



Block Island Wind Farm CVA

Status of Verification of Substructure
Installation (July 19 to September 22)

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September 22, 2015



Status of BIWF - Overview

ABS Status Update of 9/22/2015

- EHS Installation
- 2015 Installation Status
 - Jacket/TP #1
 - Jacket/TP #2
 - Jacket/TP #3
 - Jacket/TP #4
 - Jacket/TP #5
 - Repairs
- 2016 FDR
 - Alstom
 - Cable/Electrical
- 2016 FIR
 - Alstom
 - Cable/Electrical
- 2016 Fabrication
 - Alstom
 - Cable/Electrical

Status of Safety Recommendations

ABS Recommendations August 25th	Current Status on September 22nd
1. Full time safety representation during the installation process to allow for identification and timely resolution of issues	WMJV has full time safety reps on W533 and W526 Montco has a safety rep on the LB Robert Increased safety sweeps and hazard hunts observed
2. Safety stand-down to review current practices, safety concerns, personnel concerns, process failures and re-training as required	Performed by DWBI and WMJV on August 28th
3. Review of crane capabilities based upon current experience gained from first five weeks and engineering review of rigging for operations and pile driving to minimize safety hazard to personnel	Performed by DWBI and WMJV resulting in WMJV deciding to add the Lift Boat Robert to the vessel spread for the project
4. Establishing a safety committee to meet regularly and report on progress of safety system and resolution of issues	Complete according to DWBI To be confirmed by ABS
5. Establish formal process to identify root cause of near misses/issues to prevent recurrence	Complete according to DWBI To be confirmed by ABS
6. Verification of W/M Safety Management System for compliance with their written processes and procedures	Complete according to DWBI To be confirmed by ABS

Status of Safety Initiatives

Improvements

- Safety Stand down
- Increased safety representation on site
- LB Robert
- Safety committee
- Improved Barge fenders
- Access ladder and tie-offs for jacket rigging

Open Issues

- Manitowoc crane repair
- Manitowoc crane use at night
- Lack of PPE – gloves, welding flash shield
- Test slings for hammer after shock load
- Slings for decks

Status of Quality

Open Issues

- Jacket Leveling
- Welding
 - No Weld Maps
 - List of Welders/ Traceability
 - Preheat 150 to 450, Temperature not measured
 - Not using rod oven
 - Voltmeters not working
 - No indications – 0% repair is that feasible?
 - Welding machine calibration
 - MTRs rods
 - Traceability of rods
 - Grinding of welds – profile, stress concentrations
 - Procedures and drawings not available on board

Installation Sequence



Jacket Lift from Cargo Barge



Jacket set on sea bed

Installation Sequence



W533 Stabbing Piles



P1 Piles Stabbed

Installation Sequence



Pile Driving



Pile Driving Hammer

Installation Sequence



Pile Splicing

Status of BIWF – Jacket 1



Jacket removed and repaired onshore
Jacket set at location
P1 Piles stabbed but not driven

Status of BIWF – Jacket 2



Jacket set at location
All Piles driven to depth
Ready for deck installation

Status of BIWF – Jacket 3



Jacket set at location
All Piles driven to depth
Ready for deck installation

Status of BIWF – Jacket 4



Jacket set at location

P1s stabbed and one leg partially driven

B1 runaway pile

P1s to be driven by LB Robert

Status of BIWF – Jacket 5



Jacket set at location
P1 Piles driven to depth
P2 piles to be spliced by W526

Status of BIWF – Repairs



Jacket 1 Repair in Progress



Deck 2 Repair in Progress

Repairs have now been completed and verified

Status of BIWF – Installation Equipment



Status – WTG Fabrication

Complete

- Blades
- All Castings
- Converter

Ongoing

- Yaw and Pitch Bearings
- Switch Gear
- Transformer
- Controller

Ongoing with missing Information

- Tower (flanges)
- Generator
- Yaw System
- Onboard Cranes
- Tooling

Missed

- Main Bearings
- Pitch System

Overview – Status of Phases

	FDR/FIR STATUS			
	2015		2016	
	Substructure	Turbine (Loads and Type Cert)	Turbine (Project specific changes)	Cable and BOP
FDR	Complete*	Complete	No Info Received	No Info Received
FIR	Reviewing Changes	No Info Received		No Info Received
Fabrication	Complete	Ongoing - Open Items		No Info Received
Installation	Ongoing - Open Items	Not started		Not started
Operation	Not started	Not started		Not started

* Changes made by Keystone Engineering following initial completion and submittal by DWBI. FDR requires revision submittal to CRMC

Next Steps

Installation

- Continue with installation activities
- Review changes to FIR

Wind Turbine Fabrication

- Continue with Fabrication Verification
- Need 2016 FDR and FIR

Cable Fabrication

- Need 2016 FDR and FIR
- Fabrication verification not scheduled

