



April 1, 2021

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 March 2021

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 March 2021 reporting period.

Pursuant to Section 388.113 of the Commission’s regulations, National Grid requests nonpublic treatment of the CEII documents contained in this submission so marked. The materials marked as “CUI//CEII” concern specific engineering and design information about the proposed liquefaction facilities that is customarily treated by the Commission as critical energy infrastructure information because it could be useful to a person planning an attack on critical infrastructure. The proposed Project once constructed will meet the definition of critical infrastructure in Section 388.113(c)(4) of the Commission’s regulations. National Grid requests that the marked CUI//CEII material maintain that designation for the duration of this proceeding or the life of the facility, whichever is later. A form of protective agreement was filed as Exhibit Z-1 to the certificate application and appears at Accession No. 20160401-5169.

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

Respectfully submitted,

/s/ Patrick A. Chaney

Patrick A. Chaney
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cc: Service List

MONTHLY STATUS REPORT FOR MARCH 2021

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 March 2021.

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 March 2021:

- Training in the Environmental Inspector (“EI”) duties occurred five (5) 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.
- Received and Set:
 - LN2 Vaporizers
- Continued with Pipe Installation: N/S Rack, E/W Rack, Compressor Building, E/W N2 sleeper rack, Pre-Treatment, Metering Skid
- Continued installation of Cable Tray along N/S and E/W Pipe Racks
- Continue Pulling Cable

Work Planned for April 2021:

- Receive and Set:
 - Remaining LN2 Storage equipment
- Continue with Pipe Installation: N/S Rack, E/W Rack, Compressor Building, E/W N2 sleeper rack, Pre-Treatment, Metering Skid
- Complete installation of Cable Tray along N/S and E/W Pipe Racks
- Continue Pulling Cable
- Mobilization for Earthwork and Support of Excavation on Area J, inside the berm

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
02/26/2021	Unlabeled drum	Proper labeling applied to drum	02/26/2021	Effective, drum labeled.

SPECIAL INSPECTOR'S WEEKLY REPORTS

[SUBMITTED AS A SEPARATE FILE]

**CUI//CEII
CRITICAL ENERGY INFRASTRUCTURE INFORMATION
REMOVED PURSUANT TO 18 C.F.R. §388.113**

ATTACHMENT

NON-CONFORMANCE REGISTERS

National Grid NON-CONFORMANCE REGISTER



Project #: 90000130901

Project Name: Field Point Liquefaction Project Providence, RI

NCR Ref:	NCR Description	Agreed NCR Corrective Action	Date of Agreed Disposition	Date of Closure	Probable Cause	Discipline
SR010-RPT-001	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	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	07/31/19	9-30-2020	Vendor	Procurement
SR010-RPT-002	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	11/15/19	6/3/2020	Engineering	Engineering
SR010-RPT-003	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	07/31/19	09/27/19	Procurement	Vendor
SR010-RPT-004	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.	09/09/19	09/09/19	Contractor	Construction
SR010-RPT-005	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	08/27/19	09/27/19	Engineering	Engineering
SR010-RPT-006	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	10/21/19	10/21/19	Quality	Quality
SR010-RPT-007	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.	11/15/19	05/28/20	Procurement	Quality
SR010-RPT-008	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	09/27/19	09/27/19	Engineering	Engineering

National Grid NON-CONFORMANCE REGISTER



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NCR Ref:	NCR Description	Agreed NCR Corrective Action	Date of Agreed Disposition	Date of Closure	Probable Cause	Discipline
SR010-RPT-009	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.	11/15/19	05/29/20	OSSQ	OSSQ
SR010-RPT-010	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	08/08/19	09/27/19	Procurement	Procurement
SR010-RPT-011	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.	01/15/20	01/15/20	Engineering	Engineering
SR010-RPT-012	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	05/21/20	05/28/20	OSSQ	Procurement
SR010-RPT-013 R2	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	04/13/20	05/28/20	Vendor	Vendor
SR010-RPT-014r1	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	09/27/19	11/15/19	Vendor	Vendor

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SR010-RPT-015 R2	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.	04/13/20	6/22/2020	Vendor	Vendor
SR010-RPT-016	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.	05/28/20	11/13/20	Vendor	Procurement
SR010-RPT-017	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.	05/28/20	10-6-2020	Vendor	Procurement
SR010-RPT-018	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	09/27/19	11/15/19	Procurement	Procurement
SR010-RPT-019	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	11/15/19	06/04/20	Procurement	OSSQ
SR010-RPT-020	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.	11/15/19	11/15/19	Contractor	Construction
SR010-RPT-021	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	04/03/20	6/23/2020	Contractor	Construction

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NCR Ref:	NCR Description	Agreed NCR Corrective Action	Date of Agreed Disposition	Date of Closure	Probable Cause	Discipline
SR010-RPT-022	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	01/07/20	01/07/20	Contractor	Construction
SR010-RPT-023	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.	11/15/19	7/8/2020	Vendor	OSSQ
SR010-RPT-024	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	05/20/20	5-21-2020	Contractor	OSSQ
SR010-RPT-025	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.	05/20/20	5/26/2020	OSSQ	OSSQ

National Grid NON-CONFORMANCE REGISTER



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NCR Ref:	NCR Description	Agreed NCR Corrective Action	Date of Agreed Disposition	Date of Closure	Probable Cause	Discipline
SR010-RPT-026	<p>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.</p>	<p>Rebuild and replace tube bundle performing all required testing as per the contractual requirements.</p>	05/26/20	6/8/2020	Vendor	OSSQ
SR010-RPT-027	<p>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</p>	<p>Rebuild and replace tube bundle performing all required testing as per the contractual requirements.</p>	05/26/20	6/8/2020	Vendor	OSSQ
SR010-RPT-028	<p>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.</p>	<p>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.</p>	05/27/20	7/8/2020	Quality	Quality
SR010-RPT-029	<p>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.</p>	<p>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.</p>	04/10/20	6/4/2020	Quality	Quality

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NCR Ref:	NCR Description	Agreed NCR Corrective Action	Date of Agreed Disposition	Date of Closure	Probable Cause	Discipline
SR010-RPT-030	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.	04/22/20	5/29/2020	Procurement	OSSQ
SR010-RPT-031	<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	04/20/20	5/29/2020	Engineering	Engineering
SR010-RPT-032	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.	04/02/20	7/8/2020	Contractor	Construction
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.	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

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NCR Ref:	NCR Description	Agreed NCR Corrective Action	Date of Agreed Disposition	Date of Closure	Probable Cause	Discipline
SR010-RPT-034	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.	05/26/20	5/28/2020	Quality	Quality
SR010-RPT-035	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	05/26/20	7/17/2020	OSSQ	OSSQ
SR010-RPT-036	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.	05/29/20	5/29/2020	Project Management	Project Management
SR010-RPT-037	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).	04/10/20	5/29/2020	Engineering	Engineering

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NCR Ref:	NCR Description	Agreed NCR Corrective Action	Date of Agreed Disposition	Date of Closure	Probable Cause	Discipline
SR010-RPT-038	Section 2.25 Design and Engineering Work paragraph (f) of the contract states <u>As Built Drawings and Specifications</u> During construction, Contractor shall keep a <u>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.	04/03/20	6/3/2020	Engineering	Engineering
SR010-RPT-039	Section 3.3 Engineering Design listed under the Scope of Work states : " <u>Development of up-to-date equipment lists, Drawings, specification0s, and requisition schedules. Frequency to be agreed with Owner as appropriate</u> ". 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	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 <u>102761-B-DMT-PRO-001 FPLP Document Control Procedure</u> 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	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.	04/01/20	7/8/2020	Project Management	Construction
SR010-RPT-042	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

National Grid NON-CONFORMANCE REGISTER



Project #: 90000130901

Project Name: Field Point Liquefaction Project Providence, RI

NCR Ref:	NCR Description	Agreed NCR Corrective Action	Date of Agreed Disposition	Date of Closure	Probable Cause	Discipline
SR010-RPT-043	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	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	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	8-13-2020	Procurement	OSSQ
SR010-RPT-046	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.	06/24/20	01/07/21	Procurement	Quality
SR010-RPT-047	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.	6/2/2020	8/18/2020	Contractor	Quality

