



June 1, 2020

The Honorable Kimberly D. Bose  
Secretary  
Federal Energy Regulatory Commission  
888 First St., N.E.  
Washington, D.C. 20426

Re: National Grid LNG LLC, Docket No. CP16-121-000  
Fields Point Liquefaction Project  
Monthly Status Report for May 2020

Dear Secretary Bose:

On October 17, 2018, the Commission issued the Order Issuing Certificate (“Certificate Order”) granting a certificate of public convenience and necessity to National Grid LNG LLC (“National Grid”) in the above captioned docket for the Fields Point Liquefaction Project (the “Project”). *National Grid LNG LLC*, 165 FERC ¶ 61,031 (2018). National Grid filed its acceptance of the certificate of public convenience and necessity on October 29, 2018 and the Implementation Plan was filed on November 1, 2018. As required by Environmental Condition 8 of the Certificate Order, National Grid is submitting the Monthly Status Report for the May 2020 reporting period

If you have any questions about this submission, please contact me at 781-392-6640.

Respectfully submitted,

*/s/ Patrick A. Chaney*

Patrick A. Chaney  
Lead Project Manager – New England LNG  
Capital Delivery, Gas – Complex Project  
Management  
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cc: Service List

## MONTHLY STATUS REPORT FOR MAY 2020

On October 17, 2018, the Commission issued the Order Issuing Certificate (“Certificate Order”) issuing a certificate of public convenience and necessity to National Grid LNG LLC (“NGLNG”) in Docket No. CP16-121-000 for the Fields Point Liquefaction Project (the “Project”). *National Grid LNG LLC*, 165 FERC ¶ 61,031 (2018). Pursuant to Environmental Condition No. 8 of the Certificate Order, NGLNG provides its monthly status report for the month of May 2020.

### **Update on Federal Authorizations**

As previously reported in the report for December 2018, all required Federal authorizations have been received.

### **Project Schedule – Construction Status and Work Planned**

Work Accomplished in May 2020:

- Training in the Environmental Inspector (“EI”) duties occurred nine times this month
- Air monitoring in accordance with the Rhode Island Department of Environmental Short-Term Remedial Action Plan is ongoing and continued during this month.
- Completed Micropiling and Demobilization of micropiling rigs
- Continued concrete foundation installation
- Continued underground utility installation

Work Planned for June 2020:

- Setting of Power Distribution Center
- Setting of Feed Gas Booster Compressor
- Setting of N2 Recycle Compressor
- Setting initial pipe rack steel
- Continued underground utility installation
- Continued concrete foundation installation

### **Problems Encountered and/or Instances of Non-Compliance and Corrective Actions**

The problems encountered, contractor nonconformance/ deficiency logs, and each instance of noncompliance observed by the EI during this reporting period are shown below along with the corrective and remedial actions taken and the effectiveness of the implemented actions.

<b>Problems and Noncompliance</b>				
Date	Problem/Noncompliance	Remedial Action Taken	Date of Corrective Action	Effectiveness of Corrective Action
04/30/2020	Sheens observed in two secondary containments.	Sheen removed from containment.	04/30/2020	Effective, secondary containment restored.

04/30/2020	Crushed stone tracking pad at exit of work zone requires maintenance.	Pad roughened.	05/07/2020	Effective, restored tracking pad.
05/06/2020	Silt sack in catch basin #15 needs to be cleaned.	Silt sack cleaned.	05/07/2020	Effective, restored effectiveness of erosion control.
05/06/2020	Crushed stone tracking pad at exit of work zone requires maintenance.	Pad roughened.	05/07/2020	Effective, restored tracking pad.
05/12/2020	Crushed stone tracking pad at exit of work zone requires maintenance.	Pad roughened.	05/13/2020	Effective, restored tracking pad.
05/12/2020	Damaged section off filtrex soxx near entrance needs to be replaced.	Damaged section replaced.	05/13/2020	Effective, restored erosion controls.
05/20/2020	Crushed stone tracking pad at exit of work zone requires maintenance.	Pad roughened.	05/21/2020	Effective, restored tracking pad.
05/20/2020	Catch basin #15 covered.	Catch basin uncovered.	05/22/2020	Effective, drainage restored.
05/27/2020	Crushed stone tracking pad at exit of work zone requires maintenance.	Not Complete as of date of this report.		Will be tracked in June Status Report.

<b>Releases</b>				
Date	Material and Quantity Released	Cause	Description	Corrective Action Taken
05/05/2020	Hydraulic Oil	Failed hydraulic hose.	0.25 liters of hydraulic oil released onto the crane and ground.	Impacted soil excavated, crane cleaned.

### **Landowner/Resident Complaints**

None during this period.

### **Correspondence Received from Other Agencies Concerning Noncompliance**

No correspondence was received concerning instances of noncompliance from other federal, state, or local permitting agencies.

## **Special Inspector's Report**

Construction Activities Observed during the reporting period:

- Completed installation of micropiles.
- Continued construction of East-West Pipe Rack Foundations 2, 3, and 4.
- Began construction of East-West Pipe Rack Foundation 1.
- Began construction of grade beams, UG FDN #6 and #8.
- Completed construction of underground support structures: Duct Bank Foundation #2; UG FDNs #1, #2, and #5; and Tie-Point 008C.
- Completed construction of Feed Gas Booster Foundation.
- Completed construction of the PDC Building Foundation.
- Began construction of N2 Recycle Compressor Foundation
- Completed construction of all project duct banks.
- Completed the north segment of the firewater line.
- Completed excavation and placement of initial bedding for the firewater line between Tie-Point 8C and the south segment of firewater line.
- Completed the installation of the electrical conduit and associated bedding beneath the proposed Compressor Building pile cap.
- Continued placing mass fill material in almost all areas of the project site scheduled for fill.
- Resumed construction of the MSE revetment wall along the north side of the project.
- Began construction of the Line 400 segment of the stormwater drainage system.

Discrepancies reported to Contractors:

- Due to concrete pile, 5953-L-DP-13 having been driven approximately 10 inches to the east of the design position, there was a conflict between the pile and the proposed rebar cage location. The contractor submitted RFI-000160 to address the issue, which was remedied by reworking the rebar cage.

Uncorrected discrepancies reported to Engineer of Record:

- The SI noticed the separation fabric being used for the construction of the MSE revetment retaining wall along the north side of the site differed from the separation fabric called for in the wall's design drawing (the fabric being used was of a lower grade). The SI informed the contractor of the discrepancy. The contractor indicated that an NCR would be generated for the non-compliance issue.
- Kiewit claimed that it had received a resolution from their engineers through an RFI asking that backfill material for underground grade beams could be placed once their cast-in-place concrete had achieved 70% of the design strength (as opposed to the 100% design strength the specifications currently required). The SI was not provided the RFI till the close of the workday. Upon review of the RFI the following morning, the SI realized that it did not pertain to the prior day's backfill placement. The RFI's resolution stated that once the concrete had reached 70% of its design strength, it is acceptable to place CLSM (flowable fill), not the dense grade gravel that the contractor had placed as backfill material for the grade beam. The contractor indicated that an NCR would be generated for the non-compliance issue.

See Attached Register

All work requiring special inspection was, to the best of my knowledge, in conformance with the approved plans and specifications and the applicable workmanship provisions.

Yes

No

See discrepancies list above

Special Inspector:

Charles Boisvert

Date:

