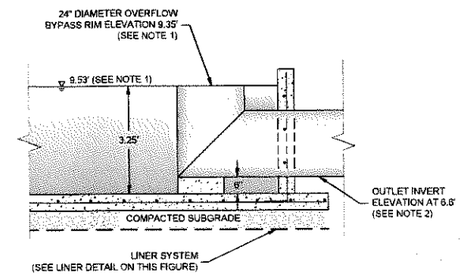
2016 - GZA GeoEnvironmental, Inc. GZA-J:\DWG\33554.60\MSK\FIGURES\CIVIL\DWGS\33554.60_DRAC-DETAILS.DWG FIG 11 SAND FILTER (X) OCTOBER 12, 2016 1:04 PM LDA, RODNALY



PLAN VIEW - SEDIMENT FOREBAY
SCALE: 1"=10'



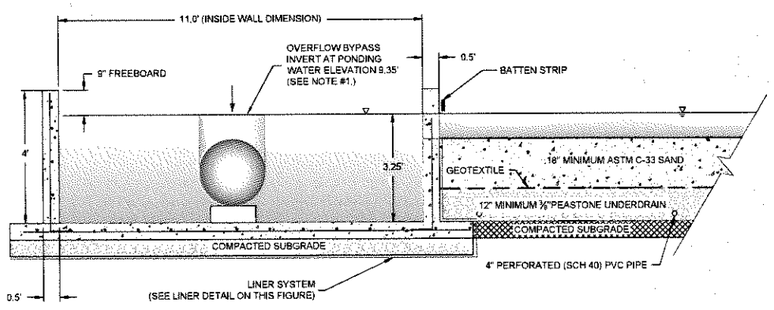
C 12 SECTION - SEDIMENT FOREBAY
SCALE: 1"=10'



E 12 SECTION - SEDIMENT FOREBAY DETAIL
NOT TO SCALE

NOTE:

OVERFLOW BYPASS PIPE DIAMETER TO BE SIZED FOR 100-YEAR PEAK FLOW RATE



D 12 SECTION - SEDIMENT FOREBAY DETAIL
NOT TO SCALE

NOT TO SCALE

NOTES:

1. PONDING ELEVATION TO BE SET AT INLET INVERT ELEVATION (CURRENTLY SET AT 9.35' BASED ON AUGUST 31, 2016 DRAINAGE CALCULATIONS.
2. OUTLET INVERT ELEVATION FOR 24" OVERFLOW BYPASS TO BE 2.75' BELOW PONDING ELEVATION.
3. SIZE WIDTH OF WEIR BASED ON WATER QUALITY PEAK FLOW RATE.

0 5' 10' 20' 30'
SCALE IN FEET

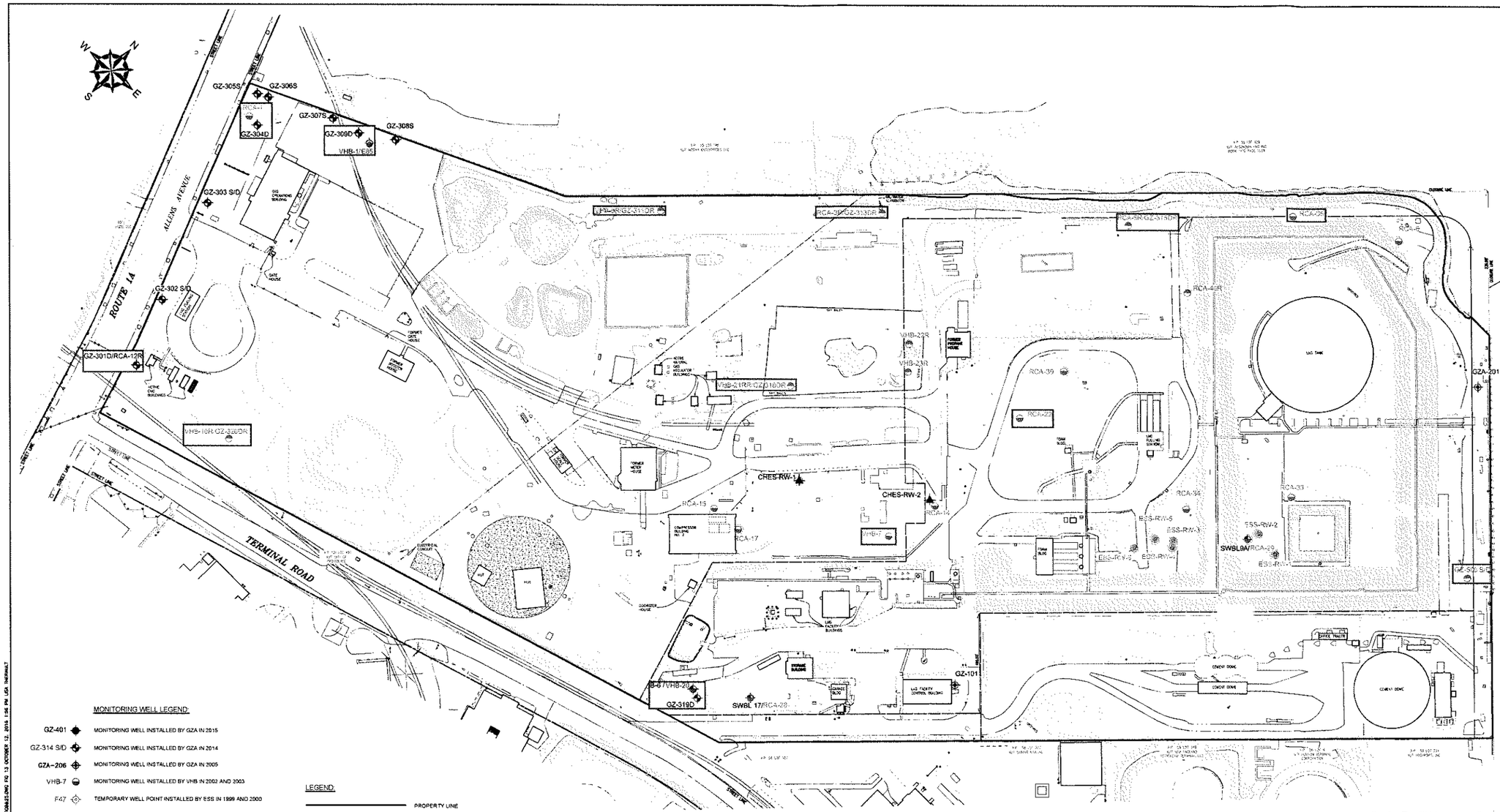
THE INFORMATION SHOWN ON THE DRAWING IS SOLELY FOR USE BY NATIONAL GRID OR THE NATIONAL GRID'S DESIGNATED REPRESENTATIVE FOR THE SPECIFIC PROJECT AND LOCATION IDENTIFIED ON THE DRAWING. THE DRAWING SHALL NOT BE TRANSFERRED, REUSED, COPIED, OR ALTERED IN ANY MANNER FOR USE AT ANY OTHER LOCATION OR FOR ANY OTHER PURPOSE WITHOUT THE PRIOR WRITTEN CONSENT OF GZA AND NATIONAL GRID. ANY TRANSFER, REUSE, OR MODIFICATION TO THE DRAWING BY OTHERS, WITHOUT THE PRIOR WRITTEN EXPRESS CONSENT OF GZA AND NATIONAL GRID, WILL BE AT THE USER'S SOLE RISK AND WITHOUT ANY RISK OR LIABILITY TO GZA AND NATIONAL GRID.

NATIONAL GRID
LIQUEFACTION PLANT
642 ALLENS AVENUE PROVIDENCE, RHODE ISLAND

STORMWATER MANAGEMENT DETAILS
CONCRETE FOREBAY

FOR PERMITTING ONLY

PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		PREPARED FOR: nationalgrid	
PROJ MGR: MSK	REVIEWED BY: SJH	CHECKED BY: IR	FIGURE 12
DESIGNED BY: SJH	DRAWN BY: LDT	SCALE: AS NOTED	
DATE: OCTOBER, 2016	PROJECT NO. 33554.60	REVISION NO. 0	SHEET NO. 12 OF 15



MONITORING WELL LEGEND:

GZ-401	MONITORING WELL INSTALLED BY GZA IN 2015
GZ-314 S/D	MONITORING WELL INSTALLED BY GZA IN 2014
GZA-206	MONITORING WELL INSTALLED BY GZA IN 2005
VHB-7	MONITORING WELL INSTALLED BY VHB IN 2002 AND 2003
F47	TEMPORARY WELL POINT INSTALLED BY ESS IN 1999 AND 2000
	TEMPORARY WELL POINT INSTALLED BY ESS IN 1999
RCA-40	MONITORING WELL INSTALLED BY ESS IN 1999
RW-1	RECOVERY WELL INSTALLED BY CHES OBSERVED BY GZA IN 2014
CHES-RW-1	RECOVERY WELL INSTALLED BY CHES OBSERVED BY VHB IN 2002
ESS-RW-1	RECOVERY WELL INSTALLED BY ESS IN 1999 AND 2000
GZ-311DR	MONITORING WELLS TO BE INSTALLED AFTER CONTRACTOR DEMOBILIZATION

MONITORING WELL LEGEND CONTINUED:

- ACTIVE MONITORING WELLS
- RECOVERY WELLS
- MONITORING WELL TO BE INSTALLED AFTER CONTRACTOR DEMOBILIZATION
- WELL IS PLANNED TO BE INCLUDED IN ANNUAL GROUNDWATER MONITORING PROGRAM AFTER CONTRACTOR DEMOBILIZATION

LEGEND:

- PROPERTY LINE
- INTERIOR PROPERTY LINE
- EXISTING BUILDING
- STEEL POST
- PILING
- EDGE OF WATER
- FENCE
- RAILROAD TRACKS
- EXISTING CONTOUR (MAJOR 5 FOOT INTERVAL)
- EXISTING CONTOUR (MINOR 1 FOOT INTERVAL)
- PAVEMENT
- CONCRETE PAD

GENERAL NOTES:

1) EXISTING CONDITIONS BASE MAP DEVELOPED FROM THE FOLLOWING:
   - ELECTRONIC CAD FILE "ACAD-72579L.DWG" PROVIDED BY VANASSE HANGEN BRUSTLIN (VHB) ENTITLED "EXISTING CONDITIONS PLAN," PROJECT TITLE "NATIONAL GRID LNG TERMINAL ROAD LNG FACILITY" DATED MARCH 19, 2014, ORIGINAL SCALE 1" = 50', DRAWING NO. SV-1 THROUGH SV-3 AND AERIAL MAPPING BY WSP TRANSPORTATION AND INFRASTRUCTURE DATED JANUARY 15, 2014 PREPARED FOR NATIONAL GRID LAND SURVEYING DEPARTMENT, WALTHAM, MASSACHUSETTS AND CAD FILE NO. 09303023.052-1.DWG
   - ON-SITE INVESTIGATIONS AND SURVEYS BY GZA PERSONNEL DURING VARIOUS SITE VISITS BETWEEN 2011 AND 2015
2) PROPERTY LINES AND LOT INFORMATION ESTABLISHED FROM INFORMATION PROVIDED ON A DRAWING ENTITLED "EXISTING CONDITIONS PLAN," PROJECT TITLE "NATIONAL GRID LNG TERMINAL ROAD LNG FACILITY" DATED MARCH 19, 2014, ORIGINAL SCALE 1" = 50', DRAWING NO. SV-1 THROUGH SV-3.
3) EXPLORATION LOCATION PLANS WERE DEVELOPED FROM THE FOLLOWING:
   - SITE PLANS PROVIDED BY RESOURCE CONTROLS ASSOCIATES (RCA) IN THE RIDEM-SUBMITTED JULY 5, 1994 "SITE CHARACTERIZATION PLAN" PREPARED ON BEHALF OF THE PROVIDENCE GAS COMPANY. PLANS PROVIDED BY NATIONAL GRID.
   - SITE PLANS PROVIDED BY RCA IN THE RIDEM-SUBMITTED JUNE 28, 1995 "PHASE IB FIELD CHARACTERIZATION INVESTIGATION" PREPARED ON BEHALF OF THE PROVIDENCE GAS COMPANY. PLANS PROVIDED BY NATIONAL GRID.
   - SITE PLANS PROVIDED BY VHB IN THE RIDEM-SUBMITTED NOVEMBER 2002 "REMEDIAL ACTION CLOSURE REPORT" PREPARED ON BEHALF OF THE NEW ENGLAND GAS COMPANY. PLANS PROVIDED BY NATIONAL GRID.
   - FIGURE 3 "EXPLORATION LOCATION PLAN" PREPARED BY GZA GEOENVIRONMENTAL, INC. (GZA) ON BEHALF OF CHICAGO BRIDGE AND IRON (CB&I) IN JULY 2005. PLANS PROVIDED BY NATIONAL GRID.
   - FIGURE 35 "TEST BORINGS UNDER SASSAFRAS POINT PLAT" DATED JUNE 5, 1912 PREPARED BY THE PROVIDENCE GAS COMPANY. PLANS PROVIDED BY NATIONAL GRID.
   - DRAWING 3 "WHARF FACILITIES - BULKHEAD REBUILDING - CROSS SECTIONS" DATED JANUARY 11, 1973 PREPARED BY PARSONS, BRINCKERHOFF, QUADE AND DOUGLAS ON BEHALF OF THE PROVIDENCE GAS COMPANY. PLANS PROVIDED BY NATIONAL GRID.
   - ELECTRONIC CAD FILE "ACAD-72579L.DWG" PROVIDED BY VANASSE HANGEN BRUSTLIN (VHB) ENTITLED "EXISTING CONDITIONS PLAN," PROJECT TITLE "NATIONAL GRID LNG TERMINAL ROAD LNG FACILITY" DATED MARCH 19, 2014, ORIGINAL SCALE 1" = 50', DRAWING NO. SV-1 THROUGH SV-3 AND AERIAL MAPPING BY WSP TRANSPORTATION AND INFRASTRUCTURE DATED JANUARY 15, 2014 PREPARED FOR NATIONAL GRID LAND SURVEYING DEPARTMENT, WALTHAM, MASSACHUSETTS AND CAD FILE NO. 09303023.052-1.DWG. PLANS PROVIDED BY NATIONAL GRID.
   - ELECTRONIC CAD FILE "ACAD-72579L.DWG" PROVIDED BY VANASSE HANGEN BRUSTLIN (VHB) ENTITLED "EXISTING CONDITIONS PLAN," PROJECT TITLE "NATIONAL GRID LNG TERMINAL ROAD LNG FACILITY" DATED MARCH 19, 2014, ORIGINAL SCALE 1" = 50', DRAWING NO. SV-1 THROUGH SV-3 AND AERIAL MAPPING BY WSP TRANSPORTATION AND INFRASTRUCTURE DATED JANUARY 15, 2014 PREPARED FOR NATIONAL GRID LAND SURVEYING DEPARTMENT, WALTHAM, MASSACHUSETTS AND CAD FILE NO. 09303023.052-1.DWG. PLANS PROVIDED BY NATIONAL GRID.
   - ON-SITE INVESTIGATIONS AND SURVEYS BY GZA PERSONNEL DURING VARIOUS SITE VISITS BETWEEN 2011 AND 2015.
4) THE LOCATION OF THE EXPLORATIONS AND MONITORING WELLS AT THE SITE WERE APPROXIMATELY DETERMINED AND HAVE BEEN ALIGNED AND ADJUSTED FOR THE "BEST FIT" AND THESE DATA SHOULD BE CONSIDERED ACCURATE ONLY TO THE DEGREE IMPLIED BY THE METHOD USED.
5) HORIZONTAL DATUM IS BASED ON NAD 1983 FROM BASE MAPPING PROVIDED BY VHB.
6) VERTICAL DATUM IS BASED ON NAVD 1988 FROM BASE MAPPING PROVIDED BY VHB.
7) SELECT PRESENTED SITE UTILITIES WERE TAKEN FROM HISTORIC FIGURES PROVIDED BY NATIONAL GRID. ALL UTILITY LOCATIONS ARE APPROXIMATE AND HAVE BEEN ALIGNED AND ADJUSTED FOR THE "BEST FIT" AND THESE DATA SHOULD BE CONSIDERED ACCURATE ONLY TO THE DEGREE IMPLIED BY THE METHOD USED. UTILITIES ARE SHOWN FOR REFERENCE ONLY. OTHER LOCATIONS MAY EXIST.

FOR PERMITTING ONLY

NOT TO SCALE

0 40 80 160 240
SCALE IN FEET 1" = 80'

THE INFORMATION SHOWN ON THE DRAWING IS SOLELY FOR USE BY NATIONAL GRID OR THE NATIONAL GRID'S DESIGNATED REPRESENTATIVE FOR THE SPECIFIC PROJECT AND LOCATION IDENTIFIED ON THE DRAWING. THE DRAWING SHALL NOT BE TRANSFERRED, REUSED, COPIED, OR ALTERED IN ANY MANNER FOR USE AT ANY OTHER LOCATION OR FOR ANY OTHER PURPOSE WITHOUT THE PRIOR WRITTEN CONSENT OF GZA AND NATIONAL GRID. ANY TRANSFER, REUSE, OR MODIFICATION TO THE DRAWING BY OTHERS, WITHOUT THE PRIOR WRITTEN EXPRESS CONSENT OF GZA AND NATIONAL GRID, WILL BE AT THE USER'S SOLE RISK AND WITHOUT ANY RISK OR LIABILITY TO GZA AND NATIONAL GRID.

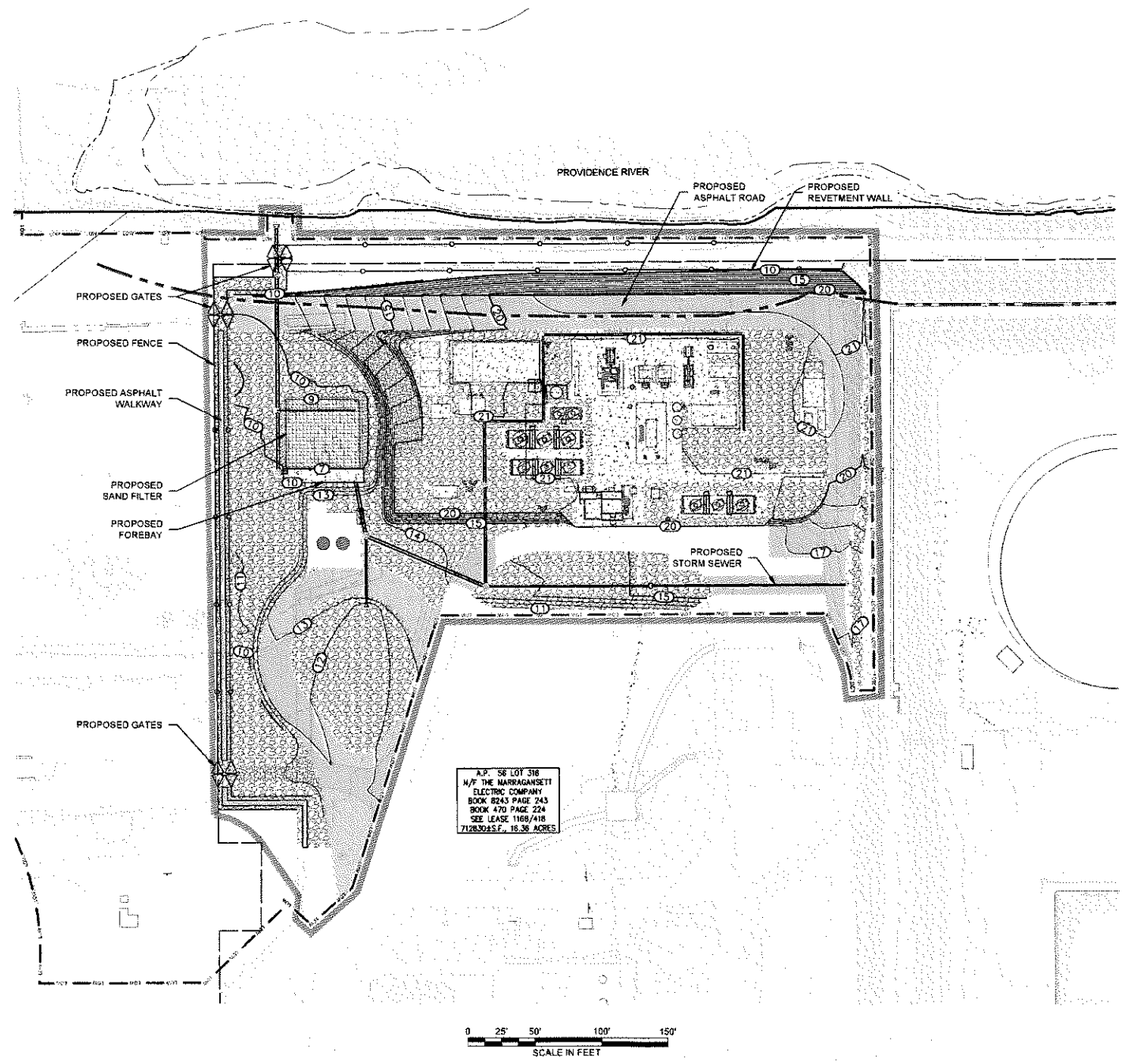
NATIONAL GRID
LIQUEFACTION PLANT
642 ALLENS AVENUE PROVIDENCE, RHODE ISLAND

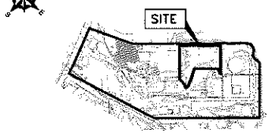
PROPOSED MONITORING WELL RE-INSTALLATION PLAN

PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com

PREPARED FOR: nationalgrid

PROJ MGR: MSK	REVIEWED BY: SJH	CHECKED BY: IR	FIGURE 13
DESIGNED BY: SJH	DRAWN BY: LDT	SCALE: AS NOTED	
DATE: OCTOBER, 2016	PROJECT NO. 33554.60	REVISION NO. 0	SHEET NO. 13 OF 15





KEY PLAN:
SCALE: 1"=800'

LEGEND:

- EXISTING STRUCTURE
- EXISTING CONTOUR (MAJOR 5 FOOT INTERVAL)
- EXISTING CONTOUR (MINOR 1 FOOT INTERVAL)
- CRMC 50-FOOT SETBACK
- EXISTING PAVEMENT
- EASEMENT AREA
- UTILITY POLE
- LIGHT POLE
- HYDRANT
- PROPERTY LINES
- INTERIOR PROPERTY LINE
- PROPOSED CONTOUR (MAJOR 5 FOOT INTERVAL)
- PROPOSED CONTOUR (MINOR 1 FOOT INTERVAL)
- PROPOSED PERMANENT PAVEMENT
- PROPOSED GRAVEL
- PROPOSED CONCRETE
- PROPOSED SAND FILTER
- LIQUEFACTION WORK AREA
- LIMIT OF WORK
- LIMIT OF PROPOSED REVETMENT (UPPER SLOPE)
- PROPOSED ROUND CATCH BASIN
- PROPOSED SQUARE CATCH BASIN
- MHW — MEAN HIGH WATER
- MLW — MEAN LOW WATER

GENERAL NOTES:

1) BASE MAP DEVELOPED FROM THE FOLLOWING:

- ELECTRONIC CAD FILE "ACAD-7257PL.DWG" PROVIDED BY VANASSE HANGEN BRUSTLIN (VHB) ENTITLED "EXISTING CONDITIONS PLAN," PROJECT TITLE "NATIONAL GRID LNG TERMINAL ROAD LNG FACILITY" DATED MARCH 10, 2014, ORIGINAL SCALE 1" = 50'. DRAWING NO. SV-1 THROUGH SV-3 AND AERIAL MAPPING BY WSP TRANSPORTATION AND INFRASTRUCTURE DATED JANUARY 15, 2014 PREPARED FOR NATIONAL GRID LAND SURVEYING DEPARTMENT, WALTHAM, MASSACHUSETTS AND CAD FILE NO. 09303023.052-1.DWG, PLANS PROVIDED BY NATIONAL GRID.
- DESCRIPTIONS PROVIDED IN THE CITY OF PROVIDENCE DEED BOOK (BK) 470 PAGES 224 - 229, BK 581 PAGES 326 - 328, BK 1111 PAGES 752 -756 AND BK 5249 PAGES 219 - 322.
- ELECTRONIC CAD FILE14-152_SU1_REV2.DWG, TITLED "TOPOGRAPHIC SURVEY PLAN, PORTION OF A.P. 56 LOT 5" DATED OCTOBER 27, 2014 AND PROVIDED BY NATIONAL GRID.
- ELECTRONIC CAD FILE 5153_COO.DWG, TITLED "EXISTING CONDITIONS PLAN" PREPARED BY PROCESS PIPELINE SERVICES, DATED DECEMBER 18, 2014 AND PROVIDED BY NATIONAL GRID.
- ELECTRONIC CAD FILES PROVIDED BY KIEWIT
  1. "ACAD-102761-CIV_SITE.DWG"
  2. "2007EXP_102761-CIV_SURFACING.DWG"
  3. "102761_MEC_STR_BASE.DWG"
  4. "102761-SURVEY_SITE.DWG"
  5. "A2007EXP_102761-CIV_STORM.DWG"
  6. "ACAD-102761-CIV_SURFACING.DWG"
  7. "ACAD-102761-PROP-CONT.DWG"
  8. "POST DEVELOPMENT DRAINAGE MAP.DWG
- PDFS OF THE FOLLOWING DRAWINGS PROVIDED BY NATIONAL GRID
  1. "CATCH BASINS AND SANITARY SEWER SYSTEM" PREPARED BY PROVIDENCE GAS COMPANY, DATED SEPTEMBER 25, 1981.
  2. "PLAN SHOWING UNDERGROUND UTILITIES LNG FACILITY" DATED OCTOBER 6, 1983. "SUBSURFACE UTILITY ENGINEERING" PREPARED BY BAYSTATE SUBSURFACE INVESTIGATION, INC. DATED MAY 17, 2005.

2) HORIZONTAL DATUM IS BASED ON NAD 1983 FROM BASE MAPPING PROVIDED BY VHB.

3) VERTICAL DATUM IS BASED ON NAVD 1988 FROM BASE MAPPING PROVIDED BY VHB.

4) SELECT PRESENTED SITE UTILITIES WERE TAKEN FROM HISTORIC FIGURES PROVIDED BY NATIONAL GRID. ALL UTILITY LOCATIONS ARE APPROXIMATE AND HAVE BEEN ALIGNED AND ADJUSTED FOR THE "BEST FIT" AND THESE DATA SHOULD BE CONSIDERED ACCURATE ONLY TO THE DEGREE IMPLIED BY THE METHOD USED. UTILITIES ARE SHOWN FOR REFERENCE ONLY. **OTHER LOCATIONS MAY EXIST.**

5) ON-SITE INVESTIGATIONS AND SURVEYS BY GZA PERSONNEL DURING VARIOUS SITE VISITS BETWEEN 2011 AND 2016.

6) PARCEL DATA PROVIDED BY THE CITY OF PROVIDENCE PLANNING AND DEVELOPMENT DEPARTMENT. PARCELS OF REAL ESTATE ASSESSED AS OF DECEMBER 31, 2012. GIS DATA ARE FOR PLANNING PURPOSES ONLY. THESE DATA DO NOT REPRESENT A LEGALLY RECORDED PLAN, DEED, SURVEY OR ENGINEERING SCHEMATIC AND ARE NOT INTENDED TO BE USED AS SUCH.

7) SITE BOUNDARIES ARE APPROXIMATE.

NOT TO SCALE

CONFIDENTIAL

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REV	DATE	REVISION INFORMATION	BY	CHK	APP.
0	10-25-16	ISSUED FOR PERMIT	NES	AMS	AMS

GENERAL NOTES AND COMMENTS:

nationalgrid

Kiewit
Kiewit Engineering and Design
8401 Gander Boulevard
Lenexa, Kansas 66219

SEAL AND SIGNATURE
ASHLEY STUTZMAN
No. 11512
REGISTERED PROFESSIONAL ENGINEER CIVIL

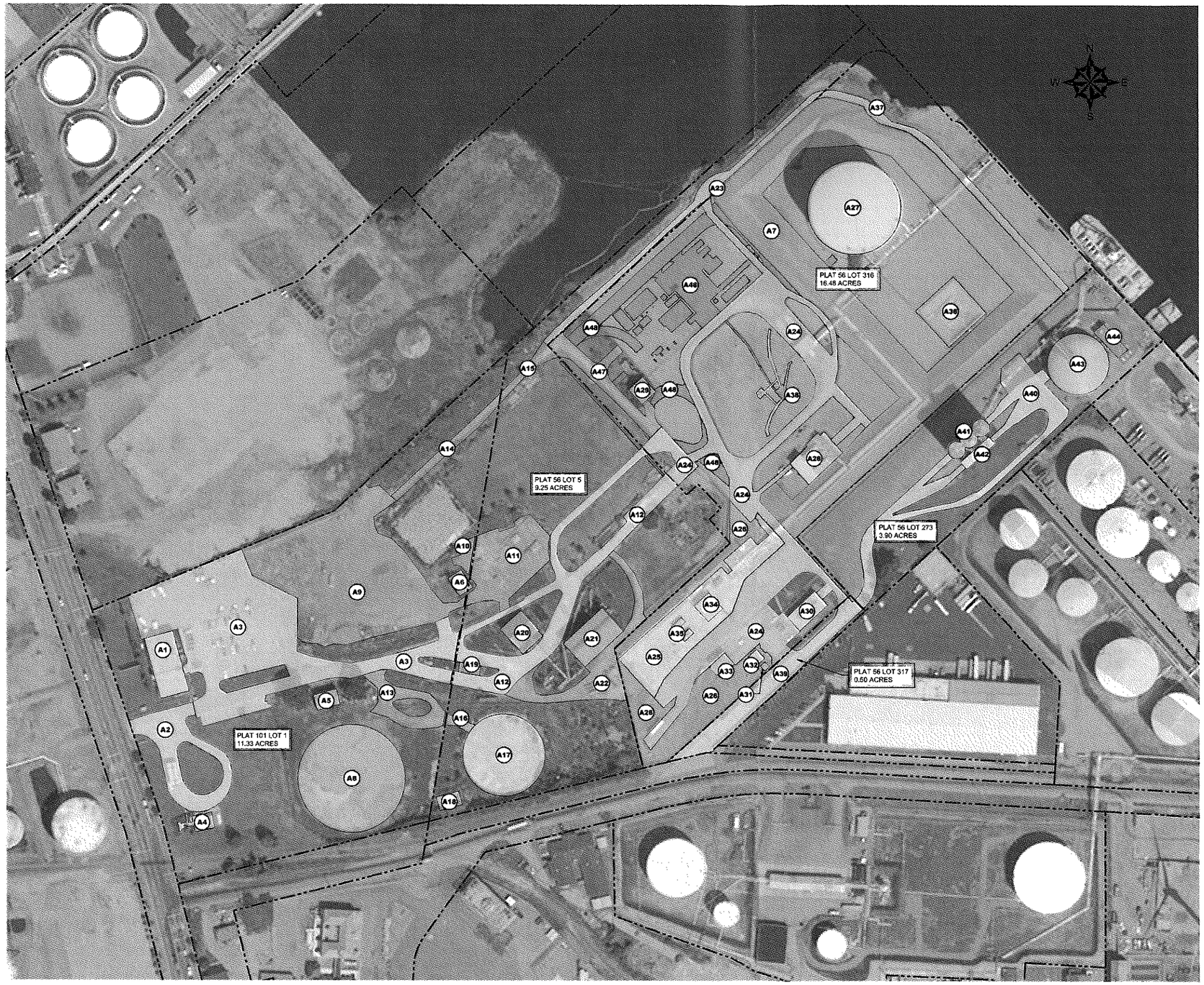
LICENSE NO. 11512
EXPIRATION DATE 06/30/2017

ENG/DESIGN ORIG: A. STUTZMAN
LEAD ENG: A. STUTZMAN
ENG. MGR: J. BOCKELMAN
PROJ. MGR: T. PARRACK

NATIONAL GRID LNG LLC
FIELDS POINT LIQUEFACTION PROJECT
PROPOSED FINAL CONDITIONS PLAN

DRAWING NO:	PROJECT NO:	SHT:	REV.
FIGURE 14	33554.60	140F15	0

OCT 25, 2016 - 10:39am DRAWING NAME: J:\102761-National_Grid_Liquefaction\CIV\CAD Exchange\in\2016-10-24 GZA Revised Permit\33554.60_CRMC PERMITTING_FOR STAMPING_Kiewit.dwg



LEGEND

- PROPERTY LINES
- PERVIOUS PROPOSED TO BE IMPERVIOUS
- STRUCTURE
- ASPHALT
- OTHER

REFERENCE NOTES:

1. THIS MAP CONTAINS THE ESRI ARCGIS ONLINE BING MAPS AERIAL LAYER PACKAGE. IMAGE COURTESY OF USGS EARTHSTAR GEOGRAPHICS SIO © MICROSOFT CORPORATION 2015.
2. PARCEL DATA PROVIDED BY THE CITY OF PROVIDENCE PLANNING AND DEVELOPMENT DEPARTMENT. PARCELS OF REAL ESTATE ASSESSED AS OF DECEMBER 31, 2012. GIS DATA ARE FOR PLANNING PURPOSES ONLY. THESE DATA DO NOT REPRESENT A LEGALLY RECORDED PLAN, DEED, SURVEY OR ENGINEERING SCHEMATIC AND ARE NOT INTENDED TO BE USED AS SUCH.
3. SITE BOUNDARIES ARE APPROXIMATE

IMPERVIOUS AREAS				
PLAT	LOT	NO.	AREA (SQ. FT.)	SURFACE TYPE
101	1	A1	8,037.44	ROOF
101	1	A2	17,913.35	ASPHALT
101	1	A3	90,158.79	ASPHALT
101	1	A4	1,788.65	STRUCTURE
101	1	A5	1,640.44	ROOF
101	1	A6	1,445.11	STRUCTURE
56	316	A7	156,852.04	CONTAINMENT DIKE
101	1	A8	39,796.73	TANK FOUNDATION
101	1	A9	79,909.64	COMPACTED GRAVEL
101	1	A10	1,933.34	COMPACTED GRAVEL
56	5	A11	21,898.19	COMPACTED GRAVEL
56	5	A12	37,777.70	ASPHALT
101	1	A13	8,857.25	COMPACTED GRAVEL
101	1	A14	5,114.04	COMPACTED GRAVEL
56	5	A15	2,860.88	COMPACTED GRAVEL
56	5	A16	1,196.51	COMPACTED GRAVEL
56	5	A17	23,127.00	TANK FOUNDATION
56	5	A18	1,923.75	STRUCTURE
56	5	A19	898.87	ROOF
56	5	A20	4,099.05	ROOF
56	5	A21	7,273.42	ROOF
56	5	A22	12,124.48	COMPACTED GRAVEL
56	5	A23	11,249.94	ASPHALT
56	316	A24	92,586.35	ASPHALT
56	316	A25	29,735.26	CONCRETE
56	316	A26	40,494.92	COMPACTED GRAVEL
56	316	A27	29,930.34	LNG TANK
56	316	A28	6,084.97	STRUCTURE
56	316	A29	1,686.87	ROOF
56	316	A30	3,197.19	ROOF
56	316	A31	164.24	ROOF
56	316	A32	638.42	ROOF
56	316	A33	1,346.21	ROOF
56	316	A34	1,845.52	ROOF
56	316	A35	712.24	ROOF
56	316	A36	10,912.10	SUMP PIT
56	316	A37	12,642.27	ASPHALT
56	316	A38	2,392.36	STRUCTURE
56	317	A39	17,080.05	ASPHALT
56	273	A40	28,623.42	ASPHALT
56	273	A41	3,112.28	STRUCTURE
56	273	A42	1,576.65	ROOF
56	273	A43	12,924.79	TANK
56	273	A44	1,893.89	STRUCTURE
56	273	A46	10,294.80	COMPACTED GRAVEL
56	316	A47	54,454.00	NEW IMPERVIOUS AREAS
TOTAL IMPERVIOUS			902,203.34	

$$\frac{894480.34 \text{ SQ. FT. IMPERVIOUS AREA}}{1807724.79 \text{ SQ. FT. TOTAL AREA}} = 49.48\% \text{ IMPERVIOUS}$$

0 50' 100' 200' 300'
SCALE IN FEET 1:100

NOT TO SCALE

THE INFORMATION SHOWN ON THE DRAWING IS SOLELY FOR USE BY NATIONAL GRID OR THE NATIONAL GRID'S DESIGNATED REPRESENTATIVE FOR THE SPECIFIC PROJECT AND LOCATION IDENTIFIED ON THE DRAWING. THE DRAWING SHALL NOT BE TRANSFERRED, REUSED, COPIED, OR ALTERED IN ANY MANNER FOR USE AT ANY OTHER LOCATION OR FOR ANY OTHER PURPOSE WITHOUT THE PRIOR WRITTEN CONSENT OF GZA AND NATIONAL GRID. ANY TRANSFER, REUSE, OR MODIFICATION TO THE DRAWING BY OTHERS, WITHOUT THE PRIOR WRITTEN EXPRESS CONSENT OF GZA AND NATIONAL GRID, WILL BE AT THE USER'S SOLE RISK AND WITHOUT ANY RISK OR LIABILITY TO GZA AND NATIONAL GRID.

