



September 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 August 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 August 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
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cc: Service List

MONTHLY STATUS REPORT FOR AUGUST 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 August 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 August 2020:

- Training in the Environmental Inspector (“EI”) duties occurred nine (9) times this month
- Air monitoring in accordance with the Rhode Island Department of Environmental Management Short-Term Response Action Plan is ongoing and continued during this month.
- Started the erection of structural steel on East/West Piperack.
- Completed foundation pours on:
 - Pre-Treatment Area
 - Metering Skid Area
 - North/South Rack
 - Nitrogen Storage
 - 2nd/3rd Stage Air Cooled Heat Exchanger
- Installed Underground Piping on Firewater, Feed Gas, and Fuel Gas
- Started the pre-fabrication of cable tray at Power Distribution Center
- Continued Stormwater installation
- Continued Grounding installation
- Received Compressor Building steel

Work Planned for September 2020:

- Erection of Compressor Building Steel
- Continue various concrete pedestal pours
- Receive N2 Recycle and Booster compressors
- Erection of North South rack steel
- Receive Crossover Box and Compander skid
- Receive/Set first above ground piping

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.

Problems and Noncompliance				
Date	Problem/Noncompliance	Remedial Action Taken	Date of Corrective Action	Effectiveness of Corrective Action
08/10/2020	Crushed stone tracking pad at exit of work zone requires maintenance.	Pads roughened.	08/13/2020	Effective, restored tracking pad.
08/26/2020	Clean Silt sacks in catch basins # 1,3, and 15.	Silt sacks cleaned.	08/28/2020	Effective, restored drainage of storm water.
08/26/2020	Replace filtrex soxx at catch basin 4.	Filtrex soxx replaced.	08/28/2020	Effective, restored effectiveness of erosion control.
08/26/2020	Remove sediment and debris at catch basins 3,4 and 15.	Sediment and debris removed.	08/28/2020	Effective, sediment and debris removed near catch basins.

Releases				
Date	Material and Quantity Released	Cause	Description	Corrective Action Taken
08/07/2020	One gallon of hydraulic oil.	Weeping hydraulic hose.	Concrete delivery truck had weeping hydraulic hose. Leak was discovered after delivery was completed.	Spill was cleaned up on-site. Impacted soil was removed, and drips on concrete and asphalt surfaces cleaned. Notice was made to vehicle owner.

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:

- Placed concrete for the following main foundations (pedestals yet to be completed):
 - Feed Gas Metering Foundation
 - N2 Storage Area Foundation.
 - Feed Gas Pretreatment Foundation.
 - Intercooler/Aftercooler Foundation.
- Completed construction of the Main Pipe Rack Foundation and Compressor Building Foundation.
- Completed construction of all underground utility support.
- Placed fill material in the western portion of the site.
- Completed construction of stormwater Line 100.
- Installed fire suppression line L-WFW-0621-01 (north of the southern segment of the firewater line's main loop).
- Completed the installation of the gas supply lines to Feed Gas Metering, Emergency Generator, and Hot Oil Systems.
- Completed the placement of pre-cast concrete sections for the East-West Pipe Rack's diversion trench (grout yet to be placed).
- Placed backfill material for the N2 Compandor Foundation

Discrepancies reported to Contractors:

- The south and east sections of concrete placed for the Cold Box Foundation's containment curb appeared compromised. Significant flaking of the concrete and what appears to be a cold seam were observed in the concrete. Several hairline cracks were also observed in the curb's concrete. The contractor demolished the troubled sections of wall and they are scheduled to be replaced.
- A Cold Box Foundation pedestal was observed to have "blown-out" during placement of the concrete. The northeast corner of the concrete pedestal had developed an approximately 1-inch bulge at the bottom (likely due to a hardware malfunction). The National Grid Construction Supervisor brought this issue to the attention of Kiewit management. The contractor demolished the afflicted pedestal and it is scheduled for replacement.
- Kiewit's thermo-couple log for the N2 Compandor Foundation's mass concrete placement showed that for about 35 hours (approximately 21% of time monitored), the temperature differential between the core and side-surface area of the concrete exceeded the 35 degree "Maximum Temperature Difference within the Concrete" specified in item F. of Kiewit's Thermal Control Plan (TCP). The maximum temperature differential exceedance recorded was 40 degrees (2 hrs.) and for most of the exceeding time period the difference was 3 degrees or less. The exceedances were recorded by a second thermocouple placed in the foundation for redundancy. National Grid questioned why the redundant thermocouple was not included in the continuous monitoring required by Kiewit's TCP. Additionally, National Grid has requested Kiewit to elevate the Thermocouple Log discrepancies to their engineers for evaluation. Kiewit's concrete engineer commented that he was not concerned with the temperature differential results, but suggested the concrete be assessed for thermal cracking.