National Grid NON-CONFORMANCE REGISTER



Project #: 90000130901

Project Name: Field Point Liquefaction Project Providence, RI

NCR Ref:	NCR Description	Agreed NCR Corrective Action	Date of Agreed Disposition	Date of Closure	Probable Cause	Discipline
SR010-RPT-048	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	10/15/2020	Contractor	Construction
SR010-RPT-049	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	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	7/15/2020	07/15/20	Vendor	OSSQ
SR010-RPT-051	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.	8/14/2020	8/14/2020	Vendor	OSSQ
SR10-RPT-052	Kiewit Specification 102761-B-MEC-SPC-0007 shows ASTM A182 fittings and flanges are allowed but Note (2) in the Fluid Limitation section states that material sourced from the Peoples Republic of China is not allowed for hazardous systems including but not limited to Fuel Gas, Feed Gas...etc. The Q-Sonic flow meter housing and various components show the material was manufactured in China as shown by the Material Test Reports.	Remove and replace the flow meter with a Q-sonic flow meter with non-Chinese materials per the project specifications.	01/07/21	01/07/21	Vendor	OSSQ

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Project #: 90000130901

Project Name: Field Point Liquefaction Project Providence, RI

NCR Ref:	NCR Description	Agreed NCR Corrective Action	Date of Agreed Disposition	Date of Closure	Probable Cause	Discipline
SR010-RPT-053	(1) APCI Line List shows line 2402 as a Nitrogen Service with a maximum design pressure of 1100 PSIG. (2) Kiewit's "Pressure Containing Material Sourced from The People's Republic of China Specification" 102761-B-MEC-SPC-007 under the notes section, states " Materials not specifically listed in this table are not allowed to be sourced from the People's Republic of China, unless specifically approved by the Contractor" (3) The Specification only allows P8-Stainless Steel Piping material under (500 psig) design pressure (higher pressures are not included for this material grade.)	Remove and replace the non-compliant material with non-Chinese material or a compliant project specific material which is acceptable	01/08/21	01/08/21	Vendor	OSSQ
SR010-RPT-054	Patterson Horth/Nucor drawings RXB010, RXB020, RXB030, RXB040 AND RXB050 show a vertical gusset weld detail with a (3/16") fillet weld 2-6" staggered on both sides of the gusset. The weld out did not meet this requirement which resulted in a weld-out of 2-12" on each side of the gusset, The attached pictures show the actual weld which is not compliant with the shop drawing weld detail.	Additional welds will be required to meet the shop detail of (3/16") fillet 2-6 staggered weld. Galvanizing is required to be completely removed to bare metal a minimum of 2-3" from the weld area and after acceptance of the final weld the welded area shall be coated with a cold galvanizing component.	10/8/20	10/21/20	Vendor	OSSQ
SR010-RPT-055	Section 4.9 Units and Scale Ratio's of the Contract Scope of Wok states "Weights and measures shall be in the English system and all instruments such as pressure gauges, thermometers, etc., shall be graduated in English units as the primary scale" The ABB Transformer's oil temperature gauge is calibrated in Celsius units.	Replace the non-compliant temperature monitors with the proper scale as per the contract requirements.	10/20/2020	Open	Vendor	OSSQ
SR010-RPT-056	The East West Pipe Rack Structural Steel Erection Sequence document 102761-B-STR-MEM-7101 Rev 1 states in the Exclusion and deviation for erection up to 34 ft TOS EL (bullet item #2) The valve access platform to the south of column line A between column lines 6 & 7 shall not be erected at this stage. This exclusion is based on completion of the 31' level and having the pipe craft install the piping prior to installation of the access platform.	A root cause analysis was performed and a Corrective Action Report detailing the plan to prevent recurrence has been developed. Please see CAR 003 for details of the cause and corrective actions to be implemented to prevent recurrence. The CAR will stay open until the corrective actions prove effective.	01/07/21	01/07/21	Contractor	Construction
SR010-RPT-057	Field construction attempted to install Column A-1 for the Compressor Building and were unable to complete the task because of rebar interference with the column key. The field construction commenced cutting the interfering rebar with a Sawzall before receiving authorization from Engineering to perform this task. See picture below. Changes made to design require Engineering written approval prior to performing work.	Engineering is to evaluate the cut rebar and determine if corrective action is required. Kiewit to perform a Root Cause Analysis to investigate the continuing action of performing work without written authorization and submit to National Grid for review and approval.	10/21/20	10/21/20	Contractor	Construction
SR010-RPT-058	Catch Basin CB107 was installed and found not to comply with project specifications resulting in the outlet opening being (1.8") higher than project requirements. This discrepancy changes the system invert elevation and has a potential impact on the overall storm water system operation. .	Kiewit's Civil engineer re-ran the Sewer and Sanitary Analysis (SSA) incorporating the change in CB-107 elevation. His analysis confirms that the change in invert elevation does not affect the sizes of underground pipes or storm water management. The calculation was reviewed and verified by National Grid Environmental. Re, RFI 000232	01/28/21	02/04/21	Contractor	Construction

National Grid NON-CONFORMANCE REGISTER



Project #: 90000130901

Project Name: Field Point Liquefaction Project Providence, RI

NCR Ref:	NCR Description	Agreed NCR Corrective Action	Date of Agreed Disposition	Date of Closure	Probable Cause	Discipline
SR010-RPT-059	Kiewit submitted a red-line drawings (see attached) that will change the original grounding grid design around the E/W Pipe rack. The drawing and changes have not been released by Kiewit Engineering and a RFI supporting the changes has not been submitted to National Grid for review and approval.	Kiewit Engineering shall review the proposed changes and submit a RFI to National Grid for review with proposed red-line drawing, showing the necessary changes to be made.	Open	Open	Contractor	Construction
SR010-RPT-060	Prime Contract 4400005216 Scope of Work Section 4.12 Erection Procedure states "The Contractor shall submit copies of the erection procedure for all LNG Facility equipment and systems to the Owner's Representative for information prior to such erection being carried out on the Work Site." National Grid requested a N/S Pipe Rack Erection Sequence and was told Kiewit did not have a final copy for distribution at the time. A period of several days transpired without a submittal of the procedure and Kiewit continued to erect the N/S Pipe rack which is in violation of the Contract as noted above.	Voided	Voided	Voided	Contractor	Construction
SR010-RPT-061	Prime Contract 4400005216 Scope of Work Section 4.12 requires the Contractor to submit copies of the erection procedure for all LNG Facility equipment and systems to the owner's representative prior to such erection being carried out on the work site. Additional requirements are addressed in Section 3.21.2 which requires the Contractor to submit detailed method statements and risk assessments to be prepared and made available to the owner for review and comment at least one week in advance of the commencement of the related Work Site construction activities. Kiewit has placed several pieces of equipment on the project without submitting the required erection procedures.	Kiewit is to follow the Contract requirements as listed in Section 4.12 and Section 3.21.2 by providing detailed method stated and risk assessments to Nation Grid at least one week in advance of the construction activities. These method statements shall be required for erection of all LNG Facility Equipment and systems as noted in Section 4.12	01/11/21	01/11/21	Contractor	Construction
SR010-RPT-062	The Atlas Copco Equipment Preservation Plan for the Feed Gas Booster Compressor - L0309 requires in Section 5.3.2 that the equipment must be covered with a tarp or tent to shed to protect the equipment from the elements. There should be no standing water beneath the equipment and the tarp should not have direct contact with the equipment. The Booster Compressor was received on site and proper storage in accordance with the Compressor Preservation Plan was not in place upon receipt and has remained deficient as of this writing.	Follow the complete set of requirements for the storage of the Booster Compressor as noted in the Lay-Up Plan for the L-0309 Compressor. Hold a pre-activity meeting within a week of equipment arrival to cover requirements for the initial inspection, preservation and rigging/setting plan. Built Tent per section 5.3.2 of the ACC preservation requirements. Compressore was set on 10/7/2020; Covered with temp tarp on 10/8/2020; semi permanent scaffold and cover completed on 10/10/2020.	12/03/20	12/07/20	Contractor	Construction