NATIONAL GRID
LIQUEFACTION PLANT
642 ALLENS AVENUE PROVIDENCE, RHODE ISLAND

PROPOSED IMPERVIOUS CONDITIONS PLAN

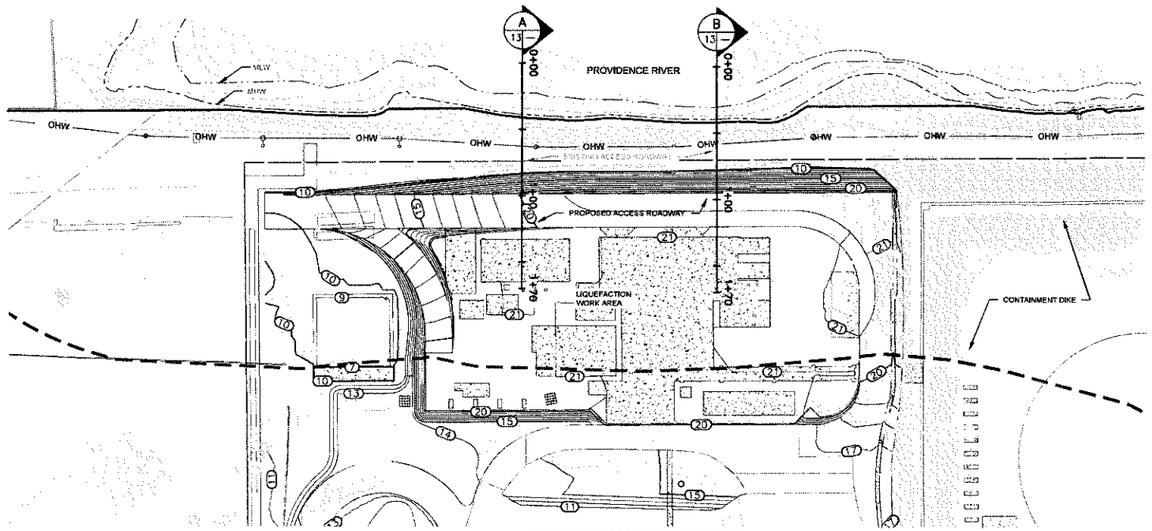
PREPARED BY:
GZA GeoEnvironmental, Inc.
Engineers and Scientists
www.gza.com

PREPARED FOR:
nationalgrid

PROJ MGR: MSK	REVIEWED BY: SJH	CHECKED BY: IR	FIGURE
DESIGNED BY: SJH	DRAWN BY: LDT	SCALE: AS NOTED	15
DATE: OCTOBER, 2016	PROJECT NO: 33554.60	REVISION NO: 0	SHEET NO. 15 OF 15

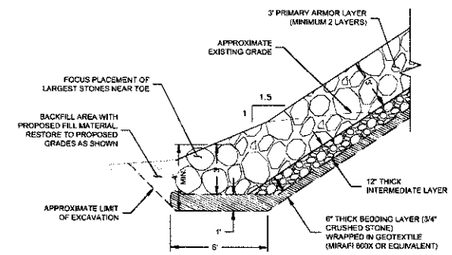
FOR PERMITTING ONLY

© 2015 - GZA GeoEnvironmental, Inc. GZA-J:\DWG\33554.60\GRY\PROJECT\CAD\GRID\33554.60_F1_IMPERVIOUS AREA.DWG PR MAP OCTOBER 12, 2015 2:57 PM LDA THERNALT



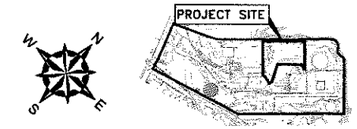
PLAN VIEW OF PROPOSED REVETMENT AND REVETMENT IMPROVEMENTS

SCALE: 1"=50'



PROPOSED REVETMENT (UPPER SLOPE) (TYP.)

SCALE: 1"=4'



KEY PLAN:

SCALE: 1"=800'

GENERAL NOTES:

1. BASE MAP DEVELOPED FROM THE FOLLOWING:
   - ELECTRONIC CAD FILE "ACAD-7257PL.DWG" PROVIDED BY VANASSE HANGEN BRUSTLIN (VHB) ENTITLED "EXISTING CONDITIONS PLAN," PROJECT TITLE "NATIONAL GRID LNG TERMINAL ROAD LNG FACILITY" DATED MARCH 10, 2014, ORIGINAL SCALE 1" = 50', DRAWING NO. SV-1 THROUGH SV-3 AND AERIAL MAPPING BY WSP TRANSPORTATION AND INFRASTRUCTURE DATED JANUARY 15, 2014 PREPARED FOR NATIONAL GRID LAND SURVEYING DEPARTMENT, WALTHAM, MASSACHUSETTS AND CAD FILE NO. 09303023.052-1.DWG. PLANS PROVIDED BY NATIONAL GRID.
   - ELECTRONIC CAD FILE14-152_SU1_REV2.DWG, TITLED "TOPOGRAPHIC SURVEY PLAN, PORTION OF A.P. 56 LOT 5" DATED OCTOBER 27, 2014 AND PROVIDED BY NATIONAL GRID.
2. HORIZONTAL DATUM IS BASED ON NAD 1983.
3. ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM (NAVD) 1988.

NOTES:

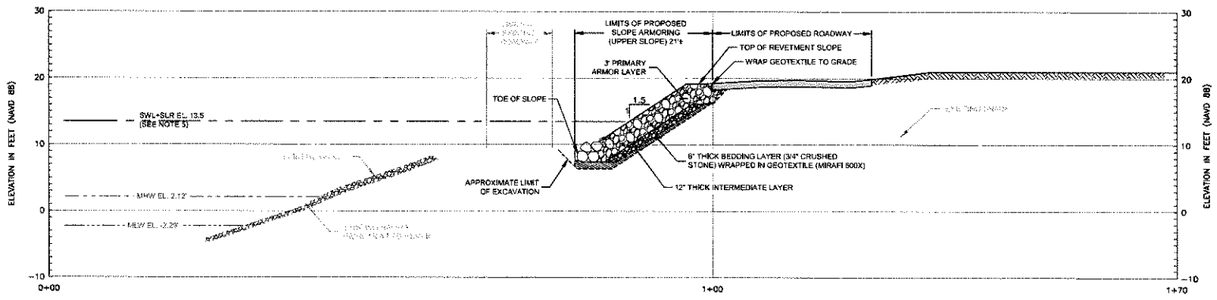
1. THE CONTRACTOR SHALL MONITOR AND ADJUST OPERATIONS AS NECESSARY TO AVOID VIBRATIONS WHICH COULD DAMAGE ADJACENT PROPERTIES AND STRUCTURES. THE CONTRACTOR IS RESPONSIBLE FOR DAMAGES TO EXISTING STRUCTURES WHICH RESULT FROM HIS OPERATIONS.
2. THE CONTRACTOR IS RESPONSIBLE FOR THE SAFE AND PROPER DISPOSAL OF ALL MATERIALS AND SHALL OBTAIN ALL NECESSARY LICENSES AND PERMITS FOR DISPOSAL.
3. ALL CONSTRUCTION MATERIALS AND STOCKPILES SHALL BE PLACED UPLAND OF THE COASTAL FEATURE.
4. NO DISTURBANCE, EXCAVATION, OR PLACEMENT OF MATERIALS SHALL BE PERFORMED BEYOND THE LIMITS SHOWN ON THE DRAWINGS.
5. 1% ANNUAL CHANCE (100-YEAR) FLOOD CONSIDERED TO BE 1% CHANCE STILL WATER LEVEL (SWL) FROM "FEMA FLOOD INSURANCE STUDY (FIS) 44007CV001C FOR PROVIDENCE COUNTY, RHODE ISLAND," DATED OCTOBER 2, 2015, PLUS A PREDICTED SEA LEVEL RISE (SLR) OF 1.5 FEET FOR A 25-YEAR DESIGN LIFE BASED ON SECTION 145 - CLIMATE CHANGE AND SEA LEVEL RISE OF THE "RHODE ISLAND COASTAL RESOURCES MANAGEMENT PROGRAM," DATED FEBRUARY 22, 2016.

RIP RAP GRADATION REQUIREMENTS

PRIMARY ARMOR LAYER		INTERMEDIATE LAYER	
RIDOT R-8		RIDOT R-2	
% LESS THAN	STONE SIZE (IN.)	% LESS THAN	STONE SIZE (IN.)
0-15%	8	0-15%	1
0-50%	13	0-50%	2
100%	26	100%	4

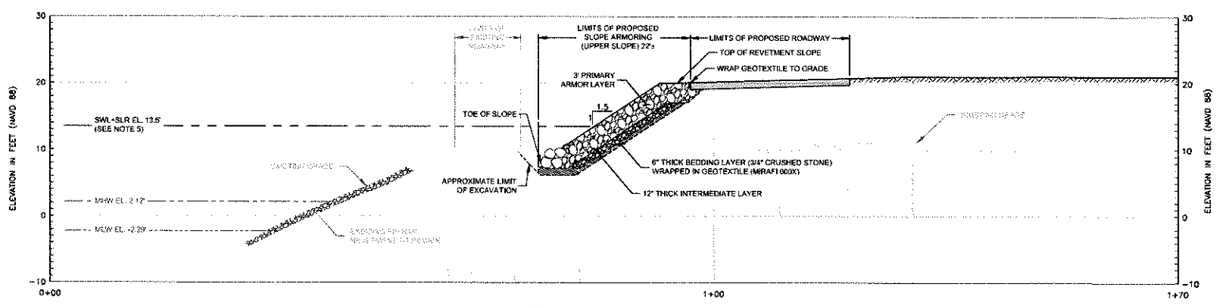
3/4" CRUSHED STONE GRADATION REQUIREMENTS

% LESS THAN	SIEVE SIZE
100	3/4 INCH
90-100	1/2 INCH
30-60	3/8 INCH
0-15	No. 4
0-5	No. 8



A 13 TYPICAL REVETMENT SECTION

SCALE: 1"=10'



B 13 TYPICAL REVETMENT SECTION

SCALE: 1"=10'

LEGEND:

- 200-FOOT CRMC JURISDICTIONAL LIMIT
- MHW — MEAN HIGH WATER
- MLW — MEAN LOW WATER
- SWL+SLR — STILL WATER LEVEL AND PREDICTED SEA LEVEL RISE (SEE NOTE #5)
- OHW — EXISTING OVERHEAD WIRE
- LIMIT OF PROPOSED REVETMENT (UPPER SLOPE)

TIDAL DATUM

NOTE:

1. TO CONVERT FROM NAVD88 TO MLW ADD 2.29 FT.
2. TIDAL DATUM BASED UPON NOAA STATION 8454000.

NAVD 88	MLW
+2.37' (MHHW)	+4.66' (MHHW)
+2.12' (MHW)	+4.41' (MHW)
0.0' (NAVD 88)	+2.29'
-2.29' (MLW)	0.0' (MLW)
-2.47' (MLLW)	-0.18' (MLLW)

0 2' 4' 8' 12'
SCALE IN FEET 1"=4'

0 5' 10' 20' 30'
SCALE IN FEET 1"=10'

0 25' 50' 100' 150'
SCALE IN FEET 1"=50'

NOT TO SCALE

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LIQUEFACTION FACILITY
642 ALLENS AVENUE
PROVIDENCE, RHODE ISLAND

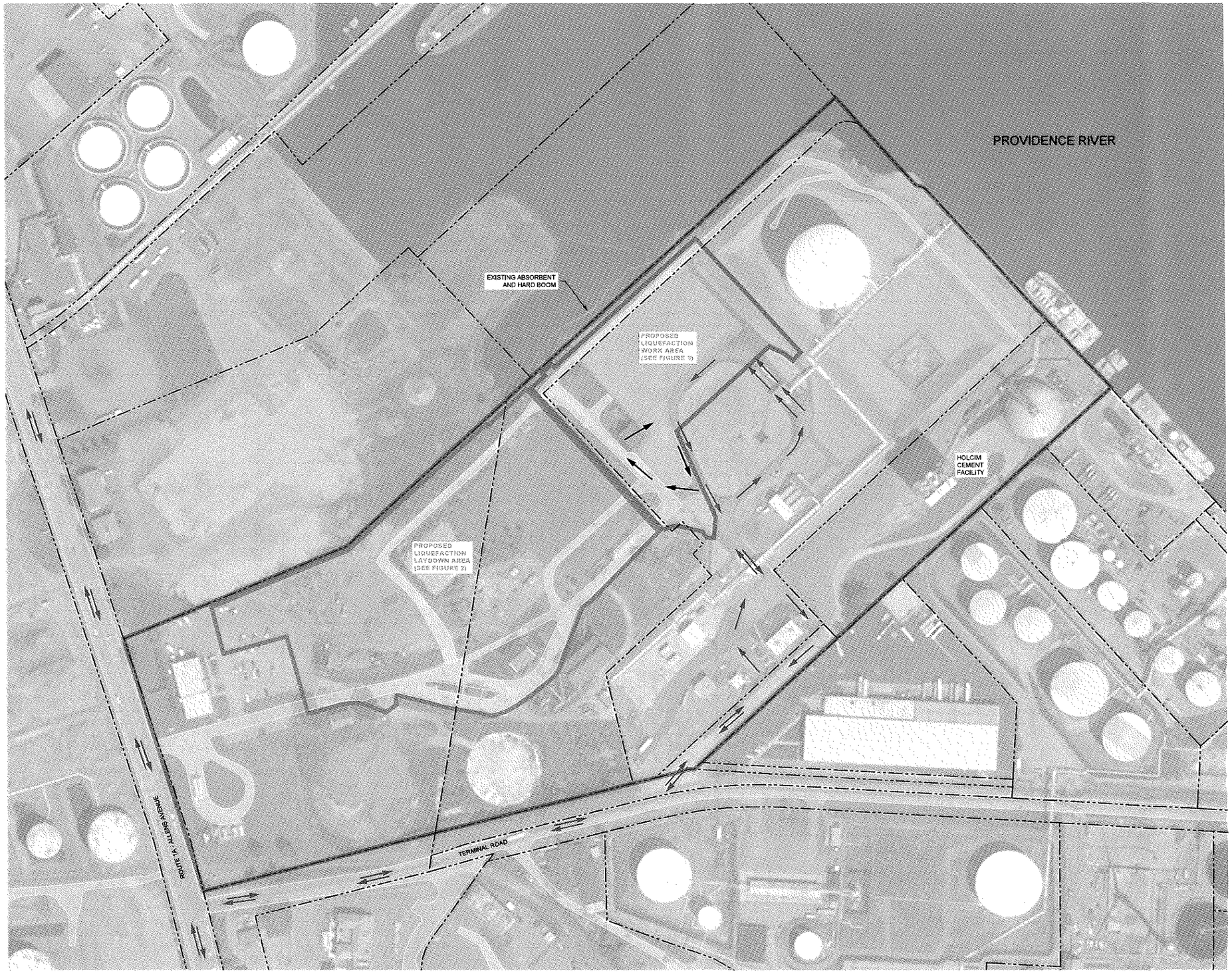
LIQUEFACTION WORK AREA - PROPOSED REVETMENT AND CROSS SECTIONS

PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com

PREPARED FOR: nationalgrid

PROJ MGR: MSK	REVIEWED BY: MJP	CHECKED BY: MJP	FIGURE 2
DESIGNED BY: SMP	DRAWN BY: LDT	SCALE: AS NOTED	
DATE: OCTOBER, 2016	PROJECT NO. 33554.60	REVISION NO. 0	SHEET NO. 2 OF 2

2016 - GZA GeoEnvironmental, Inc. G:\JOBS\33554.60 NGRID\FIGURES\CAD\PRFIG\33554-60_CRMC PERMITTING_2-3-2016 LDWG REVETMENT-FIG2 OCTOBER 13, 2016 12:22 PM LDT INTRANET



LEGEND:

- PROPERTY LINES
- 642 ALLENS AVENUE FORMER MGP SITE
- PROPOSED LIQUEFACTION WORK AREA
- PROPOSED LIQUEFACTION LAYDOWN AREA
- EXISTING LNG TRUCK TRAFFIC PATTERN
- PROPOSED LIQUID NITROGEN TRUCK TRAFFIC PATTERN

REFERENCES:

1. THIS MAP CONTAINS THE ESRI ARCGIS ONLINE BING MAPS AERIAL LAYER PACKAGE. IMAGE COURTESY OF USGS EARTHSTAR GEOGRAPHICS SIO © MICROSOFT CORPORATION 2015.
2. PARCEL AND STREET DATA PROVIDED BY THE CITY OF PROVIDENCE PLANNING AND DEVELOPMENT DEPARTMENT. PARCELS OF REAL ESTATE ASSESSED AS OF DECEMBER 31, 2012. GIS DATA ARE FOR PLANNING PURPOSES ONLY. THESE DATA DO NOT REPRESENT A LEGALLY RECORDED PLAN, DEED, SURVEY OR ENGINEERING SCHEMATIC AND ARE NOT INTENDED TO BE USED AS SUCH.
3. SITE BOUNDARIES ARE APPROXIMATE.

NOT TO SCALE

N W E S

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0 50' 100' 200' 300'
SCALE IN FEET

THE INFORMATION SHOWN ON THE DRAWING IS SOLELY FOR USE BY NATIONAL GRID OR THE NATIONAL GRID'S DESIGNATED REPRESENTATIVE FOR THE SPECIFIC PROJECT AND LOCATION IDENTIFIED ON THE DRAWING. THE DRAWING SHALL NOT BE TRANSFERRED, REUSED, COPIED, OR ALTERED IN ANY MANNER FOR USE AT ANY OTHER LOCATION OR FOR ANY OTHER PURPOSE WITHOUT THE PRIOR WRITTEN CONSENT OF GZA AND NATIONAL GRID. ANY TRANSFER, REUSE, OR MODIFICATION TO THE DRAWING BY OTHERS, WITHOUT THE PRIOR WRITTEN EXPRESS CONSENT OF GZA AND NATIONAL GRID, WILL BE AT THE USER'S SOLE RISK AND WITHOUT ANY RISK OR LIABILITY TO GZA AND NATIONAL GRID.

PROPOSED LIQUEFACTION PLANT
642 ALLENS AVENUE
PROVIDENCE, RHODE ISLAND

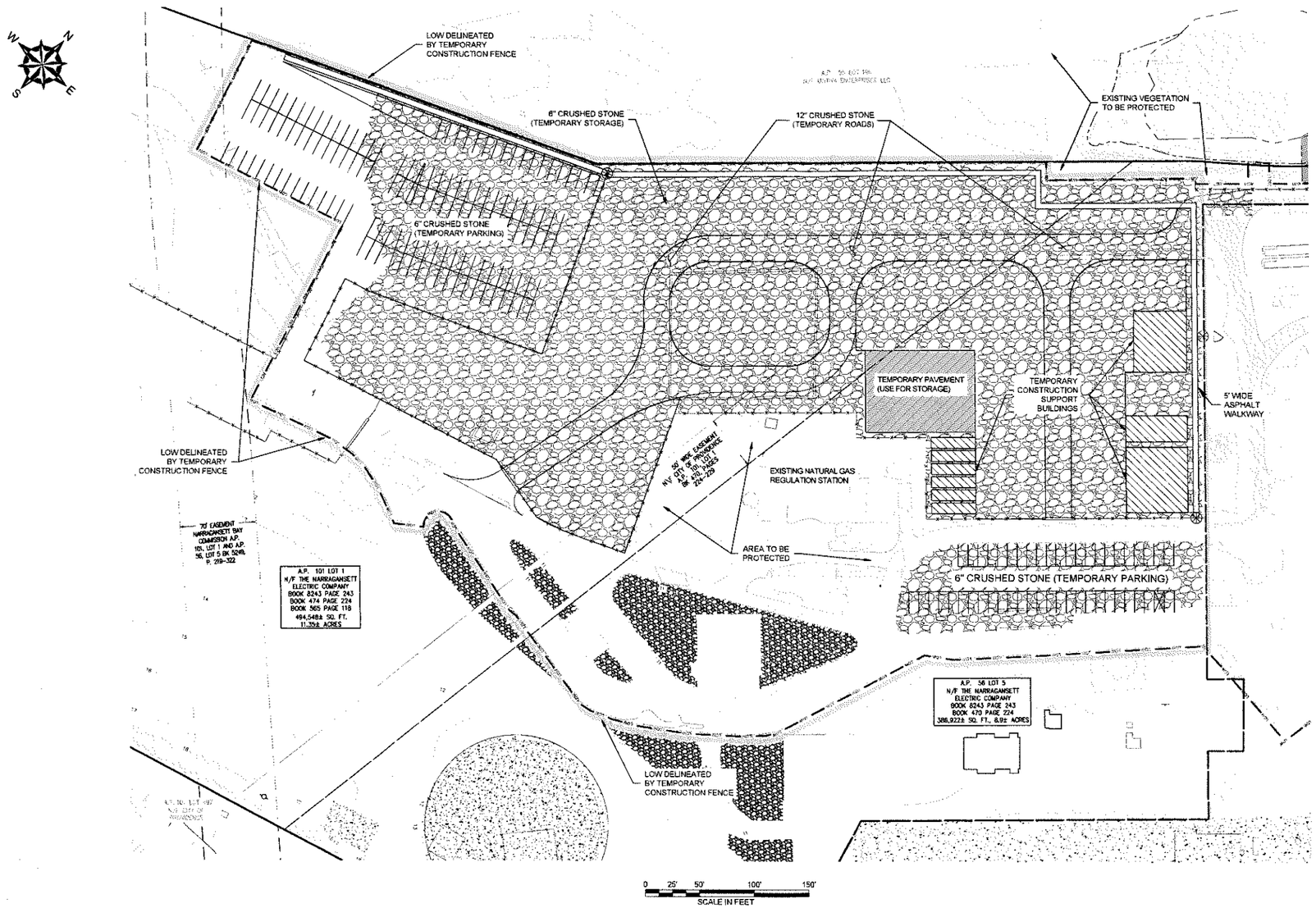
OVERALL AERIAL

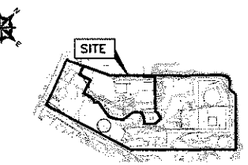
PREPARED BY:
GZA GeoEnvironmental, Inc.
Engineers and Scientists
www.gza.com

PREPARED FOR:
nationalgrid

PROJ MGR: MSK	REVIEWED BY: SN	CHECKED BY: IR	FIGURE 1
DESIGNED BY: LDT	DRAWN BY: LDT	SCALE: AS NOTED	
DATE: MARCH 15, 2017	PROJECT NO. 33554.60	REVISION NO. 0	SHEET NO. 1 OF 3

2017 - GZA GeoEnvironmental, Inc. G:\--\UNA\33554.60\GIS\FIGURES\OUTLINES\SITE FOR 600\33554.60_AERIAL_KEMA.DWG FI-SITE KEMA - 34x24 MARCH 13, 2017 9:26 AM USR \KEMA\





KEY PLAN:
SCALE: 1"=800'

LEGEND:

- EXISTING BUILDING
- EXISTING CONTOUR (MAJOR 10 FOOT INTERVAL)
- EXISTING CONTOUR (MINOR 1 FOOT INTERVAL)
- EXISTING PAVEMENT
- EASEMENT AREA
- UTILITY POLE
- LIGHT POLE
- HYDRANT
- PROPERTY LINES
- INTERIOR PROPERTY LINE
- TEMPORARY LAYDOWN AREA
- PROPOSED PERMANENT PAVEMENT
- PROPOSED TEMPORARY PAVEMENT
- PROPOSED TEMPORARY BUILDING
- PROPOSED CRUSHED STONE
- LIMIT OF WORK

NOT TO SCALE

FOR PERMITTING ONLY

GENERAL NOTES:

1) BASE MAP DEVELOPED FROM THE FOLLOWING:

- ELECTRONIC CAD FILE "ACAD-7257PL.DWG" PROVIDED BY VANASSE HANGEN BRUSTLIN (VHB) ENTITLED "EXISTING CONDITIONS PLAN." PROJECT TITLE "NATIONAL GRID LNG TERMINAL ROAD LNG FACILITY" DATED MARCH 10, 2014, ORIGINAL SCALE 1" = 50', DRAWING NO. SV-1 THROUGH SV-3 AND AERIAL MAPPING BY WSP TRANSPORTATION AND INFRASTRUCTURE DATED JANUARY 15, 2014 PREPARED FOR NATIONAL GRID LAND SURVEYING DEPARTMENT, WALTHAM, MASSACHUSETTS AND CAD FILE NO. 09303023.052-1.DWG. PLANS PROVIDED BY NATIONAL GRID.
- DESCRIPTIONS PROVIDED IN THE CITY OF PROVIDENCE DEED BOOK (BK) 470 PAGES 224 - 229, BK 561 PAGES 325 - 328, BK 1111 PAGES 752 -756 AND BK 5249 PAGES 219 - 322.
- ELECTRONIC CAD FILE14-152_SU1_REV2.DWG, TITLED "TOPOGRAPHIC SURVEY PLAN, PORTION OF A.P. 56 LOT 5" DATED OCTOBER 27, 2014 AND PROVIDED BY NATIONAL GRID.
- ELECTRONIC CAD FILE 5153_COO.DWG, TITLED "EXISTING CONDITIONS PLAN" PREPARED BY PROCESS PIPELINE SERVICES, DATED DECEMBER 18, 2014 AND PROVIDED BY NATIONAL GRID.
- ELECTRONIC CAD FILES PROVIDED BY KIEWIT
  1. "ACAD-102761-CIV_SITE.DWG"
  2. "2007EXP_102761-CIV_LAYDOWN.DWG"
  3. "102761_MEC_STR_BASE.DWG"
  4. "102761-SURVEY_SITE.DWG"
  5. "A2007EXP_102761-CIV_STORM.DWG"
  6. "ACAD-102761-CIV_SURFACING.DWG"
  7. "ACAD-102761-PROP-CONT_.DWG"
  8. "POST DEVELOPMENT DRAINAGE MAP.DWG
- PDFS OF THE FOLLOWING DRAWINGS PROVIDED BY NATIONAL GRID
  1. "CATCH BASINS AND SANITARY SEWER SYSTEM" PREPARED BY PROVIDENCE GAS COMPANY, DATED SEPTEMBER 25, 1981.
  2. "PLAN SHOWING UNDERGROUND UTILITIES LNG FACILITY" DATED OCTOBER 6, 1983, "SUBSURFACE UTILITY ENGINEERING" PREPARED BY BAYSTATE SUBSURFACE INVESTIGATION, INC., DATED MAY 17, 2005.

2) HORIZONTAL DATUM IS BASED ON NAD 1983 FROM BASE MAPPING PROVIDED BY VHB.

3) VERTICAL DATUM IS BASED ON NAVD 1988 FROM BASE MAPPING PROVIDED BY VHB.

4) SELECT PRESENTED SITE UTILITIES WERE TAKEN FROM HISTORIC FIGURES PROVIDED BY NATIONAL GRID. ALL UTILITY LOCATIONS ARE APPROXIMATE AND HAVE BEEN ALIGNED AND ADJUSTED FOR THE "BEST FIT" AND THESE DATA SHOULD BE CONSIDERED ACCURATE ONLY TO THE DEGREE IMPLIED BY THE METHOD USED. UTILITIES ARE SHOWN FOR REFERENCE ONLY, **OTHER LOCATIONS MAY EXIST.**

5) ON-SITE INVESTIGATIONS AND SURVEYS BY GZA PERSONNEL DURING VARIOUS SITE VISITS BETWEEN 2011 AND 2016.

6) PARCEL DATA PROVIDED BY THE CITY OF PROVIDENCE PLANNING AND DEVELOPMENT DEPARTMENT. PARCELS OF REAL ESTATE ASSESSED AS OF DECEMBER 31, 2012. GIS DATA ARE FOR PLANNING PURPOSES ONLY. THESE DATA DO NOT REPRESENT A LEGALLY RECORDED PLAN, DEED, SURVEY OR ENGINEERING SCHEMATIC AND ARE NOT INTENDED TO BE USED AS SUCH.