Uncorrected discrepancies reported to Engineer of Record:

- There were a few issues observed with the N2 Compandor Foundation:

ATTACHMENT

NON-CONFORMANCE REGISTERS

NON-CONFORMANCE REGISTER - For the registration of NCR Reports



Project #: 90000130901

Project Name: Field Point Liquefaction Project Providence, RI

	OSSQ	Engineering	Procurement	Construction	Quality	Vendor	Material Management	Project Management	Total Issued
Percentage of Total	25%	17%	15%	17%	13%	8%	0%	4%	100%
Count by Discipline	13	9	8	9	7	4	0	2	52
NCR Ref:	Audit Ref:	Issue Date	NCR Description		Agreed NCR Corrective Action	Date of Agreed Disposition	Date of Closure	Probable Cause	Discipline
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	6/22/2020	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	Open	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	6/3/2020	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
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

NCR Ref:	Audit Ref:	Issue Date	NCR Description	Agreed NCR Corrective Action	Date of Agreed Disposition	Date of Closure	Probable Cause	Discipline
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.	Revisit the requirements for Client notification of vendor testing with all personnel related to this requirement, document the training and provide National Grid with a responsibility matrix to ensure proper notification is achieved on future inspections.	11/15/2019	5/29/2020	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.	Provide the Owner with a functional system that is capable and will permanently correct the discrepancies as noted in section "A" above.	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" attached to the NCR report	5/21/2020	5/28/2020	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 on the crossover box as defined by KIEWIT RFI-000119 resolution dated 2-20-20	4/13/2020	Open	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	6/22/2020	Vendor	Vendor
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.	5/27/2020	Open	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.	5/28/2020	Open	Vendor	Procurement

NCR Ref:	Audit Ref:	Issue Date	NCR Description	Agreed NCR Corrective Action	Date of Agreed Disposition	Date of Closure	Probable Cause	Discipline
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	6/4/2020	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	6/23/2020	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
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	7/8/2020	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

NCR Ref:	Audit Ref:	Issue Date	NCR Description	Agreed NCR Corrective Action	Date of Agreed Disposition	Date of Closure	Probable Cause	Discipline
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	6/8/2020	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	6/8/2020	Vendor	OSSQ
SR010-RPT-028		2/27/2020	Kiewit procedure 102761-B-QLT-PRO-0011 <i>Corrective & 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	7/8/2020	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	6/4/2020	Quality	Quality
SR010-RPT-030		2/27/20	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.	4/22/20	5/29/2020	Procurement	OSSQ

NCR Ref:	Audit Ref:	Issue Date	NCR Description	Agreed NCR Corrective Action	Date of Agreed Disposition	Date of Closure	Probable Cause	Discipline
SR010-RPT-031		2/27/2020	<i>Fields Point Project Management of Change</i> Implementation process, dated March 15 th , 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	5/29/2020	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	7/8/2020	Contractor	Construction
SR010-RPT-033		3/3/2020	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.	Kiewit to submit a plan to National Grid for review and approval that does not require a compressive strength values as a determine factor in form removal or submit a compressive strength value to be met prior to form removal.	6/24/2020	7/8/2020	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	5/28/2020	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	7/17/2020	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.	5/29/2020	5/29/2020	Project Management	Project Management

NCR Ref:	Audit Ref:	Issue Date	NCR Description	Agreed NCR Corrective Action	Date of Agreed Disposition	Date of Closure	Probable Cause	Discipline
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	5/29/2020	Engineering	Engineering
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.	4/3/2020	6/3/2020	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, specification0s, 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	6/17/2020	Engineering	Engineering
SR010-RPT-040		3/24/2020	The contract requires Kiewit to develop within (45) days after Full Notice to Proceed (FNTP) 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.	6/2/2020	6/2/2020	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	7/8/2020	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	7/22/2020	OSSQ	OSSQ