NCR No.	Title	Description	Recommended Corrective Action	Type (Internal / Supplier / Client)	Disposition	Disposition & Required Actions	Recommended Preventative Actions	ACTIVE
0001	Concrete Driven Pile DP-13 out of tolerance	Concrete Driven Pile DP-13 hit an obstruction and shifted during operation and casing pile to be approximately 2.4744' out of tolerance per specification at 6"	N/A	Kiewit	Use-As-Is	EOR approval for out of tolerance per specification	No action to be taken	CLOSED
0002	Damaged Concrete Driven Pile DP-70	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 side of the column, extending from the break.	A single additional pile must be driven adjacent to this pile. The pile(new) may be driven on any side based on access. Spacing to damaged pile may be as close as 28 inches.	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	CLOSED
0003	Driven Pile DP-113 Exceeding plumbness tolerance	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.	N/A	Kiewit	Rework	Rejected piles shall be corrected as directed by the engineer of record.	See NCR for details	CLOSED
0004	GCAW Regeneration Gas Separator LDD-1011	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	Kiewit	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.	CLOSED
0005	GCA Adsorber L-1000A	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 (Interm.) and Acrolon 218 HS (Finish) 200 degree Fahrenheit system.	Would like to be present at the commencement of painting	Kiewit	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.	CLOSED
0006	GCAW Adsorber L-1000B 30Nov2017	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 (Interm.) and Acrolon 218 HS (Finish) 200 degree Fahrenheit system.	Would like to be present at the commencement of painting	Kiewit	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.	CLOSED
0007	GCAW Adsorber L-1000C 30Nov2017	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 (Interm.) and Acrolon 218 HS (Finish) 200 degree Fahrenheit system.	Would like to be present at the commencement of painting	Kiewit	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.	CLOSED
0008	Particle Filter LDS - 1010 A	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 reworked. Re-coating shall be performed as per 102761-B-MEC-SPC-0069 AND 0070	Kiewit	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.	CLOSED
0009	Particle Filter LDS - 1010 B	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 reworked. Re-coating shall be performed as per 102761-B-MEC-SPC-0069 AND 0070	Kiewit	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.	CLOSED
0010	Pressure Testing to NFPA 59A 2001 Edition 7	Failure to meet pressure testing requirements as outlined in specification NFPA 59A 2001 Edition	See Disposition & Required Actions	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	CLOSED
0011	APCI Care and Preservation	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-01776 Ref. CMD-01776 & CMD-01776 have not been followed and subsequently documented.210 & K-220	See Disposition & Required Actions	Kiewit	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	CLOSED
0012	APCI Care and Preservation	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.	See Disposition & Required Actions	Kiewit	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. 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	CLOSED
0013	APCI Care and Preservation	The equipment maintenance and preservation for Air Cooled Heat Exchangers E-2131, E-2141, E-2151, & E-2155 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	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	CLOSED
0014	Voids in two concrete driven piles	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.	See Disposition & Required Actions	Kiewit	Repair	Repair to Standard - Recommend using Sikadur 42, Grout-pak Pt, per manufacturers 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.	CLOSED
0015	Stabilization wall area A east	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.	See Disposition & Required Actions	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.	CLOSED
0016	Driven Pile Location Group 1 Stabilization Wall West Side	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.	N/A	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.	CLOSED
0017	Duct Bank Failed Air Content	Air Content was observed as being 3.3% per the required 4.5%-7.5%. Resulting in failure per the mix design.	N/A	Kiewit	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.	CLOSED
0018	Duct Bank Failed Air Content	Air Content was observed as being 4.0% per the required 4.5%-7.5%. Resulting in failure per the mix design.	N/A	Kiewit	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.	CLOSED
0019	UOP/GCAW Volumetric Examination	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 photographs 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	See Disposition & Required Actions	Kiewit	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 recoring 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. OSSO oversight of proper film and documentation reviews performed during in-process inspections.	CLOSED
0020 R1	Rejected Fill	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.	See Disposition & Required Actions	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.	CLOSED
0021	16" Pile Cutoff	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.	N/A	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.	CLOSED
0022	Pile Tension Connector Sleeves (DP-D)	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 +18"	N/A	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.	CLOSED
0023	Duct Bank Underground Utility Warning Tape	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."	N/A	Kiewit	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.	CLOSED
0024	Delivery of Non-Conforming 1/2 Dense Grade Fill Material	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	See Disposition & Required Actions	Kiewit	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.	CLOSED
0025	Air Cooled Heat Exchanger	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	Rework	Retest Heat Exchanger to correct Pressure	Verify the supplier follows test requirements	CLOSED
0026	LDE 1021 A/B Gas Heaters	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, borescope will be required where applicable. 3. ITP shall be submitted by UOP/Taylor Forge including VLT hold point and final inspection of vessels before shipment.	Kiewit	Use-As-Is	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 issued via the hold point from the ITP.	See NCR for details	CLOSED
0027	Temperature of Concrete	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 59 deg. F, which is not acceptable per ACI 301/ASTM C1064.	Ask EOR to review and accept concrete as-is.	Kiewit	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.	CLOSED
0028	Pile Cut Off Below Proposed Elevation	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	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/drill at motocut 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.	CLOSED
0029	Centerbars Out Of Tolerance	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.	N/A	Kiewit	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.	CLOSED
0030	Area D Driven Piles Out of Tolerance	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.	The two (2) out-of-tolerance piles 5900-D-DP-01 and 5900-D-DP-06 to NOT have to be rejected/scrapped and shall be used as installed. The drawing "PR-LNG-Diversion Trench FDN Loc Plan & Secs" dwg No. 102761-B-00-0000-STR-SF-5906 will be modified accordingly to accommodate this non-conformance.	Kiewit	Disposition and Action to be taken per engineering's recommendation and path forward.	Disposition and Action to be taken per engineering's recommendation and path forward.	Piles hit an obstruction.	CLOSED
0031	Area D Driven Piles Out of Tolerance	During driving of concrete piles obstructions were encountered and forced seventeen (17) piles (5871-D-DP-04, 5871-D-DP-05, 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-44, 5871-D-DP-45) out of tolerance and two (2) (5871-D-DP-03 & 5871-D-DP-08) piles out of plumb.	The 19 out of tolerance and out of plumb piles, seventeen (17) piles (5871-D-DP-04, 5871-D-DP-05, 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-44, 5871-D-DP-45) out of tolerance and two (2) (5871-D-DP-03 & 5871-D-DP-08) do NOT need to be rejected/scrapped and shall be used as installed since the As-Built piles piles do not affect the allowable lateral and vertical capacities of the piles.	Kiewit	Disposition and Action to be taken per engineering's recommendation and path forward.	Disposition and Action to be taken per engineering's recommendation and path forward.	Piles hit an obstruction.	CLOSED
0032	Area F Driven Piles Out of Tolerance	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.	The six (6) 95620-F-DP-06, 5620-F-DP-12, 5620-F-DP-21, 5620-F-DP-24, 5620-F-DP-27, 5620-F-DP-28) do NOT have to be rejected/trapped and shall be used as installed. Pile 5620-F-DP-31 has been abandoned as per RFI 79.	Kiewit	Reject/Scrap OR Use-As-Is	Disposition and Action to be taken per engineering's recommendation and path forward.	Piles hit an obstruction.	CLOSED