May 31, 2020

**ATTACHMENT**

**NON-CONFORMANCE REGISTERS**

**Project #: 90000130901**

**Project Name: Field Point Liquefaction Project Providence, RI**

	OSSQ	Engineering	Procurement	Construction	Quality	Vendor	Material Management	Project Management	Total Issued
<b>Percentage of Total</b>	<b>24%</b>	<b>20%</b>	<b>17%</b>	<b>15%</b>	<b>11%</b>	<b>9%</b>	<b>0%</b>	<b>4%</b>	<b>100%</b>
<b>Count by Discipline</b>	<b>11</b>	<b>9</b>	<b>8</b>	<b>7</b>	<b>5</b>	<b>4</b>	<b>0</b>	<b>2</b>	<b>46</b>
<b>NCR Ref:</b>	<b>Audit Ref:</b>	<b>Issue Date</b>	<b>NCR Description</b>		<b>Agreed NCR Corrective Action</b>	<b>Date of Agreed Disposition</b>	<b>Date of Closure</b>	<b>Probable Cause 1</b>	<b>Discipline</b>
SR010-RPT-001	N/A	5/1/2019	Contract section 3.20.6 states the Contractor shall be responsible to store, protect and maintain all equipment.		The equipment as noted above shall be fully inspected by the original equipment manufacturer to what ever extent necessary and then submit to Owner and recommended repairs that should be made	11/15/2019		Vendor	Procurement
SR010-RPT-001A r1	N/A	6/11/2019	Incorrect paint applied on vessels at GCAW was not properly addressed by Kiewit with a NCR per Section 18 of the QMS r3		UOP has agreed to blast the non-compliant vessels to achieve a SSPC-SP10 surface profile and repaint following the manufacturer's recommended procedure to apply a #14 system IZ/HS/HS paint system	7/31/2019		Vendor	Procurement
SR010-RPT-002	N/A	6/23/2019	Section 12.0 of the Kiewit QMS requires all documents that are replaced to be stamped as voided or superseded		Kiewit to follow the Documents Control Procedure 102761-B-DMT-PRO-0001 section 6.3.4 Stamping and Document Notations	11/15/2019	Place the	Engineering	Engineering
SR010-RPT-003	N/A	6/23/2019	National Grid requested Kiewit to provide (2) RT film packages for audit purposes related to the GCAW Adsorber PO. These documents were not provided after several requests spanning a (6) week period		National Grid to perform an audit on all RT film at the Vendor's facility	7/31/2019	9/27/2019	Procurement	Vendor
SR010-RPT-004	N/A	7/1/2019	Kiewit did not follow their QMS r3 or contract requirements when changing the location of the load cells for the Micro Pile testing		Kiewit to provide refresher RFI training to field personnel on the RFI process to ensure RFI's are submitted in a timely manner.	9/9/2019	9/9/2019	Contractor	Construction
SR010-RPT-005	N/A	7/3/2019	Piping specifications showed the incorrect NFPA-59A specification. The piping specification showed the 2019 version versus the 2001 version.		Kiewit issued a code revision RFI to NG referencing all piping specifications were revised to remove the NFPA 59A 2019 reference	8/27/2019	9/27/2019	Engineering	Engineering
SR010-RPT-006	N/A	7/30/2019	Kiewit Project Specific Procurement Plan 102761-B-QLT-PLN-0002 requires any discrepancies or damaged materials will be tagged or labeled accordingly and isolated in the warehouse, laydown area or receiving QA/QC holding areas pending resolution. Underground piping was received at project site without documentation and the piping was not properly stored or marked as quarantined.		Place the referenced piping material into the specified quarantine area and properly mark as do-not-use	10/21/2019	10/21/2019	Quality	Quality
SR010-RPT-007	N/A	8/1/2019	Kiewit did not notify National Grid for the off-site testing of the Feed Gas Booster Compressor in accordance with Section 2.23 of the Contract.		Procurement and OSSQ shall review the requirements for notification of off-site testing to ensure National Grid is properly notified in the required time frame.	11/15/2019	5/28/2020	Procurement	Quality

NCR Ref:	Audit Ref:	Issue Date	NCR Description	Agreed NCR Corrective Action	Date of Agreed Disposition	Date of Closure	Probable Cause 1	Discipline
SR010-RPT-008	N/A	8/2/2019	Incorrect hydro test pressure and hold time for firewater line. Test was not conducted in accordance with NFPA 24.	The firewater spools in question will be retested in the overall firewater system test to be performed on site at a later date. No further action required	9/27/2019	9/27/2019	Engineering	Engineering
SR010-RPT-009	N/A	8/5/2019	A Master Inspection Test Plan (MITP) was provided to allow National Grid to determine which vendor inspections/meetings that National Grid wanted written notification to attend. National Grid populated this document with the required Hold/Witness points which included a hold point for "Final Inspection Prior to Shipment (first shipment)" (see attached). This inspection was noted as a hold point by the Client and the Client was not notified of the inspection step.		11/16/2020		OSSQ	OSSQ
SR010-RPT-010	N/A	8/8/2019	Kiewit is required to provide the off-site vendors with the requirements of the contract between National Grid LNG LLC and Kiewit Power Constructors Co. Section 3.10 Welding Requirements was not conveyed to ABB for off-site construction.	Vendor ABB submitted weld procedures as required	8/8/2019	9/27/2019	Procurement	Procurement
SR010-RPT-011	N/A	8/8/2019	Section 3.21.23 of the Contract states "the Contractor shall provide a fully functional, integrated, electronic data and document management system". TeamBinder which is the existing Document Control Management system has not proved to be a functional system. This system has shown to be unable to consistently provide access by the Owner to the technical documents for review which are related to this project both for pre-suspension and post suspensions documents. Large data dumps are transmitted without regard to previous review and comments by Owner. Documents have been removed from the obligatory (10) day period prior to period completion. Comments made by the Owner during the document review have not been incorporated into the subsequent document release. The Owner has been subjected to Beta testing of system changes which has proven to be ineffective and confusing to the overall document control procedure.		1/15/2020	1/15/2020	Engineering	Engineering
SR010-RPT-012	N/A	8/14/2019	Section 7.2 Procurement Strategy of the prime Contract requires a Supplier shipment to be inspected by the Contractor to ensure compliance with Project Specifications. The first shipment for the UG piping did not receive a final release shipment	See Addendum "A" on NCR Report	5/21/2020		OSSQ	Procurement
SR010-RPT-013 R2	N/A	8/20/2019	Prime Contract Attachment 7 requires APCI to comply with NFPA 59A. A data review of the quality documents noted the actual NDE performed was not in compliance with the NFPA 59A requirements. A review of documentation for the Cross over Bridge piping did not reflect this requirement. Revision 1 added the contract requirements noted in Section 3.10 - SOW	Kiewit will direct APCI to perform the NDE ion the crossover box as defined by KIEWIT RFI-000119 resolution dated 2-20-20	4/13/2020		Vendor	Vendor
SR010-RPT-014r1	N/A	8/20/2019	Prime Contract Section 3.10 Scope of Work requires all procedures for welding of piping, vessels and equipment performed off-site shall be submitted to the Owner for review and approval prior to construction.	Kiewit will comply with the requirements of the Prime Contract	9/27/2019	11/15/2019	Vendor	Vendor
SR010-RPT-015 R2	N/A	8/20/2019	Prime Contract Attachment 7 requires APCI to comply with NFPA 59A. A data review of the quality documents noted the actual NDE performed was not in compliance with the NFPA 59A requirements. A review of documentation for the Cold Box piping did not reflect this requirement. Revision 1 added the contract requirements noted in Section 3.10 - SOW	Evaluate the correct NDE requirements as required by NFPA-59A-2001 and contract. Perform the necessary additional NDE as required to meet compliance for the Cold Box fabrication.	4/13/2020		Vendor	Vendor



NCR Ref:	Audit Ref:	Issue Date	NCR Description	Agreed NCR Corrective Action	Date of Agreed Disposition	Date of Closure	Probable Cause 1	Discipline
SR010-RPT-016	N/A	8/27/2019	UOP/GCAW equipment data books were reviewed by National Grid and found to be non-compliant with contract requirements	Kiewit shall review the data books for the equipment as mentioned above and perform the necessary tasks so the data books comply with contractual requirements.	Rejected 4-6-20		Vendor	Procurement
SR010-RPT-017	N/A	8/27/2019	UOP/GCAW equipment data books were reviewed by National Grid and found to be non-compliant with contract requirements	Kiewit shall review the data books for the equipment as mentioned above and perform the necessary tasks so the data books comply with contractual requirements.	Rejected 4-6-20		Vendor	Procurement
SR010-RPT-018	N/A	8/28/2019	Kiewit Site Specific Procurement Plan requires all contracts with risk level of 4 or 5 to conduct kick-off meetings upon execution of the contact.	Kickoff meetings with all suppliers signed up pre-suspension rated as 4 or 5 on the Master ITP have had kickoff meetings pre-suspension and during project re-initiation. An additional Prefab Quality meeting will be held as indicated in MITP	9/27/2019	11/15/2019	Procurement	Procurement
SR010-RPT-019	N/A	9/23/2019	Kiewit Site Specific Procurement Plan requires development of a Master ITP Plan including Witness and Hold Points, FAT Test, quality audits and any additional recommended in-process shop inspection. These activities shall include dates.	Kiewit is to provide an updated and completed Master ITP that complies with the requirement as noted in the Project Specific Procurement Plan 102761-B-QLT-PLN-002	11/15/2019		Procurement	OSSQ
SR010-RPT-020	N/A	10/3/2019	A ground Water monitoring well (mw) was identified in Kiewit's work area for Field Point Liquefaction Project in an area that required placement of several feet of fill. National Grid SIR provided guidance to Kiewit on closure of the mw in accordance with RI DEM requirements, prior to placement of the fill material. Kiewit did not follow proper closure procedures and did not notify On-site environmental for required oversight of mw closure procedure.	Kiewit is to notify National Grid SIR with proposal to locate and properly close the ground water monitoring well in accordance with RIDEM requirements. The mw closure shall be witnessed and approved by the National Grid SIR representatives.	11/15/2019	11/15/2019	Contractor	Construction
SR010-RPT-021	Civil 102519-002	11/1/2019	During the course of the Civil Audit #102519-002 performed at site; Checklist Item 4.0 (c) Has proof rolling been approved by the Geotechnical Engineer in coordination with the Field Representative? The audit team stated that the Geotechnical Engineer was not notified in accordance with Section 4.9 of the Earthwork Specification – 102761-B-CIV-SPC-0001. The audit team was unable to provide documentation supporting the requirement was met.	Proof rolling as described and shown meets the project requirements - M. Oakland Kiewit will be submits a Corrective Action with Preventive actions for procedural adherence - COB 4-3-2020	4/3/2020		Contractor	Construction
SR010-RPT-022	Civil 102519-002	11/1/2019	During the course of the Civil Audit #102519-002 performed at site; Checklist Item 3.0 (g) Does the Geogrid meet the requirements as required by Earthwork Specification section 3.12. Documentation showing approval for the Geogrid materials was not provided prior to construction and were subsequently approved by the Geotechnical Engineer on 10/24/2019 which is after the placement of the materials. The audit team was unable to provide documentation supporting approval prior to the start of construction.	Received supporting documentation	1/7/2020	1/7/2020	Contractor	Construction