NCR Ref:	Audit Ref:	Issue Date	NCR Description	Agreed NCR Corrective Action	Date of Agreed Disposition	Date of Closure	Probable Cause	Discipline
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	5/13/2020	Engineering	Engineering
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	6/1/2020	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	Open	Procurement	OSSQ
SR010-RPT-046		6/2/2020	Section 3.10 of the Contract requires all welding procedures to be submitted to Owner for review and approval prior to construction. The Base plates for the PDC column drawing 102761-00-0000-sTR-SF-5806 detail 1 were modified to use a welded embed rod versus the anchor bolt as called out. The fabrication was performed off-site and subsequently installed without Owner approval of welding procedure or welder qualification.	Kiewit shall require the outside fabricator to provide a WPS, PQR and Welder Certifications for Client review. Kiewit shall also provide CMTR's for the base plate and embed rod used in this application. This NCR will prevent the setting of any equipment on the referenced foundation until the NCR is closed.	6/2/2020	Open	Procurement	Quality
SR010-RPT-047		6/2/2020	Drawing 102761-B-00-0000-STR-SF-5175 detail 8 shows using Mirafi 180N or equal geotextile fabric. The 3rd lift construction used Mirafi 140N instead of the required 180N. This substitution was not approved by Engineering prior to the placement and is considered non-compliant with the specification.	National Grid is requiring a Corrective Action Report be initiated for this specific occurrence and the CAR shall cover the procurement, receiving and installation of the non-compliant product. The CAR must follow the requirements of 102761-B-QLT-PRO-0011 Corrective and Preventive Action procedure.	Open	Open	Contractor	Quality
SR010-RPT-048		6/10/2020	Kiewit procured base plates for the PDC building columns from an outside vendor. The base plates required welding (4) 1" diameter embed rods to the plate in accordance with Kiewit RFI-000161 replacing the previously designed anchor bolts. The welding of the embed rods was performed and installed. A review of the Weld Procedure and Welder Qualification Records provided from the outside vendor showed the welder was qualified for maximum 3/4" thickness in accordance with AWS D1.1 but the overall rod welded was 1" diameter for which was outside the welder's qualified limitations. Kiewit failed to properly review and vet the outside vendor for the work performed.	The base plates as installed are to be removed and properly welded with qualified welders and replaced by a method suitable to National Grid. The repeated failure by Kiewit to follow the contract and/or procedures will require a Corrective Action Report to be generated on this specific instance which will be submitted to NG for review and approval.	7/15/2020	Open	Contractor	Construction

NCR Ref:	Audit Ref:	Issue Date	NCR Description	Agreed NCR Corrective Action	Date of Agreed Disposition	Date of Closure	Probable Cause	Discipline
SR010-RPT-049		6/11/2020	Kiewit's Thermal Control plan dated December 5, 2019 provides specifications and tolerances for mass concrete pour temperatures delta between core and near surface . Section "F" of this specification limits the temperature delta between the core and near concrete surface to a maximum of 35° F during the first 4 days. The pour was placed on 5/28/2020 and the attached data log shows for a period of approximately (8) hours between 5/30/2020 @ 5:08 AM until 5/30/2020 @ 12:08 PM the monitored temperature differential was in excess of 35° F (see attached log).	Further testing and observation found the concrete did not exceed the 185 degrees (F) per the Thermal Control Plan Table 6.2.2.2	7/5/2020	7/17/2020	Contractor	Construction
SR010-RPT-050		6/15/2020	Hudson Products, subcontractor to Kiewit, submitted their ASME Welding Process Usage Log for National Grid review and the review showed the continuity lacked full traceability to show the welders welded with their qualified process(es) during the previous welding periods as required by ASME Section IX. Hudson is contracted to provide Air Cooled Heat Exchangers and structural steel supports for this product. National Grid will not accept any welders used for the ACHE and/or structural steel fabrication that do not have full traceability of qualifications and welding continuity.	Continuity package to be reviewed prior to hydrotest	7/15	Open	Vendor	OSSQ
SR010-RPT-051		6/16/2020	Kiewit provided National Grid with a data package to document current work as performed on the compressor building structural steel. The review identified (5) Welder Performance Qualification Records(WPQR) that were not signed by a qualified person at the time of welder testing rendering these records as non-compliant and the welders non-certified. AWS D1.1 Structural Welding Code - Steel requires qualified personnel to witness visual acceptance of the welds and visual acceptance of the destructive bend test. The welder I.D.'s are as follows: #7, #14, #15, #25, and #91.	All welds that were deposited by the above referenced welders are rejected and must be either cut-out and re-welded or replaced with completely new fabricated members. Other alternative corrective methods may be submitted to Client for their approval.	Open	Open	Vendor	OSSQ