NCR No.	Title	Description	Recommended Corrective Action	Type (Internal / Supplier / Client)	Disposition	Disposition & Required Actions	Recommended Preventative Actions	ACTIVE
0033	Area F Driven Piles Not Meeting Driving Criteria per 25ft Embedment.	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.	N/A	Kiewit	Use-As-Is	Disposition and Action to be taken per engineering's recommendation and path forward.	Piles hit an obstruction.	CLOSED
0034	Area F Driven Piles Out of Tolerance	During driving of concrete piles obstructions were encountered and forced one (1) pile (5640-F-DP-03) out of tolerance.	The out-of-tolerance pile 5640-F-DP-03 does NOT have to be scrapped/rejected and shall be used as installed. The drawing "Compressor Lube Oil Cooler Piling Location Plan" dwg No. 102761-00-0000-STR-5640 rev1 updated 09-25-19 represents the latest piling location plan.	Kiewit	Reject/Scrap OR Use-As-Is	Disposition and Action to be taken per engineering's recommendation and path forward.	Piles hit an obstruction.	CLOSED
0035	Area G Driven Piles Out of Tolerance	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.	The five (5) out of tolerance piles 5560-G-DP-01; 5560-G-DP-03; 5560-G-DP-04B; 5560-G-DP-05B; & 5560-G-DP-09 do NOT have to be rejected/scrapped and shall be used as installed. The Drawing "Hot Oil System Piling Location Plan" dwg 102761-B-00-0000-STR-SF-5560 rev 2 dated 02-14-20 represents the latest piling location plan.	Kiewit	Reject/Scrap OR Use-As-Is	Disposition and Action to be taken per engineering's recommendation and path forward.	Piles hit an obstruction.	CLOSED
0036	Area I Driven Piles Out of Tolerance	During driving of concrete piles obstructions were encountered and forced one (1) pile (5980-I-DP-09) out of tolerance.	The one (1) out-of-tolerance pile 5980-I-DP-09 does NOT have to be rejected/scrapped and shall be used as installed. The drawing "N2 Storage aSUPT Sleepers Piling Location Plan" dwg No. 102761-B-00-0000-STR-5980 rev1 and "N2 Storage SUPT Sleepers Fdn Plan & Sects" dwg No. 102761-B-00-0000-STR-SF-5985 rev1 dated 1-21-20 have been modified accordingly to accommodate the non-conformance.	Kiewit	Reject/Scrap OR Use-As-Is	Disposition and Action to be taken per engineering's recommendation and path forward.	Piles hit an obstruction.	CLOSED
0037	Area L Driven Piles Out of Tolerance	During driving of concrete piles obstructions were encountered and forced two (2) piles (5952-L-DP-03 & 5952-L-DP-09) out of tolerance.	The two (2) out-of-tolerance piles 5952-L-DP-03 & 5952-L-DP-09 do NOT have to be rejected/scrapped and shall be used as installed. The drawing "UG SUPT Foundation Location Plan & Sects" dwg No. 102761-B-00-0000-STR-SF-5955 will be modified accordingly to accommodate this non-conformance.	Kiewit	Reject/Scrap OR Use-As-Is	Disposition and Action to be taken per engineering's recommendation and path forward.	Piles hit an obstruction.	CLOSED
0038	Area L driven Piles Out of Tolerance	During driving of concrete piles obstructions were encountered and forced two (2) piles (5953-L-DP-19 & 5953-L-DP-21) out of tolerance.	Based on the "Reference Documentation" in the title block above, the out-of-tolerance piles should be 5953-L-DP 19 and 5953-L-DP-21. The two (2) out of tolerance piles 5953-L-DP 19 and 5953-L-DP-21 do NOT have to be rejected/scrapped and shall be used as installed. The drawing "UG SUPT Foundation Location Plan, Details & Sects" Dwg No.'s 102761-B-00-0000-STR-SF-5957 and ST-5958 will be modified accordingly to accommodate this non-conformance.	Kiewit	Reject/Scrap OR Use-As-Is	Disposition and Action to be taken per engineering's recommendation and path forward.	Piles hit an obstruction.	CLOSED
0039	Area L Driven Piles Out of Tolerance	During driving of concrete piles obstructions were encountered and forced one (1) pile (5951-L-DP-14) out of tolerance.	The one (1) out-of-tolerance pile 5951-L-DP-14 does NOT have to be rejected/scrapped and shall be used as installed. The drawings "UG SUPT FDN Piling Location Plan, Det. Sect" dwg No. 102761-B-00-0000-STR-5951 rev2 dated 1-17-20, "UG SUPT Fdn Location Plan, Det's & Sects" dwg No. 102761-B-00-0000-STR-SF-5955 rev2 dated 1-16-20 have been modified accordingly to accommodate this non-conformance.	Kiewit	Reject/Scrap OR Use-As-Is	Disposition and Action to be taken per engineering's recommendation and path forward.	Piles hit an obstruction.	CLOSED
0040	Area M Driven Piles Out of Tolerance	During driving of concrete piles obstructions were encountered and forced two (2) piles (5870-M-DP-03 & 5870-M-DP-09) out of tolerance.	The two (2) out-of-tolerance piles 5870-M-DP-03 & 5870-M-DP-09 do NOT have to be rejected/scrapped and shall be used as installed. In this case ONLY, the out-of-tolerance installation of the piles did not affect the edge distance, center-to-center spacing between piles, and did not affect the capacity, thereby no changes are required to the foundation design calculations and drawings.	Kiewit	Reject/Scrap OR Use-As-Is	Disposition and Action to be taken per engineering's recommendation and path forward.	Piles hit an obstruction.	CLOSED
0041	Pile Tension Connector Sleeves	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"	N/A	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.	CLOSED
0042	Additional Dept Drilled on 5870-MP-03	5870-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.	N/A	Kiewit	Use-As-Is	Started drilling micropile 5870-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-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.	CLOSED
0043	Recommendation vs Resolution	After drilling Micropile 5870-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 ground requirement. Recommendation per RFI was not followed per the Engineers approved resolution.	N/A	Kiewit	Use-As-Is	Based on the daily report for Dec. 17th and subsequent conversations with on-site personnel, micropile 5870-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-MP-07 is acceptable.	Action to prevent recurrence: Construction shall not proceed with an issue without some written form of documentation.	CLOSED
0044	Damage to Duct Bank #5	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.	See Disposition & Required Actions	Kiewit	Repair to standard	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	CLOSED
0045	5871-D-MP-02 out of 3' tolerance.	Micropile 5871-D-MP-02 was found during as-builts to be drilled out of tolerance	N/A	Kiewit	Use-As-Is	Crew will use 2 spotters when relocating the rig to ensure pin locations are not impacted. Survey crew will verify pin locations if any ground movement or other impacts are identified.	moving to 2 spotters to watch rig so we don't push pins and final verification by Superintendent of drill box location before drilling.	CLOSED
0046	5570-B-MP-35 and 5570-B-MP-37 out of tolerance 3'	Micropile 5570-B-MP-35 and 5570-B-MP-37 was found during as-builts to be drilled out of tolerance	N/A	Kiewit	Use-As-Is	Crew will use 2 spotters when relocating the rig to ensure pin locations are not impacted. Survey crew will verify pin locations if any ground movement or other impacts are identified.	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.	CLOSED
0047	Duct Bank Foundation #2 Backfill	Duct bank foundation #2 (Duct bank #3) was backfilled with structural fill at 87% compressive strength. The guide for form removal, curing and loading of concrete specifies a compressive 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	Use-As-Is	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 before their scope of work.	CLOSED
