Independent Assessment of Direct-Feed Low-Activity Waste Commissioning Test Procedures at Hanford Site Waste Treatment and Immobilization Plant

May 2022

Office of Enterprise Assessments
U.S. Department of Energy

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Acronyms

BNI	Bechtel National, Inc.
CTD	Commissioning Test Director
CTE	Commissioning Test Engineer
DFLAW	Direct-Feed Low-Activity Waste
DOE	U.S. Department of Energy
EA	Office of Enterprise Assessments
FR	Facility Representative
JHA	Job Hazard Analysis
JSR	Job Site Review
OFI	Opportunity for Improvement
OOD	Operations Oversight Division
ORP	Office of River Protection
WRSS	Work Record Summary Sheet
WTP	Waste Treatment and Immobilization Plant

INDEPENDENT ASSESSMENT OF DIRECT-FEED LOW-ACTIVITY WASTE COMMISSIONING TEST PROCEDURES AT HANFORD SITE WASTE TREATMENT AND IMMOBILIZATION PLANT

Executive Summary

The U.S. Department of Energy (DOE) Office of Enterprise Assessments (EA) conducted an independent assessment of direct-feed low-activity waste (DFLAW) commissioning test procedures at the Hanford Site Waste Treatment and Immobilization Plant from August to October 2021. Bechtel National, Inc. (BNI) is conducting a commissioning test process to ensure that the vitrification of low-activity tank waste can be accomplished safely and effectively. This assessment evaluated the effectiveness of BNI's programs in developing and implementing procedures to be used to perform these tests. The assessment also evaluated the effectiveness of DOE Office of River Protection (ORP) oversight of BNI's commissioning test procedure development and implementation processes.

EA identified the following strengths:

- BNI has developed and implements a commissioning test program, establishing test objectives and flowing these down through an established work control program to develop safe and effective instructions for the commissioning and testing of the DFLAW process.
- ORP oversees BNI's commissioning test program using multi-disciplined, cross-organizational teams that are staffed to ensure appropriate levels of expertise and engagement for each individual test. These teams perform a variety of oversight activities using a graded approach, ensuring that oversight is efficient and effective.

EA also identified weaknesses, as summarized below:

- BNI does not always ensure that technical procedures and work instructions have been verified and validated to confirm that prerequisites, precautions, and limitations are consistently identified and implemented. BNI does not fully document changes to commissioning test work packages in work record summary sheets.
- ORP has not established a formal process to verify that BNI evaluates and corrects ORP identified issues on a timely basis, or that the causes of significant issues have been effectively identified and addressed. This lack of a formal verification process could result in contractor issues identified through Federal oversight not being adequately addressed.

In summary, BNI has established a generally effective commissioning test program to ensure that the DFLAW process can safely and effectively perform vitrification of low-activity tank waste. Additionally, ORP has established a generally effective oversight program. However, some concerns were identified with both BNI's commissioning test program and ORP's oversight. Until the concerns identified in this report are addressed or effective mitigations are put in place to improve tracking, oversight, and consistency of test package development, increased risk associated with these weaknesses will remain.

INDEPENDENT ASSESSMENT OF DIRECT-FEED LOW-ACTIVITY WASTE COMMISSIONING TEST PROCEDURES AT HANFORD SITE WASTE TREATMENT AND IMMOBILIZATION PLANT

1.0 INTRODUCTION

The U.S. Department of Energy (DOE) Office of Nuclear Safety and Environmental Assessments, within the independent Office of Enterprise Assessments (EA), conducted an assessment of the effectiveness of the commissioning test program developed and implemented by Bechtel National, Inc. (BNI) for the Hanford Site Waste Treatment and Immobilization Plant (WTP) Direct-Feed Low-Activity Waste (DFLAW) process. This assessment was conducted remotely due to the coronavirus disease 2019 (COVID-19) pandemic, with document reviews and interviews occurring between August 30 and October 7, 2021.

With the majority of the construction for DFLAW complete, BNI is conducting a commissioning process to ensure that vitrification of low-activity tank waste can be accomplished safely and effectively. The commissioning process includes testing various equipment (e.g., laboratory gas systems, melter feed systems, and emergency power systems) prior to use in the processing of tank waste. As stated in the *Plan for the Assessment of Direct-Feed Low-Activity Waste Cold Commissioning Test Procedures at the Hanford Waste Treatment & Immobilization Plant, August-September 2021*, this assessment evaluated the effectiveness of the BNI programs in developing and implementing procedures to be used to perform these tests. The assessment also evaluated the effectiveness of DOE Office of River Protection (ORP) oversight of BNI's commissioning test procedure development and implementation processes.