Non-Conformance Log

NCR No.	Description	Recommended Corrective Action	Type (Internal / Supplier / Client)	Action By	Vendor	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	General Comments	ACTIVE	NGWP Activity	Disposition Submitted to Client for Approval	Disposition Sent For Approval	Submitted for Closure and Approved	
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					29	0		
0002	Damage to upper concrete driven pile DP-70 during pile driving activities, damage is just above the Emeca 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					68	0		
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					15	0		
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 (Interim.) and Acrolon 218 HS (Finish) 200 degree Fahrenheit system.	Would like to be present at the commencement of painting	Kiewit	OSSQ		Rework 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	6/15/2020	7/8/2020	7/8/2020	NCR will remain open until equipment is re-painted				29	0		
0005	Absorber 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 (Interim.) and Acrolon 218 HS (Finish) 200 degree Fahrenheit system.	Would like to be present at the commencement of painting	Kiewit	OSSQ	UOP	Rework 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	6/15/2020			NCR will remain open until equipment is re-painted. 7/15 - PAUT COMPLETE/ COATING TO BE COMPLETED BY 7/31 7/25 -CHC need 10 day notification for start of paint, may start 7/31 finish week of 8/10 8/1 - CHC Coating to start 8/24/with a (14) day coating cycle planned. Scheduled to complete 9/4 8/8 CHC Coating SNF received from UOP and sent to NG. Coating to start Monday 8/24 and be completed by Monday 8/31. 8/15 CHC No Further Update 8/22 CHC - Do to a Tropical Storm scheduled to impact Houston, Coating is being rescheduled to start on 8/31				29	0		
0006	Absorber 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 (Interim.) and Acrolon 218 HS (Finish) 200 degree Fahrenheit system.	Would like to be present at the commencement of painting	Kiewit	OSSQ	UOP	Rework 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	6/15/2020			NCR will remain open until equipment is re-painted. 7/15 - PAUT COMPLETE/ COATING TO BE COMPLETED BY 7/31 7/25 -CHC need 10 day notification for start of paint, may start 7/31 finish week of 8/10 7/29 EMR start 8/12 finish 8/21 approx. 8/1 - CHC Coating to start 8/24/with a (14) day coating cycle planned. Scheduled to complete 9/4 8/8 CHC Coating SNF received from UOP and sent to NG. Coating to start Monday 8/24 and be completed by Monday 8/31. 8/15 CHC No Further Update 8/22 CHC - Do to a Tropical Storm scheduled to impact Houston, Coating is being rescheduled to start on 8/31				29	0		
0007	absorber 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 (Interim.) and Acrolon 218 HS (Finish) 200 degree Fahrenheit system.	Would like to be present at the commencement of painting	Kiewit	OSSQ	UOP	Rework 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. 7/15 - PAUT COMPLETE/ COATING TO BE COMPLETED BY 7/31 7/25 -CHC need 10 day notification for start of paint, may start 7/31 finish week of 8/10 7/29 EMR start 8/12 finish 8/21 approx. 8/1 - CHC Coating to start 8/24/with a (14) day coating cycle planned. Scheduled to complete 9/4 8/8 CHC Coating SNF received from UOP and sent to NG. Coating to start Monday 8/24 and be completed by Monday 8/31. 8/15 CHC No Further Update 8/22 CHC - Do to a Tropical Storm scheduled to impact Houston, Coating is being rescheduled to start on 8/31				29	0		
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 (Interim.) 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 reworked. Re-coating shall be performed as per 102761-B-MEC-SPC-0069 AND 0070	Kiewit	OSSQ	UOP	Rework 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	7/8/2020	7/8/2020	NCR will remain open until equipment is re-painted				252	0		
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 (Interim.) 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 reworked. Re-coating shall be performed as per 102761-B-MEC-SPC-0069 AND 0070	Kiewit	OSSQ	UOP	Rework 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	7/8/2020	7/8/2020	NCR will remain open until equipment is re-painted				252	0		
0010	Failure to meet pressure testing requirements as outlined in specification NFPA 59A 2001 Edition		Kiewit			Rework 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	5/29/2020	5/29/2020	NCR will remain open until re-testing is completed and documentation has been received and reviewed.				0	0		
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 Cryomachinery Preservation Checklist Installation through start-up CMD-01774 Ref. CMD-01774 & CMD-0177b have not been followed and subsequently documented.210 & K-270		Kiewit	OSSQ	APCI	Rework 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	6/24/2020	7/1/2020	NCR will remain open until we have seen the "New" preservation procedure has been implemented and recorded.			6/27/2020 Resub	233	5		
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.		Kiewit	OSSQ	APCI	Rework 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. Alias 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	6/24/2020	6/24/2020	6/24/2020	NCR will remain open until we have seen that the "New" preservation procedure has been implemented and recorded.				233	5		
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	Nitrogen Lube Oil Cooler 1CS-E137 Compander Lube Oil 1CS-E10	Kiewit	OSSQ	APCI	Rework 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	6/24/2020	7/1/2020	NCR will remain open until we have seen that the "New" preservation procedure has been implemented and recorded.			6/27/2020 Resub	233	5		
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			Repair to Standard - Recommendation using Sikadur 42. Grout-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					14	0		
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			Scrap 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					11	0		
0016	14" Pre-Cast Pile 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			Use-As-Is Propose when performing the back filling and installing the Tensar wall that we do one 12 inch lift, one 9 inch lift and one 6 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					5	0		
0017	Air Content was observed as being 3.3% 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			7/8/2020			6/22/2020	7/8/2020	KOE will have EOR sign off on disposition week of 3/16/2020. Expect to use as is and close NCR at same time.				172	110	
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			7/29/2020			6/22/2020	7/29/2020	KOE will have EOR sign off on disposition week of 3/16/2020. Expect to use as is and close NCR at same time. CLIENT DIDN'T AGREE ON DISPOSITION; KIEWIT DOESN'T AGREE WITH THE REJECTION OF DISPOSITION - WORK WITH RICHIE FOR REWRITE. CAMERON TO GET DENNIS TO GET FEEDBACK 7/17 7/22 EMR NCR disposition was rewritten - DO WE NEED to update signature???? 7/29 EMR we need to send to NG for disposition re write review. New signatures are not required.				172	131	
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	UOP	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 recoating 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	7/22/2020	NGWP 11/21/2019			7/30/2020			7/29/2020	7/29/2020	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 Shots) that then needs to be part of the explanation. 7/22 EMR - Engineering approved disposition needs to be sent to NG for disposition review 7/29 sent to NG with reports for disposition and closure. 7/29 8/15 CHC - Awaiting Response from National Grid				296	8
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 for use the stock piles shall be separated to prevent another delivery of unsuitable fill.	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's Quarry.	10/9/2019	11/23/2019			1/13/2020			1/13/2020						45	51	
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 18" 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.	Action to prevent recurrence: 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.	10/15/2019	11/23/2019			1/10/2020			1/10/2020						39	48	
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-6021 Rev 3 Gen. Notes 8. has a tolerance of +1/8"		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. Ensure all specifications are reviewed and cross referenced as necessary by all involved. Make sure any questions are answered before material is installed.	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				84	8		
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		10/22/2019	1/22/2020			1/23/2020			1/23/2020					92	1		