NCR Ref:	Audit Ref:	Issue Date	NCR Description	Agreed NCR Corrective Action	Date of Agreed Disposition	Date of Closure	Probable Cause 1	Discipline
SR010-RPT-023		11/4/2019	On October 11, 2019 Kiewit and National Grid attended a shop inspection to witness hydro testing of the L9020-A/B N2 storage vessels located at Chart Ind. New Prague, MN. Upon arriving, the (2) vessels of interest were set up to conduct a cold-stretch test in accordance with ASME Section VIII Appendix 44. The subsequent Off-Site Vendor Surveillance report 191011 per OSSQ stated that Chart conducted a Cold Stretch Test in Lieu of a hydro and further referenced ASME Section VIII Div. 1 Appendix 44 as reference. A review of the 2017 version of Mandatory Appendix 44 states in 44-6.1 (f) ...the pressure test required by UG-99 or UG-100 shall be applied after all welding on the pressure retaining parts... Kiewit has not provided National Grid written proof that a hydro test was performed and documented on the vessels in question.	Kiewit to provide National Grid proof that a hydro test was conducted as required by ASME VIII Div.1 or have Chart perform a hydro as required. National Grid will be notified as required to attend the testing of the vessels in question.	11/15/2019		Vendor	OSSQ
SR010-RPT-024		12/21/2019	Section 3.10 of the Prime Contract NUMBER 4400005216 requires Kiewit to submit all welding procedures for piping, vessels and equipment performed off-site to Owner (National Grid) prior to start of construction. Kiewit is required to review the welding procedures for project compliance prior to submittal for National Grid review. The welding procedures for IFS's subcontractor, Transend were not submitted to Owner for approval after review by Kiewit.	Attachment 1 includes the approved WPS	5/20/2020	5-21-2020	Contractor	OSSQ
SR010-RPT-025		1/16/2020	The Contract states in, Section 2.23 Inspection and Testing, that Kiewit is to provide the owner in writing no less than (10) Business days, written notice of scheduled dates for the conduct of, and opportunity to witness, the off-site testing. Kiewit allowed IFS/Transend to conduct a hydrotest of the Feed Gas Filter without providing National Grid proper notification of the test	Kiewit to provide documentation for the notification of Witness Points no less than (10) business days to provide National Grid the opportunity to witness off-site testing, For this specific case Kiewit provided an opportunity to National Grid for review of the hydrotest documentation of the Coalescing Filter Tag# D-0200 on 2/13/2020. Report is attached. The Findings documented in the report have been closed and a copy of the Findings Log is included.	5/20/2020	5/26/2020	OSSQ	OSSQ
SR010-RPT-026		2/5/2020	Regen Gas Heater LDE-1021A tube bundle was removed for cleaning and Eddy Current testing to evaluate the condition of tubes from improper preservation. The testing was performed by IRIS NDT and the test results are attached. Two tubes were found with minor pit like indications showing a measured wall loss. In addition during the inspection several tubes were found to have been bent which caused contact between adjacent tubes causing a non relevant indication with one tube was only partially scanned due to the bent condition.	Rebuild and replace tube bundle performing all required testing as per the contractual requirements.	5/26/2020		Vendor	OSSQ
SR010-RPT-027		2/5/2020	Regen Gas Heater LDE-1021B tube bundle was removed for cleaning and Eddy Current testing to evaluate the condition of tubes from improper preservation. The testing was performed by IRIS NDT and the test results are attached. Two tubes were found with indications. Open tube was bent within the first foot and could not be inspected and one tube had non-relevant indication due to tube to tube contact. See attached report	Rebuild and replace tube bundle performing all required testing as per the contractual requirements.	5/26/2020		Vendor	OSSQ

NCR Ref:	Audit Ref:	Issue Date	NCR Description	Agreed NCR Corrective Action	Date of Agreed Disposition	Date of Closure	Probable Cause 1	Discipline
SR010-RPT-028		2/27/2020	Kiewit procedure 102761-B-QLT-PRO-0011 <i>Corrective &amp; Preventative Actions</i> states the purpose of said procedure is to establish a continuous improvement process for generating documentation and implementing Corrective and Preventive Actions in accordance with Kiewit's Quality Management System. Section 19.3 of the Kiewit QMS rev 3 states that Corrective or Preventative Action requests can be initiated by the clients or by our employees. National Grid has determined that the number and causes of Non-Compliance Reports (NCR) generated for this project has warranted Corrective Action Reports (CAR's) and has requested on several occasions such reports be generated (see attachment). To date Kiewit has not generated CAR's.	Kiewit will preform CAR's as trends are found . See attached 3 CAR's Kiewit and National Grid had a call between the quality groups and agreed on a path forward.	5/27/2020		Quality	Quality
SR010-RPT-029		2/27/2020	Kiewit document 102761-B-QLT-PRO-0009 Project Quality Audit procedure states this procedure is to verify the overall effectiveness of the quality program along with proper implementation. It will also ensure work is conducted in accordance with customer's quality expectations including contract, code, jurisdiction requirements and Cherne Project Quality Management system. This procedure applies to all Cherne's project locations as well as shop and manufacturing facilities. Section 20.0 of the Quality Management System revision 3 defines the requirements of both internal and external audits which are required to be performed. As of this date, National Grid has not received any audit notifications or audit reports as required Kiewit QMS revision 3. National Grid has conducted several audits on Kiewit as of this date.	Kiewit will updated the Quality Audit Schedule. Kiewit and National Grid quality groups meet via a conference call and agreed the attached audits performed by Kiewit meet the audit requirements. Kiewit will invite National Grid to attend future audits.	4/10/2020	5/28/2020	Quality	Quality
SR010-RPT-030		2/27/2020	The Contract, Section 3.10 Welding Requirements, requires all procedures for welding of piping, vessels and equipment performed off-site to be submitted to the Owner for review and approval prior to construction. This requirement is also noted in the Contract between Kiewit and Patterson Horth in Sub-contract SC-7200002536 Compressor Building. Nucor, sub-vendor to Patterson Horth has refused to submit the required welding procedures claiming such procedures as company proprietary information.	Require Patterson Horth/Nucor to formally submit welding procedures and quality deliverables through TeamBinder for National Grid review and approval prior to commencing any welding work.	4/22/2020		Procurement	OSSQ
SR010-RPT-031		2/27/2020	<i>Fields Point Project Management of Change</i> Implementation process, dated March 15 <sup>th</sup> , 2019 define the requirements for Major Changes in Section 3.3 and the requirements for Minor Changes in Section 3.4. Each respective section further provides the steps and processes on how changes are implemented utilizing forms, team reviews, studies and an additional requirement that the MOC is only to be implemented once approval had been received. Kiewit has modified and submitted in large quantity P&ID drawings and classified these drawings as IFC. These drawings depict processes that have been changed, which is in violation of the MOC Implementation Plan. The required MOC documentation and prior approval of the MOC is required as stated in the Implementation Plan.	All Kiewit Project Engineering Staff must attend training on the project MOC procedures which will be conducted by Ryan Terry of PSRG Kiewit agrees to the above disposition 4/1/2020	4/20/2020		Engineering	Engineering
SR010-RPT-032		2/27/2020	Kiewit placed backfill on Duct Bank area 7 using (12") lifts. Earthwork Specification 102761-B-CIV-SPC-0001 REV 01 states in Section 4.15 Compaction Requirements that for Trench's the Backfill shall be placed in 6" Lifts.	Kiewit will remove the non-compliant backfill and replace in 6" lifts for the area of Duct Bank 7 and follow the 102761-B-CIV-0001 Earthwork Specification going forward.	4/2/2020		Contractor	Construction