7) SITE BOUNDARIES ARE APPROXIMATE.

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PROPOSED LIQUEFACTION PLANT
642 ALLENS AVENUE
PROVIDENCE, RHODE ISLAND

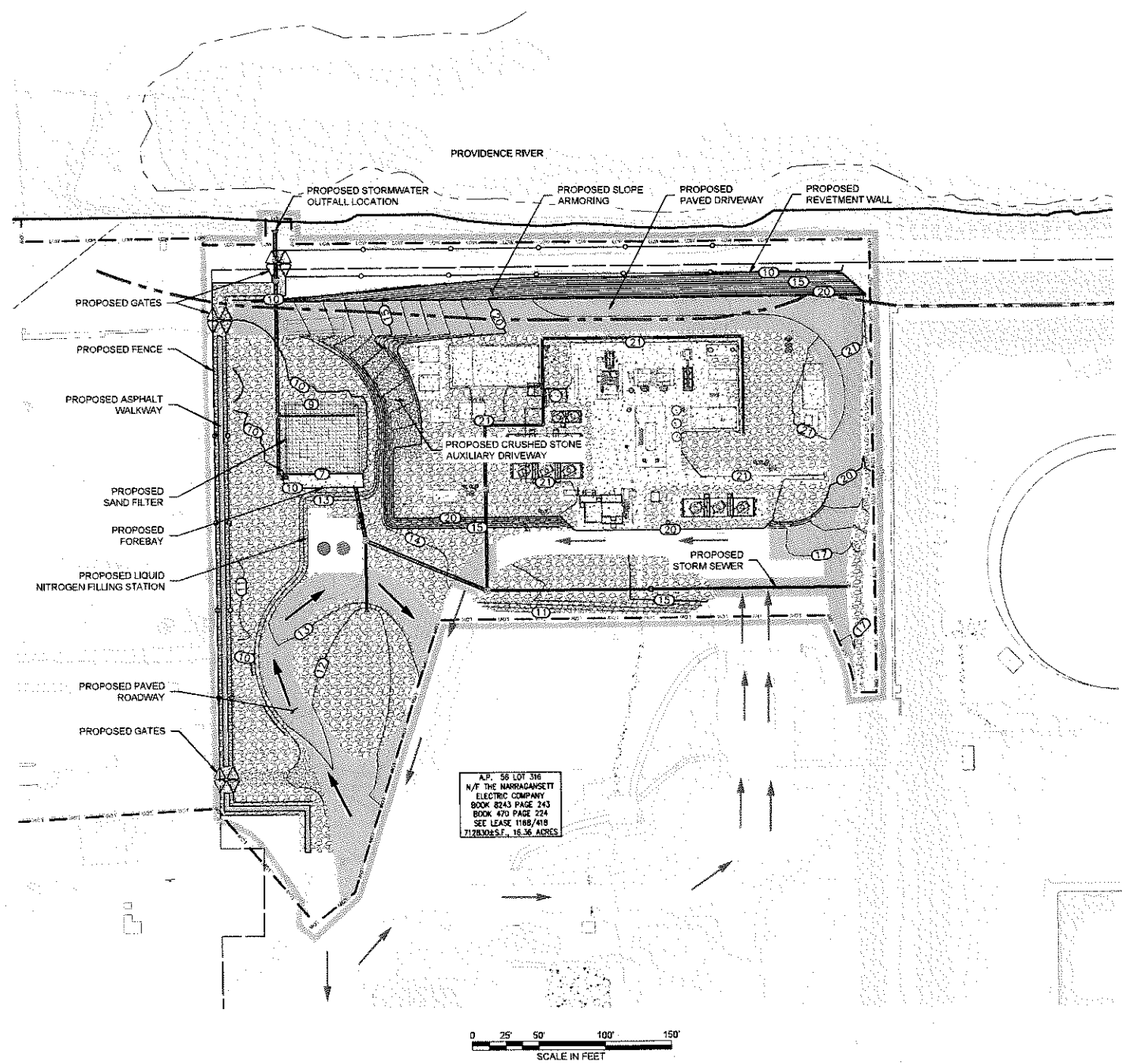
PROPOSED LIQUEFACTION LAYDOWN AREA

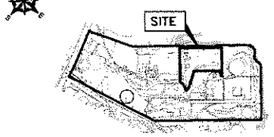
PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com

PREPARED FOR: nationalgrid

PROJ MGR: MSK	REVIEWED BY: SN	CHECKED BY: IR	FIGURE 2
DESIGNED BY: LDT	DRAWN BY: LDT	SCALE: AS NOTED	
DATE: MARCH 15, 2017	PROJECT NO. 33554.60	REVISION NO. 0	SHEET NO. 2 OF 3

2017 - GZA GeoEnvironmental, Inc. - G:\JOBS\33554.60\ACAD\FIGURES\LAYOUTS\SITE FOR ECOR\33554.60_LIQUEFACTION AND LAYDOWN.DWG F2-PR LAYDOWN MARCH 15, 2017 8:22 AM LDT, THERMALY





KEY PLAN:
SCALE: 1"=800'

LEGEND:

- EXISTING STRUCTURE
- EXISTING CONTOUR (MAJOR 5 FOOT INTERVAL)
- EXISTING CONTOUR (MINOR 1 FOOT INTERVAL)
- CRMC 50-FOOT SETBACK
- EXISTING PAVEMENT
- EASEMENT AREA
- UTILITY POLE
- LIGHT POLE
- HYDRANT
- PROPERTY LINES
- INTERIOR PROPERTY LINE
- PROPOSED CONTOUR (MAJOR 5 FOOT INTERVAL)
- PROPOSED CONTOUR (MINOR 1 FOOT INTERVAL)
- PROPOSED PERMANENT PAVEMENT
- PROPOSED GRAVEL
- PROPOSED CONCRETE
- PROPOSED SAND FILTER
- LIQUEFACTION WORK AREA
- LIMIT OF WORK
- LIMIT OF PROPOSED REVETMENT (UPPER SLOPE)
- PROPOSED ROUND CATCH BASIN
- PROPOSED SQUARE CATCH BASIN
- EXISTING LNG TRUCK TRAFFIC PATTERN
- PROPOSED LIQUID NITROGEN TRUCK TRAFFIC PATTERN
- PROPOSED GATES

NOT TO SCALE

FOR PERMITTING ONLY

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PROPOSED LIQUEFACTION PLANT
642 ALLENS AVENUE
PROVIDENCE, RHODE ISLAND

PROPOSED FINAL CONDITIONS PLAN

PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com

PREPARED FOR: nationalgrid

PROJ MGR: MSK	REVIEWED BY: SN	CHECKED BY: IR	FIGURE 3
DESIGNED BY: LDT	DRAWN BY: LDT	SCALE: AS NOTED	
DATE: MARCH 15, 2017	PROJECT NO. 33554.60	REVISION NO. 0	SHEET NO. 3 OF 3

GENERAL NOTES:

1) BASE MAP DEVELOPED FROM THE FOLLOWING:

- ELECTRONIC CAD FILE "ACAD-7257PL.DWG" PROVIDED BY VANASSE HANGEN BRUSTLIN (VHB) ENTITLED "EXISTING CONDITIONS PLAN," PROJECT TITLE "NATIONAL GRID LNG TERMINAL ROAD LNG FACILITY" DATED MARCH 10, 2014, ORIGINAL SCALE 1" = 50'. DRAWING NO. SV-1 THROUGH SV-3 AND AERIAL MAPPING BY WSP TRANSPORTATION AND INFRASTRUCTURE DATED JANUARY 15, 2014 PREPARED FOR NATIONAL GRID LAND SURVEYING DEPARTMENT, WALTHAM, MASSACHUSETTS AND CAD FILE NO. 09303023.052-1.DWG. PLANS PROVIDED BY NATIONAL GRID.
- DESCRIPTIONS PROVIDED IN THE CITY OF PROVIDENCE DEED BOOK (BK) 470 PAGES 224 - 229, BK 561 PAGES 326 - 328, BK 1111 PAGES 752 -756 AND BK 5249 PAGES 219 - 322.
- ELECTRONIC CAD FILE14-152_SU1_REV2.DWG, TITLED "TOPOGRAPHIC SURVEY PLAN, PORTION OF A.P. 56 LOT 5" DATED OCTOBER 27, 2014 AND PROVIDED BY NATIONAL GRID.
- ELECTRONIC CAD FILE 5153_COO.DWG, TITLED "EXISTING CONDITIONS PLAN" PREPARED BY PROCESS PIPELINE SERVICES, DATED DECEMBER 18, 2014 AND PROVIDED BY NATIONAL GRID.
- ELECTRONIC CAD FILES PROVIDED BY KIEWIT
  1. "ACAD-102761-CIV_SITE.DWG"
  2. "2007EXP_102761-CIV_SURFACING.DWG"
  3. "102761_MEC_STR_BASE.DWG"
  4. "102761-SURVEY_SITE.DWG"
  5. "A2007EXP_102761-CIV_STORM.DWG"
  6. "ACAD-102761-CIV_SURFACING.DWG"
  7. "ACAD-102761-PROP-CONT.DWG"
  8. "POST DEVELOPMENT DRAINAGE MAP.DWG
- PDFS OF THE FOLLOWING DRAWINGS PROVIDED BY NATIONAL GRID
  1. "CATCH BASINS AND SANITARY SEWER SYSTEM" PREPARED BY PROVIDENCE GAS COMPANY, DATED SEPTEMBER 25, 1981.
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3) VERTICAL DATUM IS BASED ON NAVD 1988 FROM BASE MAPPING PROVIDED BY VHB.

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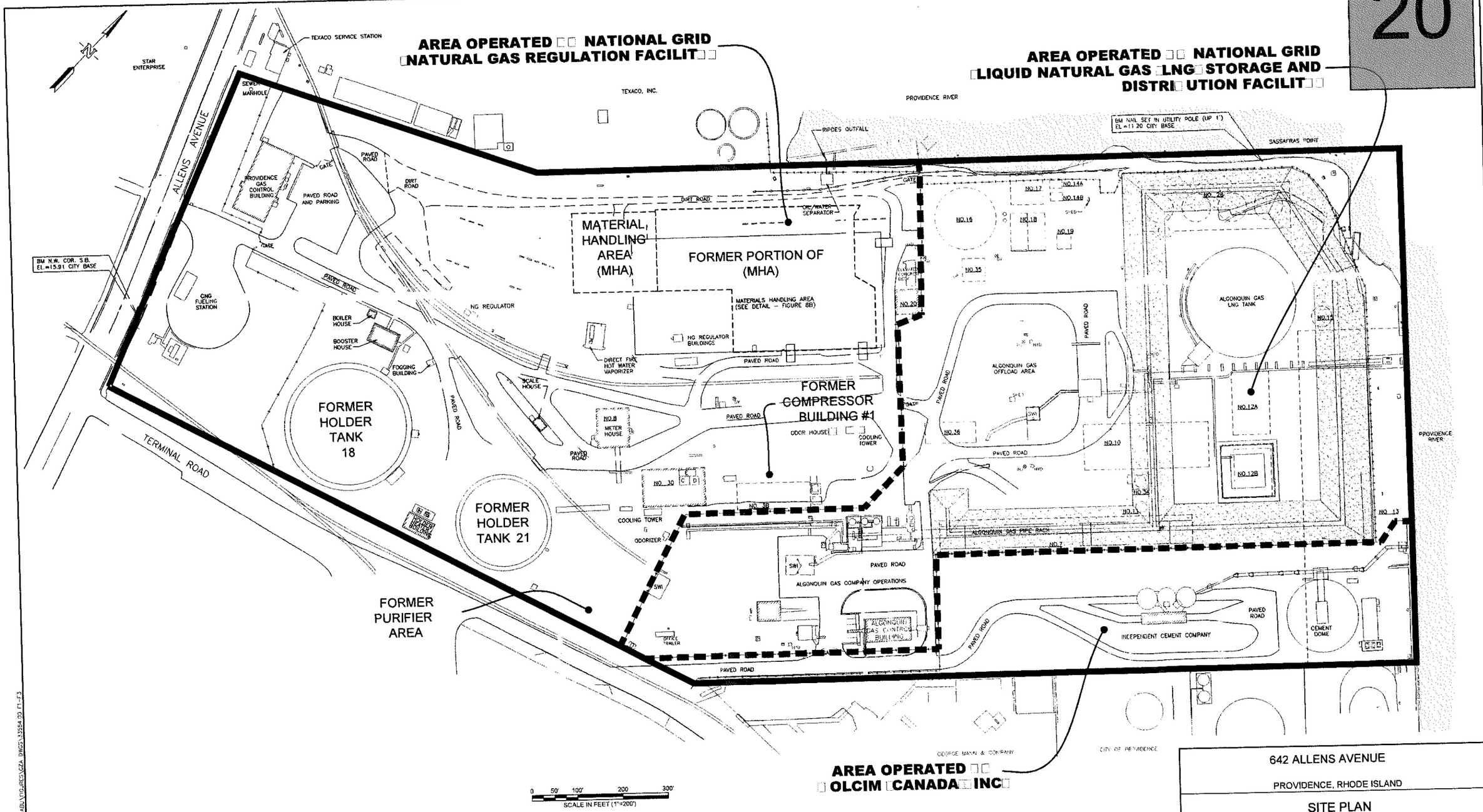
7) SITE BOUNDARIES ARE APPROXIMATE.

2017 - GZA GeoEnvironmental, Inc. G:\~\USA\33554.60.MSK\FIGURES\LOD_DWGS\SITE FOR KGW\33554.60_LIQUEFACTION AND LAYDOWN.DWG F3 - FINAL COND MARCH 15, 2017 8:29 AM LDN, THERMALE1



NOT TO SCALE

NOTE:

1) BASE MAP DEVELOPED FROM ELECTRONIC SCAN PROVIDED BY NATIONAL GRID, PREPARED BY ESS ENVIRONMENTAL SCIENCE SERVICES, INC. , ENTITLED "SITE LAYOUT PLAN," DATED DECEMBER 3, 1998, ORIGINAL SCALE 1"=80', DRAWING No. P1P51-8A.

UNLESS SPECIFICALLY STATED BY WRITTEN AGREEMENT, THIS DRAWING IS THE SOLE PROPERTY OF GZA GEOENVIRONMENTAL, INC. (GZA). THE INFORMATION SHOWN ON THE DRAWING IS SOLELY FOR USE BY GZA'S CLIENT OR THE CLIENT'S DESIGNATED REPRESENTATIVE FOR THE SPECIFIC PROJECT AND LOCATION IDENTIFIED ON THE DRAWING. THE DRAWING SHALL NOT BE TRANSFERRED, REUSED, COPIED, OR ALTERED IN ANY MANNER FOR USE AT ANY OTHER LOCATION OR FOR ANY OTHER PURPOSE WITHOUT THE PRIOR WRITTEN CONSENT OF GZA. ANY TRANSFER, REUSE, OR MODIFICATION TO THE DRAWING BY THE CLIENT OR OTHERS, WITHOUT THE PRIOR WRITTEN EXPRESS CONSENT OF GZA, WILL BE AT THE USER'S SOLE RISK AND WITHOUT ANY RISK OR LIABILITY TO GZA.

642 ALLENS AVENUE

PROVIDENCE, RHODE ISLAND

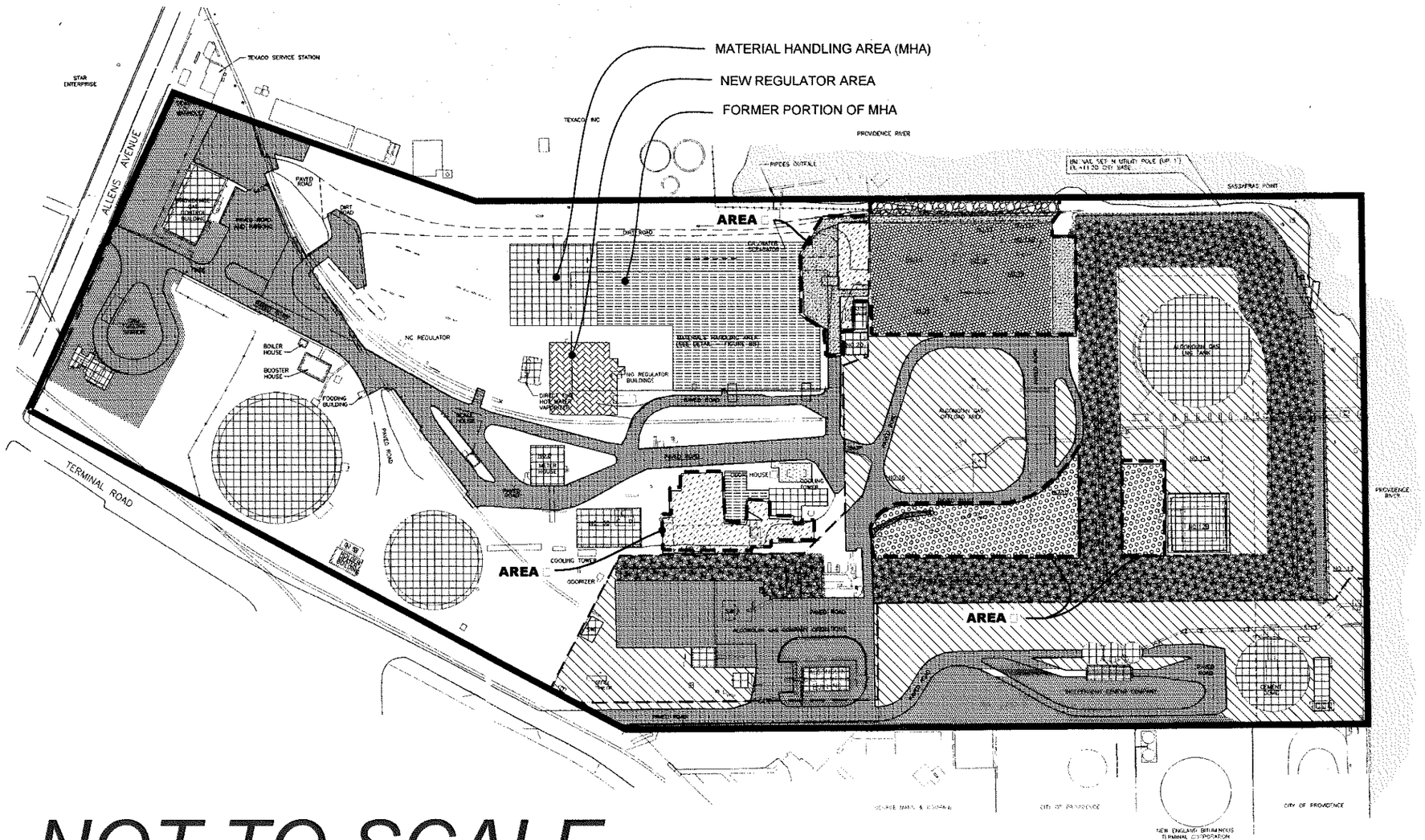
SITE PLAN

PREPARED BY: GZA GEOENVIRONMENTAL, INC. 330 BROADWAY PROVIDENCE, RHODE ISLAND 02909 (401) 421-4140		PREPARED FOR: NATIONAL GRID	
PROJ MGR: ABU	REVIEWED BY: ABU	CHECKED BY: JPH	FIGURE 2
DESIGNED BY: ABU	DRAWN BY: CRB	SCALE: AS NOTED	
DATE SEPTEMBER 2012	PROJECT NO. 33554.00	REVISION NO.	SHEET NO.

©2010 - GZA GeoEnvironmental, Inc. J:\ENV\33554.ABU\FIGURES\GZA DWGS\33554.00 F1-F3

NOTE:

1) BASE MAP DEVELOPED FROM ELECTRONIC SCAN PROVIDED BY NATIONAL GRID, PREPARED BY ESS ENVIRONMENTAL SCIENCE SERVICES, INC., ENTITLED "SITE LAYOUT PLAN," DATED DECEMBER 3, 1988. ORIGINAL SCALE 1"=80'. DRAWING No. P1P51-8A.



AREAS OF REMEDIATION

- AREAS CAPPED WITH APPROXIMATELY 18-20 INCHES OF CLEAN SAND, APPROXIMATELY 4-6 INCHES OF LOAM AND HYDOSEED
- AREAS CAPPED WITH WITH APPROXIMATELY 2 FEET OF STONE DUST
- AREAS CAPPED WITH APPROXIMATELY 18-20 INCHES OF CLEAN SAND AND APPROXIMATELY 4-6 INCHES OF CRUSHED STONE
- AREAS CAPPED WITH 2 FEET OF CLEAN FILL
- AREAS REMEDIATED BY ESS, CLEAN SAND AND CRUSHED STONE CAP
- AREAS CAPPED WITH GEOTEXTILE AND APPROXIMATELY 24 INCHES OF RIP RAP

AREAS EQUIVALENT TO AN ENGINEERED CAP

- BUILDING STRUCTURE
- PAVED AREAS
- CONTAINMENT DIKE

OTHER AREAS

- APPROXIMATELY 4-6 INCHES OF LOAM AND HYDROSEED APPLIED TO FORMER MHA, NOT AN ENGINEERED CAP. ADDITIONAL INVESTIGATION ARE PLANNED
- CRUSHED STONE
- AREAS MAINTAINED WITH GRASS

21

N W E S

NOT TO SCALE

0 50' 100' 200 300'
SCALE IN FEET (1"=200')

UNLESS SPECIFICALLY STATED BY WRITTEN AGREEMENT, THIS DRAWING IS THE SOLE PROPERTY OF GZA GEOENVIRONMENTAL, INC. (GZA). THE INFORMATION SHOWN ON THE DRAWING IS SOLELY FOR USE BY GZA'S CLIENT OR THE CLIENT'S DESIGNATED REPRESENTATIVE FOR THE SPECIFIC PROJECT AND LOCATION IDENTIFIED ON THE DRAWING. THE DRAWING SHALL NOT BE TRANSFERRED, REUSED, COPIED, OR ALTERED IN ANY MANNER FOR USE AT ANY OTHER LOCATION OR FOR ANY OTHER PURPOSE WITHOUT THE PRIOR WRITTEN CONSENT OF GZA. ANY TRANSFER, REUSE, OR MODIFICATION TO THE DRAWING BY THE CLIENT OR OTHERS, WITHOUT THE PRIOR WRITTEN EXPRESS CONSENT OF GZA, WILL BE AT THE USER'S SOLE RISK AND WITHOUT ANY RISK OR LIABILITY TO GZA.

642 ALLENS AVENUE

PROVIDENCE, RHODE ISLAND

REMEDIATED AREAS

PREPARED BY:
GZA GEOENVIRONMENTAL, INC.
530 BROADWAY
PROVIDENCE, RHODE ISLAND 02909
(401) 421-4140

PREPARED FOR:

PROJ MGR: ABU	REVIEWED BY: ABU	CHECKED BY: JPH	FIGURE 3
DESIGNED BY: ABU	DRAWN BY: CRB	SCALE: AS NOTED	
DATE SEPTEMBER 2012	PROJECT NO. 33554.00	REVISION NO.	SHEET NO

©2010 - GZA GeoEnvironmental, Inc. J:\ENV\33554.ABU\FIGURES\GZA DWGS\33554.00 F1-F3

NATIONAL GRID
LIQUEFACTION PLANT
642 ALLENS AVENUE PROVIDENCE, RHODE ISLAND

SEPTEMBER 2016

PREPARED FOR:

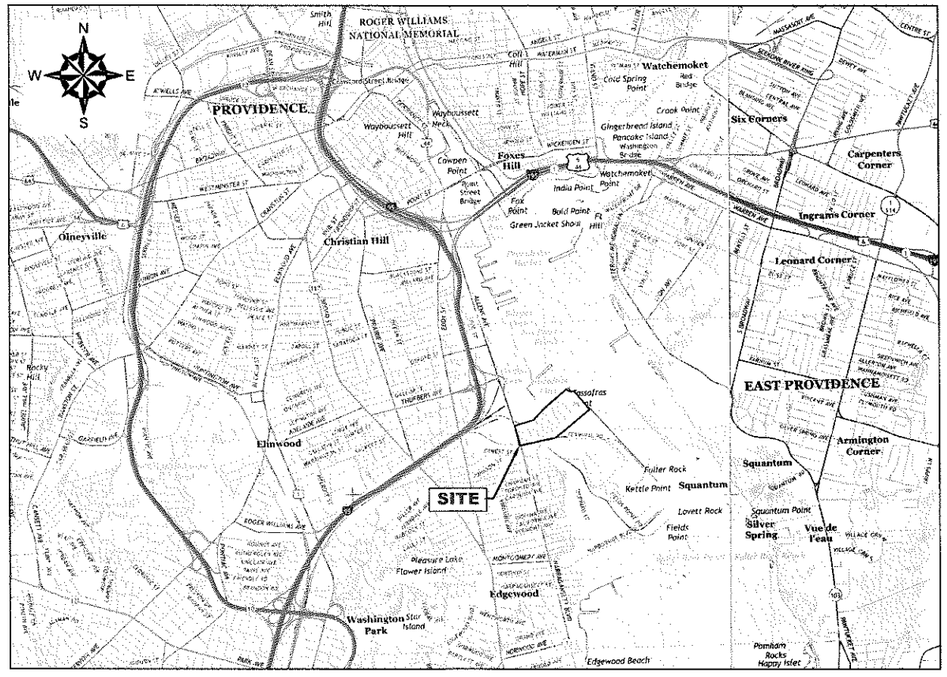
nationalgrid

PREPARED BY:

GZA GEOENVIRONMENTAL, INC.
530 BROADWAY
PROVIDENCE, RHODE ISLAND 02909

DESIGNED BY:

KIEWIT ENGINEERING AND DESIGN CO.
9401 RENNER BOULEVARD
LENEXA, KANSAS 66219



PROJECT LOCUS MAP

SOURCE: USGSSTORE.GOV

0 1000' 2000' 4000' 6000'
SCALE: 1 INCH = 2000 FEET

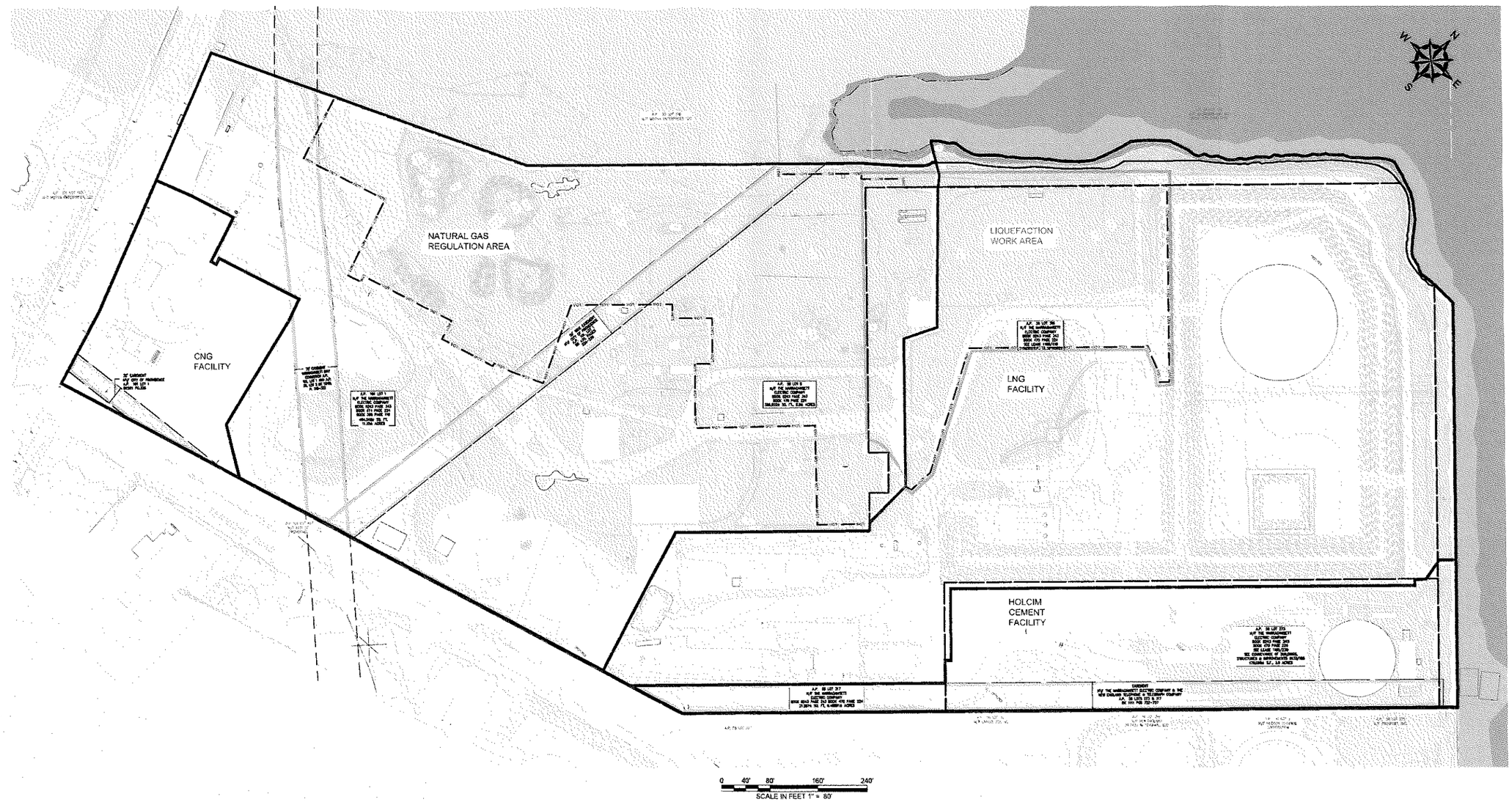
INDEX OF DRAWINGS	
Sheet #	Sheet Title
1	COVER
2	EXISTING CONDITIONS PLAN
3	EXISTING IMPERVIOUS CONDITIONS PLAN
4	TEMPORARY LAYDOWN AREA EROSION AND SEDIMENTATION CONTROLS
5	TEMPORARY SEDIMENTATION AND EROSION CONTROL DETAILS
6	SOIL STORAGE AREA PLAN
7	LIQUEFACTION WORK AREA - EROSION AND SEDIMENTATION CONTROLS
8	LIQUEFACTION WORK AREA - EXISTING REVETMENT WALL AND CROSS SECTIONS
9	LIQUEFACTION WORK AREA - PROPOSED SLOPE ARMORING,EXISTING REVETMENT AND CROSS SECTIONS
10	STORMWATER MANAGEMENT PLAN
11	STORMWATER MANAGEMENT DETAILS - SAND FILTER
12	STORMWATER MANAGEMENT DETAILS - CONCRETE FOREBAY
13	PROPOSED MONITORING WELL RE-INSTALLATION PLAN
14	PROPOSED FINAL CONDITIONS PLAN
15	PROPOSED IMPERVIOUS CONDITIONS PLAN

FOR PERMITTING ONLY

NOT TO SCALE

THE INFORMATION SHOWN ON THE DRAWING IS SOLELY FOR USE BY NATIONAL GRID OR THE NATIONAL GRID'S DESIGNATED REPRESENTATIVE FOR THE SPECIFIC PROJECT AND LOCATION IDENTIFIED ON THE DRAWING. THE DRAWING SHALL NOT BE TRANSFERRED, REUSED, COPIED, OR ALTERED IN ANY MANNER FOR USE AT ANY OTHER LOCATION OR FOR ANY OTHER PURPOSE WITHOUT THE PRIOR WRITTEN CONSENT OF GZA AND NATIONAL GRID. ANY TRANSFER, REUSE, OR MODIFICATION TO THE DRAWING BY OTHERS, WITHOUT THE PRIOR WRITTEN EXPRESS CONSENT OF GZA AND NATIONAL GRID, WILL BE AT THE USER'S SOLE RISK AND WITHOUT ANY RISK OR LIABILITY TO GZA AND NATIONAL GRID.