Non-Conformance Log

NCR No.	Description	Recommended Corrective Action	Type (Internal / Supplier / Client)	Action By	Vendor	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	General Comments	ACTIVE	NGWP Activity	Disposition Submitted to Client for Approval	Disposition Sent For Approval	Submitted for Closure and Approved	
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						82	0	
0025	Atlas Copco 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			Re-work 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						70	4	
0026	The Regen 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, boroscope 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.	Kiewit	OSSQ	UOP	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			6/24/2020		6/24/2020	7/1/2020	Submitted for closure to NG with UOP signoff or their NCR	6/30/20 Resubmi	CLOSED			22	214	
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.	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.				117	26	
0028	During the cutting operation of concrete piles, survey (A-Plus) reported pile 5953-L-DP-09 was cut-off approximately 6ft below elevation. Proposed Cut-off=18.75 Actual=13.17. Piles in that run of grade-beam had been being cut off at approx. 13ft as the location was below 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 piledriver at motout 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						14	59	
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.		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 the grout has occurred. For the piles identified, either due to accidental and undetected shifting the top of the centerbar during the connection of the temporary cap or after the cap has placed and the pile is no longer being monitored (due to loads imposed by the casing), the location of the center bar shifted.	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			7/22/2020	5/15/2020		7/24/2020		KOE currently reviewing issue and will provide proposed disposition no later than 3/26/2020. 7/22 EMR sent to NG for disposition review. 7/28 EMR Quality needs to sign and close 7/29				109	124	
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-07) 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						41	9	
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-18, 5871-D-DP-21, 5871-D-DP-24, 5871-D-DP-26, 5871-D-DP-27, 5871-D-DP-28, 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.		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.				75	4	
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.		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			6/16/2020	4/17/2020	4/14/2020	6/16/2020		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				71	89	
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 25ft embedment.		Kiewit	Engineering		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						13	0	
0034	During driving of concrete piles obstructions were encountered and forced one (1) pile (5640-F-DP-03) 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	3/19/2020			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. Submitted to NG 3/19/2020	3/23/20 Resubmi	CLOSED		71	8	
0035	During driving of concrete piles obstructions were encountered and forced five (5) piles (5560-G-DP-01, 5560-G-DP-03, 5560-G-DP-04B, 5560-G-DP-05B, & 5560-G-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	3/19/2020			6/16/2020	4/17/2020	4/14/2020	6/16/2020		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				71	89	
0036	During driving of concrete piles obstructions were encountered and forced one (1) pile (5980-IDP-03) 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	3/20/2020			6/16/2020	4/17/2020	4/14/2020	6/16/2020		KOE will have EOR sign off on disposition week of 3/16/2020. Expect to use as is and close NCR at same time.	3/23/20 Resubmi	CLOSED		72	88	
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						41	9	
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.				41	9	
0039	During driving of concrete piles obstructions were encountered and forced one (1) pile (5951-L-DP-14) 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	3/20/2020			6/8/2020	4/17/2020	4/14/2020	6/8/2020		KOE will have EOR sign off on disposition week of 3/16/2020. Expect to use as is and close NCR at same time.	3/23/20 Resubmi	CLOSED		72	80	
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						41	2	
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"		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		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				84	8	
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 continued as if there was a 5' casing in the spot where there was actually a 10' casing, therefore resulting in an additional 5' being drilled.	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							29	5