NCR Ref:	Audit Ref:	Issue Date	NCR Description	Agreed NCR Corrective Action	Date of Agreed Disposition	Date of Closure	Probable Cause 1	Discipline
SR010-RPT-033			Kiewit Plain and Reinforced Concrete procedure 102761-B-STR-SPC-0024 rev 1 Section 4.6.2.3 states Form removal shall be in accordance with ACI 301/ACI 301M and the following, which further states certain forms could be removed in (48) hours. ACI 301 Section 2.1.2.1.c requires a submittal of a method for determining concrete strength for formwork removal is in accordance with 2.3.4.2 when a method other than field-cured cylinders is proposed. ACI 347 section 3.7.3.1 states the engineer/architect should specify a minimum strength of the concrete to be attained before removal of forms or shores. Section 3.7.2.3 states because the minimum stripping time is a function of concrete strength, the preferred method of determining stripping time is using tests of job-cured cylinders or concrete in place. An alternative method has not been submitted for approval and forms have been removed before a compressive strength test has been completed and accepted.		Open		Engineering	Construction
SR010-RPT-034		3/2/2020	Kiewit QMS rev 3 section 18.3 States "When a nonconforming situation or procedure is detected, the issues is documented and actions are taken to correct or resolve the issue in a timely manner. National Grid has (4) NCR's generated during 2019 without agreed dispositions; (14) NCR's generated during 2019 that are open without closure.	Kiewit will provide National Grid with an updated status for all open NCR's along with a schedule detailing projected dates for open NCR dispositions and closures. Kiewit will make NCR update party of the weekly client meeting with National Grid in order to keep the team focused on closing out the currently issued NCR's as well as any future NCR's issued on the project.	5/26/2020		Quality	Quality
SR010-RPT-035		3/3/2020	National Grid performed an audit on legacy film for the 3886 LD-1000/C Adsorber at the GCAW facility and rejected the Number 4 weld on Nozzle "B" due to chemical stains rendering the film non-compliant with code requirements.	Open pending additional information	5/26/2020		OSSQ	OSSQ
SR010-RPT-036		3/3/2020	Section 2.6 Employees and Key Personnel of the Prime Contract requires Key Personnel to be devoted to the Liquefaction Project for all of the time which is necessary to perform the Work and Contractor shall not remove or replace any of the Key Personnel without the prior written approval of Owner, which approval shall not be unreasonably withheld. Kiewit has on multiple occasions removed and replaced Key Personnel on the Project with new personnel without proper notification and/or approval.	Provide owner with current Organizational Chart that provides names to the positions as noted in Appendix "I", and submit resumes on all Key Personnel that have changed within the last (90) days.	Open		Project Management	Project Management
SR010-RPT-037		3/10/2020	The Engineering, Procurement and Construction Contract Number 4400005216 provides requirements for the Contractor to submit documents for Client review and approval. These requirements are addressed in the Scope of Work Section 2.25 and further in Appendix "U". The attached Kiewit TRN # 02088 shows (10) Piping Material Specifications that were revised without providing documents to client for review and/or approval. The attached review history shows an example where Piping Specification 102761-B-MEC-SPC-0083 was issued a Studio Session for revision "A & B" but sessions for revisions "00, 01, 02, & 03" were not issued.	Summarizing the actions from the Document Control Breakout Meeting on March 25, 2020, National Grid will expand the table in Section 4.4 of the Scope of Work and List of Deliverables to expand upon the deliverables National Grid would like to formally review and approve and Kiewit will determine the appropriate methodology to facilitate those reviews. Kiewit will update the Document Control procedure with the mutually agreed table and resolve any outstanding National Grid comments. In the interim, the project will continue the current document review communication process of National Grid/CHIV submitting comments, and Kiewit responding to all comments, even if the comment is not incorporate, and regardless of document type, content of comment, or timing (i.e. when the document was issued).	4/10/2020		Engineering	Engineering

NCR Ref:	Audit Ref:	Issue Date	NCR Description	Agreed NCR Corrective Action	Date of Agreed Disposition	Date of Closure	Probable Cause 1	Discipline
SR010-RPT-038		3/24/2020	Section 2.25 Design and Engineering Work paragraph (f) of the contract states <u>As Built Drawings and Specifications During construction, Contractor shall keep a relined, marked, up-to-date set of As-Built Drawings and specifications on the Work Site as required under Appendix "U"</u> . Kiewit has not maintained a "set" of as-built drawings as required by the statement above for piling and other civil activities..	Kiewit will produce a set of "E" size drawings for all past and future construction activities where as-built conditions have been generated. These drawings will be made available to all National Grid personnel anytime construction activities are taking place on site. The drawings set will be updated immediately upon changes or issuance of the IFC construction drawings that effect or change the original approved design or Scope of Work.	Rejected 4-6-20		Engineering	Engineering
SR010-RPT-039		3/24/2020	Section 3.3 Engineering Design listed under the Scope of Work states : " <i>Development of up-to-date equipment lists, Drawings, specificationOs, and requisition schedules. Frequency to be agreed with Owner as appropriate</i> ". National Grid has made repeated requests for Kiewit to provide an updated Drawing Index on a weekly basis and this has not happened.	Kiewit shall produce an updated drawing index in an acceptable format for all IFC/IFD/IFI drawings and submit such list to National Grid Engineering by COB on each Friday during design and construction of the LNG Facility..	4/6/2020		Engineering	Engineering
SR010-RPT-040		3/24/2020	The contract requires Kiewit to develop within (45) days after Full Notice to Proceed (FNTF) a Project Procedure Manual and as the prime purpose of the PPM is to ensure consistent project processes and procedures. National Grid has requested that Kiewit develop a Site Specific Document Control procedure for over (8) months and as of this date the referenced procedure <i>102761-B-DMT-PRO-001 FPLP Document Control Procedure</i> has not fully addressed the Owner's comments as contractually required.	Kiewit shall immediately produce and implement the Client's comments in the referenced Document Control Procedure and submit as IFC to the project.	Open		Project Management	Project Management
SR010-RPT-041		3/24/2020	Kiewit performed a closure of the Dry Well next to the Old Propane House without properly notifying National Grid Construction, Environmental and GZA. Procedural steps were provided to Kiewit Construction Manager by National Grid Construction Manager on Friday March 20th, 2020 which outlined the steps and notification requirements for the proposed activity. Kiewit performed the work on Monday March 23rd without notifying the proper personnel as provided by National Grid.	Kiewit to perform a root cause analysis that shall accompany this NCR. The root cause shall be submitted to National Grid for review and approval and a subsequent discussion shall follow. Additionally a Corrective Action shall be generated as this is a recurring event where steps and notification requirements are not followed.	4/1/2020		Project Management	Construction
SR010-RPT-042		4/16/2020	Kiewit OSSQ performed a Final Inspection and Document Review on 4-8-2020 at the Highland Tank facility (Report #200408 Highland Tank). There were multiple findings during this visit which included (1) U-1A form requires correction (2) Multiple X-ray reports were found to be non-compliant; missing IQIs, missing "F" markers, missing acceptance noted on report (3) PMI Testing showed low values on nickel composition (4) Missing NDE testing prior to hydro testing (5) Welder Performance Qualification records were found to have various errors. (5) Welding Procedures were found to have typographical errors on the PQR documents.	Kiewit to perform a root cause analysis that shall accompany this NCR. The root cause shall be submitted to National Grid for review and approval and a subsequent discussion shall follow. Additionally a Corrective Action shall be generated as this is a recurring event where documentation review uncovers multiple findings subsequent to a recent OSSQ Inspection. All items as noted in Section "A" are required to be corrected as required to a compliant status with project and code requirements.	5/21/20		OSSQ	OSSQ
SR010-RPT-043		4/24/2020	The Contract, Number 4400005216 between National Grid LLC and Kiewit Power Constructors Co. states in section 3.20.6 of the <i>Scope of Work and List of Deliverables</i> the Contractor shall be responsible for providing warehouse and storage facilities both on or off site. Also stated in this section " <i>It shall be the responsibility of the Contractor to store, protect and maintain all equipment and materials in accordance with SOW, the Supplier's preservation requirements and good practice</i> ." The final inspection and FAT testing were conducted on 3-5-2020 and National Grid's request for Preservation and Maintenance and inspection records have not been providing which indicates the P&M for the PDC and installed electrical equipment has not been performed in accordance with the manufacturer's requirements.	The equipment as noted above shall be inspected by either National Grid or a 3rd party inspector, suitable to National Grid to what ever extent necessary and then any repairs, if applicable, shall be corrected to National Grid's satisfaction. Kiewit shall immediately provide a P&M procedure which will include the building and installed electrical gear in accordance with the manufacturer's requirements. The P&M procedure shall provide details of how the preservation requirements will be maintained during shipment and during storage on site.	5/21/2020		Engineering	Engineering

NCR Ref:	Audit Ref:	Issue Date	NCR Description	Agreed NCR Corrective Action	Date of Agreed Disposition	Date of Closure	Probable Cause 1	Discipline
SR010-RPT-044		5/5/2020	The Prime Contract requires Kiewit to provide Client with a copy of any Supply Contract within (10) days after request by Owner. National Grid has requested Kiewit to provide a SDS (Supplier Document Schedule) showing quality deliverables and schedule for the Compressor Building contract. As of this writing, the SDS has not been provided.	Kiewit shall provide National Grid Supplier Document Schedule as requested.	5/21/2020		Procurement	Procurement
SR010-RPT-045		5/5/2020	The Prime Contract, Vendor Contract and Vendor and Subcontractor Document Control and Expediting Procedure provide requirements for Vendors and Subcontractors to provide documentation deliverables per the Seller's Deliverable Schedule. The submittal process shall use the Vendor Data Module of InEight Document (TeamBinder). Additional requirements also state the type of quality deliverables required for submittal. The QA/QC program requirements are passed on to the second-tier suppliers and that the subcontractor enforces them. Nucor, a subcontractor to Patterson Horth has refused to submit the quality deliverables as so required through InEight for Owner review and approval.	Kiewit shall require NUCOR, as a subcontractor to Patterson Horth, to submit all required quality deliverables through the InEight/TeamBinder system for review and approval by Client.	5/20/20	5/14/2020	Procurement	OSSQ