C1



NOT TO SCALE

GENERAL NOTES:

1) BASE MAP DEVELOPED FROM THE FOLLOWING:

- ELECTRONIC CAD FILE "ACAD-7257PL.DWG" PROVIDED BY VANASSE HANGEN BRUSTLIN (VHB) ENTITLED "EXISTING CONDITIONS PLAN," PROJECT TITLE "NATIONAL GRID LNG TERMINAL ROAD LNG FACILITY" DATED MARCH 10, 2014, ORIGINAL SCALE 1" = 50', DRAWING NO. SV-1 THROUGH SV-3 AND AERIAL MAPPING BY WSP TRANSPORTATION AND INFRASTRUCTURE DATED JANUARY 15, 2014 PREPARED FOR NATIONAL GRID LAND SURVEYING DEPARTMENT, WALTHAM, MASSACHUSETTS AND CAD FILE NO. 09303023.052-1.DWG. PLANS PROVIDED BY NATIONAL GRID.
- DESCRIPTIONS PROVIDED IN THE CITY OF PROVIDENCE DEED BOOK (BK) 470 PAGES 224 - 229, BK 561 PAGES 326 - 328, BK 1111 PAGES 752 -758 AND BK 5249 PAGES 219 - 322.
- ELECTRONIC CAD FILE14-152_SU1_REV2.DWG. TITLED "TOPOGRAPHIC SURVEY PLAN, PORTION OF A.P. 56 LOT 5" DATED OCTOBER 27, 2014 AND PROVIDED BY NATIONAL GRID.
- ELECTRONIC CAD FILE 5153_COO.DWG. TITLED "EXISTING CONDITIONS PLAN" PREPARED BY PROCESS PIPELINE SERVICES, DATED DECEMBER 18, 2014 AND PROVIDED BY NATIONAL GRID.

2) HORIZONTAL DATUM IS BASED ON NAD 1983 FROM BASE MAPPING PROVIDED BY VHB.

3) VERTICAL DATUM IS BASED ON NAVD 1988 FROM BASE MAPPING PROVIDED BY VHB.

4) ON-SITE INVESTIGATIONS AND SURVEYS BY GZA PERSONNEL DURING VARIOUS SITE VISITS BETWEEN 2011 AND 2016.

5) PARCEL DATA PROVIDED BY THE CITY OF PROVIDENCE PLANNING AND DEVELOPMENT DEPARTMENT. PARCELS OF REAL ESTATE ASSESSED AS OF DECEMBER 31, 2012. GIS DATA ARE FOR PLANNING PURPOSES ONLY. THESE DATA DO NOT REPRESENT A LEGALLY RECORDED PLAN, DEED, SURVEY OR ENGINEERING SCHEMATIC AND ARE NOT INTENDED TO BE USED AS SUCH.

6) SITE BOUNDARIES ARE APPROXIMATE.

7) FLOOD ZONE HAZARD AREA DATA WERE PROVIDED BY RHODE ISLAND GEOGRAPHIC INFORMATION SYSTEM (RIGIS) AND DERIVED FROM STATEWIDE DIGITAL FLOOD INSURANCE RATE MAP (DFIRM) DATABASE, ORIGINALLY PUBLISHED BY FEMA IN OCTOBER 2015.

LEGEND:

- EXISTING BUILDING
- EXISTING CONTOUR (MAJOR 5 FOOT INTERVAL)
- EXISTING CONTOUR (MINOR 1 FOOT INTERVAL)
- PAVEMENT
- EASEMENT AREA
- PROPERTY LINE
- INTERIOR PROPERTY LINE
- LIMIT OF WORK
- ABUTTING PROPERTY LINE
- EDGE OF WATER
- EXISTING RAILROAD TRACKS
- EXISTING FENCE
- OPERATIONS BOUNDARY
- LIQUEFACTION WORK AREA
- EXISTING CONCRETE PAD
- UTILITY POLE
- LIGHT POLE
- HYDRANT

FLOOD HAZARD AREAS:

- FLOOD ZONE VE (EL. 14)
- FLOOD ZONE AE (EL. 12)
- FLOOD ZONE X (EL. 14)

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NATIONAL GRID
LIQUEFACTION PLANT
642 ALLENS AVENUE PROVIDENCE, RHODE ISLAND

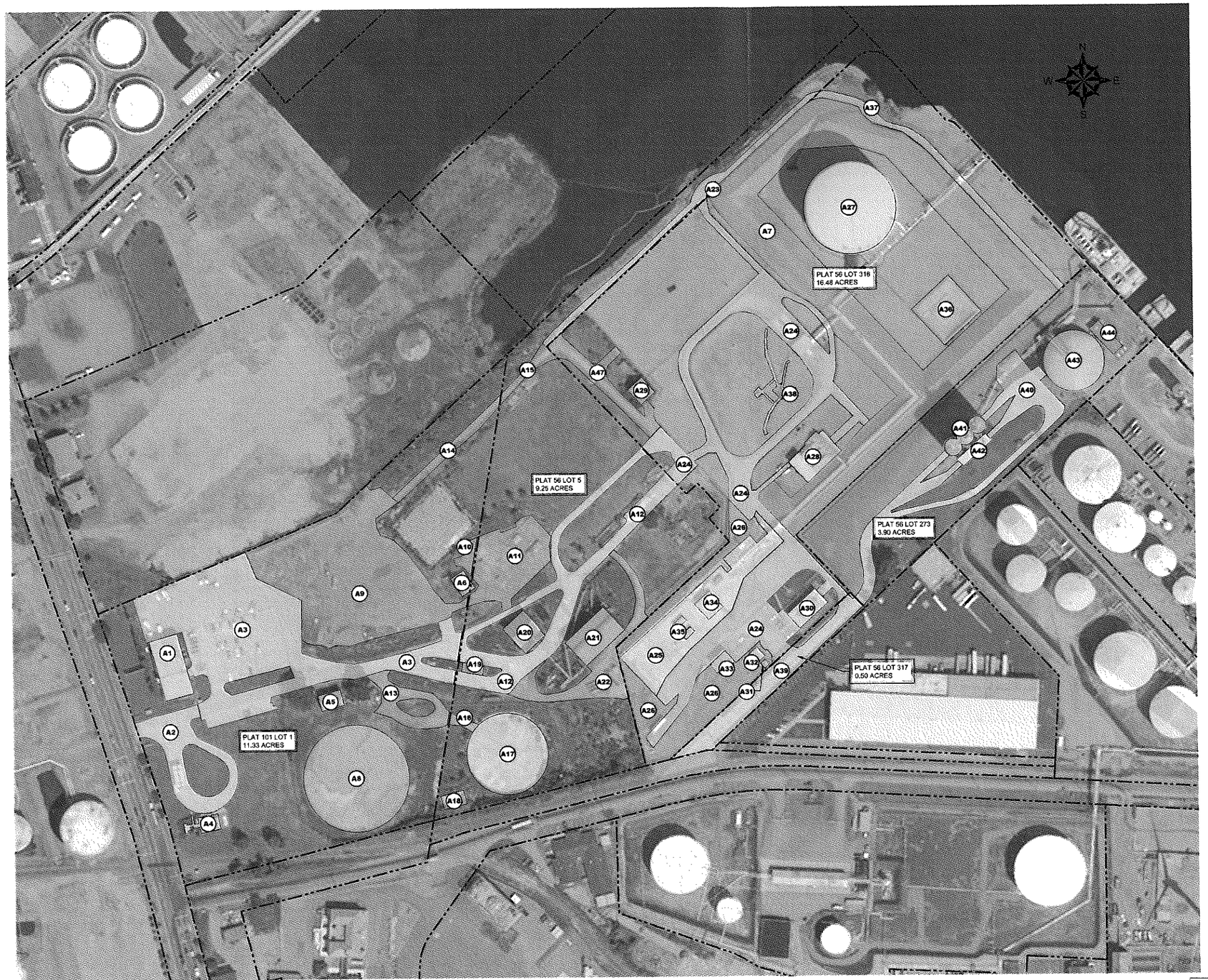
EXISTING CONDITIONS PLAN

PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com

PREPARED FOR: nationalgrid

PROJ MGR: MSK	REVIEWED BY: SJH	CHECKED BY: IR	FIGURE 2
DESIGNED BY: SJH	DRAWN BY: LDT	SCALE: AS NOTED	
DATE: SEPTEMBER, 2016	PROJECT NO. 33554.60	REVISION NO. 1	SHEET NO. 2 OF 15

2016 - GZA GeoEnvironmental, Inc. G:\JOBS\33554.60\DWG\SOURCE\CAD\DWGS\33554-60_DWG_PER_EX_FINAL_2-1-2016.DWG EX COND SEPTEMBER 7, 2016 2:53 PM LISA THERIAULT



LEGEND

- PROPERTY LINES
- STRUCTURE
- ASPHALT
- OTHER

REFERENCE NOTES:

1. THIS MAP CONTAINS THE ESRI ARCGIS ONLINE BING MAPS AERIAL LAYER PACKAGE. IMAGE COURTESY OF USGS EARTHSTAR GEOGRAPHICS SIG © MICROSOFT CORPORATION 2015.
2. PARCEL DATA PROVIDED BY THE CITY OF PROVIDENCE PLANNING AND DEVELOPMENT DEPARTMENT. PARCELS OF REAL ESTATE ASSESSED AS OF DECEMBER 31, 2012. GIS DATA ARE FOR PLANNING PURPOSES ONLY. THESE DATA DO NOT REPRESENT A LEGALLY RECORDED PLAN, DEED, SURVEY OR ENGINEERING SCHEMATIC AND ARE NOT INTENDED TO BE USED AS SUCH.
3. SITE BOUNDARIES ARE APPROXIMATE.

IMPERVIOUS AREAS

PLAT	LOT	NO.	AREA (SQ. FT.)	SURFACE TYPE
101	1	A1	8,037.44	ROOF
101	1	A2	17,913.35	ASPHALT
101	1	A3	90,158.79	ASPHALT
101	1	A4	1,786.65	STRUCTURE
101	1	A5	1,640.44	ROOF
101	1	A6	1,445.11	STRUCTURE
56	1	A7	156,852.04	CONTAINMENT DIKE
101	1	A8	39,796.73	TANK FOUNDATION
101	1	A9	79,909.64	COMPACTED GRAVEL
101	1	A10	1,933.34	COMPACTED GRAVEL
56	5	A11	21,898.19	COMPACTED GRAVEL
56	5	A12	33,764.16	ASPHALT
101	1	A13	8,857.25	COMPACTED GRAVEL
101	1	A14	5,114.04	COMPACTED GRAVEL
56	5	A15	2,860.86	COMPACTED GRAVEL
56	5	A16	1,196.51	COMPACTED GRAVEL
56	5	A17	23,127.00	TANK FOUNDATION
56	5	A18	1,425.31	STRUCTURE
56	5	A19	898.87	ROOF
56	5	A20	4,099.05	ROOF
56	5	A21	7,273.42	ROOF
56	5	A22	16,442.64	COMPACTED GRAVEL
56	5	A23	11,249.94	ASPHALT
56	316	A24	93,429.89	ASPHALT
56	316	A25	29,735.26	CONCRETE
56	316	A26	40,494.92	COMPACTED GRAVEL
56	316	A27	29,930.34	LNG TANK
56	316	A28	6,084.97	STRUCTURE
56	316	A29	1,686.87	ROOF
56	316	A30	3,197.19	ROOF
56	316	A31	164.24	ROOF
56	316	A32	638.42	ROOF
56	316	A33	1,346.21	ROOF
56	316	A34	1,845.52	ROOF
56	316	A35	712.24	ROOF
56	316	A36	10,912.10	SUMP PIT
56	316	A37	10,655.36	ASPHALT
56	316	A38	2,392.36	STRUCTURE
56	317	A39	18,586.35	ASPHALT
56	273	A40	28,623.42	ASPHALT
56	273	A41	3,112.29	STRUCTURE
56	273	A42	1,576.65	ROOF
56	273	A43	12,924.79	TANK
56	273	A44	1,893.69	STRUCTURE
56	316	A47	10,294.60	COMPACTED GRAVEL
TOTAL IMPERVIOUS			847,918.45	

$$\frac{847918.45 \text{ SQ. FT. IMPERVIOUS AREA}}{1807724.79 \text{ SQ. FT. TOTAL AREA}} = 46.91\% \text{ IMPERVIOUS}$$

NOT TO SCALE

0 50' 100' 200' 300'
SCALE IN FEET 1" = 100'

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NATIONAL GRID
LIQUEFACTION PLANT
642 ALLENS AVENUE PROVIDENCE, RHODE ISLAND

EXISTING IMPERVIOUS CONDITIONS PLAN

PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com

PREPARED FOR: nationalgrid

PROJ MGR: MSK	REVIEWED BY: SJH	CHECKED BY: IR	FIGURE 3
DESIGNED BY: SJH	DRAWN BY: LDT	SCALE: AS NOTED	
DATE: SEPTEMBER, 2016	PROJECT NO.: 33554.60	REVISION NO.: 0	SHEET NO. 3 OF 15

FOR PERMITTING ONLY

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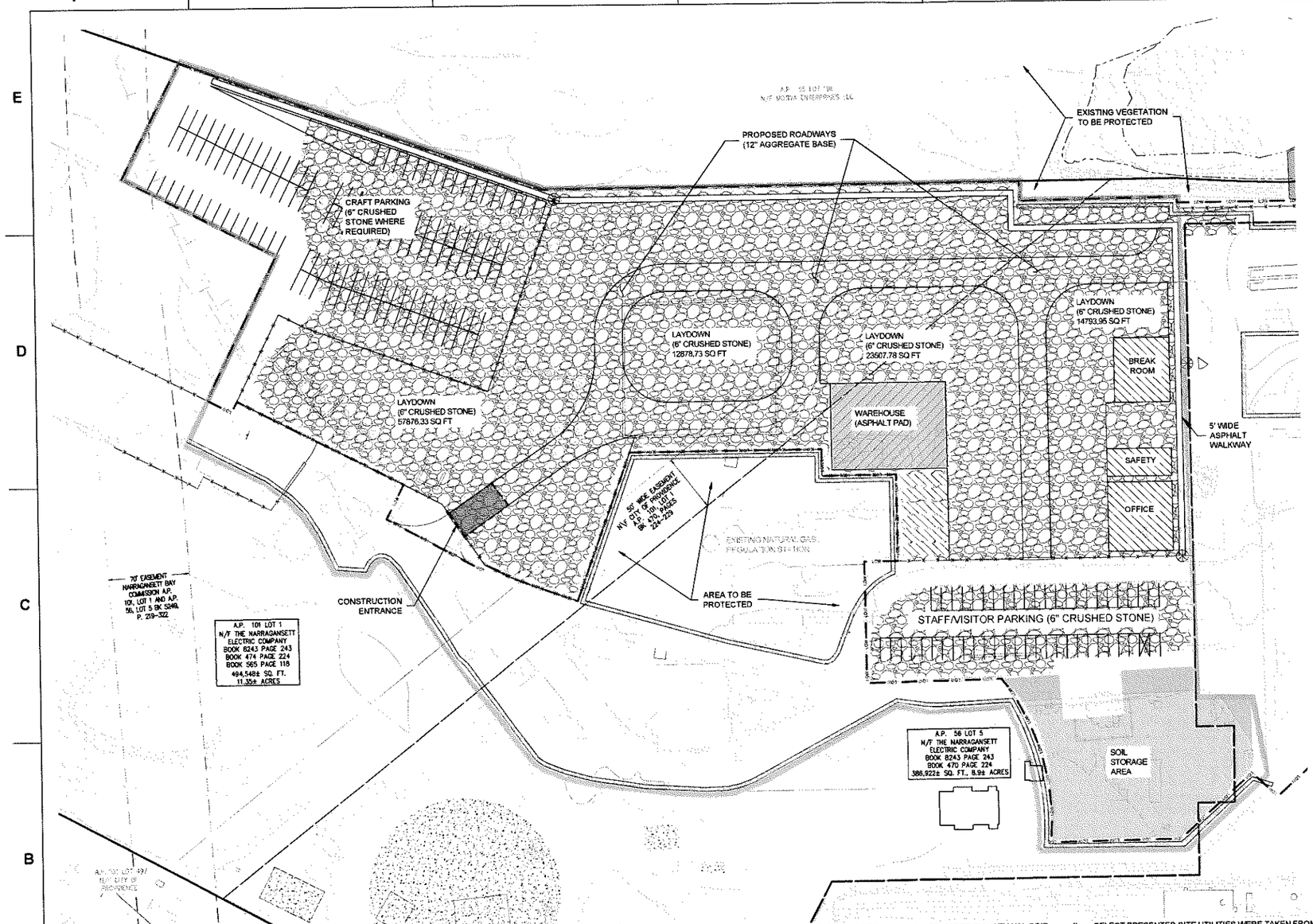

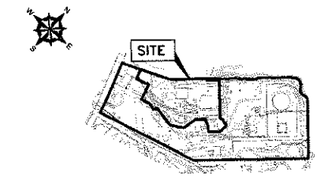

KEY PLAN:
SCALE: 1"=800'

LEGEND:

- EXISTING BUILDING
- EXISTING CONTOUR (MAJOR 10 FOOT INTERVAL)
- EXISTING CONTOUR (MINOR 1 FOOT INTERVAL)
- EXISTING PAVEMENT
- EASEMENT AREA
- UTILITY POLE
- LIGHT POLE
- HYDRANT
- PROPERTY LINES
- INTERIOR PROPERTY LINE
- TEMPORARY LAYDOWN AREA
- PROPOSED PERMANENT PAVEMENT
- PROPOSED TEMPORARY PAVEMENT
- PROPOSED TEMPORARY BUILDING
- PROPOSED CRUSHED STONE
- STAKED FILTREXX SOXX (SEE DETAIL ON SHEET 5)
- LIMIT OF WORK
- CONSTRUCTION ENTRANCE

NOT TO SCALE

GENERAL NOTES:

1) BASE MAP DEVELOPED FROM THE FOLLOWING:

- ELECTRONIC CAD FILE "ACAD-7257PL.DWG" PROVIDED BY VANASSE HANGEN BRUSTLIN (VHB) ENTITLED "EXISTING CONDITIONS PLAN," PROJECT TITLE "NATIONAL GRID LNG TERMINAL ROAD LNG FACILITY" DATED MARCH 10, 2014, ORIGINAL SCALE 1" = 50', DRAWING NO. SV-1 THROUGH SV-3 AND AERIAL MAPPING BY WSP TRANSPORTATION AND INFRASTRUCTURE DATED JANUARY 15, 2014 PREPARED FOR NATIONAL GRID LAND SURVEYING DEPARTMENT, WALTHAM, MASSACHUSETTS AND CAD FILE NO. 09303023.052-1.DWG. PLANS PROVIDED BY NATIONAL GRID.
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- ELECTRONIC CAD FILE 5153_COO.DWG, TITLED "EXISTING CONDITIONS PLAN" PREPARED BY PROCESS PIPELINE SERVICES, DATED DECEMBER 18, 2014 AND PROVIDED BY NATIONAL GRID.
- ELECTRONIC CAD FILES PROVIDED BY KIEWIT
  1. "ACAD-102761-CIV_SITE.DWG"
  2. "2007EXP_102761-CIV_LAYDOWN.DWG"
  3. "102761_MEC_STR_BASE.DWG"
  4. "102761-SURVEY_SITE.DWG"
  5. "A2007EXP_102761-CIV_STORM.DWG"
  6. "ACAD-102761-CIV_SURFACING.DWG"
  7. "ACAD-102761-PROP-CONT_.DWG"
  8. "POST DEVELOPMENT DRAINAGE MAP.DWG
- PDFS OF THE FOLLOWING DRAWINGS PROVIDED BY NATIONAL GRID
  1. "CATCH BASINS AND SANITARY SEWER SYSTEM" PREPARED BY PROVIDENCE GAS COMPANY, DATED SEPTEMBER 25, 1981.
  2. "PLAN SHOWING UNDERGROUND UTILITIES LNG FACILITY" DATED OCTOBER 6, 1983, "SUBSURFACE UTILITY ENGINEERING" PREPARED BY BAYSTATE SUBSURFACE INVESTIGATION, INC., DATED MAY 17, 2005.

2) HORIZONTAL DATUM IS BASED ON NAD 1983 FROM BASE MAPPING PROVIDED BY VHB.

3) VERTICAL DATUM IS BASED ON NAVD 1988 FROM BASE MAPPING PROVIDED BY VHB.

4) SELECT PRESENTED SITE UTILITIES WERE TAKEN FROM HISTORIC FIGURES PROVIDED BY NATIONAL GRID. ALL UTILITY LOCATIONS ARE APPROXIMATE AND HAVE BEEN ALIGNED AND ADJUSTED FOR THE "BEST FIT" AND THESE DATA SHOULD BE CONSIDERED ACCURATE ONLY TO THE DEGREE IMPLIED BY THE METHOD USED. UTILITIES ARE SHOWN FOR REFERENCE ONLY. **OTHER LOCATIONS MAY EXIST.**

5) ON-SITE INVESTIGATIONS AND SURVEYS BY GZA PERSONNEL DURING VARIOUS SITE VISITS BETWEEN 2011 AND 2016.

6) PARCEL DATA PROVIDED BY THE CITY OF PROVIDENCE PLANNING AND DEVELOPMENT DEPARTMENT. PARCELS OF REAL ESTATE ASSESSED AS OF DECEMBER 31, 2012. GIS DATA ARE FOR PLANNING PURPOSES ONLY. THESE DATA DO NOT REPRESENT A LEGALLY RECORDED PLAN, DEED, SURVEY OR ENGINEERING SCHEMATIC AND ARE NOT INTENDED TO BE USED AS SUCH.

7) SITE BOUNDARIES ARE APPROXIMATE.

CONFIDENTIAL

THESE DRAWINGS ARE CONFIDENTIAL IN NATURE. ANY MISUSE OR UNAUTHORIZED DISTRIBUTION OF THE DRAWINGS CONTAINED HEREIN WILL BE A VIOLATION OF THIS CONFIDENTIALITY REQUIREMENT AND SUBJECT THE VIOLATOR TO LIABILITY. REVIEW OF THESE MATERIALS BY RECIPIENT SHALL CONSTITUTE AN ACCEPTANCE OF THESE TERMS AND THE TERMS OF ANY UNDERLYING CONFIDENTIALITY AGREEMENT WE MAY HAVE EXECUTED. IN OBTAINING THIS INFORMATION FROM A THIRD PARTY. IF THE RECIPIENT IS NOT IN AGREEMENT WITH THE OBLIGATION OF CONFIDENTIALITY THEN THE DRAWINGS SHALL BE RETURNED TO THE ORIGINATOR.

REV	DATE	REVISION INFORMATION	BY	CHK	APP.
0	09/06/16	ISSUED FOR PERMIT	DAC	AMS	AMS

GENERAL NOTES AND COMMENTS:

nationalgrid

Kiewit
Kiewit Engineering and Design
9401 Renner Boulevard
Lenexa, Kansas 66219

SEAL AND STAMP:
ASHLEY STUTZMAN
No. 11512
REGISTERED PROFESSIONAL ENGINEER CIVIL

LICENSE NO. 11512
EXPIRATION DATE 06/30/2017

ENG/DESIGN ORIG:	A. STUTZMAN
LEAD ENG:	A. STUTZMAN
ENG. MGR:	J. BOCKELMAN
PROJ. MGR:	A. PARRACK

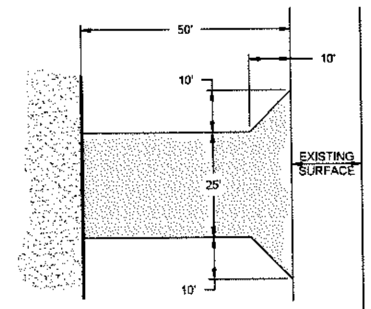
NATIONAL GRID LNG LLC
FIELDS POINT LIQUEFACTION PROJECT
TEMPORARY LAYDOWN AREA
EROSION AND SEDIMENTATION CONTROLS

DRAWING NO:	PROJECT NO:	SHT:	REV.
FIGURE 4	33554.60	4 OF 15	0

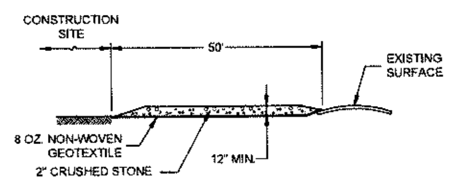
SEP 06, 2016 - 9:03am DRAWING NAME: J:\102761-National_Grid_Liquefaction\CIV\CAD Exchange\in\2016-08-31 GZA Liq Permit Package\33554.60_CRMC PERMITTING_FOR STAMPING-AMS.dwg

WHEEL WASH/CONSTRUCTION ENTRANCE NOTES

1. ENTRANCE WIDTH SHALL BE TWENTY-FIVE (25) FEET MINIMUM.
2. THE ENTRANCE SHALL BE MAINTAINED IN A CONDITION WHICH SHALL PREVENT TRACKING OR FLOWING OF SEDIMENT OUT OF THE LIMITS OF WORK. THIS MAY REQUIRE PERIODIC TOP DRESSING WITH ADDITIONAL STONE AS CONDITIONS DEMAND AND REPAIR OR CLEANOUT OF ANY MEASURES USED TO TRAP SEDIMENT. ALL SEDIMENT SPILLED, DROPPED, WASHED OR TRACKED OUT OF THE LIMITS OF WORK MUST BE REMOVED IMMEDIATELY. PERIODIC INSPECTION AND MAINTENANCE SHALL BE PROVIDED AS NEEDED.

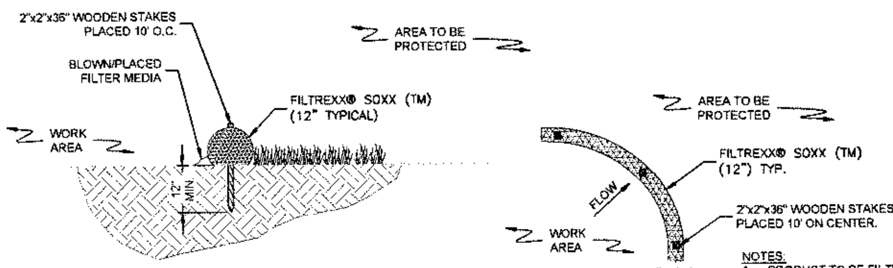


PLAN



SECTION

WHEEL WASH/CONSTRUCTION ENTRANCE/EXIT
NOT TO SCALE

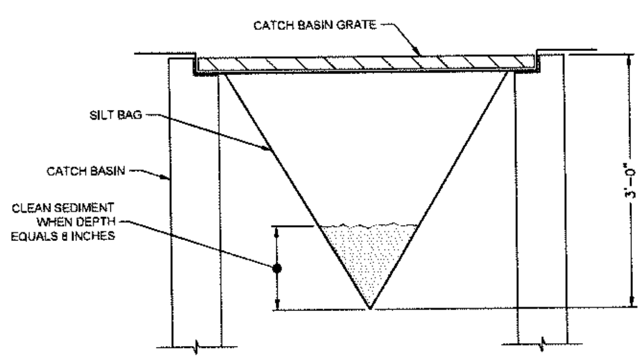


SECTION NTS

PLAN NTS

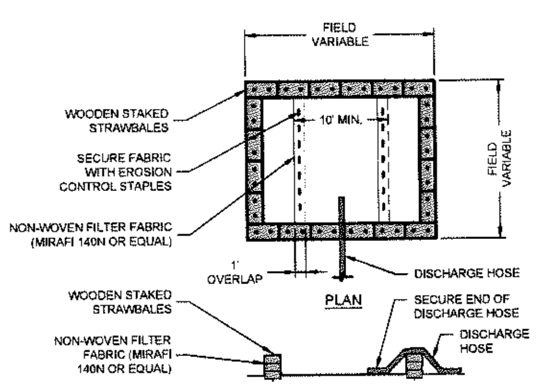
NOTES:
1. PRODUCT TO BE FILTREXX SILT SOXX OR APPROVED EQUAL BY NATIONAL GRID .
2. ALL MATERIAL AND INSTALLATION TO MEET FILTREXX® SPECIFICATIONS.
3. FILTER MEDIA FILL TO MEET APPLICATION REQUIREMENTS.
4. COMPOST MATERIAL TO BE DISPERSED ON SITE AS DETERMINED BY NATIONAL GRID .

FILTREXX® SOXX SEDIMENT CONTROL DETAIL
NOT TO SCALE



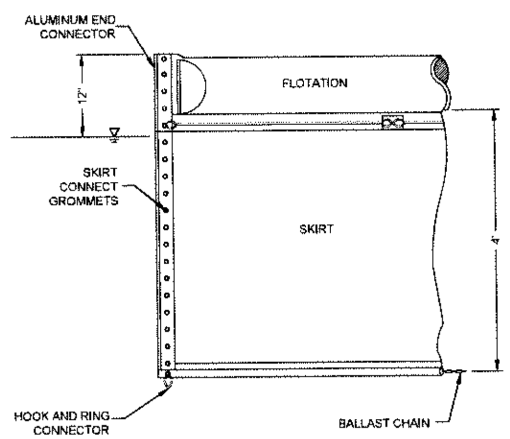
NOTE:
SEDIMENT BAG INLET PROTECTION TO BE SILTSACK MANUFACTURED BY ATLANTIC CONSTRUCTION FABRICS INC. RICHMOND, VA OR APPROVED EQUAL.

SILT SACK DETAIL
NOT TO SCALE



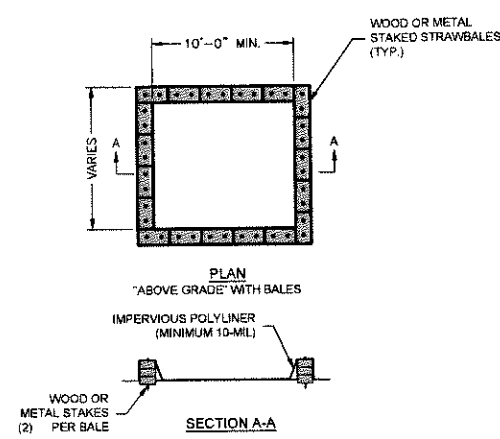
SECTION

DEWATERING BASIN (SMALL SCALE)
NOT TO SCALE

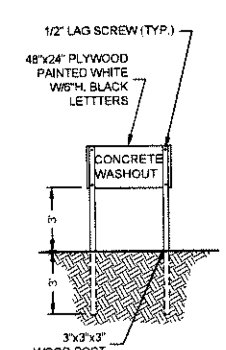


TURBIDITY CURTAIN DETAIL
NOT TO SCALE

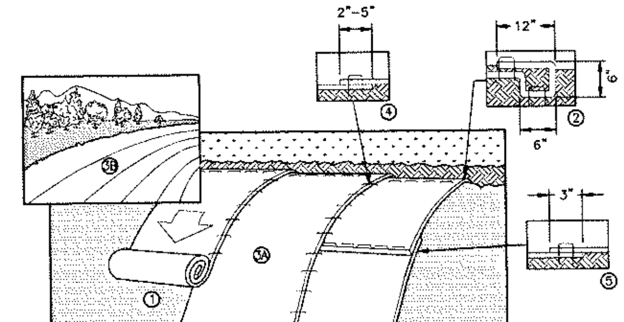
NOTES:
1. ANCHOR CURTAIN ENDS AT BULKHEAD AND SHORELINE.
2. ANCHOR CURTAIN AT INTERMEDIATE POINTS WITH CONCRETE ANCHOR BLOCKS.



CONCRETE WASHOUT
NOT TO SCALE



CONCRETE WASHOUT SIGN DETAIL (OR EQUIVALENT)



SLOPE INSTALLATION DETAIL OF EROSION CONTROL BLANKET
NOT TO SCALE

NOTES:

1. PRODUCT TO BE NORTH AMERICAN GREEN EROSION CONTROL BLANKET OR APPROVED EQUAL BY NATIONAL GRID.
2. IN LOOSE SOIL CONDITIONS, THE USE OF STAPLES OR STAKE LENGTHS GREATER THAN 6" (15 cm) MAY BE NECESSARY TO PROPERLY SECURE THE RECP's.