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 grout volume for the pile was 127% of the theoretical volume, which is in line with where we would expect it to be. The installation of pile 5870-M-MP-07 is acceptable.	Action to prevent recurrence: Construction shall not proceed with an issue without some written form of documentation.	1/31/2020	1/31/2020			2/3/2020			3/11/2020							0	3
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			6/26/2020		6/26/2020	6/26/2020		NG requesting a RCA to be performed for the safety factor				4	94	
0045	Micropile 5871-D-MP-02 was found during as-builts to be drilled out of tolerance	Use-As-Is	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	5/1/2020			5/28/2020	5/15/2020	5/11/2020	6/17/2020						27	17	
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	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			5/28/2020	5/15/2020	5/11/2020	6/17/2020						27	17	
0047	Ductbank foundation #2 (Ductbank #3) was backfilled with structural fill at 87% compressive strength. The guide for form removal, curing and loading of concrete specifies a strength of 100% before it can be backfill with structural fill material.	RFI-000153 was not thoroughly reviewed prior to directing backfill. RFI-000153 was approved specifying the use of CLSM to backfill UG foundations at 70%, but did not mention structural backfill.	Kiewit	Construction		Construction to submit a revision to RFI-000153 clarifying that both CLSM and structural backfill may be used to backfill to top of concrete at 70% concrete compressive strength.	Audit of field work packages to ensure all applicable RFIs are included. Field staff and foremen to review all RFIs applicable to their scope of work.	6/3/2020	6/5/2020			6/5/2020		6/5/2020	6/24/2020							2	0
0048	After removal of the forms for the PDC column pedestals it was found that there was areas of concrete that wasn't completely consolidated	Engineer develop a repair procedure, which includes the removal of unconsolidated material and place back with an approved Grout/Concrete Product.	Kiewit	Construction		Lack of training on use of external vibrators. Initial plan did not address weight of Embeds, Material receiving process. Clash between anchor bolts and siting of the PDC not discovered all 4 weeks prior to pour & Order embeds prior to final design.	Training on new tool, Through workplan review. Workplans developed in advance of start of work (goal 8 weeks), RE-Train on Material Receiving process & RFIs to be published to the field workplans audited for RFIs and Current Drawings.	6/3/2020	7/1/2020			7/8/2020		7/8/2020	7/29/2020		7/15 DENNIS REJECT TILL SUPPLEMENTAL STEEL IS ERECTED. STEEL ERECTION START #3 COMPLETE 8/7 7/22 attach RFI to NCR resubmit for closure-Cameron 7/29 need to send out.				28	7	
0049	Embed Plates called out in RFI-000161 were fabricated by a welder qualified only to 3/4" thickness, and actual welds were 1" thickness.		Kiewit	Construction		Review for acceptance and use-as-is with after-the-fact welder qualification.		6/20/2020	7/1/2020			7/8/2020			7/8/2020		7/22 EMR Supplemental Steel Erection Must Be complete to close NCR.	OPEN			11	7	
0050	In the area of the nitrogen access road, reusable on-site soils were placed and not structural fill. There is concern that on-site reusable soils were placed beneath the roadway.	Limits of the roadway are to be laid out and verified by survey so that the areas needing structural fill can be clearly marked. Only structural fill material will be placed underneath this roadway section which is in line with the Civil Earthwork Specification, Sec 4.12 of the earthwork spec. Only Structural Fill shall be placed under concrete mat foundations, pile caps, spread footings, vaults, other shallow foundations, and paved areas.	Kiewit	Construction		The limits of the road where not marked out prior to placement of fill materials. Due to the mass quantity of fill needed to bring the area up to finish grade, both underneath the roadway section and the surrounding areas, a bulldozer was used to push material and place an approx. 1 ft lift of on-site reusable fill. Since the roadway limits were not clearly marked, there is concern that on-site reusable fill materials were incorrectly placed beneath the roadway.	Action to prevent recurrence includes the initial layout of areas needing only structural fill prior to the placement of on-site reusable fill.	6/24/2020	6/30/2020			7/1/2020		7/9/2020	7/9/2020						6	1	
0051	Cold Box Heat Exchanger		Kiewit	OSSQ	APCI	Re-fabricate		6/30/2020	7/22/2020			7/23/2020			7/22/2020		7/22 EMR need to send Disposition review to NG	OPEN			22	1	
0052	Shipment of Material with Open NCR		Kiewit	OSSQ	PH	Structural Steel Rejected and sent off-site		7/20/2020	7/22/2020					8/5/2020	8/5/2020		7/28 EMR sent to NG for Disposition Review 7/28 EMR sent to NG for disposition 7/22	CLOSED			2	-44034	
0053	Aether Skid Q-Sonic Ultrasonic Flowmeter Material country of origin.	under review by engineering	Kiewit	OSSQ	Aether	TBD		7/28/2020									8/5 - EMR working for replacement/disposition 8/19 EMR Issue USE AS IS with supplement information from VICE and sign.	OPEN					