Non-Conformance Log



NCR No.	Description	Recommended Corrective Action	19-Mar-20 STATUS	Type (Internal / Supplier / Client)	Action By	Disposition & Required Actions	Recommended Preventative Actions	Date Issued	Date Disposition Submitted	Rejected	Elevated	Date Disposition Approved	Proposed Closure Date	Date Submitted for Closure	Date Closed	Planned Action
0001	Concrete Driven Pile DP-13 hit an obstruction and shifted during operation and causing pile to be approximately 2.4744" out of tolerance per specification at 6'			Kiewit		<b>Use-As-Is</b> EOR approval for out of tolerance per specification	No action to be taken	5/28/2019	6/26/2019	N/A	N/A	6/26/2019			6/26/2019	
0002	Damage to upper concrete driven pile DP-70 during pile driving activities, damage is just above the Emecca splice plate, resulting in exposed rebar and a 2' crack protruding up the south east side of the column, extending from the break.			Kiewit		<b>Rework or Scrap</b> EOR to determine action to be taken per specification 102761-B-STR-SPC-0006 section 4.5.4.1.12	EOR to notify Quality of resolution	6/6/2019	8/13/2019	N/A	N/A	8/13/2019			8/13/2019	
0003	During installation of DP 113 the toe of the pile started to walk to the west. Crew attempted to correct the out of plumbness during driving but could not correct enough to get back in tolerance. As the pile sits now it is 1.38" in 4' equating to 2.86% or .86% out of tolerance.			Kiewit		<b>Rework</b> Rejected piles shall be corrected as directed by the engineer of record.		6/11/2019	6/26/2019	N/A	N/A	6/26/2019			6/26/2019	
0004	Regeneration Gas Separator LDD-1011 was found to have an incorrect coating applied in accordance w/ 102761-B-STR-SPC-0003. The original coating was specified as Sherwin-Williams Heat-Flex, Hi-Temp 1200 degree Fahrenheit system. The coatings found to be applied are Sherwin-Williams Macropoxy 646 (Interm.) and Acrolon 218 HS (Finish) 200 degree Fahrenheit system.	Would like to be present at the commencement of painting	Final Paint Reports from Lone Star Corrosion to be added to the NCR for closure - Chuck C 5/6/2020	Kiewit		<b>Rework</b> Blast incorrect coating and recoat with approved coating system per specification 102761-B-MEC-SPC-0070	Being knowledgeable of specification and verify current drawings before proceeding with any installation and applications of materials.	5/16/2019	6/14/2019	N/A	N/A	6/14/2019	5/15/2020			NCR will remain open until equipment is re-painted
0005	Adsorber L-1000A was found to have an incorrect coating applied in accordance w/ 102761-B-STR-SPC-0003. The original coating was specified as Sherwin-Williams Heat-Flex, Hi-Temp 1200 degree Fahrenheit system. The coatings found to be applied are Sherwin-Williams Macropoxy 646 (Interm.) and Acrolon 218 HS (Finish) 200 degree Fahrenheit system.	Would like to be present at the commencement of painting		Kiewit		<b>Rework</b> Blast incorrect coating and recoat with approved coating system per specification 102761-B-MEC-SPC-0070	Being knowledgeable of specification and verify current drawings before proceeding with any installation and applications of materials.	5/16/2019	6/14/2019	N/A	N/A	6/14/2019	5/1/2020			NCR will remain open until equipment is re-painted
0006	Adsorber L-1000B was found to have an incorrect coating applied in accordance w/ 102761-B-STR-SPC-0003. The original coating was specified as Sherwin-Williams Heat-Flex, Hi-Temp 1200 degree Fahrenheit system. The coatings found to be applied are Sherwin-Williams Macropoxy 646 (Interm.) and Acrolon 218 HS (Finish) 200 degree Fahrenheit system.	Would like to be present at the commencement of painting		Kiewit		<b>Rework</b> Blast incorrect coating and recoat with approved coating system per specification 102761-B-MEC-SPC-0070	Being knowledgeable of specification and verify current drawings before proceeding with any installation and applications of materials.	5/16/2019	6/14/2019	N/A	N/A	6/14/2019	5/1/2020			NCR will remain open until equipment is re-painted
0007	Adsorber L-1000C was found to have an incorrect coating applied in accordance w/ 102761-B-STR-SPC-0003. The original coating was specified as Sherwin-Williams Heat-Flex, Hi-Temp 1200 degree Fahrenheit system. The coatings found to be applied are Sherwin-Williams Macropoxy 646 (Interm.) and Acrolon 218 HS (Finish) 200 degree Fahrenheit system.	Would like to be present at the commencement of painting		Kiewit		<b>Rework</b> Blast incorrect coating and recoat with approved coating system per specification 102761-B-MEC-SPC-0070	Being knowledgeable of specification and verify current drawings before proceeding with any installation and applications of materials.	5/16/2019	6/14/2019	N/A	N/A	6/14/2019	5/1/2020			NCR will remain open until equipment is re-painted
0008	Particle Filter LDS - 1010 A, was found to have an incorrect coating applied in accordance w/ 102761-B-STR-SPC-0003. The original coating was specified as Sherwin-Williams Heat-Flex, Hi-Temp 1000 degree Fahrenheit system. The coatings found to be applied are Sherwin-Williams Macropoxy 646 (Interm.) and Acrolon 218 HS (Finish) 200 degree Fahrenheit system.	Rejected / Does not agree with the disposition Re-coating will be performed to allow NDE to be worked. Re-coating shall be performed as per 102761-B-MEC-SPC-0069 AND 0070	Final Paint Reports from Lone Star Corrosion to be added to the NCR for closure - Chuck C 5/6/2020	Kiewit	OSSQ	<b>Rework</b> Blast incorrect coating and recoat with approved coating system per specification 102761-B-MEC-SPC-0070	Being knowledgeable of specification and verify current drawings before proceeding with any installation and applications of materials.	5/22/2019	1/29/2020			1/29/2020	5/15/2020			NCR will remain open until equipment is re-painted
0009	Particle Filter LDS - 1010 B, was found to have an incorrect coating applied in accordance w/ 102761-B-STR-SPC-0003. The original coating was specified as Sherwin-Williams Heat-Flex, Hi-Temp 1000 degree Fahrenheit system. The coatings found to be applied are Sherwin-Williams Macropoxy 646 (Interm.) and Acrolon 218 HS (Finish) 200 degree Fahrenheit system.	Rejected / Does not agree with the disposition Re-coating will be performed to allow NDE to be worked. Re-coating shall be performed as per 102761-B-MEC-SPC-0069 AND 0070	Final Paint Reports from Lone Star Corrosion to be added to the NCR for closure - Chuck C 5/6/2020	Kiewit	OSSQ	<b>Rework</b> Blast incorrect coating and recoat with approved coating system per specification 102761-B-MEC-SPC-0070	Being knowledgeable of specification and verify current drawings before proceeding with any installation and applications of materials.	5/22/2019	1/29/2020			1/29/2020	5/15/2020			NCR will remain open until equipment is re-painted
0010	Failure to meet pressure testing requirements as outlined in specification NFPA 59A 2001 Edition			Kiewit		<b>Rework</b> Testing plan shall be developed to provide re-testing at Barnhart Hake facility including pressure testing procedure to require 1.25 X MAWP, equipment mobilization manpower and safety plan and PPE to be used. See attached letter and instructions.	To be provided by APCI	6/18/2019	6/18/2019			6/18/2019	6/5/2020			NCR will remain open until re-testing is completed and documentation has been received and reviewed.
0011	Companders K-The equipment maintenance and preservation for the Companders 1CS-V200 as required by Air Products and Chemicals, INC. was not followed and properly documented. Request have been previously made to produce verifiable documentation that would support proper maintenance and preservation activities during the period of January of 2018 through the date of this NCR. Specific requirements in accordance with FPLP-APCI Compander Storage Procedure and Cryochinery Preservation Checklist Installation through start-up CMD-0177a Ref. CMD-0177a & CMD-0177b have not been followed and subsequently documented.210 & K-220		Working with Peter from APCI to obtain documents needed to close this NCR to include post delivery preservation expectations Chuck C 5/6/2020	Kiewit	OSSQ	<b>Rework</b> Consultation with equipment manufacturer and owner to determine inspection steps that would identify any potential equipment damage. 1. New preservation procedure is to be submitted for both off-site and on-site storage encompassing requirements through commissioning. 2. Quarterly preservation inspections of all identified equipment must be performed and report submitted to Kiewit and National Grid.	Follow Written procedures	6/19/2019	2/7/2020			2/12/2020	5/31/2020			NCR will remain open until we have seen that the "New" preservation procedure has been implemented and recorded.
0012	The equipment maintenance and preservation for the K-131 Nitrogen Recycle Compressors as required by Air Products and Chemicals INC. was not followed and properly documented. Request have been previously made to produce verifiable documentation that would support proper maintenance and preservation activities during the period of January of 2018 through the date of this NCR.		We need Atlas Copco to go to the warehouse and evaluate the equipment.	Kiewit	OSSQ	<b>Rework</b> Consultation with equipment manufacturer and owner to determine inspection steps that would identify any potential equipment damage. 1. New preservation procedure is to be submitted for both off-site and on-site storage encompassing requirements through commissioning. 2. Atlas Copco needs to provide Technician to site to evaluate compressor condition and compliance to proper preservation procedures. 3. Quarterly preservation inspections of all identified equipment must be performed and report submitted to Kiewit and National Grid.	Follow Written procedures	6/19/2019	2/7/2020			2/12/2020				NCR will remain open until we have seen that the "New" preservation procedure has been implemented and recorded.
0013	The equipment maintenance and preservation for Air Cooled Heat Exchangers E-2131, E-2141, E-2151, & E-2135 required by Air Products and Chemicals INC. was not followed and properly documented. Request have been previously made to produce verifiable documentation that would support proper maintenance and preservation activities during the period of January of 2018 through the date of this NCR.		Working with Peter from APCI to obtain documents needed to close this NCR to include post delivery preservation expectations Chuck C 5/6/2020	Kiewit	OSSQ	<b>Rework</b> Consultation with equipment manufacturer and owner to determine inspection steps that would identify any potential equipment damage. 1. New preservation procedure is to be submitted for both off-site and on-site storage encompassing requirements through commissioning. 2. Quarterly preservation inspections of all identified equipment must be performed and report submitted to Kiewit and National Grid.	Follow Written procedures	6/19/2019	2/7/2020			2/12/2020	5/15/2020			NCR will remain open until we have seen that the "New" preservation procedure has been implemented and recorded.
0014	As Kiewit was cutting off piles to elevation the first, two or three feet, voids in top of concrete piles were discovered on two separate piles with numbers mentioned in the Reference Documentation above.			Kiewit		<b>Repair</b> Repair to Standard - Recommended using Sikadur 42, Groun-pak PT, per manufactures recommendations to fill voids.	Kiewit's Concrete Engineer is communicating to Oldcastle (Supplier) to remedy the cause and ensure voids don't occur again. Oldcastle will be doing a training with their staff.	8/27/2019	9/10/2019	N/A	N/A	9/10/2019			9/11/2019	
0015	Pile initially inspected and there were no cracks. We started driving the top piece and noticed the crack. The crack went down about 20' and the corner of the pile chipped off 20' down. Once pile chipped we continued driving to grade.			Kiewit		<b>Scrap</b> Drive another pile within 28' (center to center) in any direction of the pile that cracked.	Unknown. We believe it was a flaw with the concrete that was not visible to the naked eye.	6/27/2019	7/8/2019	N/A	N/A	7/8/2019			7/8/2019	
0016	14" Pre-Cast Piles were cut off short by 2 inches to 3 inches out of Tolerance. Specification Cut-off tolerance shall be within 1 inch of the required elevation shown in the contract documents.			Kiewit		<b>Use-As-Is</b> Propose when performing the back filling and installing the Tensar wall that we do one 12 inch lift, one 9 inch lift and one 5 inch lift this would bring us back to design elevation.	To prevent from recurrence Control Point (3rd party surveyor) are shooting in bench marks then by using a laser level laying out the cut lines.	7/10/2019	7/15/2019	N/A	N/A	7/15/2019			9/11/2019	
0017	Air Content was observed as being 3.3% per the required 4.5%-7.5%. Resulting in failure per the mix design.		Draft complete confirming Use-As-Is. EOR approval targeted for 20-Mar-20.	Kiewit	Engineering	<b>Use-As-Is</b> Request EOR evaluation and / or approval. Speak with concrete supplier about air content concerns.	If air test fails initially, take new sample and re-perform air content test. If test fails for second time, truck will be rejected.	9/30/2019	3/20/2020							KOE will have EOR sign off on disposition week of 3/16/2020. Expect to use as is and close NCR at same time.