INSTALLATION NOTES:

1. PREPARE SOIL BEFORE INSTALLING ROLLED EROSION CONTROL PRODUCTS (RECP's), INCLUDING ANY NECESSARY APPLICATION OF LIME, FERTILIZER, AND SEED. NOTE: WHEN USING CELL-O-SEED DO NOT SEED PREPARED AREA. CELL-O-SEED MUST BE INSTALLED WITH PAPER SIDE DOWN.
2. BEGIN AT THE TOP OF THE SLOPE BY ANCHORING THE RECP's IN A 6" (15cm) DEEP x 6" (15cm) WIDE TRENCH WITH APPROXIMATELY 12" (30cm) OF RECP's EXTENDED BEYOND THE UP-SLOPE PORTION OF THE TRENCH. ANCHOR THE RECP's WITH A ROW OF STAPLES/STAKES APPROXIMATELY 12" (30cm) APART IN THE BOTTOM OF THE TRENCH. BACKFILL AND COMPACT THE TRENCH AFTER STAPLING. APPLY SEED TO COMPACTED SOIL AND FOLD REMAINING 12" (30cm) PORTION OF RECP's BACK OVER SEED AND COMPACTED SOIL. SECURE RECP's OVER COMPACTED SOIL WITH A ROW OF STAPLES/STAKES SPACED APPROXIMATELY 12" (30cm) APART ACROSS THE WIDTH OF THE RECP's.
3. ROLL THE RECP's (A.) DOWN OR (B.) HORIZONTALLY ACROSS THE SLOPE. RECP's WILL UNROLL WITH APPROPRIATE SIDE AGAINST THE SOIL SURFACE. ALL RECP's MUST BE SECURELY FASTENED TO SOIL SURFACE BY PLACING STAPLES/STAKES IN APPROPRIATE LOCATIONS AS SHOWN IN THE STAPLE PATTERN GUIDE(tm). WHEN USING THE DOT SYSTEM, STAPLES/STAKES SHOULD BE PLACED THROUGH EACH OF THE COLORED DOTS CORRESPONDING TO THE APPROPRIATE STAPLE PATTERN.
4. THE EDGES OF PARALLEL RECP's MUST BE STAPLED WITH APPROXIMATELY 2'-5" (5cm - 12.5cm) OVERLAP DEPENDING ON RECP's TYPE.
5. CONSECUTIVE RECP's SPLICED DOWN THE SLOPE MUST BE PLACED END OVER END (SHINGLE STYLE) WITH AN APPROXIMATE 3" (7.5cm) OVERLAP. STAPLE THROUGH OVERLAPPED AREA, APPROXIMATELY 12" (30cm) APART ACROSS ENTIRE RECP's WIDTH.

TURBIDITY CURTAINS NOTES

TURBIDITY CURTAIN SPECIFICATIONS

1. THE HEIGHT OF THE CURTAIN SHALL BE 20 PERCENT GREATER THAN THE DEPTH OF THE WATER TO ALLOW FOR WATER LEVEL FLUCTUATIONS.
2. THE AREA THAT THE TURBIDITY CURTAIN PROTECTS SHALL NOT CONTAIN LARGE CULVERTS OR DRAINAGE AREA THAT IS FLOWS OCCUR BEHIND THE CURTAIN WOULD CAUSE A BREACH OR LOST CONTACT AT THE BOTTOM SURFACE.
3. AT A MINIMUM THE CURTAIN MATERIAL SHALL BE SUPPORTED BY A FLOTATION MATERIAL HAVING AT LEAST 29 LBS PER FOOT OF BUOYANCY. THE FLOATING CURTAIN SHALL HAVE AT LEAST A 5/16" GALVANIZED CHAIN AS BALLAST AND AT LEAST DUAL 5/16" GALVANIZED WIRE ROPES WITH A HEAVY VINYL COATING AS LOAD LINES.
4. THE CURTAIN SHALL BE MADE OF A TIGHTLY WOVEN NYLON, PLASTIC OR OTHER NON-DETERIORATING MATERIAL MEETING THE FOLLOWING SPECIFICATIONS:
   - GRAB TENSILE STRENGTH:
     a. MACHINE DIRECTION (MD) -370 LBS
     b. CROSS MACHINE DIRECTION (CD) -250 LBS
   - MULLEN BURST STRENGTH: 480 PSI
   - TRAPEZOID TEAR STRENGTH:
     a. MD-100 LBS
     b. CD-60LBS
   - APPARENT OPENING SIZE: 70 US STANDARD SIEVE
   - PERCENT OPEN AREA: 4%
   - PERMISSIVETY: 0.28 SEC-1

TURBIDITY CURTAIN INSTALLATION REQUIREMENTS

1. THE AREA OF THE PROPOSED INSTALLATION SHALL BE INSPECTED FOR OBSTACLES THAT COULD DAMAGE THE CURTAIN OR IMPAIR ITS EFFECTIVENESS.
2. THE CURTAIN SHALL BE FIRMLY ANCHORED IN PLACE. SHALLOW INSTALLATIONS CAN BE MADE BY SECURING THE CURTAIN BY STAKING RATHER THAN USING A FLOTATION SYSTEM.
3. SUPPLEMENTAL ANCHORS SHALL BE USED AS NEEDED DEPENDING ON WATER SURFACE DISTURBANCES SUCH AS BOATS AND WAVE ACTION BY WINDS.

TURBIDITY CURTAIN MAINTENANCE

1. THE TURBIDITY CURTAIN SHALL BE INSPECTED DAILY AND REPAIRED OR REPLACED IMMEDIATELY.
2. IF THE CURTAIN IS ORIENTED IN A MANNER THAT FACES THE PREVAILING WINDS, FREQUENT CHECKS OF THE ANCHORAGE SHALL BE MADE.
3. ANY NECESSARY SEDIMENT REMOVAL MUST BE DONE BY HAND BEFORE THE CURTAIN IS REMOVED.
4. THE BARRIER SHALL BE REMOVED BY PULLING IT TOWARD THE CONSTRUCTION SITE TO MINIMIZE THE RELEASE OF ATTACHED SEDIMENT.

CONCRETE WASHOUT NOTES

CONCRETE WASHOUT SPECIFICATIONS

1. LOCATE WASHOUT AREA AT LEAST 50 FEET FROM SENSITIVE AREAS SUCH AS STORM DRAINS, OPEN DITCHES, OR WATER BODIES INCLUDING JURISDICTIONAL WETLANDS.
2. ALLOW CONVENIENT TRUCK ACCESS.
3. THE NUMBER OF FACILITIES SHOULD DEPEND ON THE DEMAND FOR STORAGE CAPACITY.
4. CONCRETE WASHOUT FACILITIES SHALL BE CONSTRUCTED AND MAINTAINED IS SUFFICIENT QUANTITY AND SIZE TO CONTAIN ALL LIQUID AND CONCRETE WASTE GENERATED.

CONCRETE WASHOUT INSTALLATION REQUIREMENTS

1. THE CONCRETE WASHOUT SHOULD BE A MINIMUM OF 10 FOOT BY 10 FOOT AREA.
2. THE WASHOUT WILL BE CONSTRUCTED WITH STRAW BALES ARRANGED AROUND THE PERIMETER AND LINED WITH TWO LAYERS OF 10 MIL POLYETHYLENE SHEETING. THE POLYETHYLENE SHEETING WILL WRAP OVER THE STRAW BALES (OR APPROVED EQUAL) AND WILL BE SECURED WITH SAND BAGS.
3. THE WASHOUT SHALL BE SIZED TO ACCOMMODATE ALL OF THE WASHOUT WATER AND CONCRETE AND SHOULD INCLUDE 12-INCHES OF FREEBOARD ABOVE THE WASHOUT WASTE.

CONCRETE WASHOUT MAINTENANCE

1. INSPECT AND VERIFY THAT THE CONCRETE WASHOUT HAS BEEN PROPERLY CONSTRUCTED PRIOR TO THE COMMENCEMENT OF CONCRETE WORK.
2. INSPECT DAILY FOR DAMAGE OR ISSUES.
3. CHECK REMAINING CAPACITY.
4. VERIFY THAT LINERS ARE INTACT.
5. WASHOUT FACILITIES MUST BE CLEANED, OR NEW FACILITIES MUST BE CONSTRUCTED ONCE THE WASHOUT IS 75% FULL.
6. IF WASHOUT IS NEARING CAPACITY, VACUUM AND DISPOSE OF THE WASTE MATERIAL IN AN APPROVED MANNER.
7. DO NOT DISCHARGE LIQUID OR SLURRY TO WATERWAYS, STORM DRAINS, OR ONTO THE GROUND SURFACE.
8. COVER THE WASHOUT WITH A NON-WATER COLLECTING COVER PRIOR TO STORM EVENTS TO PREVENT OVERFLOW.
9. REMOVE AND DISPOSE OF HARDENED CONCRETE AND RETURN THE WASHOUT TO FUNCTIONAL CONDITION.

NOT TO SCALE

THE INFORMATION SHOWN ON THE DRAWING IS SOLELY FOR USE BY NATIONAL GRID OR THE NATIONAL GRID'S DESIGNATED REPRESENTATIVE FOR THE SPECIFIC PROJECT AND LOCATION IDENTIFIED ON THE DRAWING. THE DRAWING SHALL NOT BE TRANSFERRED, REUSED, COPIED, OR ALTERED IN ANY MANNER FOR USE AT ANY OTHER LOCATION OR FOR ANY OTHER PURPOSE WITHOUT THE PRIOR WRITTEN CONSENT OF GZA AND NATIONAL GRID. ANY TRANSFER, REUSE, OR MODIFICATION TO THE DRAWING BY OTHERS, WITHOUT THE PRIOR WRITTEN EXPRESS CONSENT OF GZA AND NATIONAL GRID, WILL BE AT THE USER'S SOLE RISK AND WITHOUT ANY RISK OR LIABILITY TO GZA AND NATIONAL GRID.

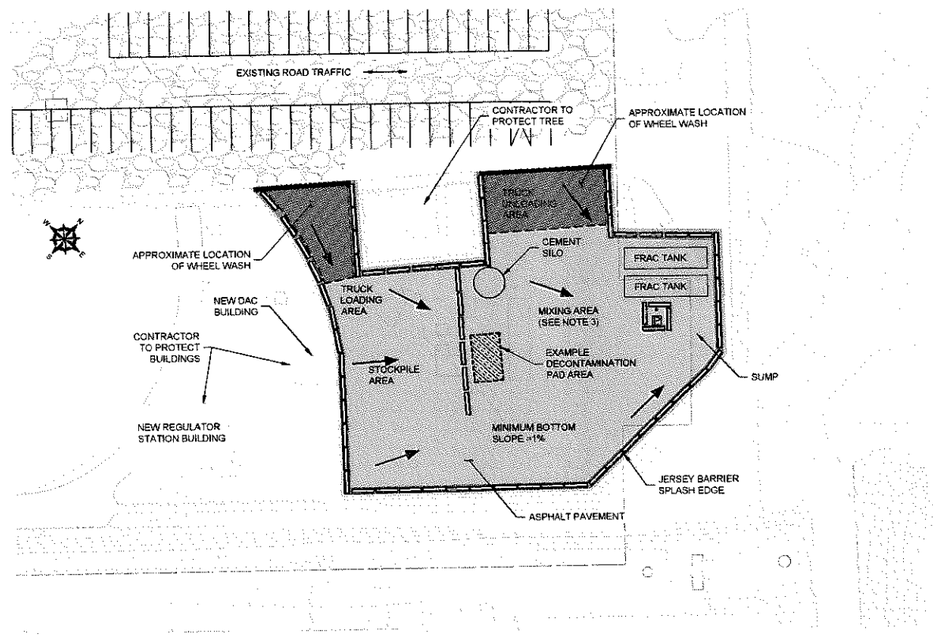
FOR PERMITTING ONLY

NATIONAL GRID
LIQUEFACTION PLANT
642 ALLENS AVENUE PROVIDENCE, RHODE ISLAND

TEMPORARY SEDIMENTATION AND EROSION CONTROL DETAILS

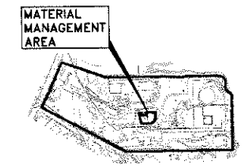
PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		PREPARED FOR: nationalgrid	
PROJ MGR: MSK	REVIEWED BY: SJH	CHECKED BY: IR	FIGURE
DESIGNED BY: SJH	DRAWN BY: LDT	SCALE: AS NOTED	5
DATE: SEPTEMBER 2016	PROJECT NO. 33554.60	REVISION NO. 0	SHEET NO. 5 OF 15

2016 – GZA GeoEnvironmental, Inc. GZA-J:\ENV\33554.60.MSK\FIGURES\CAD\DWGS\33554_60_CRMC PERMITTING_2-3-2016.DWG EROS DET-FIG 5 SEPTEMBER 6, 2016 12:21 PM LISA THERIAULT



MATERIAL MANAGEMENT AREA: PLAN VIEW

SCALE: 1"=30'



KEY PLAN:
SCALE 1"=800'

LEGEND:

- EXISTING BUILDING
- EXISTING CONTOUR (MAJOR 5 FOOT INTERVAL)
- EXISTING CONTOUR (MINOR 1 FOOT INTERVAL)
- EXISTING PAVEMENT
- UTILITY POLE
- LIGHT POLE
- HYDRANT
- PROPERTY LINES
- INTERIOR PROPERTY LINE
- PROPOSED PERMANENT PAVEMENT
- PROPOSED CRUSHED STONE
- PROPOSED GRAVEL
- EXISTING FENCE
- JERSEY BARRIERS
- JERSEY BARRIER SPLASH EDGE
- WHEEL WASH
- PROPOSED GRADING
- DECONTAMINATION PAD

NOT TO SCALE

0 15' 30' 60' 90'
SCALE IN FEET

0 400' 800' 1600' 2400'
KEY PLAN - SCALE IN FEET

GENERAL NOTES:

1) BASE MAP DEVELOPED FROM THE FOLLOWING:

- ELECTRONIC CAD FILE "ACAD-7257PL.DWG" PROVIDED BY VANASSE HANGEN BRUSTLIN (VHB) ENTITLED "EXISTING CONDITIONS PLAN." PROJECT TITLE "NATIONAL GRID LNG TERMINAL ROAD LNG FACILITY" DATED MARCH 10, 2014, ORIGINAL SCALE 1" = 50'. DRAWING NO. SV-1 THROUGH SV-3 AND AERIAL MAPPING BY WSP TRANSPORTATION AND INFRASTRUCTURE DATED JANUARY 15, 2014 PREPARED FOR NATIONAL GRID LAND SURVEYING DEPARTMENT, WALTHAM, MASSACHUSETTS AND CAD FILE NO. 09303023.052-1.DWG. PLANS PROVIDED BY NATIONAL GRID.
- DESCRIPTIONS PROVIDED IN THE CITY OF PROVIDENCE DEED BOOK (BK) 470 PAGES 224 - 229, BK 581 PAGES 326 - 328, BK 1111 PAGES 752 -756 AND BK 5249 PAGES 219 - 322.
- ELECTRONIC CAD FILE14-152_SU1_REV2.DWG, TITLED "TOPOGRAPHIC SURVEY PLAN, PORTION OF A.P. 56 LOT 5" DATED OCTOBER 27, 2014 AND PROVIDED BY NATIONAL GRID.
- ELECTRONIC CAD FILE 5153_COO.DWG, TITLED "EXISTING CONDITIONS PLAN" PREPARED BY PROCESS PIPELINE SERVICES, DATED DECEMBER 18, 2014 AND PROVIDED BY NATIONAL GRID.
- ELECTRONIC CAD FILES PROVIDED BY KIEWIT
  1. "ACAD-102761-CIV_SITE.DWG"
  2. "2007EXP_102761-CIV_LAYDOWN.DWG"
  3. "102761_MEC_STR_BASE.DWG"
  4. "102761-SURVEY_SITE.DWG"
  5. "2007EXP_102761-CIV_STORM.DWG"
  6. "ACAD-102761-CIV_SURFACING.DWG"
  7. "ACAD-102761-PROP-CONT.DWG"
  8. "POST DEVELOPMENT DRAINAGE MAP.DWG
- PDFS OF THE FOLLOWING DRAWINGS PROVIDED BY NATIONAL GRID
  1. "CATCH BASINS AND SANITARY SEWER SYSTEM" PREPARED BY PROVIDENCE GAS COMPANY, DATED SEPTEMBER 25, 1981.
  2. "PLAN SHOWING UNDERGROUND UTILITIES LNG FACILITY" DATED OCTOBER 5, 1983, "SUBSURFACE UTILITY ENGINEERING" PREPARED BY BAYSTATE SUBSURFACE INVESTIGATION, INC., DATED MAY 17, 2005.

2) HORIZONTAL DATUM IS BASED ON NAD 1983 FROM BASE MAPPING PROVIDED BY VHB.

3) VERTICAL DATUM IS BASED ON NAVD 1988 (MSL) FROM BASE MAPPING PROVIDED BY VHB.

4) SELECT PRESENTED SITE UTILITIES WERE TAKEN FROM HISTORIC FIGURES PROVIDED BY NATIONAL GRID. ALL UTILITY LOCATIONS ARE APPROXIMATE AND HAVE BEEN ALIGNED AND ADJUSTED FOR THE "BEST FIT" AND THESE DATA SHOULD BE CONSIDERED ACCURATE ONLY TO THE DEGREE IMPLIED BY THE METHOD USED. UTILITIES ARE SHOWN FOR REFERENCE ONLY. **OTHER LOCATIONS MAY EXIST.**

5) ON-SITE INVESTIGATIONS AND SURVEYS BY GZA PERSONNEL DURING VARIOUS SITE VISITS BETWEEN 2011 AND 2016.

6) PARCEL DATA PROVIDED BY THE CITY OF PROVIDENCE PLANNING AND DEVELOPMENT DEPARTMENT. PARCELS OF REAL ESTATE ASSESSED AS OF DECEMBER 31, 2012. GIS DATA ARE FOR PLANNING PURPOSES ONLY. THESE DATA DO NOT REPRESENT A LEGALLY RECORDED PLAN, DEED, SURVEY OR ENGINEERING SCHEMATIC AND ARE NOT INTENDED TO BE USED AS SUCH.

7) SITE BOUNDARIES ARE APPROXIMATE.

MATERIAL MANAGEMENT AREA NOTES:

1. REGRADE LAND TO FACILITATE DRAINAGE TO THE SUMP. REMOVE EXISTING PAVEMENT AS NEEDED. THE MINIMUM BOTTOM SLOPE OF THE PAVED SURFACE SHALL BE 1%.
2. TRUCK LOADING AND UNLOADING AREAS SHALL BE USED AS WHEEL WASH AREAS, AS NECESSARY TRUCK UNLOADING AREA SHALL BE CONSTRUCTED WITH A MINIMUM BOTTOM SLOPE OF 1% TO DRAIN INTO SUMP.
3. MIXING AREA SHALL BE USED AS DECONTAMINATION PAD. PRIOR TO USE AS A DECONTAMINATION PAD, THE SURFACE SHALL BE POWER WASHED TO REMOVE ANY REMAINING MATERIAL.
4. IF THE MIXING AREA IS NOT USED AS A DECONTAMINATION PAD, CONSTRUCT STAND-ALONE DECONTAMINATION PAD, AS SHOWN IN DETAIL ON SHEET ENV-3 .

FOR PERMITTING ONLY

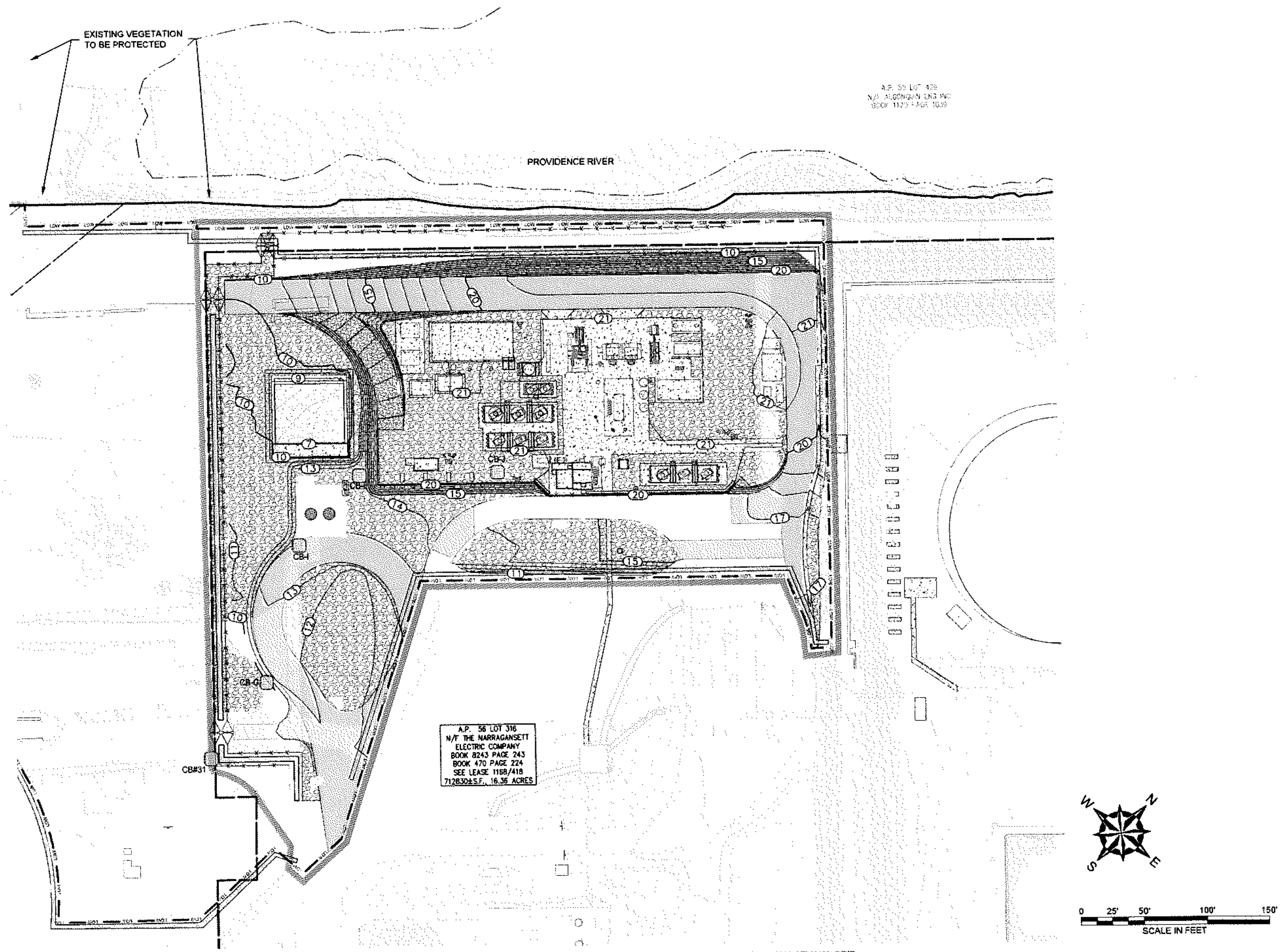
THE INFORMATION SHOWN ON THE DRAWING IS SOLELY FOR USE BY NATIONAL GRID OR THE NATIONAL GRID'S DESIGNATED REPRESENTATIVE FOR THE SPECIFIC PROJECT AND LOCATION IDENTIFIED ON THE DRAWING. THE DRAWING SHALL NOT BE TRANSFERRED, REUSED, COPIED, OR ALTERED IN ANY MANNER FOR USE AT ANY OTHER LOCATION OR FOR ANY OTHER PURPOSE WITHOUT THE PRIOR WRITTEN CONSENT OF GZA AND NATIONAL GRID. ANY TRANSFER, REUSE, OR MODIFICATION TO THE DRAWING BY OTHERS, WITHOUT THE PRIOR WRITTEN EXPRESS CONSENT OF GZA AND NATIONAL GRID, WILL BE AT THE USER'S SOLE RISK AND WITHOUT ANY RISK OR LIABILITY TO GZA AND NATIONAL GRID.

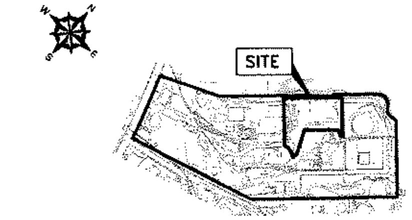
NATIONAL GRID
LIQUEFACTION PLANT
642 ALLENS AVENUE PROVIDENCE, RHODE ISLAND

SOIL STORAGE AREA PLAN

PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		PREPARED FOR: nationalgrid	
PROJ MGR: MSK	REVIEWED BY: SJH	CHECKED BY: IR	FIGURE
DESIGNED BY: SJH	DRAWN BY: LDT	SCALE: AS NOTED	6
DATE: SEPTEMBER, 2016	PROJECT NO. 33554.50	REVISION NO. 0	SHEET NO. 6 OF 15

2016 - GZA GeoEnvironmental, Inc. G:\A-J\MYL\33554.50 NGRID\VOLUME1\DWG\SOIL MANAGEMENT AREA\33554.50_SOIL MANAGEMENT.DWG SOIL STORAGE-FIG SEPTEMBER 6, 2016 12:23 PM LIGHTBULB7





KEY PLAN:
SCALE: 1"=800'

LEGEND:

- EXISTING BUILDING
- EXISTING CONTOUR (MAJOR 5 FOOT INTERVAL)
- EXISTING CONTOUR (MINOR 1 FOOT INTERVAL)
- EXISTING PAVEMENT
- EASEMENT AREA
- UTILITY POLE
- LIGHT POLE
- HYDRANT
- PROPERTY LINES
- INTERIOR PROPERTY LINE
- LIQUEFACTION WORK AREA
- PROPOSED PERMANENT PAVEMENT
- (10) PROPOSED CONTOUR (MAJOR 5 FOOT INTERVAL)
- (11) PROPOSED CONTOUR (MINOR 1 FOOT INTERVAL)
- PROPOSED GRAVEL
- STAKED FILTREXX SOXX (SEE DETAIL ON SHEET 5)
- LOW LOW LOW LIMIT OF WORK
- PROPOSED CONCRETE
- PROPOSED SAND FILTER
- CATCH BASIN FRAME AND GRATE
- CATCH BASIN TO BE PROTECTED WITH SILT SACK DURING CONSTRUCTION (SEE DETAIL ON SHEET 5)

GENERAL NOTES:

1) BASE MAP DEVELOPED FROM THE FOLLOWING:

- ELECTRONIC CAD FILE "ACAD-7257PL.DWG" PROVIDED BY VANASSE HANGEN BRUSTLIN (VHB) ENTITLED "EXISTING CONDITIONS PLAN," PROJECT TITLE "NATIONAL GRID LNG TERMINAL ROAD LNG FACILITY" DATED MARCH 10, 2014, ORIGINAL SCALE 1" = 50', DRAWING NO. SV-1 THROUGH SV-3 AND AERIAL MAPPING BY WSP TRANSPORTATION AND INFRASTRUCTURE DATED JANUARY 15, 2014 PREPARED FOR NATIONAL GRID LAND SURVEYING DEPARTMENT, WALTHAM, MASSACHUSETTS AND CAD FILE NO. 09303023.052-1.DWG. PLANS PROVIDED BY NATIONAL GRID.
- DESCRIPTIONS PROVIDED IN THE CITY OF PROVIDENCE DEED BOOK (BK) 470 PAGES 224 - 229, BK 561 PAGES 326 - 328, BK 1111 PAGES 752 -756 AND BK 5249 PAGES 219 - 322.
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- ELECTRONIC CAD FILES PROVIDED BY KIEWIT
  1. "2007EXP_102761-CIV_SITE.DWG"
  2. "2007EXP_102761-CIV_LAYDOWN.DWG"
  3. "102761_MEC_STR_BASE.DWG"
  4. "102761-SURVEY_SITE.DWG"
  5. "2007EXP_102761-CIV_STORM_.DWG"
  6. "2007EXP-102761-CIV_SURFACING.DWG"
  7. "102761-CIV_GRADING.DWG"
  8. "POST DEVELOPMENT DRAINAGE MAP.DWG
- PDFS OF THE FOLLOWING DRAWINGS PROVIDED BY NATIONAL GRID
  1. "CATCH BASINS AND SANITARY SEWER SYSTEM" PREPARED BY PROVIDENCE GAS COMPANY, DATED SEPTEMBER 25, 1981.
  2. "PLAN SHOWING UNDERGROUND UTILITIES LNG FACILITY" DATED 0CTOBER 6, 1983, "SUBSURFACE UTILITY ENGINEERING" PREPARED BY BAYSTATE SUBSURFACE INVESTIGATION, INC., DATED MAY 17, 2005.

2) HORIZONTAL DATUM IS BASED ON NAD 1983 FROM BASE MAPPING PROVIDED BY VHB.

3) VERTICAL DATUM IS BASED ON NAVD 1988 FROM BASE MAPPING PROVIDED BY VHB.

4) SELECT PRESENTED SITE UTILITIES WERE TAKEN FROM HISTORIC FIGURES PROVIDED BY NATIONAL GRID. ALL UTILITY LOCATIONS ARE APPROXIMATE AND HAVE BEEN ALIGNED AND ADJUSTED FOR THE "BEST FIT" AND THESE DATA SHOULD BE CONSIDERED ACCURATE ONLY TO THE DEGREE IMPLIED BY THE METHOD USED. UTILITIES ARE SHOWN FOR REFERENCE ONLY. **OTHER LOCATIONS MAY EXIST.**

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6) PARCEL DATA PROVIDED BY THE CITY OF PROVIDENCE PLANNING AND DEVELOPMENT DEPARTMENT. PARCELS OF REAL ESTATE ASSESSED AS OF DECEMBER 31, 2012. GIS DATA ARE FOR PLANNING PURPOSES ONLY. THESE DATA DO NOT REPRESENT A LEGALLY RECORDED PLAN, DEED, SURVEY OR ENGINEERING SCHEMATIC AND ARE NOT INTENDED TO BE USED AS SUCH.

7) SITE BOUNDARIES ARE APPROXIMATE.

NOT TO SCALE

CONFIDENTIAL
THESE DRAWINGS ARE CONFIDENTIAL IN NATURE. ANY MISUSE OR UNAUTHORIZED DISTRIBUTION OF THE DRAWINGS CONTAINED HEREIN WILL BE A VIOLATION OF THIS CONFIDENTIALITY REQUIREMENT AND SUBJECT THE VIOLATOR TO LIABILITY. REVIEW OF THESE MATERIALS BY RECIPIENT SHALL CONSTITUTE AN ACCEPTANCE OF THESE TERMS AND THE TERMS OF ANY UNDERLYING CONFIDENTIALITY AGREEMENT WE MAY HAVE EXECUTED IN OBTAINING THIS INFORMATION FROM A THIRD PARTY. IF THE RECIPIENT IS NOT IN AGREEMENT WITH THE OBLIGATION OF CONFIDENTIALITY THEN THE DRAWINGS SHALL BE RETURNED TO THE ORIGINATOR.