0048	Unconsolidated Concrete on PDC Pedestals	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	Repair to standard	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 till 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 audit for RFIs and Current Drawings.	CLOSED
0049	PDC Embed Plates - Welders Pre-Qual	Embed Plates called out in RFI-000161 were fabricated by a welder qualified only to 3/4" thickness, and actual welds were 1" thickness.	N/A	Kiewit	Use-As-Is	Review for acceptance and use-as-is with after-the-fact welder qualification.	See NCR for details	CLOSED
0050	Misplacement of On-Site Reusable Fill Materials	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	Repair to standard	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.	CLOSED
0051	Cold Box Heat Exchanger Non-Compliance	Cold Box Heat Exchanger. See actual NCR for detailed description.	See Disposition & Required Actions	Kiewit	Rework	Re-fabricate	See NCR for details	CLOSED
0052	Shipment to NUCOR material with Open NCR	Shipment of Material with Open NCR	See Disposition & Required Actions	Kiewit	Rework	Structural Steel Rejected and sent off-site	See NCR for details	CLOSED
0053 R2	Aether Skid Q-Sonic Ultrasonic Flowmeter - Material country of origin	Aether Skid Q-Sonic Ultrasonic Flowmeter has pressure retaining components that originate from the People's Republic of China (PRC). This violates Kiewit specification 102761-B-MEC-SPC-0007 (Pressure Containing Material Sourced from The People's Republic of China Specification). Chinese material is not permitted for hazardous systems per note 2 of appendix 2. The flowmeter system is for Feed gas and is therefore hazardous.	See Disposition & Required Actions	Kiewit	Remove and Replace	Remove and Replace	Kiewit shall amend specification to remove note (2) of appendix 2 and allow PRC sourced materials on a case-by-case. Basis with engineering approval.	CLOSED
0054 R4	ACC Booster Compressor - Missing Charpy & Inconel NDE %	ACC performed Charpy Impact Testing on carbon steel welding procedure for the weld metal and heat affected zone for the Booster Compressor in accordance with the Kiewit Detailed Design Criteria, ASME B31.3, the Contract and the National Grid Weld Policy. ACC did not perform Charpy impact testing for the base metal as described in the National Grid Weld Policy Section 5 Content; Subsection 5.1 Scope; Paragraph d. Procedures; Subsection 2) Testing; Subparagraph 1. Charpy V-Notch Toughness testing of the base metal and base metal heat affected zone in accordance with the requirements of ASME Section IX, Sub paragraph 1. Three (3) test specimens shall be tested from each weldment location, i.e., base metal, weld metal, and heat affected zone and shall meet the following specified maximum test temperatures: a. 20 ft-lbs. at +20 degrees F for buried transmission and distribution piping systems, b. 20 ft-lbs. at 0 degrees F for above ground transmission and distribution piping and c. 20 ft-lbs. at -20 degrees F for National Grid Gas Station piping systems"	N/A	Kiewit	Use-As-Is	Rework to Acceptable Standard	See NCR for details	CLOSED
0055	GCAW Regeneration Gas Separator LDD-1011	Cold Box Aluminum WPSs will not be included in Final Doc Pack due to vendor placing proprietary stamp on them.	N/A	Kiewit	Use-As-Is	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	CLOSED
0056 R2	UOP 3 point inspection not completed per NGWP	UOP performed final visual weld inspection on all piping welds on the Pretreatment Skids in accordance with the Project specifications, ASME B31.3, the Contract, and the National Grid Weld Policy. UOP did not document weld joint fit-up and weld root inspection on all welds as described in the National Grid Weld Policy Section 5.3 Welder Qualification c. Responsibilities 2) The Welding Inspector shall be responsible for completion of a Weld Record Inspection Report Attachment B (No actual Attachment B in the contract, assuming to be Attachment 2 Weld Record and Inspection Report Gas Transmission (125 PSIG and greater). Use this report form or similar logform to document the weld inspections. The alternate form must meet the minimum record requirements of API 1104 section 9.	N/A	Kiewit	Use-As-Is	Verify Final Visual Inspection was performed in accordance with B31.3 and if acceptable Use As Is	See NCR for details	CLOSED
0057	Chart Industries did not provide proper NDE on the Thermal Vaporizer	Chart Industries did not provide proper NDE on the Thermal Vaporizer	N/A	Kiewit	VOID	VOID	VOID	VOID
0058 R1	APCI 3 point inspection not completed per NGWP	APCI performed final visual weld inspection on all piping welds on the Compressor Skid package and the N2 Compressor Skid package, in accordance with the Project specifications, ASME B31.3, the Contract, and the National Grid Weld Policy. APCI did not document weld joint fit-up and weld root inspection on all welds as described in the National Grid Weld Policy Section 5.3 Welder Qualification c. Responsibilities 2) The Welding Inspector shall be responsible for completion of a Weld Record Inspection Report Attachment B (No actual Attachment B in the contract, assuming to be Attachment 2 Weld Record and Inspection Report Gas Transmission (125 PSIG and greater). Use this report form or similar logform to document the weld inspections. The alternate form must meet the minimum record requirements of API 1104 section 9.	N/A	Kiewit	Use-As-Is	Use As Is	See NCR for details	CLOSED
0059	Cryo and Non Cryo Control Valves	Puffer Swiven has supplied control valves that have components originating from People's Republic of China (PRC). This violates Kiewit's specification 102761-B-MEC-SPC-0007 (Pressure Containing Material Sourced from the People's Republic of China Specification). Chinese material is not permitted for hazardous system per note 2 of appendix 2. Below are valve tags with PRC content	N/A	Kiewit	Use-As-Is	Use As Is Based on Engineering approval	Kiewit shall amend specification to remove note (2) of appendix 2 and allow PRC sourced materials on a case-by-case. Basis with engineering approval.	OPEN
0060	On Off Valves	Puffer Swiven has supplied On/Off valves that have components originating from People's Republic of China (PRC). This violates Kiewit's specification 102761-B-MEC-SPC-0007 (Pressure Containing Material Sourced from the People's Republic of China Specification). Chinese material is not permitted for hazardous system per note 2 of appendix 2.	N/A	Kiewit	Use-As-Is	Use As Is Based on Engineering approval	Kiewit shall amend specification to remove note (2) of appendix 2 and allow PRC sourced materials on a case-by-case. Basis with engineering approval.	OPEN
0061	Non Cryo Manual Valves	Sunbelt Supply has supplied Non-Cryo valves that have components originating from People's Republic of China (PRC). This violates Kiewit's specification 102761-B-MEC-SPC-0007 (Pressure Containing Material Sourced from the People's Republic of China Specification). Chinese material is not permitted for hazardous system per note 2 of appendix 2.	N/A	Kiewit	Use-As-Is	Use As Is Based on Engineering approval	Kiewit shall amend specification to remove note (2) of appendix 2 and allow PRC sourced materials on a case-by-case. Basis with engineering approval.	CLOSED
0062	Compressor Bldg. NUCOR Rafter Welds	Description: Pieces RXB030 and RXB080 were examined for weld discontinuities. On piece #RXB030, out of 16 welds inspected, 10 were found to be undersized or not of sufficient length/spacing (in the case of stitch welds) as per weld symbols. On piece# RXB080, out of 20 welds inspected, 10 were found to be undersized. Pieces taken as representative of entire shipment of steel	Nucor confirmed calculations as fabricated.	Kiewit	Use-As-Is	Use As Is Based on Engineering approval	See NCR for details	CLOSED