Non-Conformance Log



NCR No.	Description	Recommended Corrective Action	19-Mar-20 STATUS	Type (Internal / Supplier / Client)	Action By	Disposition & Required Actions	Recommended Preventative Actions	Date Issued	Date Disposition Submitted	Rejected	Elevated	Date Disposition Approved	Proposed Closure Date	Date Submitted for Closure	Date Closed	Planned Action	
0001	Concrete Driven Pile DP-13 hit an obstruction and shifted during operation and causing pile to be approximately 2.4744" out of tolerance per specification at 6'			Kiewit		Use-As-Is EOR approval for out of tolerance per specification	No action to be taken	5/28/2019	6/26/2019	N/A	N/A	6/26/2019			6/26/2019		
0002	Damage to upper concrete driven pile DP-70 during pile driving activities, damage is just above the Emecca splice plate, resulting in exposed rebar and a 2' crack protruding up the south east side of the column, extending from the break.			Kiewit		Rework or Scrap EOR to determine action to be taken per specification 102761-B-STR-SPC-0006 section 4.5.4.1.12	EOR to notify Quality of resolution	6/6/2019	8/13/2019	N/A	N/A	8/13/2019			8/13/2019		
0003	During installation of DP 113 the toe of the pile started to walk to the west. Crew attempted to correct the out of plumbness during driving but could not correct enough to get back in tolerance. As the pile sits now it is 1.308" in 4' equating to 2.86% or .86% out of tolerance.			Kiewit		Rework Rejected piles shall be corrected as directed by the engineer of record.		6/11/2019	6/26/2019	N/A	N/A	6/26/2019			6/26/2019		
0018	Air Content was observed as being 4.0% per the required 4.5%-7.5%. Resulting in failure per the mix design.			Kiewit	Engineering	Use-As-Is Request EOR evaluation and / or approval. Speak with concrete supplier about air content concerns.	If air test fails initially, take new sample and re-perform air content test. If test fails for second time, truck will be rejected.	9/30/2019	3/20/2020								KOE will have EOR sign off on disposition week of 3/16/2020. Expect to use as is and close NCR at same time.
0019	On September 17th 2019 a quality document and NDE review was performed at GCAW shop in Humble, TX. Attendees included, Robert Poche, Alex Devine, Robert Johnson, Gene Johnson, and Al Noriega. It was discovered during this review that the volumetric examination records and radiographic film were found to be non-compliant to the mandatory essential variables as per ASME Sec. VIII and ASME Sec. V requirements including but not limited to, film quality, film density, IQI placement and identification, etc. Reader sheets / Reports were found to not meet minimum requirements as per ASME Sec. V			Kiewit	OSSQ	Rework to Acceptable Standard Volumetric examination to be performed in conformance with code and contractual requirements 1. NDE must be re-performed in compliance to the contract specification. 2. NDE procedures and operator qualifications must be submitted for review. 3. This rework will take place after blasting and before recasting of vessels. Kiewit and National Grid will be in attendance for first operation.	Proper NDE review must be performed by supplier to assure conformance of sub-vendor to code and contractual requirements. OSSQ oversight of proper film and documentation reviews performed during in-process inspections.	9/30/2019	11/15/2019		NGWP 11/21/2019						Need OSSQ to work with Vendor and Authorized Inspector to provided documentation as required by codes of construction. If there are welds in question are not subject to these requirements (Info Sheet) then that needs to be part of the explanation.
0020	Fill materials were brought on-site from the PJ Keating quarry, it was discovered after dumping the load the 1 1/2" dense grade material was unapproved and would not meet the standards for FPLP			Kiewit		Scrap Kiewit to take another test sample from the stock pile at PJ Keating as well as witness an in-process sieve analysis in conjunction with National Grid's Special Inspector. If material is deemed unsuitable.	Action to prevent recurrence: Kiewit has communicated to the vendor that any new materials not previously tested and approved from PJ Keating's stock pile to the project, shall be tested and approved before use. Kiewit will be conducting random visits at PJ Keating to ensure compliance. Have survey crew mark each individual pile then tie with green flagging around piling signifying pile cutoff elevations were marked before commencing cutting of pile.	10/9/2019	11/23/2019			1/13/2020			1/13/2020		
0021	Craft proceeded cutting 16" concrete driven piles 5871-D-DP-25 & 5871-D-DP-26 without confirming pile cutoff elevations accordingly, resulting in two piles approximately 19" below actual elevation.			Kiewit		Use-As-Is All pile cutoffs halted until survey marks pile cutoff elevations in front of pile cutting crew and per RFI-000075, attached.		10/15/2019	11/23/2019			1/10/2020			1/10/2020		
0022	Upon cutting off of the 16" driven concrete piles it was found that the tension connector tubes were not in the correct location within the pile per Dwg. 102761-B-00-0000-STR-SF-8021 Rev.3 Gen. Notes 5, has a tolerance of +19"		Tommy to submit new drawing 5/6/2020	Kiewit		Use-As-Is Engineering to provide recommendation and path forward.	The lack of support templates being used during fabrication. Kiewit has advised the fabricator of the findings and advised them of the need for additional support. Kiewit will also be performing a shop visit to ensure the fabricator has addressed the issue.	10/16/2019	1/8/2020			1/16/2020	5/8/2020	5/27/2020	5/27/2020		This NCR should be ready to close. Tommy H. Jason R. to gather revised engineering documents to facilitate closure of NCR and present to NG week of 3/16/2020. Waiting to receive updated Drawings from Eng. 4/14/2020
0023	During review of Duct Bank 5, Sections 1, 2, & 3 - the underground utility warning tape installed is, 3" wide and approximately 100' total placed. Per specification 102761-B-CIV-SPC-0001; states in section 3.10, "Tape shall be six (6) inches wide."			Kiewit	Engineering	Use-As-Is Discontinue using the currently installed 3" wide utility warning tape and use the required 6" wide tape specified in the 102761-B-CIV-SPC-0001	Ensure all specifications are reviewed and cross referenced as necessary by all involved. Make sure any questions are answered before material is installed.	10/22/2019	1/22/2020			1/23/2020			1/23/2020		
0024	Material delivered on-site from P.J. Keating was a new material (not existing) which was tested and failed to meet the requirements per specification 102761-B-CIV-SPC-0001 section 3.1			Kiewit		Reject/Scrap Non-conforming material was rejected and returned. Kiewit and National Grids Quality Manager conducted an off-site visit at P.J. Keating to further assess the stockpile of the material.	Deliveries will continue to be monitored and P.J. Keating is to clearly segregate Kiewit's approved stockpile from any other new materials.	10/24/2019	1/14/2020			1/14/2020			1/14/2020		
0025	Atisa Coppo Air Cooled Heat Exchanger was pressure tested to 1.3 instead of the 1.5 required	1. Re-testing will be performed at AXH to 1.5 X MAWP. Kiewit and National Grid will be in attendance for testing.		Kiewit		Rework to Acceptable Standard Retest Heat Exchanger to correct Pressure	Verify the supplier follows test requirements	11/1/2019	1/10/2020			1/14/2020			1/14/2020		
0026	The Gas Heater was preserved under a N2 purge with positive pressure of 12-15 psig at the end of fabrication. The purge was physically monitored weekly. However there was no log or record kept of the monitoring. NCR assigned to Taylor Forge	1. New preservation procedure shall be submitted and approved. Inspections will be conducted weekly and documented. Inspection documentation will be submitted monthly. 2. 100% Internal VT will be performed at time of re-work, borescope will be required where applicable. 3. ITP shall be submitted by UOP/Taylor Forge including VT hold point and final inspection of vessels before shipment.	Tommy to check on status. NG has never responded.	Kiewit	OSSQ	The supplier will maintain a record of inspection starting September 2019. The heater will be internally inspected for condition and documented. The inspection will be insured via the hold point from the ITP.		11/1/2019	11/23/2019								Tommy H. to check with NG on their acceptance of proposed disposition. No response has ever come from NG on this.
0027	During concrete testing prior to pouring Duct Bank 5 - Section 4, Fenagh Inspector was asked to take the temperature of the concrete and said, he did not have a thermometer with his testing equipment. Temperature is required per Fenagh's procedure and ACI 301. Infrared Gun was used to verify temperature externally at 58 deg. F, which is not acceptable per ACI 301/ASTM C1064.	Ask EOR to review and accept concrete as-is.	Draft complete confirming Use-As-Is. EOR approval targeted for 20-Mar-20.	Kiewit	Engineering	Use-As-Is Fenagh testing agency was unprepared, no checks to verify equipment was on-site, and concrete trucks were not rejected when all testing was not completed.	Action to prevent recurrence: Kiewit to inspect Fenagh's testing equipment prior to each test to verify all equipment is on-site before testing is performed, regroup the team and discuss stop work authority. Fenagh to review their procedures internally with all technicians.	11/5/2019	3/1/2020			3/27/2020			3/27/2020		KOE will have EOR sign off on disposition week of 3/16/2020. Expect to use as is and close NCR at same time.
0028	During the cutting operation of concrete piles, survey (A-Plus) reported pile 5953-L-DP-09 was cut off approximately 8ft below elevation. Proposed Cut-off=18.75 Actual=13.17. Piles in that run of grade-beam had been being cut-off at approximately 18.75 ft above grade. cuts made on the other adjacent piles were preliminary cuts and not final cuts.	Abandon driven pile 5953-L-DP-09 and replace with Micropile(s) per direction of EOR.		Kiewit		Reject/Scrap Pile cut short had been marked by survey, verified cut-off location approximately 8ft in the air. Slurry from adjacent pile cutting may have obscured the pile cut off mark.	Using pile driver at motocr finalizing alignment prior to proceeding with cut. Survey will be verifying height same day as cut. No more 'preliminary' cuts, remaining cuts are at final height.	11/9/2019	11/23/2019			1/21/2020	5/15/2020		3/9/2020		
0029	After grouting operations were completed on micropiles 5850-C-MP-08 & 5850-C-MP-28 centerbars being placed ended up leaning to an out-of-tolerance location horizontally within the casing.	Engineering will continue review of the NCR following completion of the proof testing. Disposition targeted for 27-Mar-20. Submit proof testing and close 5/6/2020		Kiewit	Engineering	Use-As-Is After grouting, the centerbar generally extends from the ground surface to the soils at the pile tip. However, since approximately 25 to 30 feet of casing has been pulled, the casing does not extend to the bottom of the hole, but is held in place by skin friction in what is generally considered to be the unbonded zone. To prevent the casing from dropping back down the hole until the grout is set and can support it, a temporary pile cap is connected from the centerbar to the casing to hold the casing in place until initial set of	Fabricate wooden templates to ensure center bar is centrally located within tolerance of micropile casing / In addition, we have developed a method of wiring the rod in the center using the holes in temporary casing that holds the casing. Either method is anticipated to eliminate this problem. We will also measure the annular distance between the bar and the casing.	12/2/2019	3/20/2020			4/10/2020	5/15/2020				KOE currently reviewing issue and will provide proposed disposition no later than 3/26/2020.
0030	During driving of concrete piles an obstruction was encountered and forced two piles (5900-D-DP-01 & 5900-D-DP-06) out of tolerance and one (5900-D-DP-01) of the two piles out of plumb.			Kiewit	Engineering	Disposition and Action to be taken per engineering's recommendation and path forward.	Piles hit an obstruction.	1/8/2020	2/18/2020			2/27/2020			3/9/2020		