REV	DATE	REVISION INFORMATION	BY	CHK	APP.
0	09/06/16	ISSUED FOR PERMIT	DAC	AMS	AMS

GENERAL NOTES AND COMMENTS:

nationalgrid

Kiewit
Kiewit Engineering and Design
9401 Renner Boulevard
Lenexa, Kansas 66219

SEAL AND STAMP:
ASHLEY STUTZMAN
No. 11512
REGISTERED PROFESSIONAL ENGINEER CIVIL

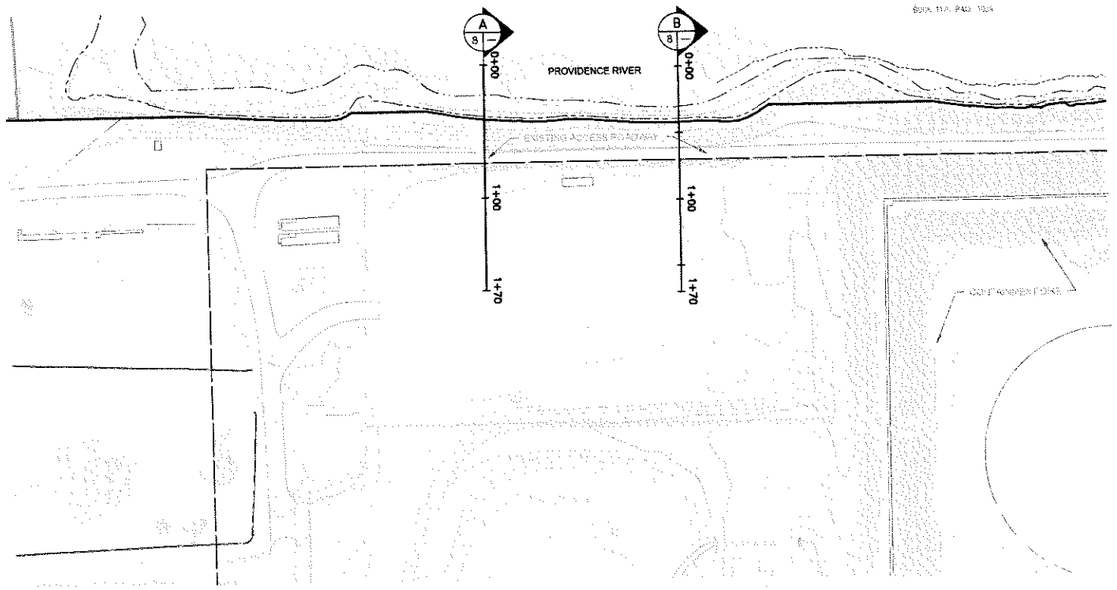
PROFESSIONAL CERTIFICATION: I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF RHODE ISLAND.
LICENSE NO. 11512
EXPIRATION DATE 06/30/2017

ENG/DESIGN ORIG: A. STUTZMAN
LEAD ENG: A. STUTZMAN
ENG. MGR: J. BOCKELMAN
PROJ. MGR: A. PARRACK

NATIONAL GRID LNG LLC
FIELDS POINT LIQUEFACTION PROJECT
LIQUEFACTION WORK AREA
EROSION AND SEDIMENTATION CONTROLS

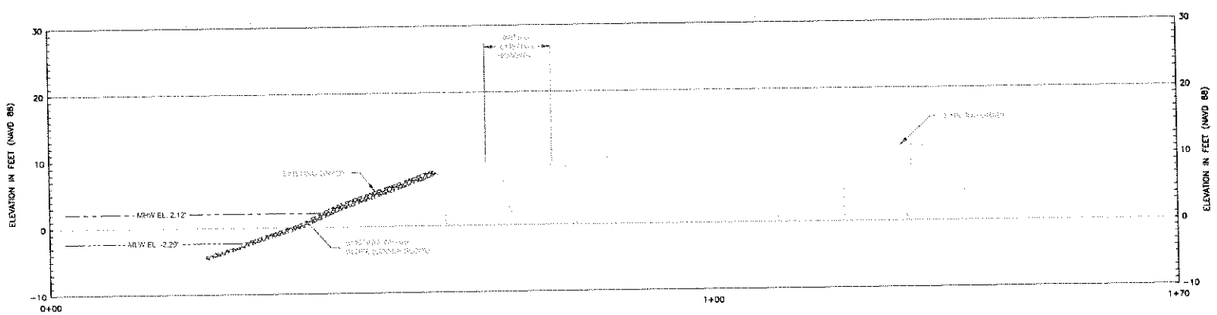
DRAWING NO:	PROJECT NO:	SHT:	REV.
FIGURE 7	33554.60	7 OF 15	0

SEP 06, 2016 - 9:03am DRAWING NAME: J:\102761-National_Grid_Liquefaction\CIV\CAD Exchange\In\2016-08-31 GZA Liq Permit Package\33554.60_CRMC PERMITTING_FOR STAMPING-AMS.dwg



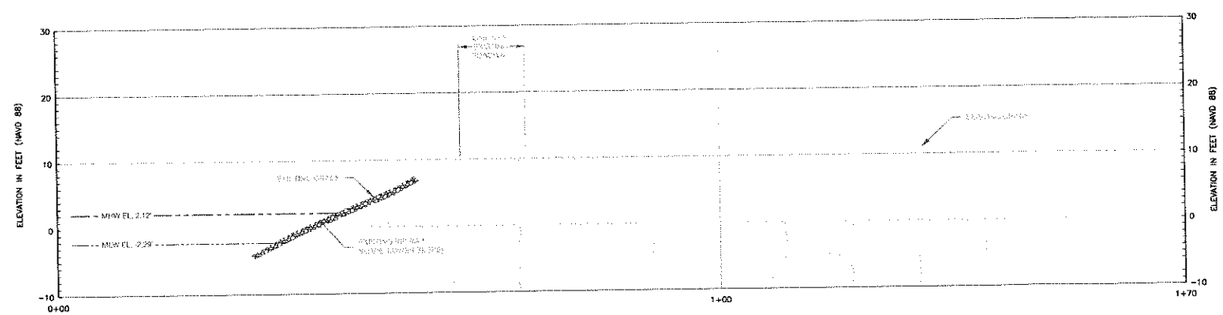
PLAN VIEW OF EXISTING REVETMENT

SCALE: 1"=50'



A — TYPICAL REVETMENT SECTION

SCALE: 1"=10'

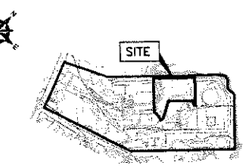


B — TYPICAL REVETMENT SECTION

SCALE: 1"=10'

LEGEND:

- EXISTING BUILDING
- EXISTING CONTOUR (MAJOR 5 FOOT INTERVAL)
- EXISTING CONTOUR (MINOR 1 FOOT INTERVAL)
- EXISTING PAVEMENT
- UTILITY POLE
- LIGHT POLE
- HYDRANT
- PROPERTY LINES
- INTERIOR PROPERTY LINE
- MHW — MEAN HIGH WATER
- MLW — MEAN LOW WATER
- EASEMENT AREA



KEY PLAN:

SCALE: 1"=800'

GENERAL NOTES:

1) BASE MAP DEVELOPED FROM THE FOLLOWING:

- ELECTRONIC CAD FILE "ACAD-7257PL.DWG" PROVIDED BY VANASSE HANGEN BRUSTLIN (VHB) ENTITLED "EXISTING CONDITIONS PLAN," PROJECT TITLE "NATIONAL GRID LNG TERMINAL ROAD LNG FACILITY" DATED MARCH 10, 2014. ORIGINAL SCALE 1" = 50', DRAWING NO. SV-1 THROUGH SV-3 AND AERIAL MAPPING BY WSP TRANSPORTATION AND INFRASTRUCTURE DATED JANUARY 15, 2014 PREPARED FOR NATIONAL GRID LAND SURVEYING DEPARTMENT, WALTHAM, MASSACHUSETTS AND CAD FILE NO. 09303023.052-1.DWG. PLANS PROVIDED BY NATIONAL GRID.
- DESCRIPTIONS PROVIDED IN THE CITY OF PROVIDENCE DEED BOOK (BK) 470 PAGES 224 - 229, BK 561 PAGES 326 - 328, BK 1111 PAGES 752 -758 AND BK 5249 PAGES 219 - 322.
- ELECTRONIC CAD FILE14-152_SU1_REV2.DWG. TITLED "TOPOGRAPHIC SURVEY PLAN, PORTION OF A.P. 56 LOT 5" DATED OCTOBER 27, 2014 AND PROVIDED BY NATIONAL GRID.
- ELECTRONIC CAD FILE 5153_COO.DWG. TITLED "EXISTING CONDITIONS PLAN" PREPARED BY PROCESS PIPELINE SERVICES. DATED DECEMBER 18, 2014 AND PROVIDED BY NATIONAL GRID.
- ELECTRONIC CAD FILES PROVIDED BY KIEWIT
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  2. "2007EXP_102761-CIV_LAYDOWN.DWG"
  3. "102761_MEC_STR_BASE.DWG"
  4. "102761-SURVEY_SITE.DWG"
  5. "A2007EXP_102761-CIV_STORM.DWG"
  6. "ACAD-102761-CIV_SURFACING.DWG"
  7. "ACAD-102761-PROP-CONT.DWG"
  8. "POST DEVELOPMENT DRAINAGE MAP.DWG
- PDFS OF THE FOLLOWING DRAWINGS PROVIDED BY NATIONAL GRID
  1. "CATCH BASINS AND SANITARY SEWER SYSTEM" PREPARED BY PROVIDENCE GAS COMPANY. DATED SEPTEMBER 25, 1981.
  2. "PLAN SHOWING UNDERGROUND UTILITIES LNG FACILITY" DATED OCTOBER 6, 1983, "SUBSURFACE UTILITY ENGINEERING" PREPARED BY BAYSTATE SUBSURFACE INVESTIGATION, INC., DATED MAY 17, 2005.

2) HORIZONTAL DATUM IS BASED ON NAD 1983 FROM BASE MAPPING PROVIDED BY VHB.

3) VERTICAL DATUM IS BASED ON NAVD 1988 FROM BASE MAPPING PROVIDED BY VHB.

4) SELECT PRESENTED SITE UTILITIES WERE TAKEN FROM HISTORIC FIGURES PROVIDED BY NATIONAL GRID. ALL UTILITY LOCATIONS ARE APPROXIMATE AND HAVE BEEN ALIGNED AND ADJUSTED FOR THE "BEST FIT" AND THESE DATA SHOULD BE CONSIDERED ACCURATE ONLY TO THE DEGREE IMPLIED BY THE METHOD USED. UTILITIES ARE SHOWN FOR REFERENCE ONLY. **OTHER LOCATIONS MAY EXIST.**

5) ON-SITE INVESTIGATIONS AND SURVEYS BY GZA PERSONNEL DURING VARIOUS SITE VISITS BETWEEN 2011 AND 2016.

6) PARCEL DATA PROVIDED BY THE CITY OF PROVIDENCE PLANNING AND DEVELOPMENT DEPARTMENT. PARCELS OF REAL ESTATE ASSESSED AS OF DECEMBER 31, 2012. GIS DATA ARE FOR PLANNING PURPOSES ONLY. THESE DATA DO NOT REPRESENT A LEGALLY RECORDED PLAN, DEED, SURVEY OR ENGINEERING SCHEMATIC AND ARE NOT INTENDED TO BE USED AS SUCH.

7) SITE BOUNDARIES ARE APPROXIMATE.

NOT TO SCALE

0 5' 10' 20' 30'
SCALE IN FEET

0 25' 50' 100' 150'
SCALE IN FEET

THE INFORMATION SHOWN ON THE DRAWING IS SOLELY FOR USE BY NATIONAL GRID OR THE NATIONAL GRID'S DESIGNATED REPRESENTATIVE FOR THE SPECIFIC PROJECT AND LOCATION IDENTIFIED ON THE DRAWING. THE DRAWING SHALL NOT BE TRANSFERRED, REUSED, COPIED, OR ALTERED IN ANY MANNER FOR USE AT ANY OTHER LOCATION OR FOR ANY OTHER PURPOSE WITHOUT THE PRIOR WRITTEN CONSENT OF GZA AND NATIONAL GRID. ANY TRANSFER, REUSE, OR MODIFICATION TO THE DRAWING BY OTHERS, WITHOUT THE PRIOR WRITTEN EXPRESS CONSENT OF GZA AND NATIONAL GRID, WILL BE AT THE USER'S SOLE RISK AND WITHOUT ANY RISK OR LIABILITY TO GZA AND NATIONAL GRID.

NATIONAL GRID
LIQUEFACTION PLANT
642 ALLENS AVENUE PROVIDENCE, RHODE ISLAND

LIQUEFACTION WORK AREA - EXISTING REVETMENT WALL AND CROSS SECTIONS

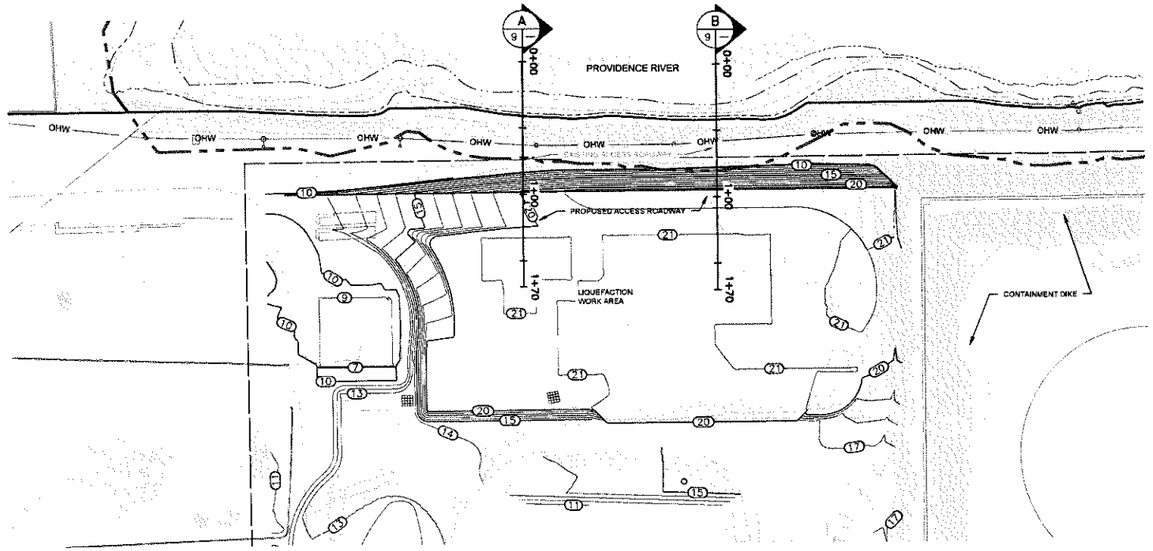
PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com

PREPARED FOR: nationalgrid

PROJ MGR: MSK	REVIEWED BY: SJH	CHECKED BY: IR	FIGURE 8
DESIGNED BY: SJH	DRAWN BY: LDT	SCALE: AS NOTED	
DATE: SEPTEMBER, 2016	PROJECT NO. 33554.60	REVISION NO. 0	SHEET NO. 8 OF 15

FOR PERMITTING ONLY

2016 - GZA GeoEnvironmental, Inc. GZA-V:\DWG\33554.60\MSK\FIGURES\CAD\DWG\33554.60_CIVIL PERMITTING_2-1-2016.DWG LDT-HC 8 SEPTEMBER 6, 2016 12:25 PM USA, "NORMAL"

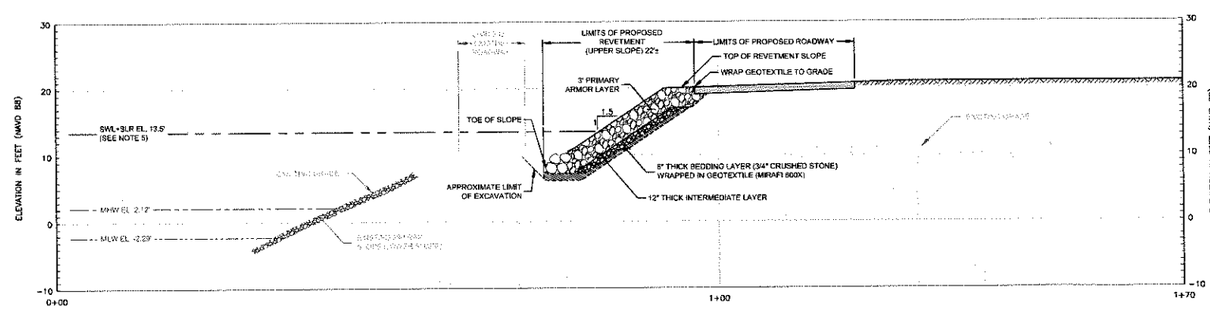


PLAN VIEW OF PROPOSED REVETMENT AND REVETMENT IMPROVEMENTS

SCALE: 1"=50'

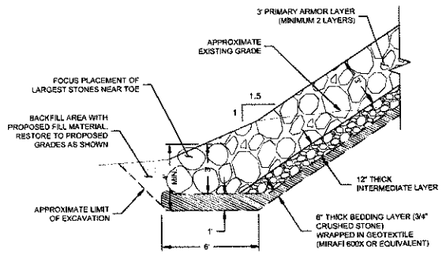
A 9 TYPICAL REVETMENT SECTION

SCALE: 1"=10'



B 9 TYPICAL REVETMENT SECTION

SCALE: 1"=10'



PROPOSED REVETMENT (UPPER SLOPE) (TYP.)

SCALE: 1"=4'

RIP RAP GRADATION REQUIREMENTS			
PRIMARY ARMOR LAYER		INTERMEDIATE LAYER	
RIDOT R-6		RIDOT R-2	
% LESS THAN	STONE SIZE (IN.)	% LESS THAN	STONE SIZE (IN.)
0-15%	8	0-15%	1
0-50%	13	0-50%	2
100%	26	100%	4

3/4" CRUSHED STONE GRADATION REQUIREMENTS	
% LESS THAN	SIEVE SIZE
100	3/4 INCH
90-100	1/2 INCH
30-60	3/8 INCH
0-15	No. 4
0-5	No. 8

LEGEND:

- EXISTING BUILDING
- EXISTING CONTOUR (MAJOR 5 FOOT INTERVAL)
- EXISTING CONTOUR (MINOR 1 FOOT INTERVAL)
- 50-FOOT SETBACK
- EXISTING PAVEMENT
- UTILITY POLE
- LIGHT POLE
- HYDRANT
- PROPERTY LINES
- INTERIOR PROPERTY LINE
- MHW — MEAN HIGH WATER
- MLW — MEAN LOW WATER
- EASEMENT AREA
- (10) — PROPOSED CONTOUR (MAJOR 5 FOOT INTERVAL)
- (11) — PROPOSED CONTOUR (MINOR 1 FOOT INTERVAL)
- STILL WATER LEVEL AND PREDICTED SEA LEVEL RISE (SEE NOTE #5)
- OHW — EXISTING OVERHEAD WIRE
- LIMIT OF PROPOSED REVETMENT (UPPER SLOPE)

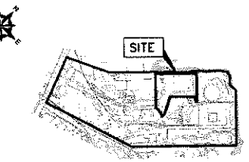
TIDAL DATUM

NOTE:

1. TO CONVERT FROM NAVD88 TO MLW ADD 2.29 FT.
2. TIDAL DATUM BASED UPON NOAA STATION 8454000.

NAVD 88	MLW
+2.37' (MHHW)	+4.66' (MHHW)
+2.12' (MHW)	+4.41' (MHW)
0.0' (NAVD 88)	+2.29'
-2.29' (MLW)	0.0' (MLW)
-2.47' (MLLW)	-0.18' (MLLW)

FOR PERMITTING ONLY



KEY PLAN:

SCALE: 1"=800'

GENERAL NOTES:

1) BASE MAP DEVELOPED FROM THE FOLLOWING:

- ELECTRONIC CAD FILE "ACAD-72579PL.DWG" PROVIDED BY VANASSE HANGEN BRUSTLIN (VHB) ENTITLED "EXISTING CONDITIONS PLAN," PROJECT TITLE "NATIONAL GRID LNG TERMINAL ROAD LNG FACILITY" DATED MARCH 10, 2014, ORIGINAL SCALE 1" = 50'. DRAWING NO. SV-1 THROUGH SV-3 AND AERIAL MAPPING BY WSP TRANSPORTATION AND INFRASTRUCTURE DATED JANUARY 15, 2014 PREPARED FOR NATIONAL GRID LAND SURVEYING DEPARTMENT, WALTHAM, MASSACHUSETTS AND CAD FILE NO. 09303023.052-1.DWG. PLANS PROVIDED BY NATIONAL GRID.
- DESCRIPTIONS PROVIDED IN THE CITY OF PROVIDENCE DEED BOOK (BK) 470 PAGES 224 - 229, BK 561 PAGES 326 - 328, BK 1111 PAGES 752 - 756 AND BK 5249 PAGES 219 - 322.
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- ELECTRONIC CAD FILE 5153_COO.DWG, TITLED "EXISTING CONDITIONS PLAN" PREPARED BY PROCESS PIPELINE SERVICES, DATED DECEMBER 18, 2014 AND PROVIDED BY NATIONAL GRID.
- ELECTRONIC CAD FILES PROVIDED BY KIEWIT
  1. "ACAD-102761-CIV_SITE.DWG"
  2. "2007EXP_102761-CIV_LAYDOWN.DWG"
  3. "102761_MEC_STR_BASE.DWG"
  4. "102761-SURVEY_SITE.DWG"
  5. "A2007EXP_102761-CIV_STORM.DWG"
  6. "ACAD-102761-CIV_SURFACING.DWG"
  7. "ACAD-102761-PROP-CONT.DWG"
  8. "POST DEVELOPMENT DRAINAGE MAP.DWG
- PDFS OF THE FOLLOWING DRAWINGS PROVIDED BY NATIONAL GRID
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2) HORIZONTAL DATUM IS BASED ON NAD 1983 FROM BASE MAPPING PROVIDED BY VHB.

3) VERTICAL DATUM IS BASED ON NAVD 1988 FROM BASE MAPPING PROVIDED BY VHB.

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7) SITE BOUNDARIES ARE APPROXIMATE.

NOT TO SCALE

0 2' 4' 8' 12'
SCALE IN FEET 1"=4'

0 5' 10' 20' 30'
SCALE IN FEET 1"=10'

0 25' 50' 100' 150'
SCALE IN FEET 1"=50'

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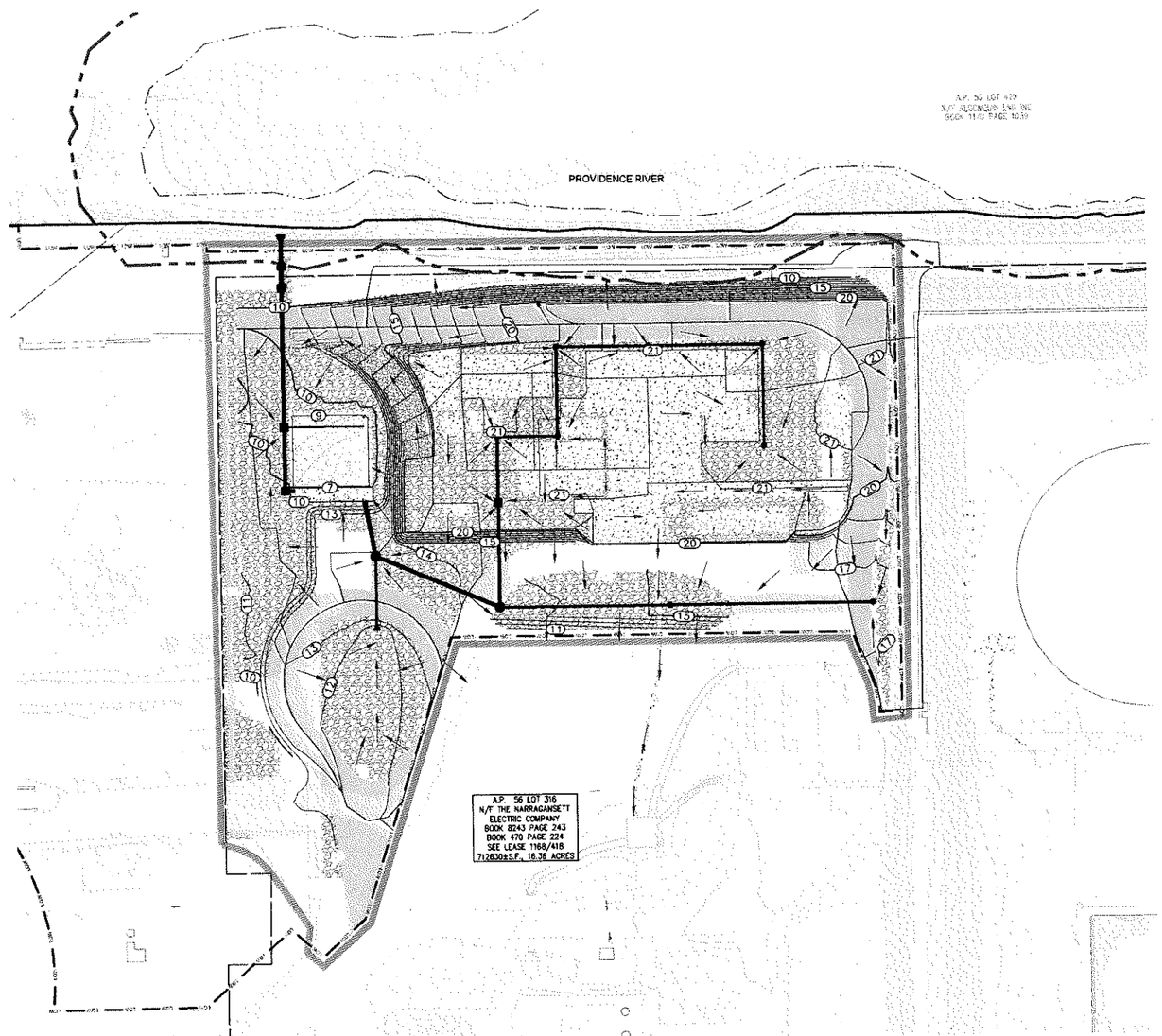
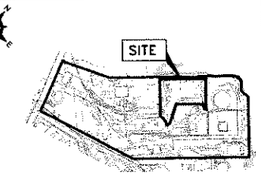
NATIONAL GRID
LIQUEFACTION PLANT
642 ALLENS AVENUE PROVIDENCE, RHODE ISLAND

LIQUEFACTION WORK AREA - PROPOSED SLOPE ARMORING, EXISTING REVETMENT AND CROSS SECTIONS

PREPARED BY		PREPARED FOR:	
GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		nationalgrid	
PROJ MGR: MSK	REVIEWED BY: SJH	CHECKED BY: IR	FIGURE
DESIGNED BY: SJH	DRAWN BY: LDT	SCALE: AS NOTED	9
DATE: SEPTEMBER, 2016	PROJECT NO. 33554.60	REVISION NO. 0	SHEET NO. 9 OF 15

2016 - GZA GeoEnvironmental, Inc. GZA-J:\33\#\33554.60\SHA\VOLUME1\CAD\FIGS\33554-AL-DRAC PERMITTING_2-3-2016.DWG, LIQUF-FIG 9, SEPTEMBER 8, 2016 12:41 PM LISA THIBAULT





KEY PLAN:
SCALE: 1"=800'

LEGEND:

- EXISTING BUILDING
- EXISTING CONTOUR (MAJOR 5 FOOT INTERVAL)
- EXISTING CONTOUR (MINOR 1 FOOT INTERVAL)
- 50-FOOT SETBACK
- EXISTING PAVEMENT
- EASEMENT AREA
- UTILITY POLE
- LIGHT POLE
- HYDRANT
- PROPERTY LINES
- INTERIOR PROPERTY LINE
- PROPOSED CONTOUR (MAJOR 5 FOOT INTERVAL)
- PROPOSED CONTOUR (MINOR 1 FOOT INTERVAL)
- PROPOSED PERMANENT PAVEMENT
- PROPOSED GRAVEL
- PROPOSED CONCRETE
- PROPOSED SAND FILTER
- LIQUEFACTION WORK AREA
- LIMIT OF WORK
- FLOW DIRECTION

0 25' 50' 100' 150'
SCALE IN FEET

NOT TO SCALE

GENERAL NOTES:

1) BASE MAP DEVELOPED FROM THE FOLLOWING:

- ELECTRONIC CAD FILE "ACAD-7257PL.DWG" PROVIDED BY VANASSE HANGEN BRUSTLIN (VHB) ENTITLED "EXISTING CONDITIONS PLAN." PROJECT TITLE "NATIONAL GRID LNG TERMINAL ROAD LNG FACILITY" DATED MARCH 10, 2014, ORIGINAL SCALE 1" = 50', DRAWING NO. SV-1 THROUGH SV-3 AND AERIAL MAPPING BY WSP TRANSPORTATION AND INFRASTRUCTURE DATED JANUARY 15, 2014 PREPARED FOR NATIONAL GRID LAND SURVEYING DEPARTMENT, WALTHAM, MASSACHUSETTS AND CAD FILE NO. 09303023.052-1.DWG. PLANS PROVIDED BY NATIONAL GRID.
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  3. "102761_MEC_STR_BASE.DWG"
  4. "102761-SURVEY_SITE.DWG"
  5. "A2007EXP_102761-CIV_STORM.DWG"
  6. "ACAD-102761-CIV_SURFACING.DWG"
  7. "ACAD-102761-PROP-CONT.DWG"
  8. "POST DEVELOPMENT DRAINAGE MAP.DWG
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7) SITE BOUNDARIES ARE APPROXIMATE.

CONFIDENTIAL

THESE DRAWINGS ARE CONFIDENTIAL IN NATURE. ANY MISUSE OR UNAUTHORIZED DISTRIBUTION OF THE DRAWINGS CONTAINED HEREIN WILL BE A VIOLATION OF THIS CONFIDENTIALITY REQUIREMENT AND SUBJECT THE VIOLATOR TO LIABILITY. REVIEW OF THESE MATERIALS BY RECIPIENT SHALL CONSTITUTE AN ACCEPTANCE OF THESE TERMS AND THE TERMS OF ANY UNDERLYING CONFIDENTIALITY AGREEMENT WE MAY HAVE EXECUTED IN OBTAINING THIS INFORMATION FROM A THIRD PARTY. IF THE RECIPIENT IS NOT IN AGREEMENT WITH THE OBLIGATION OF CONFIDENTIALITY THEN THE DRAWINGS SHALL BE RETURNED TO THE ORIGINATOR.

REV	DATE	REVISION INFORMATION	BY	CHK	APP.
0	09/08/15	ISSUED FOR PERMIT	DAC	AMS	AMS

GENERAL NOTES AND COMMENTS:

nationalgrid

Kiewit
Kiewit Engineering and Design
9401 Renner Boulevard
Lenexa, Kansas 66219

SEAL AND STAMP:
ASHLEY STUTZMAN
No. 11512
REGISTERED PROFESSIONAL ENGINEER CIVIL

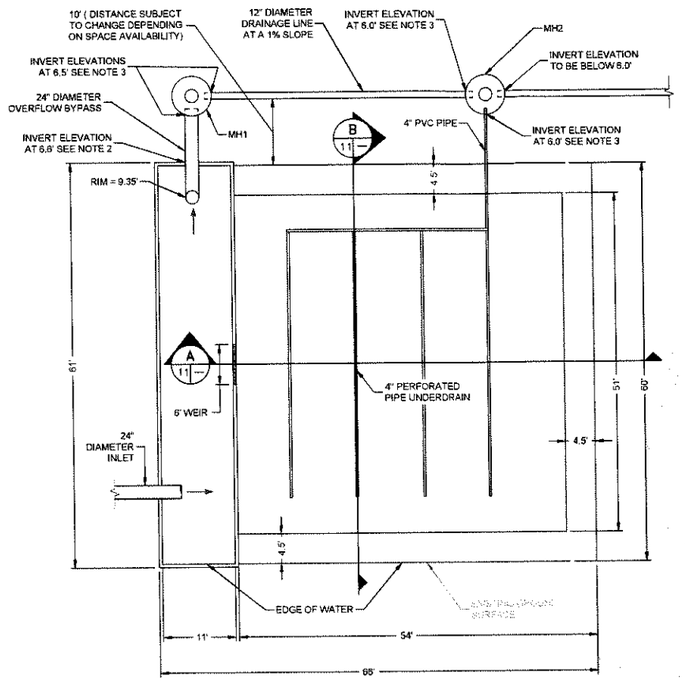
LICENSE NO. 11512
EXPIRATION DATE 06/30/2017

ENG/DESIGN ORIG: A. STUTZMAN
LEAD ENG: A. STUTZMAN
ENG. MGR: J. BOCKELMAN
PROJ. MGR: A. PARRACK

NATIONAL GRID LNG LLC
FIELDS POINT LIQUEFACTION PROJECT
STORMWATER MANAGEMENT PLAN

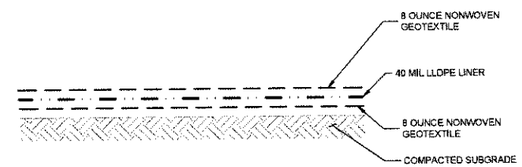
DRAWING NO:	PROJECT NO:	SHT:	REV.
FIGURE 10	33554.60	10 OF 15	0

SEP 06, 2016 - 9:02am DRAWING NAME: J:\102761-National_Grid_Liquefaction\CIV\CAD Exchange\jn\2016-08-31 GZA Liq Permit Package\33554.60_CRMC PERMITTING_FOR STAMPING-AMS.dwg



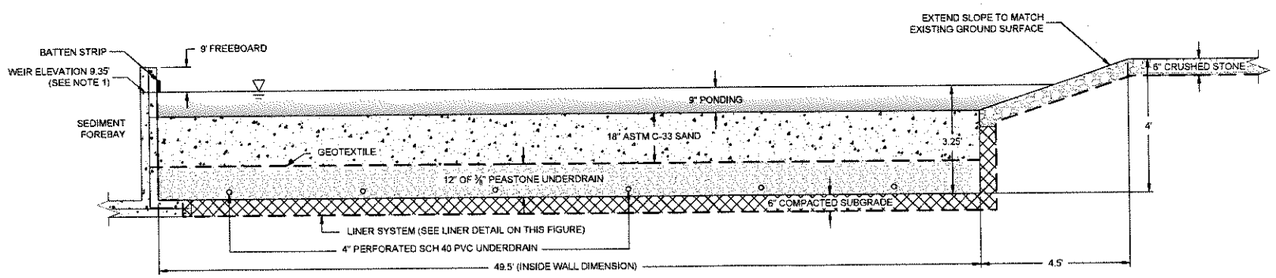
PLAN VIEW - SEDIMENT FOREBAY AND SAND FILTER

SCALE: 1"=10'



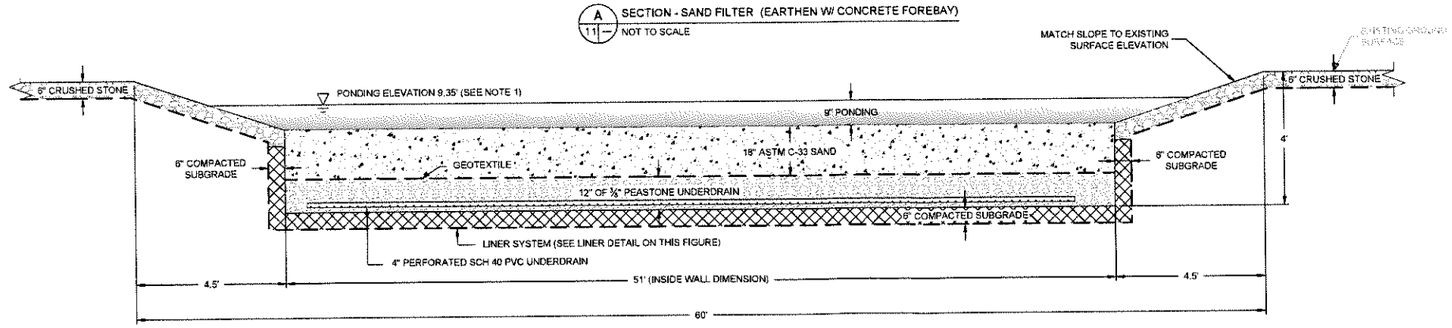
SECTION - LINER DETAIL

NOT TO SCALE



A 11 SECTION - SAND FILTER (EARTHEN W/ CONCRETE FOREBAY)

NOT TO SCALE



B 11 SECTION - SAND FILTER (EARTHEN)

NOT TO SCALE

NOTES:

1. PONDING ELEVATION TO BE SET AT INLET INVERT ELEVATION (CURRENTLY SET AT 9.35' BASED ON AUGUST 31, 2016 DRAINAGE CALCULATIONS.
2. OUTLET INVERT ELEVATION FOR 24" OVERFLOW BYPASS TO BE 2.75' BELOW PONDING ELEVATION.
3. INVERT ELEVATIONS TO BE SET BASED ON AUGUST 31, 2016 DRAINAGE CALCULATIONS.