NCR No.	Title	Description	Recommended Corrective Action	Type (Internal / Supplier / Client)	Disposition	Disposition & Required Actions	Recommended Preventative Actions	ACTIVE
0063-R1	ACC Booster Compressor 3 Point Inspection	ACC performed final visual weld inspection on all piping welds on the Booster Compressor in accordance with the Project specifications, ASME B31.3, the Contract, and the National Grid Weld Policy. ACC did not document weld joint fit-up and weld root inspection on all welds as described in the National Grid Weld Policy Section 5.3 Welder Qualification c. Responsibilities 2) The Welding Inspector shall be responsible for completion of a Weld Record Inspection Report Attachment B (No actual Attachment B in the contract, assuming to be Attachment 2 Weld Record and Inspection Report Gas Transmission (125 PSIG and greater). Use this report form or similar log/form to document the weld inspections. The alternate form must meet the minimum record requirements of API 1104 section 9.	N/A	Kiewit	Use-As-Is	Verify Final Visual Inspection was performed in accordance with B31.3 and if acceptable Use As Is	See NCR for details	CLOSED
0064-R1	APCI N2 Compressor Skid 3 Point Inspection	APCI performed final visual weld inspection on all piping welds on the N2 Compressor in accordance with the Project specifications, ASME B31.3, the Contract, and the National Grid Weld Policy. APCI did not document weld joint fit-up and weld root inspection on all welds as described in the National Grid Weld Policy Section 5.3 Welder Qualification c. Responsibilities 2) The Welding Inspector shall be responsible for completion of a Weld Record Inspection Report Attachment B (No actual Attachment B in the contract, assuming to be Attachment 2 Weld Record and Inspection Report Gas Transmission (125 PSIG and greater). Use this report form or similar log/form to document the weld inspections. The alternate form must meet the minimum record requirements of API 1104 section 9.	N/A	Kiewit	Use-As-Is	Verify Final Visual Inspection was performed in accordance with B31.3 and if acceptable Use As Is	See NCR for details	CLOSED
0065-R1	Aether Feed Gas Metering Skid - 3 Point Inspection	Aether performed final visual weld inspection on all piping welds on the Feed Gas Metering Skid in accordance with the Project specifications, ASME B31.3, the Contract, and the National Grid Weld Policy. Aether did not document weld joint fit-up and weld root inspection on all welds as described in the National Grid Weld Policy Section 5.3 Welder Qualification c. Responsibilities 2) The Welding Inspector shall be responsible for completion of a Weld Record Inspection Report Attachment B (No actual Attachment B in the contract, assuming to be Attachment 2 Weld Record and Inspection Report Gas Transmission (125 PSIG and greater). Use this report form or similar log/form to document the weld inspections. The alternate form must meet the minimum record requirements of API 1104 section 9.	N/A	Kiewit	Use-As-Is	Verify Final Visual Inspection was performed in accordance with B31.3 and if acceptable Use As Is	See NCR for details	CLOSED
0066-R1	APCI ColdBox - 3 Point Inspection	APCI performed final visual weld inspection on all piping welds on the ColdBox in accordance with the Project specifications, ASME B31.3, the Contract, and the National Grid Weld Policy. APCI did not document weld joint fit-up and weld root inspection on all welds as described in the National Grid Weld Policy Section 5.3 Welder Qualification c. Responsibilities 2) The Welding Inspector shall be responsible for completion of a Weld Record Inspection Report Attachment B (No actual Attachment B in the contract, assuming to be Attachment 2 Weld Record and Inspection Report Gas Transmission (125 PSIG and greater). Use this report form or similar log/form to document the weld inspections. The alternate form must meet the minimum record requirements of API 1104 section 9.	N/A	Kiewit	Use-As-Is	Verify Final Visual Inspection was performed in accordance with B31.3 and if acceptable Use As Is	See NCR for details	CLOSED
0067-R1	APCI Crossover Box - 3 Point Inspection	APCI performed final visual weld inspection on all piping welds on the Crossover Box in accordance with the Project specifications, ASME B31.3, the Contract, and the National Grid Weld Policy. APCI did not document weld joint fit-up and weld root inspection on all welds as described in the National Grid Weld Policy Section 5.3 Welder Qualification c. Responsibilities 2) The Welding Inspector shall be responsible for completion of a Weld Record Inspection Report Attachment B (No actual Attachment B in the contract, assuming to be Attachment 2 Weld Record and Inspection Report Gas Transmission (125 PSIG and greater). Use this report form or similar log/form to document the weld inspections. The alternate form must meet the minimum record requirements of API 1104 section 9.	N/A	Kiewit	Use-As-Is	Verify Final Visual Inspection was performed in accordance with B31.3 and if acceptable Use As Is	See NCR for details	CLOSED
0068-R1	Chart Truck Loading Skid - 3 Point Inspection	Chart performed final visual weld inspection on all piping welds on the Truck Loading Skid in accordance with the Project specifications, ASME B31.3, the Contract, and the National Grid Weld Policy. Chart did not document weld joint fit-up and weld root inspection on all welds as described in the National Grid Weld Policy Section 5.3 Welder Qualification c. Responsibilities 2) The Welding Inspector shall be responsible for completion of a Weld Record Inspection Report Attachment B (No actual Attachment B in the contract, assuming to be Attachment 2 Weld Record and Inspection Report Gas Transmission (125 PSIG and greater). Use this report form or similar log/form to document the weld inspections. The alternate form must meet the minimum record requirements of API 1104 section 9.	N/A	Kiewit	Use-As-Is	Verify Final Visual Inspection was performed in accordance with B31.3 and if acceptable Use As Is	See NCR for details	CLOSED
0069-R1	Chart Nitrogen Vaporization Package - 3 Point Inspection	Chart performed final visual weld inspection on all piping welds on the Nitrogen Vaporization Package in accordance with the Project specifications, ASME B31.3, the Contract, and the National Grid Weld Policy. Chart did not document weld joint fit-up and weld root inspection on all welds as described in the National Grid Weld Policy Section 5.3 Welder Qualification c. Responsibilities 2) The Welding Inspector shall be responsible for completion of a Weld Record Inspection Report Attachment B (No actual Attachment B in the contract, assuming to be Attachment 2 Weld Record and Inspection Report Gas Transmission (125 PSIG and greater). Use this report form or similar log/form to document the weld inspections. The alternate form must meet the minimum record requirements of API 1104 section 9.	N/A	Kiewit	Use-As-Is	Verify Final Visual Inspection was performed in accordance with B31.3 and if acceptable Use As Is	See NCR for details	CLOSED
0070-R1	Atlas Copco Comtec - Booster Compressor - Base Metal Charpy SS	Atlas Copco Comtec performed Charpy Impact Testing on stainless steel welding procedures for the weld metal and heat affected zone for the Booster Compressor in accordance with the Kiewit Detailed Design Criteria, ASME B31.3, the Contract and the National Grid Weld Policy. Atlas Copco did not perform Charpy impact testing for the base metal as described in the National Grid Weld Policy Section 5.5 In-Service Welder Procedure Specification; Paragraph c. Procedure Qualifications; Subsection 1) All welding procedure qualifications for Austenitic Stainless Steel piping...; Subparagraph i. Three (3) test specimens shall be tested from each weldment location, i.e., base metal, weld metal, and heat affected zone."	N/A	Kiewit	Use-As-Is	Verify all Procedure Qualification Records contain Charpy impact testing results in compliance with B31.3 and if acceptable Use As Is.	See NCR for details	CLOSED
0071-R1	APCI - N2 Compressor Skid - Base Metal Charpy SS	APCI performed Charpy Impact Testing on stainless steel welding procedures for the weld metal and heat affected zone for the N2 Compressor Skid in accordance with the project specifications, ASME B31.3, the Contract and the National Grid Weld Policy. APCI did not perform Charpy impact testing for the base metal as described in the National Grid Weld Policy Section 5.5 In-Service Welder Procedure Specification; Paragraph c. Procedure Qualifications; Subsection 1) All welding procedure qualifications for Austenitic Stainless Steel piping...; Subparagraph i. Three (3) test specimens shall be tested from each weldment location, i.e., base metal, weld metal, and heat affected zone."	N/A	Kiewit	Use-As-Is	Verify all Procedure Qualification Records contain Charpy impact testing results in compliance with B31.3 and if acceptable Use As Is.	See NCR for details	CLOSED