Non-Conformance Log



NCR No.	Description	Recommended Corrective Action	19-Mar-20 STATUS	Type (Internal / Supplier / Client)	Action By	Disposition & Required Actions	Recommended Preventative Actions	Date Issued	Date Disposition Submitted	Rejected	Elevated	Date Disposition Approved	Proposed Closure Date	Date Submitted for Closure	Date Closed	Planned Action	
0001	Concrete Driven Pile DP-13 hit an obstruction and shifted during operation and causing pile to be approximately 2.4744" out of tolerance per specification at 4'			Kiewit		Use-As-Is EOR approval for out of tolerance per specification	No action to be taken	5/28/2019	6/26/2019	N/A	N/A	6/26/2019			6/26/2019		
0002	Damage to upper concrete driven pile DP-70 during pile driving activities, damage is just above the Emecca splice plate, resulting in exposed rebar and a 2' crack protruding up the south east side of the column, extending from the break.			Kiewit		Rework or Scrap EOR to determine action to be taken per specification 102761-B-STR-SPC-0006 section 4.5.4.1.12	EOR to notify Quality of resolution	6/6/2019	8/13/2019	N/A	N/A	8/13/2019			8/13/2019		
0003	During installation of DP 113 the toe of the pile started to walk to the west. Crew attempted to correct the out of plumbness during driving but could not correct enough to get back in tolerance. As the pile sits now it is 1.3/8" in 4' equating to 2.86% or .86% out of tolerance.			Kiewit		Rework Rejected piles shall be corrected as directed by the engineer of record.		6/11/2019	6/26/2019	N/A	N/A	6/26/2019			6/26/2019		
0031	During driving of concrete piles obstructions were encountered and forced seventeen (17) piles (5871-D-DP-04, 5871-D-DP-09, 5871-D-DP-14, 5871-D-DP-16, 5871-D-DP-21, 5871-D-DP-24, 5871-D-DP-26, 5871-D-DP-27, 5871-D-DP-28, 5871-D-DP-29, 5871-D-DP-32, 5871-D-DP-34, 5871-D-DP-35, 5871-D-DP-36, 5871-D-DP-41, 5871-D-DP-43, 5871-D-DP-44, 5871-D-DP-45 ) out of tolerance and two (2) (5871-D-DP-03 & 5871-D-DP-08) piles out of plumb.	Revised IFC drawing complete and Kiewit Engineering disposition referencing updated drawings to be provided to Kiewit Quality on 19-Mar-20.		Kiewit	Engineering	Disposition and Action to be taken per engineering's recommendation and path forward.	Piles hit an obstruction.	1/8/2020	3/23/2020			3/27/2020			3/27/2020	KOE will have EOR sign off on disposition week of 3/16/2020. Expect to use as is and close NCR at same time.	
0032	During driving of concrete piles obstructions were encountered and forced seven (7) piles (5620-F-DP-05; 5620-F-DP-12; 5620-F-DP-21; 5620-F-DP-24; 5620-F-DP-27; 5620-F-DP-28; & 5620-F-DP-31) out of tolerance.	Revised IFC drawing complete and Kiewit Engineering disposition referencing updated drawings provided to Kiewit Quality on 18-Mar-20.		Kiewit	Engineering	Disposition and Action to be taken per engineering's recommendation and path forward.	Piles hit an obstruction.	1/8/2020	3/19/2020			4/17/2020	4/14/2020			4/14/2020	KOE will have EOR sign off on disposition week of 3/16/2020. Expect to use as is and close NCR at same time. Submitted to NG 3/19/2020
0033	During driving of concrete piles six (6) piles (5620-F-DP-17; 5620-F-DP-24; 5620-F-DP-25; 5620-F-DP-26; 5620-F-DP-28; & 5620-F-DP-29) did not meet the blow count (driving criteria) per 25R embedment.			Kiewit		Disposition and Action to be taken per engineering's recommendation and path forward.	Piles hit an obstruction.	1/8/2020	1/21/2020			1/21/2020			1/21/2020		
0034	During driving of concrete piles obstructions were encountered and forced one (1) pile (5640-F-DP-03) out of tolerance.	Revised IFC drawing complete and Kiewit Engineering disposition referencing updated drawings provided to Kiewit Quality on 18-Mar-20.		Kiewit	Engineering	Disposition and Action to be taken per engineering's recommendation and path forward.	Piles hit an obstruction.	1/8/2020	3/19/2020 Resubmit 3/23/20			3/27/2020			3/27/2020	KOE will have EOR sign off on disposition week of 3/16/2020. Expect to use as is and close NCR at same time. Submitted to NG 3/19/2020	
0035	During driving of concrete piles obstructions were encountered and forced five (5) piles (5560-C-DP-01; 5560-C-DP-03; 5560-C-DP-04B; 5560-C-DP-05B; & 5560-C-DP-06) out of tolerance.	Revised IFC drawing complete and Kiewit Engineering disposition referencing updated drawings provided to Kiewit Quality on 18-Mar-20.		Kiewit	Engineering	Disposition and Action to be taken per engineering's recommendation and path forward.	Piles hit an obstruction.	1/8/2020	3/19/2020			4/17/2020	4/14/2020			4/14/2020	KOE will have EOR sign off on disposition week of 3/16/2020. Expect to use as is and close NCR at same time. Submitted to NG 3/19/2020
0036	During driving of concrete piles obstructions were encountered and forced one (1) pile (5980-L-DP-09) out of tolerance.	Revised IFC drawing complete and Kiewit Engineering disposition referencing updated drawings to be provided to Kiewit Quality on 19-Mar-20.		Kiewit	Engineering	Disposition and Action to be taken per engineering's recommendation and path forward.	Piles hit an obstruction.	1/8/2020	3/20/20 Resubmitted 3/23/20			4/17/2020	4/14/2020			4/14/2020	KOE will have EOR sign off on disposition week of 3/16/2020. Expect to use as is and close NCR at same time.
0037	During driving of concrete piles obstructions were encountered and forced two (2) piles (5952-L-DP-03 & 5952-L-DP-09) out of tolerance.			Kiewit	Engineering	Disposition and Action to be taken per engineering's recommendation and path forward.	Piles hit an obstruction.	1/8/2020	2/18/2020			2/27/2020			3/10/2020		
0038	During driving of concrete piles obstructions were encountered and forced two (2) piles (5953-L-DP-19 & 5953-L-DP-21) out of tolerance.			Kiewit	Engineering	Disposition and Action to be taken per engineering's recommendation and path forward.	Piles hit an obstruction.	1/8/2020	2/18/2020			2/27/2020	4/17/2020	4/14/2020	5/27/2020	This NCR should be ready to close. Tommy H./Jason R. to gather revised engineering documents to facilitate closure of NCR and present to NG week of 3/16/2020.	
0039	During driving of concrete piles obstructions were encountered and forced one (1) pile (5951-L-DP-14) out of tolerance.	Revised IFC drawing complete and Kiewit Engineering disposition referencing updated drawings to be provided to Kiewit Quality on 19-Mar-20.		Kiewit	Engineering	Disposition and Action to be taken per engineering's recommendation and path forward.	Piles hit an obstruction.	1/8/2020	3/20/20 Resubmitted 3/23/20			4/17/2020	4/14/2020			4/14/2020	KOE will have EOR sign off on disposition week of 3/16/2020. Expect to use as is and close NCR at same time.