0 5' 10' 20' 30'

SCALE: 1"=10'

NOT TO SCALE

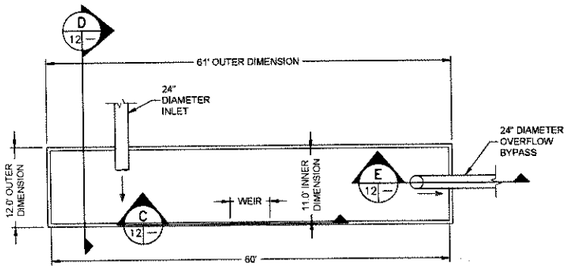
THE INFORMATION SHOWN ON THE DRAWING IS SOLELY FOR USE BY NATIONAL GRID OR THE NATIONAL GRID'S DESIGNATED REPRESENTATIVE FOR THE SPECIFIC PROJECT AND LOCATION IDENTIFIED ON THE DRAWING. THE DRAWING SHALL NOT BE TRANSFERRED, RELISED, COPIED, OR ALTERED IN ANY MANNER FOR USE AT ANY OTHER LOCATION OR FOR ANY OTHER PURPOSE WITHOUT THE PRIOR WRITTEN CONSENT OF GZA AND NATIONAL GRID. ANY TRANSFER, REUSE, OR MODIFICATION TO THE DRAWING BY OTHERS, WITHOUT THE PRIOR WRITTEN EXPRESS CONSENT OF GZA AND NATIONAL GRID, WILL BE AT THE USER'S SOLE RISK AND WITHOUT ANY RISK OR LIABILITY TO GZA AND NATIONAL GRID.

NATIONAL GRID
LIQUEFACTION PLANT
642 ALLENS AVENUE PROVIDENCE, RHODE ISLAND

STORMWATER MANAGEMENT DETAILS
SAND FILTER

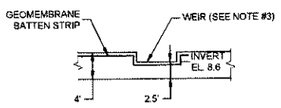
PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		PREPARED FOR: nationalgrid	
PROJ MGR: MSK	REVIEWED BY: SJH	CHECKED BY: IR	FIGURE 11
DESIGNED BY: SJH	DRAWN BY: LDT	SCALE: AS NOTED	
DATE: SEPTEMBER 2016	PROJECT NO. 33554.60	REVISION NO. 0	SHEET NO. 11 OF 15

FOR PERMITTING ONLY



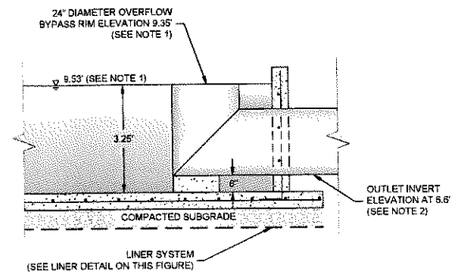
PLAN VIEW - SEDIMENT FOREBAY

SCALE: 1"=10'



C 12 — SECTION - SEDIMENT FOREBAY

SCALE: 1"=10'

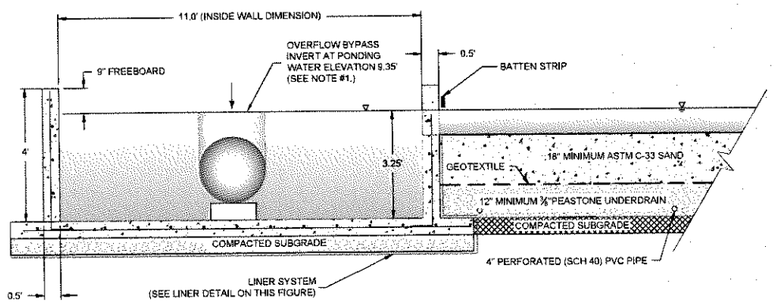


E 12 — SECTION - SEDIMENT FOREBAY DETAIL

NOT TO SCALE

NOTE:

OVERFLOW BYPASS PIPE DIAMETER TO BE SIZED FOR 100-YEAR PEAK FLOW RATE



D 12 — SECTION - SEDIMENT FOREBAY DETAIL

NOT TO SCALE

NOTES:

1. PONDING ELEVATION TO BE SET AT INLET INVERT ELEVATION (CURRENTLY SET AT 9.35' BASED ON AUGUST 31, 2016 DRAINAGE CALCULATIONS.
2. OUTLET INVERT ELEVATION FOR 24" OVERFLOW BYPASS TO BE 2.75' BELOW PONDING ELEVATION.
3. SIZE WIDTH OF WEIR BASED ON WATER QUALITY PEAK FLOW RATE.

0 5' 10' 20' 30'

SCALE IN FEET

NOT TO SCALE

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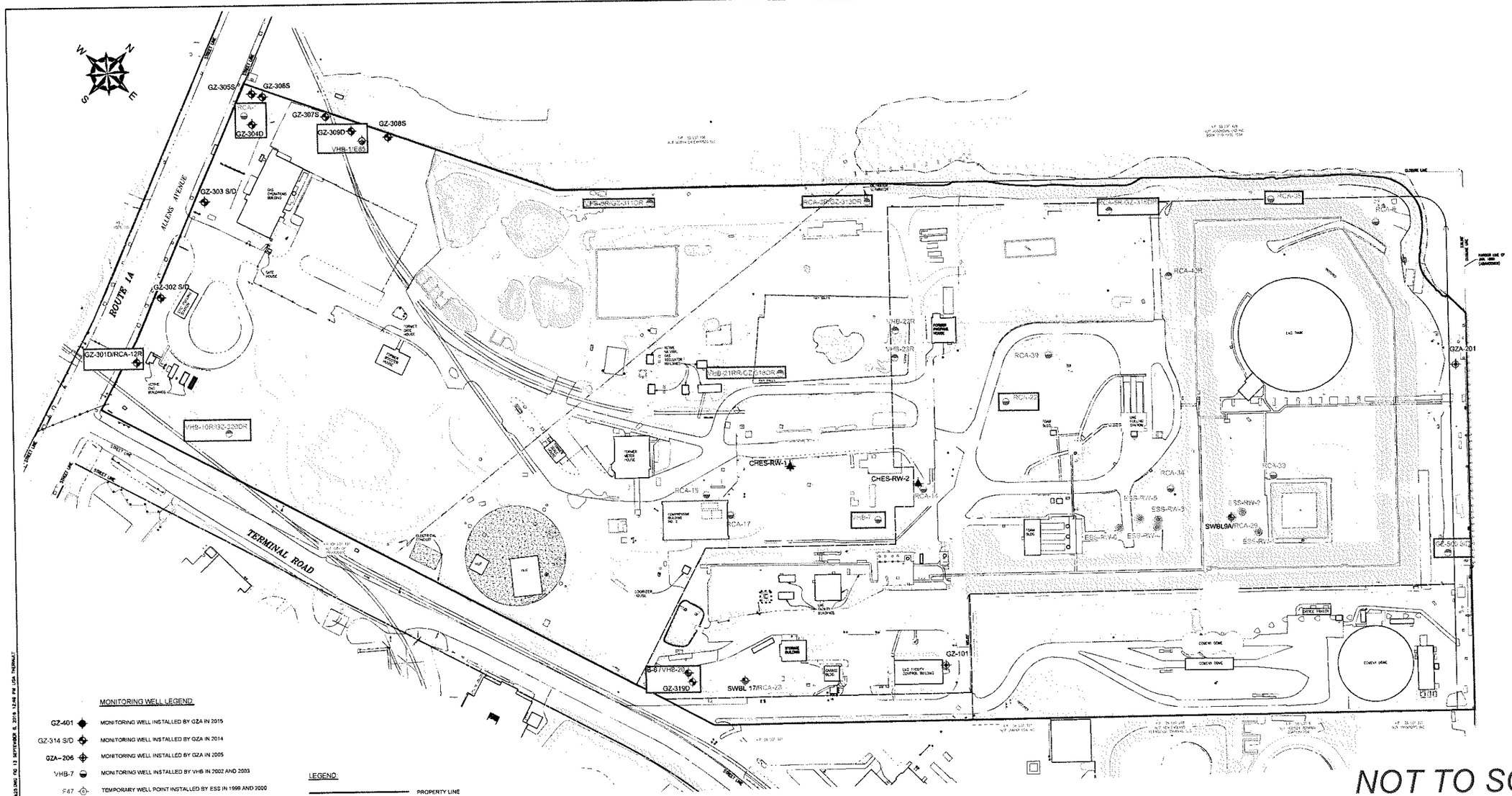
NATIONAL GRID
LIQUEFACTION PLANT
642 ALLENS AVENUE PROVIDENCE, RHODE ISLAND

STORMWATER MANAGEMENT DETAILS
CONCRETE FOREBAY

FOR PERMITTING ONLY

PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		PREPARED FOR: nationalgrid	
PROJ MGR: MSK	REVIEWED BY: SJH	CHECKED BY: IR	FIGURE 12
DESIGNED BY: SJH	DRAWN BY: LDT	SCALE: AS NOTED	
DATE: SEPTEMBER, 2016	PROJECT NO. 33554.60	REVISION NO. 0	SHEET NO. 12 OF 15

2016 - GZA GeoEnvironmental, Inc. GZA-J:\ENV\33554.60\MAP\NG\REPS\GRP\DWG\33554.60_DWG-DETAILS.DWG FID: 12 FORENSY SEPTEMBER 7, 2016 2:04 PM USA EASTERN



NOT TO SCALE

0 40 80 160 240
SCALE IN FEET 1" = 80'

MONITORING WELL LEGEND:

GZ-401	MONITORING WELL INSTALLED BY GZA IN 2015
GZ-314 S/D	MONITORING WELL INSTALLED BY GZA IN 2014
GZA-206	MONITORING WELL INSTALLED BY GZA IN 2005
VHB-7	MONITORING WELL INSTALLED BY VHB IN 2002 AND 2003
F47	TEMPORARY WELL POINT INSTALLED BY ESS IN 1999 AND 2000
	TEMPORARY WELL POINT INSTALLED BY ESS IN 1999
RCA-40	MONITORING WELL INSTALLED BY ESS IN 1996
RW-1	RECOVERY WELL INSTALLED BY CHES OBSERVED BY GZA IN 2014
CHES-RW-1	RECOVERY WELL INSTALLED BY CHES OBSERVED BY VHB IN 2002
ESS-RW-1	RECOVERY WELL INSTALLED BY ESS IN 1999 AND 2000
GZ-311DR	MONITORING WELLS TO BE INSTALLED AFTER CONTRACTOR DEMOBILIZATION

MONITORING WELL LEGEND CONTINUED:

	ACTIVE MONITORING WELLS
	RECOVERY WELLS
	MONITORING WELL TO BE INSTALLED AFTER CONTRACTOR DEMOBILIZATION
	WELL IS PLANNED TO BE INCLUDED IN ANNUAL GROUNDWATER MONITORING PROGRAM AFTER CONTRACTOR DEMOBILIZATION

LEGEND:

	PROPERTY LINE
	INTERIOR PROPERTY LINE
	EXISTING BUILDING
	STEEL POST
	PILING
	EDGE OF WATER
	FENCE
	RAILROAD TRACKS
	EXISTING CONTOUR (MAJOR 5 FOOT INTERVAL)
	EXISTING CONTOUR (MINOR 1 FOOT INTERVAL)
	PAVEMENT
	CONCRETE PAD

GENERAL NOTES:

1) EXISTING CONDITIONS BASE MAP DEVELOPED FROM THE FOLLOWING:
   - **ELECTRONIC CAD FILE "ACAD-7257PL.DWG" PROVIDED BY VANASSE HANGEN BRUSTLIN (VHB) ENTITLED "EXISTING CONDITIONS PLAN," PROJECT TITLE "NATIONAL GRID LNG TERMINAL ROAD LNG FACILITY" DATED MARCH 10, 2014, ORIGINAL SCALE 1" = 50', DRAWING NO. SV-1 THROUGH SV-3** AND AERIAL MAPPING BY WSP TRANSPORTATION AND INFRASTRUCTURE DATED JANUARY 15, 2014 PREPARED FOR NATIONAL GRID LAND SURVEYING DEPARTMENT, WALTHAM, MASSACHUSETTS AND CAD FILE NO. 09303023 052-1.DWG
   - ON-SITE INVESTIGATIONS AND SURVEYS BY GZA PERSONNEL DURING VARIOUS SITE VISITS BETWEEN 2011 AND 2016.
2) PROPERTY LINES AND LOT INFORMATION ESTABLISHED FROM **INFORMATION PROVIDED ON A DRAWING ENTITLED "EXISTING CONDITIONS PLAN," PROJECT TITLE "NATIONAL GRID LNG TERMINAL ROAD LNG FACILITY" DATED MARCH 10, 2014, ORIGINAL SCALE 1" = 50', DRAWING NO. SV-1 THROUGH SV-3.**
3) EXPLORATION LOCATION PLANS WERE DEVELOPED FROM THE FOLLOWING:
   - SITE PLANS PROVIDED BY RESOURCE CONTROLS ASSOCIATES **(RCA) IN THE RIDEM-SUBMITTED JULY 5, 1994 "SITE CHARACTERIZATION PLAN" PREPARED ON BEHALF OF THE** PROVIDENCE GAS COMPANY. PLANS PROVIDED BY NATIONAL GRID.
   - SITE PLANS PROVIDED BY RCA IN THE RIDEM-SUBMITTED JUNE 28, 1995 **"PHASE IB FIELD CHARACTERIZATION INVESTIGATION"** PREPARED ON BEHALF OF THE PROVIDENCE GAS COMPANY. PLANS PROVIDED BY NATIONAL GRID
   - SITE PLANS PROVIDED BY VHB IN THE RIDEM-SUBMITTED NOVEMBER 2002 **"REMEDIAL ACTION CLOSURE REPORT"** PREPARED ON BEHALF OF THE NEW ENGLAND GAS COMPANY. PLANS PROVIDED BY NATIONAL GRID.
   - FIGURE 3 **"EXPLORATION LOCATION PLAN" PREPARED BY GZA** GEOENVIRONMENTAL, INC. (GZA) ON BEHALF OF CHICAGO BRIDGE AND IRON (CB&I) IN JULY 2005. PLANS PROVIDED BY NATIONAL GRID.
   - **FIGURE 35 "TEST BORINGS UNDER SASSAFRAS POINT PLAT"** DATED JUNE 5, 1912 PREPARED BY THE PROVIDENCE GAS COMPANY. PLANS PROVIDED BY NATIONAL GRID.
   - **DRAWING 3 "WHARF FACILITIES - BULKHEAD REBUILDING - CROSS SECTIONS" DATED JANUARY 11, 1973 PREPARED BY** PARSONS, BRINCKERHOFF, QUADE AND DOUGLAS ON BEHALF OF THE PROVIDENCE GAS COMPANY. PLANS PROVIDED BY NATIONAL GRID.
   - **ELECTRONIC CAD FILE "ACAD-7257PL.DWG" PROVIDED BY VANASSE HANGEN BRUSTLIN (VHB) ENTITLED "EXISTING CONDITIONS PLAN," PROJECT TITLE "NATIONAL GRID LNG TERMINAL ROAD LNG FACILITY" DATED MARCH 10, 2014, ORIGINAL SCALE 1" = 50', DRAWING NO. SV-1 THROUGH SV-3** AND AERIAL MAPPING BY WSP TRANSPORTATION AND INFRASTRUCTURE DATED JANUARY 15, 2014 PREPARED FOR NATIONAL GRID LAND SURVEYING DEPARTMENT, WALTHAM, MASSACHUSETTS AND CAD FILE NO. 09303023 052-1.DWG. PLANS PROVIDED BY NATIONAL GRID
   - **ELECTRONIC CAD FILE "ACAD-7257PL.DWG" PROVIDED BY VANASSE HANGEN BRUSTLIN (VHB) ENTITLED "EXISTING CONDITIONS PLAN," PROJECT TITLE "NATIONAL GRID LNG TERMINAL ROAD LNG FACILITY" DATED MARCH 10, 2014, ORIGINAL SCALE 1" = 50', DRAWING NO. SV-1 THROUGH SV-3** AND AERIAL MAPPING BY WSP TRANSPORTATION AND INFRASTRUCTURE DATED JANUARY 15, 2014 PREPARED FOR NATIONAL GRID LAND SURVEYING DEPARTMENT, WALTHAM, MASSACHUSETTS AND CAD FILE NO. 09303023 052-1.DWG. PLANS PROVIDED BY NATIONAL GRID.
   - ON-SITE INVESTIGATIONS AND SURVEYS BY GZA PERSONNEL DURING VARIOUS SITE VISITS BETWEEN 2011 AND 2016.
4) THE LOCATION OF THE EXPLORATIONS AND MONITORING WELLS AT THE SITE WERE APPROXIMATELY DETERMINED AND HAVE BEEN ALIGNED AND ADJUSTED FOR THE "BEST FIT" AND THESE DATA SHOULD BE CONSIDERED ACCURATE ONLY TO THE DEGREE IMPLIED BY THE METHOD USED.
5) HORIZONTAL DATUM IS BASED ON NAD 1983 FROM BASE MAPPING PROVIDED BY VHB.
6) VERTICAL DATUM IS BASED ON NAVD 1988 FROM BASE MAPPING PROVIDED BY VHB.
7) SELECT PRESENTED SITE UTILITIES WERE TAKEN FROM HISTORIC FIGURES PROVIDED BY NATIONAL GRID. ALL UTILITY LOCATIONS ARE APPROXIMATE AND HAVE BEEN ALIGNED AND ADJUSTED FOR THE "BEST FIT" AND THESE DATA SHOULD BE CONSIDERED ACCURATE ONLY TO THE DEGREE IMPLIED BY THE METHOD USED. UTILITIES ARE SHOWN FOR REFERENCE ONLY. OTHER LOCATIONS MAY EXIST.

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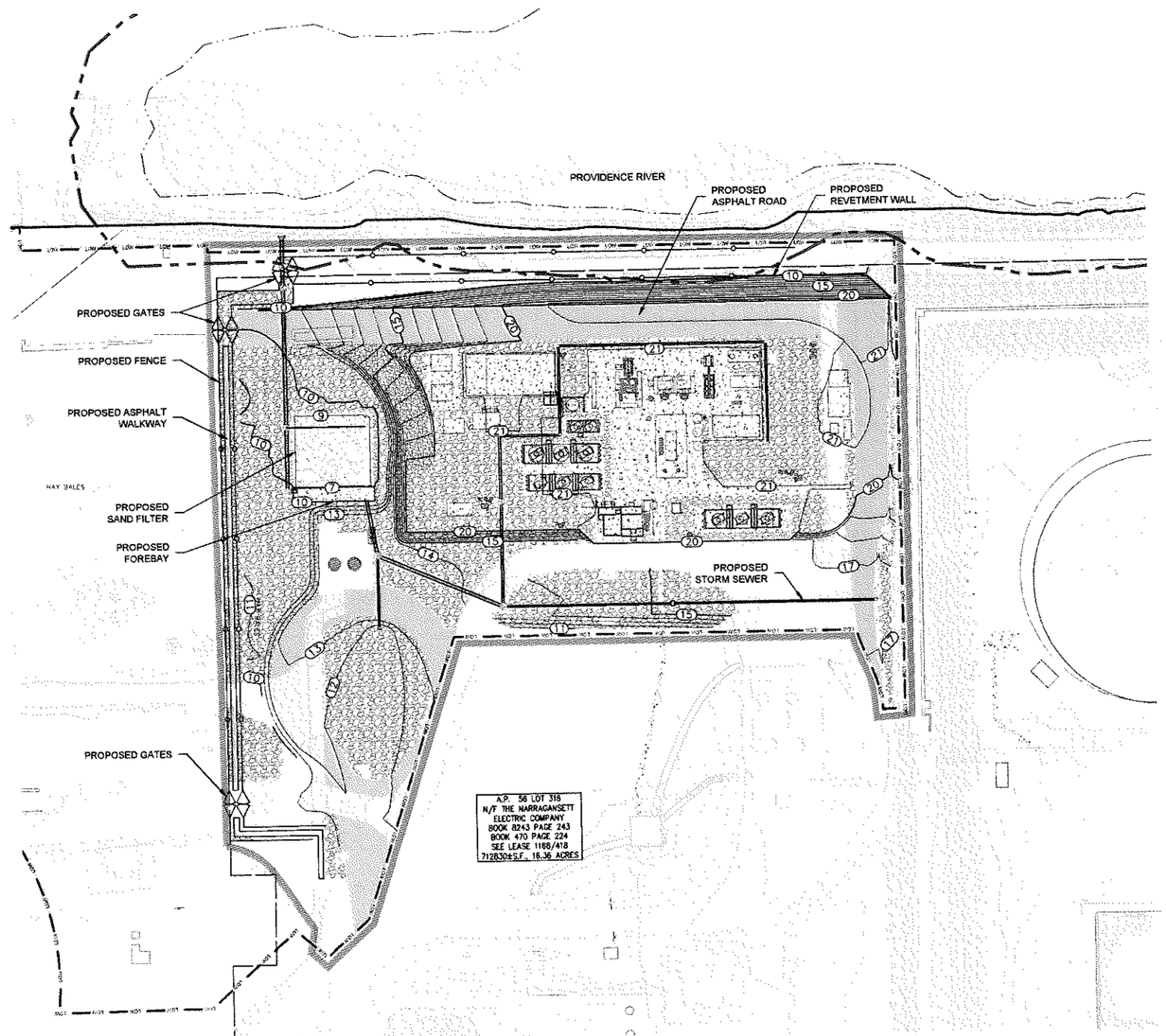
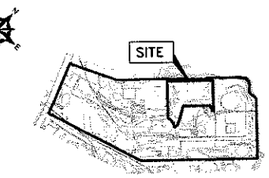
NATIONAL GRID
LIQUEFACTION PLANT
642 ALLENS AVENUE PROVIDENCE, RHODE ISLAND

PROPOSED MONITORING WELL RE-INSTALLATION PLAN

PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		PREPARED FOR: nationalgrid	
PROJ MGR: MSK	REVIEWED BY: SJH	CHECKED BY: IR	FIGURE 13
DESIGNED BY: SJH	DRAWN BY: LDT	SCALE: AS NOTED	
DATE: SEPTEMBER, 2016	PROJECT NO.: 33554.60	REVISION NO.: 0	SHEET NO. 13 OF 15

2016 - GZA GeoEnvironmental, Inc. G:\ACAD\33554.60\DRAWINGS\CAD\GRID\33554_RL_GRIDC_PERM_LAY_FIG0813.DWG 02:13 SEPTEMBER 8, 2016 12:48 PM USA - THERRALT





KEY PLAN:
SCALE: 1"=800'

LEGEND:

- EXISTING STRUCTURE
- EXISTING CONTOUR (MAJOR 5 FOOT INTERVAL)
- EXISTING CONTOUR (MINOR 1 FOOT INTERVAL)
- 50-FOOT SETBACK
- EXISTING PAVEMENT
- EASEMENT AREA
- UTILITY POLE
- LIGHT POLE
- HYDRANT
- PROPERTY LINES
- INTERIOR PROPERTY LINE
- PROPOSED CONTOUR (MAJOR 5 FOOT INTERVAL)
- PROPOSED CONTOUR (MINOR 1 FOOT INTERVAL)
- PROPOSED PERMANENT PAVEMENT
- PROPOSED GRAVEL
- PROPOSED CONCRETE
- PROPOSED SAND FILTER
- LIQUEFACTION WORK AREA
- LIMIT OF WORK
- LIMIT OF PROPOSED REVETMENT (UPPER SLOPE)
- PROPOSED ROUND CATCH BASIN
- PROPOSED SQUARE CATCH BASIN

0 25' 50' 100' 150'
SCALE IN FEET

NOT TO SCALE

GENERAL NOTES:

1) BASE MAP DEVELOPED FROM THE FOLLOWING:

- ELECTRONIC CAD FILE "ACAD-7257PL.DWG" PROVIDED BY VANASSE HANGEN BRUSTLIN (VHB) ENTITLED "EXISTING CONDITIONS PLAN," PROJECT TITLE "NATIONAL GRID LNG TERMINAL ROAD LNG FACILITY" DATED MARCH 10, 2014, ORIGINAL SCALE 1" = 50', DRAWING NO. SV-1 THROUGH SV-3 AND AERIAL MAPPING BY WSP TRANSPORTATION AND INFRASTRUCTURE DATED JANUARY 15, 2014 PREPARED FOR NATIONAL GRID LAND SURVEYING DEPARTMENT, WALTHAM, MASSACHUSETTS AND CAD FILE NO. 09303023.052-1.DWG. PLANS PROVIDED BY NATIONAL GRID.
- DESCRIPTIONS PROVIDED IN THE CITY OF PROVIDENCE DEED BOOK (BK) 470 PAGES 224 - 229, BK 561 PAGES 326 - 328, BK 1111 PAGES 752 -756 AND BK 5249 PAGES 219 - 322.
- ELECTRONIC CAD FILE14-152_SU1_REV2.DWG, TITLED "TOPOGRAPHIC SURVEY PLAN, PORTION OF A.P. 56 LOT 5" DATED OCTOBER 27, 2014 AND PROVIDED BY NATIONAL GRID.
- ELECTRONIC CAD FILE 5153_COO.DWG, TITLED "EXISTING CONDITIONS PLAN" PREPARED BY PROCESS PIPELINE SERVICES, DATED DECEMBER 18, 2014 AND PROVIDED BY NATIONAL GRID.
- ELECTRONIC CAD FILES PROVIDED BY KIEWIT
  1. "ACAD-102761-CIV_SITE.DWG"
  2. "2007EXP_102761-CIV_SURFACING.DWG"
  3. "102761_MEC_STR_BASE.DWG"
  4. "102761-SURVEY_SITE.DWG"
  5. "A2007EXP_102761-CIV_STORM.DWG"
  6. "ACAD-102761-CIV_SURFACING.DWG"
  7. "ACAD-102761-PROP-CONT.DWG"
  8. "POST DEVELOPMENT DRAINAGE MAP.DWG
- PDFS OF THE FOLLOWING DRAWINGS PROVIDED BY NATIONAL GRID
  1. "CATCH BASINS AND SANITARY SEWER SYSTEM" PREPARED BY PROVIDENCE GAS COMPANY, DATED SEPTEMBER 25, 1981.
  2. "PLAN SHOWING UNDERGROUND UTILITIES LNG FACILITY" DATED OCTOBER 6, 1983, "SUBSURFACE UTILITY ENGINEERING" PREPARED BY BAYSTATE SUBSURFACE INVESTIGATION, INC., DATED MAY 17, 2005.

2) HORIZONTAL DATUM IS BASED ON NAD 1983 FROM BASE MAPPING PROVIDED BY VHB.

3) VERTICAL DATUM IS BASED ON NAVD 1988 FROM BASE MAPPING PROVIDED BY VHB.

4) SELECT PRESENTED SITE UTILITIES WERE TAKEN FROM HISTORIC FIGURES PROVIDED BY NATIONAL GRID. ALL UTILITY LOCATIONS ARE APPROXIMATE AND HAVE BEEN ALIGNED AND ADJUSTED FOR THE "BEST FIT" AND THESE DATA SHOULD BE CONSIDERED ACCURATE ONLY TO THE DEGREE IMPLIED BY THE METHOD USED. UTILITIES ARE SHOWN FOR REFERENCE ONLY. **OTHER LOCATIONS MAY EXIST.**

5) ON-SITE INVESTIGATIONS AND SURVEYS BY GZA PERSONNEL DURING VARIOUS SITE VISITS BETWEEN 2011 AND 2016.

6) PARCEL DATA PROVIDED BY THE CITY OF PROVIDENCE PLANNING AND DEVELOPMENT DEPARTMENT. PARCELS OF REAL ESTATE ASSESSED AS OF DECEMBER 31, 2012. GIS DATA ARE FOR PLANNING PURPOSES ONLY. THESE DATA DO NOT REPRESENT A LEGALLY RECORDED PLAN, DEED, SURVEY OR ENGINEERING SCHEMATIC AND ARE NOT INTENDED TO BE USED AS SUCH.

7) SITE BOUNDARIES ARE APPROXIMATE.

CONFIDENTIAL
THESE DRAWINGS ARE CONFIDENTIAL IN NATURE. ANY MISUSE OR UNAUTHORIZED DISTRIBUTION OF THE DRAWINGS CONTAINED HEREIN WILL BE A VIOLATION OF THIS CONFIDENTIALITY REQUIREMENT AND SUBJECT THE VIOLATOR TO LIABILITY. REVIEW OF THESE MATERIALS BY RECIPIENT SHALL CONSTITUTE AN ACCEPTANCE OF THESE TERMS AND THE TERMS OF ANY UNDERLYING CONFIDENTIALITY AGREEMENT WE MAY HAVE EXECUTED IN OBTAINING THIS INFORMATION FROM A THIRD PARTY. IF THE RECIPIENT IS NOT IN AGREEMENT WITH THE OBLIGATION OF CONFIDENTIALITY THEN THE DRAWINGS SHALL BE RETURNED TO THE ORIGINATOR.