0072-R1	APCI - Componder Skid - Base Metal Charpy SS	APCI performed Charpy Impact Testing on stainless steel welding procedures for the weld metal and heat affected zone for the Componder Skid in accordance with the project specifications, ASME B31.3, the Contract and the National Grid Weld Policy. APCI did not perform Charpy impact testing for the base metal as described in the National Grid Weld Policy Section 5.5 In-Service Welder Procedure Specification; Paragraph c. Procedure Qualifications; Subsection 1) All welding procedure qualifications for Austenitic Stainless Steel piping...; Subparagraph i. Three (3) test specimens shall be tested from each weldment location, i.e., base metal, weld metal, and heat affected zone."	N/A	Kiewit	Use-As-Is	Verify all Procedure Qualification Records contain Charpy impact testing results in compliance with B31.3 and if acceptable Use As Is.	See NCR for details	CLOSED
0073-R1	APCI - Crossover Box - Base Metal Charpy SS	APCI performed Charpy Impact Testing on stainless steel welding procedures for the weld metal and heat affected zone for the Crossover Box in accordance with the project specifications, ASME B31.3, the Contract and the National Grid Weld Policy. APCI did not perform Charpy impact testing for the base metal as described in the National Grid Weld Policy Section 5.5 In-Service Welder Procedure Specification; Paragraph c. Procedure Qualifications; Subsection 1) All welding procedure qualifications for Austenitic Stainless Steel piping...; Subparagraph i. Three (3) test specimens shall be tested from each weldment location, i.e., base metal, weld metal, and heat affected zone."	N/A	Kiewit	Use-As-Is	Verify all Procedure Qualification Records contain Charpy impact testing results in compliance with B31.3 and if acceptable Use As Is.	See NCR for details	CLOSED
0074-R1	APCI - Cold Box - Base Metal Charpy SS	APCI performed Charpy Impact Testing on stainless steel welding procedures for the weld metal and heat affected zone for the ColdBox in accordance with the project specifications, ASME B31.3, the Contract and the National Grid Weld Policy. APCI did not perform Charpy impact testing for the base metal as described in the National Grid Weld Policy Section 5.5 In-Service Welder Procedure Specification; Paragraph c. Procedure Qualifications; Subsection 1) All welding procedure qualifications for Austenitic Stainless Steel piping...; Subparagraph i. Three (3) test specimens shall be tested from each weldment location, i.e., base metal, weld metal, and heat affected zone."	N/A	Kiewit	Use-As-Is	Verify all Procedure Qualification Records contain Charpy impact testing results in compliance with B31.3 and if acceptable Use As Is.		OPEN
0075-R1	UOP - Gas Pretreatment Package - Base Metal Charpy CS	UOP performed Charpy Impact Testing on carbon steel welding procedure for the weld metal and heat affected zone for the Componder Skid in accordance with the project specifications, ASME B31.3, the Contract and the National Grid Weld Policy. UOP did not perform Charpy impact testing for the base metal as described in the National Grid Weld Policy Section 5.5 In-Service Welder Procedure Specification; Paragraph c. Procedure Qualifications; Subsection 1) All welding procedure qualifications for Austenitic Stainless Steel piping...; Subparagraph i. Three (3) test specimens shall be tested from each weldment location, i.e., base metal, weld metal, and heat affected zone and shall meet the following specified minimum test temperatures: a. 20 lbs. at +20 degrees F. for buried transmission and distribution piping systems, b. 20 lbs. at 0 degrees F for above ground transmission and distribution piping and c. 20 lbs. at -20 degrees F for National Grid Gas Station piping systems"	N/A	Kiewit	Use-As-Is	Verify all Procedure Qualification Records contain Charpy impact testing results in compliance with B31.3 and if acceptable Use As Is.	See NCR for details	CLOSED
0076-R2	Chart - Final Line Skid - Base Metal Charpy SS	Chart performed Charpy Impact Testing on stainless steel welding procedures for the weld metal and heat affected zone for the Final Line Skid in accordance with the project specifications, ASME B31.3, the Contract and the National Grid Weld Policy. Chart did not perform Charpy impact testing for the base metal as described in the National Grid Weld Policy Section 5.5 In-Service Welder Procedure Specification; Paragraph c. Procedure Qualifications; Subsection 1) All welding procedure qualifications for Austenitic Stainless Steel piping...; Subparagraph i. Three (3) test specimens shall be tested from each weldment location, i.e., base metal, weld metal, and heat affected zone."	N/A	Kiewit	Use-As-Is	Verify all Procedure Qualification Records contain Charpy impact testing results in compliance with B31.3 and if acceptable Use As Is.		OPEN
0077-R1	Chart - Truck Loading Skid - Base Metal Charpy SS	Chart performed Charpy Impact Testing on stainless steel welding procedures for the weld metal and heat affected zone for the Truck Loading Skid in accordance with the project specifications, ASME B31.3, the Contract and the National Grid Weld Policy. Chart did not perform Charpy impact testing for the base metal as described in the National Grid Weld Policy Section 5.5 In-Service Welder Procedure Specification; Paragraph c. Procedure Qualifications; Subsection 1) All welding procedure qualifications for Austenitic Stainless Steel piping...; Subparagraph i. Three (3) test specimens shall be tested from each weldment location, i.e., base metal, weld metal, and heat affected zone."	N/A	Kiewit	Use-As-Is	Verify all Procedure Qualification Records contain Charpy impact testing results in compliance with B31.3 and if acceptable Use As Is.		CLOSED
0078-R1	APCI - N2 Compressor Skid - NDE Requirements	APCI did not perform additional NDE per Contract Scope of Work 3.10 Welding Requirements: 100% of welds performed on gas piping with a design pressure of 125 psig or greater shall be non-destructively examined by radiograph, ultrasonic, magnetic particle or liquid dye penetrant methods as specified in the National Grid Weld Policy."	N/A	Kiewit	Use-As-Is	Verify all NDE was performed in compliance with B31.3 and detailed engineering design and if acceptable Use As Is.	See NCR for details	CLOSED
0079-R1	APCI - Componder - NDE Requirements	APCI did not perform additional NDE per Contract Scope of Work 3.10 Welding Requirements: 100% of welds performed on gas piping with a design pressure of 125 psig or greater shall be non-destructively examined by radiograph, ultrasonic, magnetic particle or liquid dye penetrant methods as specified in the National Grid Weld Policy."	N/A	Kiewit	Use-As-Is	Verify all NDE was performed in compliance with B31.3 and detailed engineering design and if acceptable Use As Is.	See NCR for details	CLOSED
0080-R1	UOP - Gas Pretreatment Package - NDE Requirements	UOP performed NDE on Gas Pretreatment Package Piping in accordance with the Kiewit Detailed Design Criteria, NFPA 59A and ASME B31.3. UOP did not perform additional NDE per Contract Scope of Work 3.10 Welding Requirements: 100% of welds performed on gas piping with a design pressure of 125 psig or greater shall be non-destructively examined by radiograph, ultrasonic, magnetic particle or liquid dye penetrant methods as specified in the National Grid Weld Policy."	N/A	Kiewit	Use-As-Is	Verify all NDE was performed in compliance with B31.3 and detailed engineering design and if acceptable Use As Is.		OPEN
0081-R1	Chart - Nitrogen Vaporization Package - NDE Requirements	Chart performed NDE on Nitrogen Vaporization Piping in accordance with the Kiewit Detailed Design Criteria, NFPA 59A and ASME B31.3. Chart did not perform additional NDE per Contract Scope of Work 3.10 Welding Requirements: 100% of welds performed on gas piping with a design pressure of 125 psig or greater shall be non-destructively examined by radiograph, ultrasonic, magnetic particle or liquid dye penetrant methods as specified in the National Grid Weld Policy."	N/A	Kiewit	Use-As-Is	Verify all NDE was performed in compliance with B31.3 and detailed engineering design and if acceptable Use As Is.	See NCR for details	CLOSED
0082	Partially Cut Shear Key Pocket Horizontal Reinforcement Steel Bar	While attempting to install steel column number A1 into its shear key pocket that is located on the new compressor building concrete foundation structure, it has been discovered that the exposed horizontal reinforcement steel within the bottom of the shear key pocket prohibits the full penetration of the steel column's shear lug down into the pocket as required. Field crews began cutting the horizontal rebar out of the way in order to resolve the conflict and to make room for the column's shear lug prior to receiving written RFI approval to do so.	N/A	Kiewit	Use-As-Is	As a result, the work has been stopped and an alternate RFI #236 has been written that has approved the trimming of steel column 1A's shear lug that allows it to fit properly within the shear key pocket above the partially cut horizontal reinforcement steel resolving the encountered conflict. In addition, the Engineer of Record has examined the partially cut horizontal reinforcement steel bar and has determined that it is of adequate strength to utilize in place as is.	See NCR for details	CLOSED