0040	During driving of concrete piles obstructions were encountered and forced two (2) piles (5870-M-DP-03 & 5870-M-DP-09) out of tolerance.			Kiewit	Engineering	Disposition and Action to be taken per engineering's recommendation and path forward.	Piles hit an obstruction.	1/8/2020	2/18/2020			2/20/2020			2/20/2020		
0041	Upon cutting off of the 16" driven concrete piles it was found that the tension connector tubes were not in the correct location embedded in the pile, per Dwg. 102761-B-00-0000-STR-SF-6021 Rev.3 Gen. Notes 8. has a tolerance of +1/8"	Update with RFI - 101 Close		Kiewit		Engineering to provide recommendation and path forward.	The lack of support templates being used during fabrication. Kiewit has advised the fabricator of the findings and advised them of the need for additional support. Kiewit will also be performing a shop visit to ensure the fabricator has addressed the issue.	10/16/2019	1/8/2020			1/16/2020	5/15/2020	5/27/2020	5/27/2020	Close. Tommy H./Jason R. to gather revised engineering documents to facilitate closure of NCR and present to NG week of 3/16/2020. Waiting to receive updated Drawings from Eng.	
0042	5870-M-MP-03 was drilled an additional 5 feet in depth total (it achieved a tip elevation of approximately -78.8 feet and the minimum required elevation was -70 feet). As scheduled, 25 feet of casing was pulled. However, with the extra five feet of drilling, we have a total of 70.7 feet of casing on the pile, which is 6.4 feet more than the casing length given for the pile on Sheet 102761-B-00-0000-STR-SF-5872. The tolerance for the casing length is plus or minus 3 feet. Due to length of the subsequent casing sections, pulling an additional 5 feet of casing out (30 total) was not a readily available option for this pile.			Kiewit	Engineering	Started drilling micropile 5870-M-MP-03 on 12/31/19. The piles in Area M were all drilled with 100.7' of casing, some with different sequencing in order to utilize all the casing available on site. The previous two holes had been drilled with the same sequencing and 5870-M-MP-03 was supposed to be drilled with the same sequencing. In order to use the casing already available at the drilling location, a 10' casing was used where a 5' casing had been used on the previous two shafts. The shaft was drilled 55' when operations ceased for the holiday and resumed two days later on 1/2/20. When operations resumed, the sequence of casings was	Following a long weekend/holiday, tool-box talks will be conducted with craft during their morning stretch and flex activities prior to starting work.	1/9/2020	2/7/2020			2/12/2020			3/9/2020		
0043	After drilling Micropile 5870-M-MP-07 to full depth (90'), the operation was shut down due to a safety stand down following a safety incident (12/12/19). Operation was anticipated to resume 12/18/19. Construction put in an RFI asking for the path forward and clarification of same day grout requirement. Recommendation per RFI was not followed per the Engineers approved resolution.			Kiewit	Engineering	Use-As-Is Based on the daily report for Dec. 17th and subsequent conversations with on-site personnel, micropile 5870-M-MP-07 was drilled 5 additional feet after being left at depth for 6 days. Approximately 6.5 feet of sand was encountered at the bottom of the casing after drilling, which is in line with other piles installed in this area. The total amount of sand for the pile was 127% of the	Action to prevent recurrence. Construction shall not proceed with an issue without some written form of documentation.	1/31/2020	1/31/2020			2/9/2020			3/11/2020		



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0002	Damage to upper concrete driven pile DP-70 during pile driving activities, damage is just above the Emecca splice plate, resulting in exposed rebar and a 2' crack protruding up the south east side of the column, extending from the break.			Kiewit		<b>Rework or Scrap</b> EOR to determine action to be taken per specification 102761-B-STR-SPC-0006 section 4.5.4.1.12	EOR to notify Quality of resolution	6/6/2019	8/13/2019	N/A	N/A	8/13/2019			8/13/2019		
0003	During installation of DP 113 the toe of the pile started to walk to the west. Crew attempted to correct the out of plumbness during driving but could not correct enough to get back in tolerance. As the pile sits now it is 1.3/8" in 4' equating to 2.86% or .86% out of tolerance.			Kiewit		<b>Rework</b> Rejected piles shall be corrected as directed by the engineer of record.		6/11/2019	6/26/2019	N/A	N/A	6/26/2019			6/26/2019		
0044	During the demolition of an existing slab for the propane foundation Duct Bank #5 was impacted with the excavator mounted hammer. Resulting in the concrete from the Duct Bank being damaged and a 4" conduit being cracked.	Kiewit will demo the concrete around the conduit to expose the conduit which was damaged area will be replaced. Then the concrete for the damaged area of Duct Bank #5 will be re-poured.		Kiewit	Construction	Kiewit will demo the concrete around the conduit to expose the conduit which was damaged area will be replaced. Then the concrete for the damaged area of Duct Bank #5 will be re-poured.	Cause: Area was not laying out Duct Bank #5 from the as-builts for the crew to have a visual of the edge of the duct bank. Prevention #1 New Ground Disturbance permit for all operations that disturb the ground. #2 Existing and installed utilities will be clearly marked before digging, #3 Permanently installed work will be protected so no damage occurs	3/20/2020	3/24/2020								NG requesting a RCA to be performed for the safety factor
0045	Micropile 5871-D-MP-02 was found during as-builts to be drilled out of tolerance	Use-As-Is	Tommy to follow up with Engineering on RFI-165	Kiewit	Construction		moving to 2 spotters to watch rig so we don't push pins and final verification by Superintendent of drill box location before drilling.	4/14/2020	5/11/2020				5/15/2020	5/11/2020			
0046	Micropile 5570-B-MP-35 and 5570-B-MP-37 was found during as-builts to be drilled out of tolerance	Use-As-Is	Tommy to follow up with Engineering on RFI-164	Kiewit	Construction		moving with 2 spotters to watch rig so we don't push pins. Utilizing survey even more often to verify nothing has been moved and if it has it is corrected and final verification by superintendent of drill box before drilling.	4/14/2020	5/11/2020				5/15/2020	5/11/2020			

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