Non-Conformance Log

NCR No.	Description	Recommended Corrective Action	Type (Internal / Supplier / Client)	Action By	Vendor	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	General Comments	ACTIVE	NGWP Activity	Disposition Submitted to Client for Approval	Disposition Sent For Approval	Submitted for Closure and Approved
0054	ACC Booster Compressor - NDE % & Missing Charpy		Kiewit	OSSQ	ACC			7/31/2020	8/19/2020													
0055	Cold Box Aluminum WPSs will not be included in Final Doc Pack due to vendor placing proprietary stamp on them.		Kiewit	OSSQ	APCI	Vendor will allow review @ fabrication facility of the Aluminum WPSs by Kiewit and NG. After acceptable review submit a COC in lieu of actual WPS in the final package.	Communicate all client requirements down to all vendors and sub prior to fabrication	8/12/2020								8/5 - EMR drafting 8/19 EMR write up disposition - Kiewit to review unredacted review. Redacted version with Letter stating review from Kiewit in final package. Client option to attend if they can. Noble to set up WPS review with Justin M.		OPEN				
0056	UOP 3 point inspection not completed per NGWP	Use-As-Is	Kiewit	OSSQ	UOP	Use As Is		8/19/2020	8/25/2020													
0057	Chart Industries did not provide proper NDE on the Thermal Vaporizer	Use-As-Is	Kiewit	OSSQ	CHART	Chart to perform additional NDE to meet the required % as required by NGWP		8/19/2020	8/25/2020													
0058	APCI 3 point inspection not completed per NGWP	Use-As-Is	Kiewit	OSSQ	APCI	Use As Is		8/19/2020	8/25/2020													