REV	DATE	REVISION INFORMATION	BY	CHK	APP.
0	09/06/16	ISSUED FOR PERMIT	DAC	AMS	AMS

GENERAL NOTES AND COMMENTS:

nationalgrid

Kiewit
Kiewit Engineering and Design
9401 Renner Boulevard
Lenexa, Kansas 66219

SEAL AND SIGNAT
ASHLEY STUTZMAN
No. 11512
REGISTERED PROFESSIONAL ENGINEER CIVIL

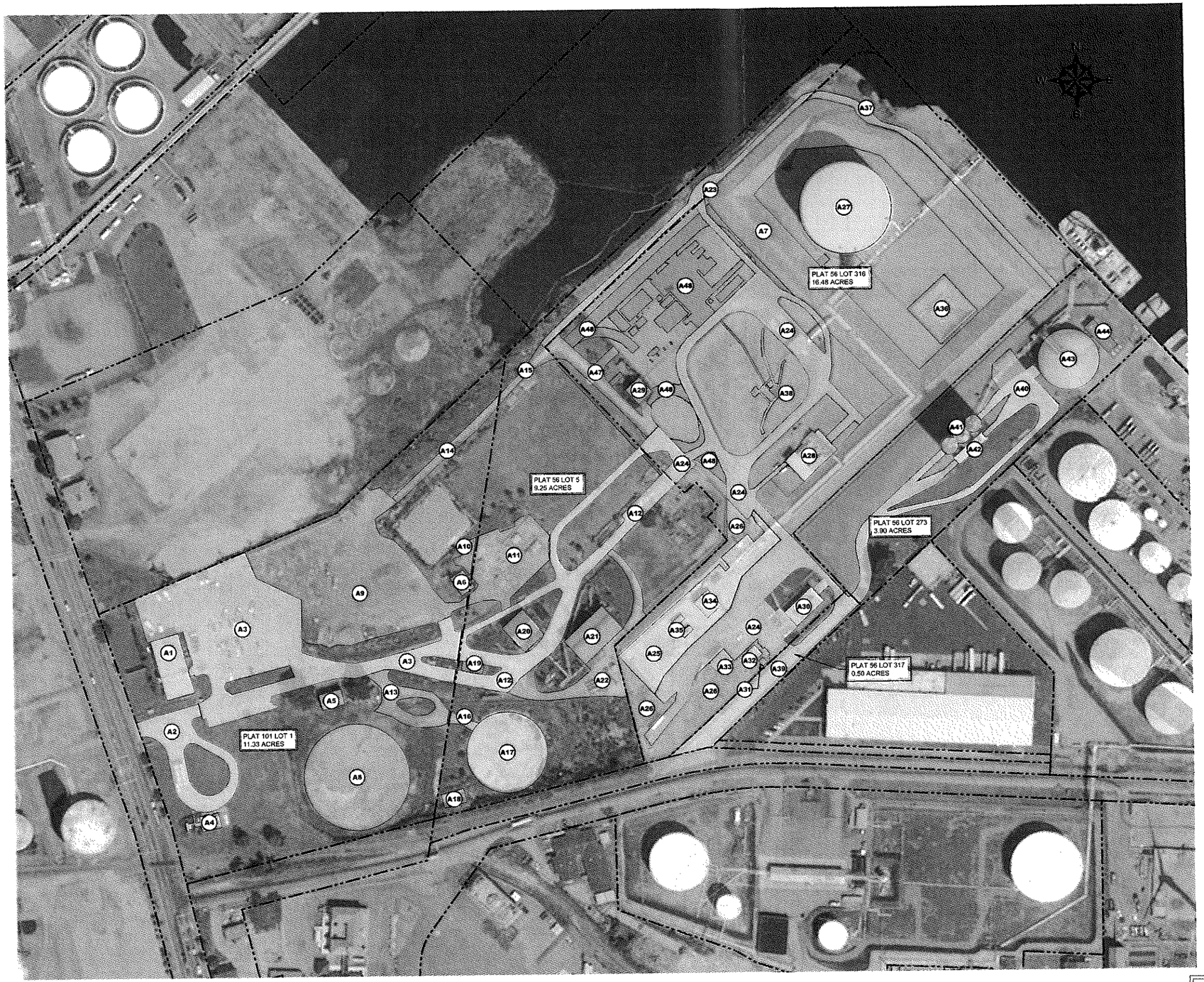
LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF RHODE ISLAND
LICENSE NO. 11512
EXPIRATION DATE 06/30/2017

ENG/DESIGN ORIG: A. STUTZMAN
LEAD ENG: A. STUTZMAN
ENG. MGR: J. BOCKELMAN
PROJ. MGR: A. PARRACK

NATIONAL GRID LNG LLC
FIELDS POINT LIQUEFACTION PROJECT
PROPOSED FINAL CONDITIONS PLAN

DRAWING NO:	PROJECT NO:	SHT:	REV.
FIGURE 14	33554.60	14 OF 15	0

SEP 06, 2016 - 1:30pm DRAWING NAME: J:\102761-National_Grid_Liquefaction\CIV\CAD Exchange\fin\2016 08 31 GZA Liq Permit Package\33554.60_CRMC PERMITTING_FOR STAMPING-AMS.dwg



LEGEND

- PROPERTY LINES
- PERVIOUS PROPOSED TO BE IMPERVIOUS
- STRUCTURE
- ASPHALT
- OTHER

REFERENCE NOTES:

1. THIS MAP CONTAINS THE ESRI ARCGIS ONLINE BING MAPS AERIAL LAYER PACKAGE. IMAGE COURTESY OF USGS EARTHSTAR GEOGRAPHICS SIO © MICROSOFT CORPORATION 2015.
2. PARCEL DATA PROVIDED BY THE CITY OF PROVIDENCE PLANNING AND DEVELOPMENT DEPARTMENT. PARCELS OF REAL ESTATE ASSESSED AS OF DECEMBER 31, 2012. GIS DATA ARE FOR PLANNING PURPOSES ONLY. THESE DATA DO NOT REPRESENT A LEGALLY RECORDED PLAN, DEED, SURVEY OR ENGINEERING SCHEMATIC AND ARE NOT INTENDED TO BE USED AS SUCH.
3. SITE BOUNDARIES ARE APPROXIMATE.

IMPERVIOUS AREAS

PLAT	LOT	NO.	AREA (SQ. FT.)	SURFACE TYPE
101	1	A1	8,037.44	ROOF
101	1	A2	17,913.35	ASPHALT
101	1	A3	90,158.79	ASPHALT
101	1	A4	1,786.65	STRUCTURE
101	1	A5	1,640.44	ROOF
101	1	A6	1,445.11	STRUCTURE
56	316	A7	156,852.04	CONTAINMENT DIKE
101	1	A8	39,796.73	TANK FOUNDATION
101	1	A9	79,909.64	COMPACTED GRAVEL
101	1	A10	1,933.34	COMPACTED GRAVEL
56	5	A11	21,898.19	COMPACTED GRAVEL
56	5	A12	37,777.70	ASPHALT
101	1	A13	8,857.25	COMPACTED GRAVEL
101	1	A14	5,114.04	COMPACTED GRAVEL
56	5	A15	2,860.86	COMPACTED GRAVEL
56	5	A16	1,196.51	COMPACTED GRAVEL
56	5	A17	23,127.00	TANK FOUNDATION
56	5	A18	1,923.75	STRUCTURE
56	5	A19	898.67	ROOF
56	5	A20	4,099.05	ROOF
56	5	A21	7,273.42	ROOF
56	5	A22	12,124.48	COMPACTED GRAVEL
56	5	A23	11,249.94	ASPHALT
56	316	A24	92,586.35	ASPHALT
56	316	A25	29,735.26	CONCRETE
56	316	A26	40,494.92	COMPACTED GRAVEL
56	316	A27	29,930.34	LNG TANK
56	316	A28	6,084.97	STRUCTURE
56	316	A29	1,686.87	ROOF
56	316	A30	3,197.19	ROOF
56	316	A31	164.24	ROOF
56	316	A32	638.42	ROOF
56	316	A33	1,346.21	ROOF
56	316	A34	1,845.52	ROOF
56	316	A35	712.24	ROOF
56	316	A36	10,912.10	SUMP PIT
56	316	A37	12,642.27	ASPHALT
56	316	A38	2,392.38	STRUCTURE
56	317	A39	17,080.05	ASPHALT
56	273	A40	28,023.42	ASPHALT
56	273	A41	3,112.29	STRUCTURE
56	273	A42	1,576.65	ROOF
56	273	A43	12,924.79	TANK
56	273	A44	1,893.69	STRUCTURE
56	273	A46	10,294.60	COMPACTED GRAVEL
56	316	A47	54,454.00	NEW IMPERVIOUS AREAS
TOTAL IMPERVIOUS			902,203.34	

$$\frac{894480.34 \text{ SQ. FT. IMPERVIOUS AREA}}{1807724.79 \text{ SQ. FT. TOTAL AREA}} = 49.48\% \text{ IMPERVIOUS}$$

0 50' 100' 200' 300'
SCALE IN FEET

NOT TO SCALE

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NATIONAL GRID
LIQUEFACTION PLANT
642 ALLENS AVENUE PROVIDENCE, RHODE ISLAND

PROPOSED IMPERVIOUS CONDITIONS PLAN

PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com

PREPARED FOR: nationalgrid

PROJ MGR: MSK	REVIEWED BY: SJH	CHECKED BY: IR	FIGURE 15
DESIGNED BY: SJH	DRAWN BY: LDT	SCALE: AS NOTED	
DATE: SEPTEMBER, 2016	PROJECT NO: 33554.60	REVISION NO: 0	SHEET NO. 15 OF 15

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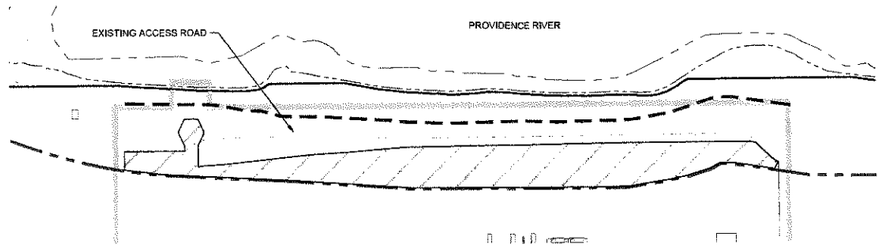
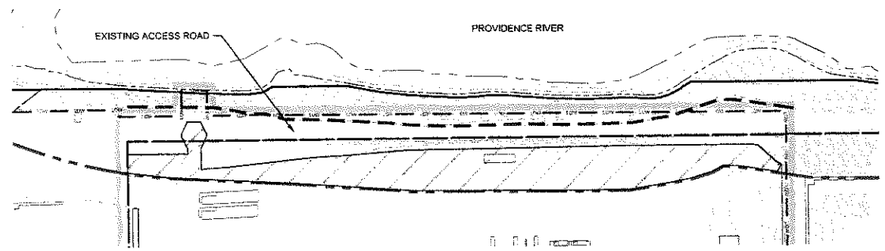
37

SECTION 3

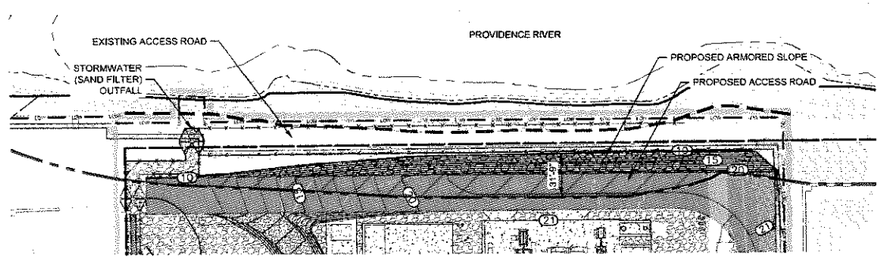
Figures from "Information Concerning Variance Request and Handling of Major Weather Events" dated June 14, 2017, prepared by National Grid and submitted to CRMC



EXISTING CONDITIONS WITH AERIAL

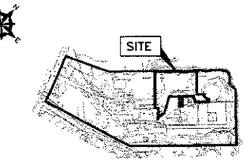


EXISTING CONDITIONS



PROPOSED CONDITIONS

0 25' 50' 100' 150'
SCALE IN FEET



KEY PLAN:
SCALE: 1"=800'

LEGEND:

- EXISTING CONTOUR (MAJOR 5 FOOT INTERVAL)
- EXISTING CONTOUR (MINOR 1 FOOT INTERVAL)
- CRMC 50-FOOT SETBACK
- EXISTING SHORELINE FEATURE
- EXISTING ACCESS ROAD
- PROPERTY LINES
- LIQUEFACTION WORK AREA
- PROPOSED PERMANENT PAVEMENT
- 10 PROPOSED CONTOUR (MAJOR 5 FOOT INTERVAL)
- 11 PROPOSED CONTOUR (MINOR 1 FOOT INTERVAL)
- PROPOSED GRAVEL
- STAKED FILTREXX SOXX
- LIMIT OF WORK
- PROPOSED CONCRETE
- MHW MEAN HIGH WATER
- MLW MEAN LOW WATER

GENERAL NOTES:

1) BASE MAP DEVELOPED FROM THE FOLLOWING:

- ELECTRONIC CAD FILE "ACAD-7257PL.DWG" PROVIDED BY VANASSE HANGEN BRUSTLIN (VHB) ENTITLED "EXISTING CONDITIONS PLAN," PROJECT TITLE "NATIONAL GRID LNG TERMINAL ROAD LNG FACILITY" DATED MARCH 10, 2014, ORIGINAL SCALE 1" = 50', DRAWING NO. SV-1 THROUGH SV-3 AND AERIAL MAPPING BY WSP TRANSPORTATION AND INFRASTRUCTURE DATED JANUARY 15, 2014 PREPARED FOR NATIONAL GRID LAND SURVEYING DEPARTMENT, WALTHAM, MASSACHUSETTS AND CAD FILE NO. 09303023.052-1.DWG. PLANS PROVIDED BY NATIONAL GRID.
- DESCRIPTIONS PROVIDED IN THE CITY OF PROVIDENCE DEED BOOK (BK) 470 PAGES 224 - 229, BK 561 PAGES 326 - 328, BK 1111 PAGES 752 -756 AND BK 5249 PAGES 219 - 322.
- ELECTRONIC CAD FILE14-152_SU1_REV2.DWG, TITLED "TOPOGRAPHIC SURVEY PLAN, PORTION OF A.P. 56 LOT 5" DATED OCTOBER 27, 2014 AND PROVIDED BY NATIONAL GRID.
- ELECTRONIC CAD FILE 5153_COO.DWG, TITLED "EXISTING CONDITIONS PLAN" PREPARED BY PROCESS PIPELINE SERVICES, DATED DECEMBER 18, 2014 AND PROVIDED BY NATIONAL GRID.
- ELECTRONIC CAD FILES PROVIDED BY KIEWIT
  1. "2007EXP_102761-CIV_SITE.DWG"
  2. "2007EXP_102761-CIV_LAYDOWN.DWG"
  3. "102761_MEC_STR_BASE.DWG"
  4. "102761-SURVEY_SITE.DWG"
  5. "2007EXP_102761-CIV_STORM_.DWG"
  6. "2007EXP-102761-CIV_SURFACING.DWG"
  7. "102761-CIV_GRADING.DWG"
  8. "POST DEVELOPMENT DRAINAGE MAP.DWG
- PDFS OF THE FOLLOWING DRAWINGS PROVIDED BY NATIONAL GRID
  1. "CATCH BASINS AND SANITARY SEWER SYSTEM" PREPARED BY PROVIDENCE GAS COMPANY, DATED SEPTEMBER 25, 1981.
  2. "PLAN SHOWING UNDERGROUND UTILITIES LNG FACILITY" DATED OCTOBER 6, 1983, "SUBSURFACE UTILITY ENGINEERING" PREPARED BY BAYSTATE SUBSURFACE INVESTIGATION, INC., DATED MAY 17, 2005.

2) HORIZONTAL DATUM IS BASED ON NAD 1983 FROM BASE MAPPING PROVIDED BY VHB.

3) VERTICAL DATUM IS BASED ON NAVD 1988 FROM BASE MAPPING PROVIDED BY VHB.

4) SELECT PRESENTED SITE UTILITIES WERE TAKEN FROM HISTORIC FIGURES PROVIDED BY NATIONAL GRID. ALL UTILITY LOCATIONS ARE APPROXIMATE AND HAVE BEEN ALIGNED AND ADJUSTED FOR THE "BEST FIT" AND THESE DATA SHOULD BE CONSIDERED ACCURATE ONLY TO THE DEGREE IMPLIED BY THE METHOD USED. UTILITIES ARE SHOWN FOR REFERENCE ONLY. **OTHER LOCATIONS MAY EXIST.**

5) ON-SITE INVESTIGATIONS AND SURVEYS BY GZA PERSONNEL DURING VARIOUS SITE VISITS BETWEEN 2011 AND 2016.

6) PARCEL DATA PROVIDED BY THE CITY OF PROVIDENCE PLANNING AND DEVELOPMENT DEPARTMENT. PARCELS OF REAL ESTATE ASSESSED AS OF DECEMBER 31, 2012. GIS DATA ARE FOR PLANNING PURPOSES ONLY. THESE DATA DO NOT REPRESENT A LEGALLY RECORDED PLAN, DEED, SURVEY OR ENGINEERING SCHEMATIC AND ARE NOT INTENDED TO BE USED AS SUCH.

7) SITE BOUNDARIES ARE APPROXIMATE.

NOT TO SCALE

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50-FOOT SETBACK

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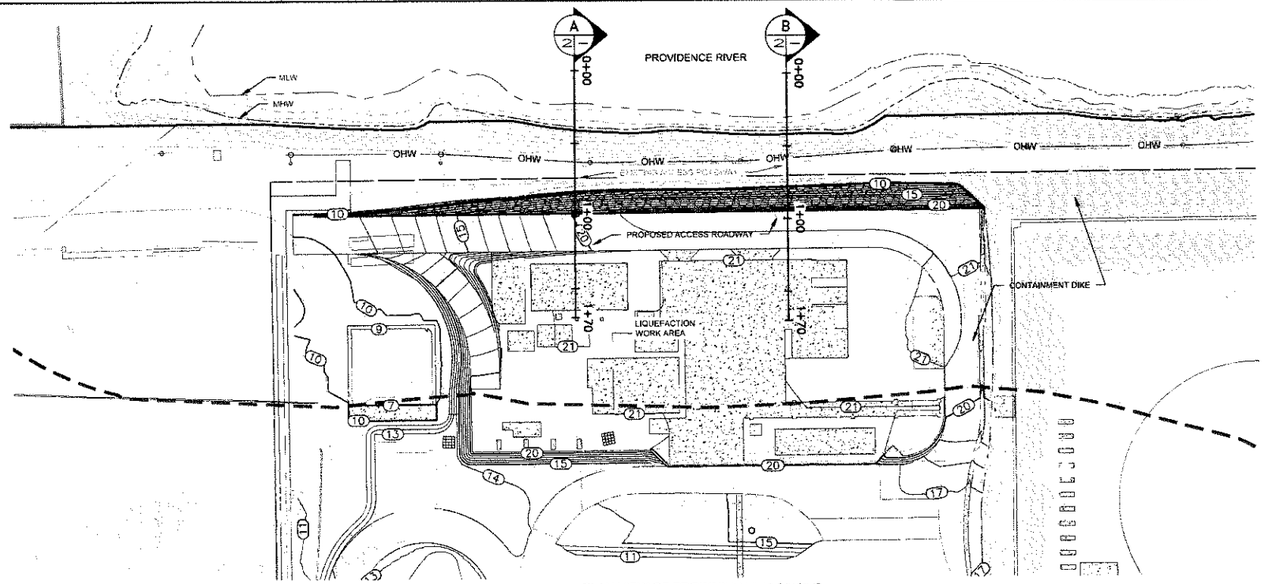
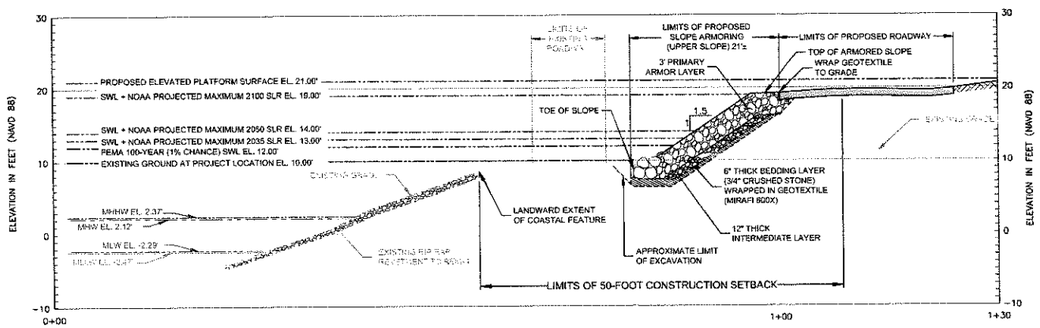
PREPARED BY:			PREPARED FOR:
GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com			nationalgrid
PROJ MGR: MSK	REVIEWED BY: SJH	CHECKED BY: IR	FIGURE
DESIGNED BY: SJH	DRAWN BY: LDT	SCALE: AS NOTED	1
DATE: JUNE 2017	PROJECT NO. 33554.60	REVISION NO. 0	SHEET NO. 1 OF 3

2017 - GZA GeoEnvironmental, Inc. GZA-J:\EWL\33554.60\MXD\FIGURES\CAD\DWGS\33554.60_REVETMENT_2017-6-31.DWG 50 FOOT SETBACK JUNE 5, 2017 11:09 AM LDT, HARTWLLT



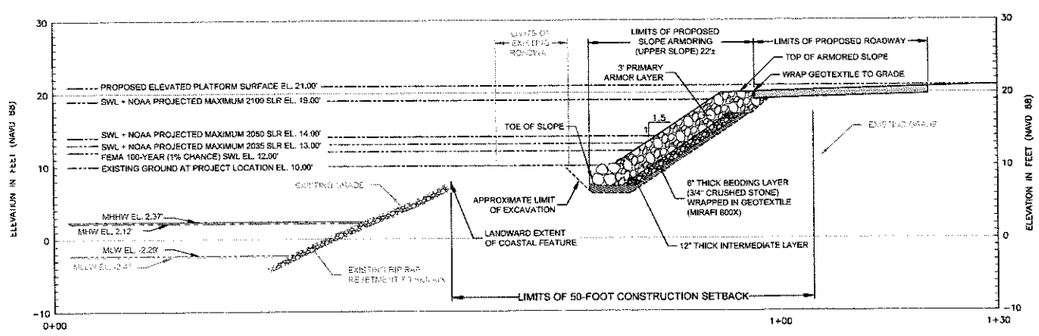
PLAN VIEW OF PROPOSED REVETMENT AND REVETMENT IMPROVEMENTS

SCALE: 1"=50'



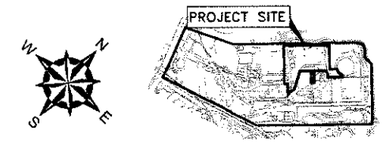
A 2 TYPICAL REVETMENT SECTION

SCALE: 1"=10'



B 2 TYPICAL REVETMENT SECTION

SCALE: 1"=10'



KEY PLAN:

SCALE: 1"=800'

GENERAL NOTES:

1. BASE MAP DEVELOPED FROM THE FOLLOWING:
   - ELECTRONIC CAD FILE "ACAD-7257PL.DWG" PROVIDED BY VANASSE HANGEN BRUSTLIN (VHB) ENTITLED "EXISTING CONDITIONS PLAN," PROJECT TITLE "NATIONAL GRID LNG TERMINAL ROAD LNG FACILITY" DATED MARCH 10, 2014, ORIGINAL SCALE 1" = 50', DRAWING NO. SV-1 THROUGH SV-3 AND AERIAL MAPPING BY WSP TRANSPORTATION AND INFRASTRUCTURE DATED JANUARY 15, 2014 PREPARED FOR NATIONAL GRID LAND SURVEYING DEPARTMENT, WALTHAM, MASSACHUSETTS AND CAD FILE NO. 09303023.052-1.DWG. PLANS PROVIDED BY NATIONAL GRID.
   - ELECTRONIC CAD FILE14-152_SU1_REV2.DWG, TITLED "TOPOGRAPHIC SURVEY PLAN, PORTION OF A.P. 56 LOT 5" DATED OCTOBER 27, 2014 AND PROVIDED BY NATIONAL GRID.
2. HORIZONTAL DATUM IS BASED ON NAD 1983.
3. ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM (NAVD) 1988.

LEGEND:

— — — — — —	200-FOOT CRMC JURISDICTIONAL LIMIT
MHW	MEAN HIGH WATER
MLW	MEAN LOW WATER
MHHW	MEAN HIGH HIGH WATER
MLLW	MEAN LOW LOW WATER
OHW	EXISTING OVERHEAD WIRE
▭	LIMIT OF PROPOSED REVETMENT (UPPER SLOPE)
SWL	STILL WATER LEVEL
SLR	SEA LEVEL RISE

NOT TO SCALE

0 5' 10' 20' 30'

SCALE IN FEET 1"=10'

0 25' 50' 100' 150'

SCALE IN FEET 1"=50'

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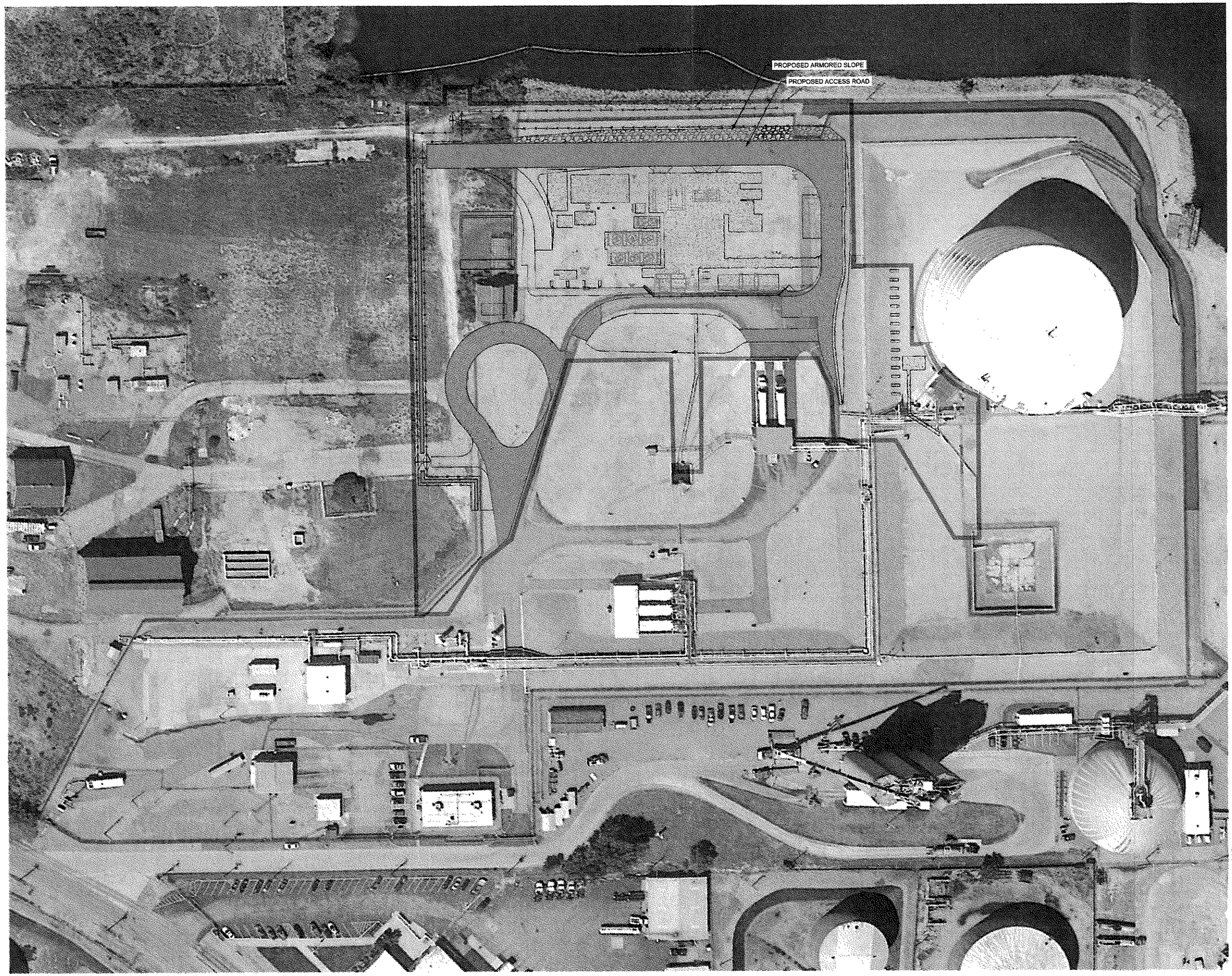
LIQUEFACTION WORK AREA - PROPOSED REVETMENT AND CROSS SECTIONS

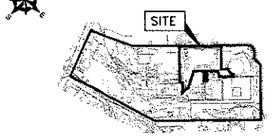
PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com

PREPARED FOR: nationalgrid

PROJ MGR: MSK	REVIEWED BY: MJP	CHECKED BY: MJP	FIGURE 2
DESIGNED BY: SMF	DRAWN BY: LDT	SCALE: AS NOTED	
DATE: JUNE 2017	PROJECT NO. 33554.60	REVISION NO. 0	SHEET NO. 2 OF 3

2017- GZA GeoEnvironmental, Inc. GZA-J:\DWG\33554.60\REV\FIGURES\CAD\PROV\33554.60_REVETMENT_2017-5-31.DWG REVETMENT-FIG2 SDR JUNE 5, 2017 11:44 AM USA TIERNAN,T





KEY PLAN:
SCALE: 1"=800'

LEGEND:

- LIQUEFACTION WORK AREA
- PROPOSED PERMANENT PAVEMENT
- PROPOSED CONCRETE
- PROPOSED SAND FILTER

GENERAL NOTES:

1) BASE MAP DEVELOPED FROM THE FOLLOWING:

- ELECTRONIC CAD FILE "ACAD-7257PL.DWG" PROVIDED BY VANASSE HANGEN BRUSTLIN (VHB) ENTITLED "EXISTING CONDITIONS PLAN," PROJECT TITLE "NATIONAL GRID LNG TERMINAL ROAD LNG FACILITY" DATED MARCH 10, 2014, ORIGINAL SCALE 1" = 50', DRAWING NO. SV-1 THROUGH SV-3 AND AERIAL MAPPING BY WSP TRANSPORTATION AND INFRASTRUCTURE DATED JANUARY 15, 2014 PREPARED FOR NATIONAL GRID LAND SURVEYING DEPARTMENT, WALTHAM, MASSACHUSETTS AND CAD FILE NO. 09303023.052-1.DWG. PLANS PROVIDED BY NATIONAL GRID.
- A GOOGLE EARTH PRO IMAGE DATED AUGUST 22, 2017.
- ELECTRONIC CAD FILES PROVIDED BY KIEWIT
  1. "102761_MEC_STR_BASE.DWG"
  2. "2007EXP-102761-CIV_SURFACING.DWG"

NOT TO SCALE

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0 25' 50' 100' 150'
SCALE IN FEET

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PROPOSED LIQUEFACTION EQUIPMENT OVER AERIAL PHOTOGRAPH

PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		PREPARED FOR: nationalgrid	
PROJ MGR: MSK	REVIEWED BY: SJH	CHECKED BY: IR	FIGURE 3
DESIGNED BY: SJH	DRAWN BY: LDT	SCALE: AS NOTED	
DATE: JUNE 2017	PROJECT NO. 33554.60	REVISION NO. 0	SHEET NO. 3 OF 3

GENERAL NOTES:

1) BASE MAP DEVELOPED FROM THE FOLLOWING:

- ELECTRONIC CAD FILE "ACAD-72597R_DWG" PROVIDED BY VANASSE HANDEN BRUSTLIN (VHB) ENTITLED "EXISTING CONDITIONS PLAN," PROJECT TITLE "NATIONAL GRID LNG TERMINAL ROAD LNG FACILITY" DATED MARCH 10, 2014, ORIGINAL SCALE 1" = 60', DRAWING NO. SV-1 THROUGH SV-3 AND AERIAL MAPPING BY WSP TRANSPORTATION AND INFRASTRUCTURE DATED JANUARY 15, 2014 PREPARED FOR NATIONAL GRID LAND SURVEYING DEPARTMENT, WALTHAM, MASSACHUSETTS AND CAD FILE NO. 09303023.052-1.DWG. PLANS PROVIDED BY NATIONAL GRID.
- A GOOGLE EARTH PRO IMAGE DATED AUGUST 22, 2017.
- ELECTRONIC CAD FILES PROVIDED BY KIEWIT
  1. "102761_MEC_STR_BASE.DWG"
  2. "2007EXP-102761-CIV_SURFACING.DWG"

LEGEND:

- LIQUEFACTION WORK AREA
- PROPOSED PERMANENT PAVEMENT
- PROPOSED CONCRETE
- PROPOSED SAND FILTER

FOR PERMITTING ONLY

0 25' 50' 100' 150'
SCALE IN FEET

N W E S

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LIQUEFACTION PLANT
642 ALLENS AVENUE PROVIDENCE, RHODE ISLAND

PROPOSED LIQUEFACTION EQUIPMENT OVER AERIAL PHOTOGRAPH

PREPARED BY: GZA GeoEnvironmental, Inc. Engineers and Scientists www.gza.com		PREPARED FOR: nationalgrid	
PROJ MGR: MBK	REVIEWED BY: BJH	CHECKED BY: IR	FIGURE 2
DESIGNED BY: BJH	DRAWN BY: LDT	SCALE: AS NOTED	
DATE: MAY 2017	PROJECT NO. 33584.00	REVISION NO. 0	SHEET NO. 2 OF 2

NOT TO SCALE