NCR No.	Title	Description	Recommended Corrective Action	Type (Internal / Supplier / Client)	Disposition	Disposition & Required Actions	Recommended Preventative Actions	ACTIVE
0083-R1	APCI - N2 Compressor Skid - Base Metal Charpy CS	APCI performed Charpy Impact Testing on carbon steel welding procedure for the weld metal and heat affected zone for the N2 Compressor Skid in accordance with the project specifications, ASME B31.3, the Contract and the National Grid Weld Policy. APCI did not perform Charpy impact testing for the base metal as described in the National Grid Weld Policy Section 5 Content; Subsection 5.1 Scope; Paragraph d. Procedures; Subsection 2) Testing; Subparagraph i. Charpy V-Notch Toughness testing of the base metal and base metal heat affected zone in accordance with the requirements of ASME Section IX, Subparagraph 1. Three (3) test specimens shall be tested from each weldment location, i.e., base metal, weld metal, and heat affected zone and shall meet the following specified maximum test temperatures: a. 20 ft-lbs. at +20 degrees F, for buried transmission and distribution piping systems, b. 20 ft-lbs. at 0 degrees F for above ground transmission and distribution piping and c. 20 ft-lbs. at -20 degrees F for National Grid Gas Station piping systems"	N/A	Kiewit	Use-As-Is	Verify all Procedure Qualification Records contain Charpy impact testing results in compliance with B31.3 and if acceptable Use As Is.	See NCR for details	CLOSED
0084-R1	APCI - Compander Skid - Base Metal Charpy CS	APCI performed Charpy Impact Testing on carbon steel welding procedure for the weld metal and heat affected zone for the Compander Skid in accordance with the project specifications, ASME B31.3, the Contract and the National Grid Weld Policy. APCI did not perform Charpy impact testing for the base metal as described in the National Grid Weld Policy Section 5 Content; Subsection 5.1 Scope; Paragraph d. Procedures; Subsection 2) Testing; Subparagraph i. Charpy V-Notch Toughness testing of the base metal and base metal heat affected zone in accordance with the requirements of ASME Section IX, Subparagraph 1. Three (3) test specimens shall be tested from each weldment location, i.e., base metal, weld metal, and heat affected zone and shall meet the following specified maximum test temperatures: a. 20 ft-lbs. at +20 degrees F, for buried transmission and distribution piping systems, b. 20 ft-lbs. at 0 degrees F for above ground transmission and distribution piping and c. 20 ft-lbs. at -20 degrees F for National Grid Gas Station piping systems"	N/A	Kiewit	Use-As-Is	Verify all Procedure Qualification Records contain Charpy impact testing results in compliance with B31.3 and if acceptable Use As Is.	See NCR for details	CLOSED
0085-R1	APCI - Cold Box - Base Metal Charpy CS	APCI performed Charpy Impact Testing on carbon steel welding procedure for the weld metal and heat affected zone for the Cold Box in accordance with the project specifications, ASME B31.3, the Contract and the National Grid Weld Policy. APCI did not perform Charpy impact testing for the base metal as described in the National Grid Weld Policy Section 5 Content; Subsection 5.1 Scope; Paragraph d. Procedures; Subsection 2) Testing; Subparagraph i. Charpy V-Notch Toughness testing of the base metal and base metal heat affected zone in accordance with the requirements of ASME Section IX, Subparagraph 1. Three (3) test specimens shall be tested from each weldment location, i.e., base metal, weld metal, and heat affected zone and shall meet the following specified maximum test temperatures: a. 20 ft-lbs. at +20 degrees F, for buried transmission and distribution piping systems, b. 20 ft-lbs. at 0 degrees F for above ground transmission and distribution piping and c. 20 ft-lbs. at -20 degrees F for National Grid Gas Station piping systems"	N/A	Kiewit	Use-As-Is	Verify all Procedure Qualification Records contain Charpy impact testing results in compliance with B31.3 and if acceptable Use As Is.	See NCR for details	CLOSED
0086-R1	Chart - Nitrogen Final Line Skid - Base Metal Charpy CS	Chart performed Charpy Impact Testing on carbon steel welding procedure for the weld metal and heat affected zone for the Nitrogen Final Line Skid piping in accordance with the project specifications, ASME B31.3, the Contract and the National Grid Weld Policy. Chart did not perform Charpy impact testing for the base metal as described in the National Grid Weld Policy Section 5 Content; Subsection 5.1 Scope; Paragraph d. Procedures; Subsection 2) Testing; Subparagraph i. Charpy V-Notch Toughness testing of the base metal and base metal heat affected zone in accordance with the requirements of ASME Section IX, Subparagraph 1. Three (3) test specimens shall be tested from each weldment location, i.e., base metal, weld metal, and heat affected zone and shall meet the following specified maximum test temperatures: a. 20 ft-lbs. at +20 degrees F, for buried transmission and distribution piping systems, b. 20 ft-lbs. at 0 degrees F for above ground transmission and distribution piping and c. 20 ft-lbs. at -20 degrees F for National Grid Gas Station piping systems"	N/A	Kiewit	VOID	VOID	VOID	VOID
0087	Use Of releasing agent on Concrete forms	After removal of formwork, portions of the concrete placed this Wednesday were observed to have porous surface areas. This surface issue is believed to be the result of Kiewit placing concrete without coating the job-built forms with a release agent (the job-built forms were observed to have concrete adhered to their face after removal).	N/A	Kiewit	Use-As-Is	Increase quality visual. Review specification with supervision	See NCR for details	CLOSED
0088	Duckbank conduit D0125 Off coordinates	Conduit D-0125 moved during concrete placement encroaching on the Termination Cabinet Steel Support base plate for the Feed Gas Booster Compressor.	N/A	Kiewit	Use-As-Is	RFI-000240 Generated. Field cut the 2 west anchor bolts and post install 2 - 3/4" anchor bolts 3' to the east from the original anchor location.	See NCR for details	CLOSED
0089	Road Clash	Roadway section as shown on 102761-B-CIV-CD-3003 detail STA. 10+00.00 to STA. 14+81.20 does not account for 4' 6" wide section of Rip Rap R-6 gradation as shown on 102761-B-STR-SF-5175 detail 8 (Thornton Tomasetti). This results in a 4' road width reduction unless modifications are made to 102761-B-STR-SF-5175 detail 8 to widen the roadway.	N/A	Kiewit				OPEN
0090	Compressor Building Anchor Bolt Off Coordinates	COLUMN B1 anchor bolts off location	N/A	Kiewit	Use-As-Is	see disposition	See NCR for details	CLOSED
0091	PSI CR Images quality for shop welds on spool fabrication	PSI CR images from spool fabrication were found to have excessive film artifacts per ASME Section V III-267 and T-261.	N/A	Kiewit				OPEN
0092	Grout Breaks test results at 28 days are below Specification Requirements	Some Grout 28 day Break test results are below the 8000 psi requirement of 102761-B-STR-SPC-0022 Nonshrink Cementitious Grout. Section 2.0 Modifications to PIP STS03600, Item 3 "replace 5,000 psi with 8,000 psi."	N/A	Kiewit	Use-As-Is			OPEN
0093	Incorrect SMAW filler used on CS welds	5 welds were completed using E7018 vs E7018-1 as required per WPS 1-1-BA-0212-C. These welds were: F-NR-2008-01-FW-01 B-NR-2101-02-FW-01 F-FCI-1014-01-FW-01 F-FCI-1014-01-FW-04 M-NR-2010-01-FW-01	Filler metal purchasing will follow the procedure PKS-PRO-WELD-4.05. A second check for ANY filler purchased for the job is now in place. This required Project quality manager to sign off on filler metal purchasing. All 7018 filler was removed from the job site. Only 7018-1 is allowed going forward. Training was held with the welders, foreman, and FE/Supers to review this incident and review filler metal control program and everyone's part.	Kiewit	Remove and Replace	See NCR for details	See NCR for details	CLOSED
0094	ER70S-2 used in lieu of 80S-N1	2 welds were found to have ER70S-2 used for GTAW versus the 80S-N1 required per WPS 1-1-BA-01195-C. Welds affected by this are D-NR-2105-FW-01, D-NR-2010-03-FW-02.	N/A	Kiewit	Remove and Replace	See NCR for details	See NCR for details	CLOSED
0095	Incorrect GTAW filler was found in tube issued to the welder and in the filler metal control room	During a routine inspection of subject field weld and associated filler metal, the Quality Control Inspector discovered that the rod caddy contained two different classifications of filler metal (ER70S-2 and ER80S-N1). It was assumed that both types of filler metals were included in the weld.	Close down the filler metal control room, audit each filler metal issue slip and rod caddy, and perform a cause analysis to determine why two types of filler metals were issued in the same rod caddy.	Kiewit	Use-As-Is			OPEN
0096	Cold Box EMT & Conduit not per Spec or NFPA	EMT & Flexible Conduit may only be used within areas as specified in Spec 102761-B-ELE-SPC-0021 Par 3.2.2a, 3.3.4 & 3.35 & NFPA ART 356.6, 356.12 (4), ART 501.10 (A) (1) & (B) (1)	EMT & Flexible Conduit must be replaced with RGS conduit & Flexible Conduit per above specifications & NFPA Articles	Kiewit	Remove and Replace			OPEN
0097	Chromatograph Gas Analyzer Panel components not Class 1 Div 2 and not under purge	The area location of the Cont Pnl and inside the panel is Class 1 Div. 2. The Phoenix relays and the fuse/fuse holders must meet area classification. No conduit seals or purge on this panel. Labels on the Norseman heater just inside the door of the analyzer shelter reads that it meets CL 1 Div. 2 but it also reads that it requires a conduit seal.	Need to install conduit seals and have a purge on this panel to meet Class 1 Div 2 requirements.	Kiewit	Remove and Replace			OPEN
0098	Grout Breaks test results at 28 days are below Specification Requirements	The compressive strength samples for the Compressor Building column base plates at gridlines 1 @ A to C, 4 @ C and 5 @ A-C are below the 6500 psi requirement of 102761-B-STR-SPC-0022 Nonshrink Cementitious Grout. Section 2.0 Modifications to PIP STS03600 and RFI # 344 changing the 28day grout strength requirements from 8000 psi to 6500 psi	N/A	Kiewit				OPEN
0099	Grout Breaks test results at 28 days are below Specification Requirements	The compressive strength samples for the Keyway at the south LNG diversion trench are below the 6500 psi requirement of RFI #283 and RFI # 344 changing the 28day grout strength requirements from 8000 psi to 6500 psi	N/A	Kiewit				OPEN
0100	Grout Breaks test results at 28 days are below Specification Requirements	The compressive strength samples for the cable tray support base plates at the PDC building are below the 6500 psi requirement of 102761-B-STR-SPC-0022 Nonshrink Cementitious Grout. Section 2.0 Modifications to PIP STS03600 and RFI # 344 changing the 28day grout strength requirements from 8000 psi to 6500 psi.	N/A	Kiewit				OPEN