BNI developed 24590-WTP-PL-RACT-CG-0001, *Commissioning Plan*, to ensure effective integration of the various BNI organizations involved in the commissioning process through the use of guidance documents, procedures, and effective teaming. These organizations include Commissioning, Work Control, Operations, Plant Engineering, and Safety. The Commissioning Plan relies principally on 24590-WTP-PD-RACT-CT-0001, *Test Program Description*, a comprehensive implementing procedure for managing the testing process. The Test Program Description governs the development of specific commissioning tests through an incremental process, building from the identification of test requirements, creating test planning documents, and ultimately producing detailed activity-level documents (i.e., test work packages). This incremental approach progresses sequentially through the following test documents, each adding scope and detail leading to field-deployable test documents: commissioning test indices, commissioning test plans, commissioning test instructions, and commissioning test work packages.

While EA reviewed BNI's entire process for developing commissioning tests, EA focused primarily on the final two types of test documents, commissioning test instructions and commissioning test work packages, which allowed EA to assess whether BNI appropriately implemented conduct of operations and maintenance management requirements. Commissioning test instructions are developed to provide a precise sequence of executable steps to be used as input to the work control process. Following the development of these commissioning test instructions, hazard control requirements are developed and work authorization is handled through the normal BNI work package review and approval process, resulting in the finalized commissioning test work packages.

2.0 METHODOLOGY

The DOE independent oversight program is described in and governed by DOE Order 227.1A, *Independent Oversight Program*, which is implemented through a comprehensive set of internal protocols, operating practices, assessment guides, and process guides. This report uses the terms "best practices, deficiencies, findings, and opportunities for improvement (OFIs)" as defined in DOE Order 227.1A.

EA used objective 2.p of EA criteria and review approach document (CRAD) 30-02, Rev. 0, *Review of Conduct of Operations*, and objectives MT.4, MT.6, and MT.17 of EA CRAD 30-06, Rev. 0, *Conduct of Maintenance*, to guide this assessment. EA also used elements of EA CRAD EA-30-07, Rev. 0, *Federal Line Management Oversight Processes*, to collect and analyze data on ORP oversight activities related to DFLAW commissioning test procedures.

To support this assessment, EA reviewed 16 test work packages. Four of these packages were for work that had already been performed, and the remaining 12 were for work that had not yet started. EA also examined key documents, such as system descriptions, procedures, manuals, analyses, policies, and training and qualification records, and interviewed key personnel responsible for developing and executing the associated programs. This included review of BNI's commissioning testing program from the identification of test requirements and objectives through the development of written work instructions, to the documentation of test results. The members of the EA assessment team, the Quality Review Board, and management responsible for this assessment are listed in appendix A.

There were no previous items for follow-up addressed during this assessment.

3.0 RESULTS

3.1 Commissioning Test Development

The objective of this portion of the assessment was to evaluate the adequacy of BNI's program for developing safe and effective instructions for commissioning testing of the DFLAW process, including processes identifying testing requirements and translating those requirements into field-executable work instructions, procedure change control, and personnel training and qualification.

Implementing procedures for the commissioning test program adequately define roles, responsibilities and appropriate training and qualification requirements. Interviewed commissioning test engineers (CTEs), responsible for developing commissioning tests, and commissioning test directors (CTDs), responsible for approving those tests, demonstrated adequate knowledge of the commissioning test program, interfaces and integration with other organizations, and assigned systems and test instructions. Interviewed work planners, who refine work documents developed by CTEs into activity-level work control documents suitable for field use, were familiar with the process to integrate test instructions into the work package format in accordance with 24590-WTP-GPP-RAMN-WC-0012, *Work Planning and Work Instruction Development*, for field implementation. Qualification records for all CTDs, CTEs, and work planners interviewed demonstrated that personnel are appropriately trained and qualified in a manner consistent with DOE Order 426.2, *Personnel Selection, Training, Qualification, and Certification Requirements for DOE Nuclear Facilities*.

Document 24590-WTP-GPP-RACT-CT-0005, *Commissioning Test Instruction Development*, effectively defines the implementation of the testing process and requires the identification of test objectives and development of test instructions. These test instructions are entered into the existing work control process

through work packages in accordance with 24590-WTP-GPP-RAMN-WC-0012. This approach ensures the consistent production of field work packages familiar to the workforce.

Though some test work packages were annotated with a revision number, work packages are not subject to version control and revision processes during development because they are not considered final until they are issued for field work. Instead, 24590-WTP-GPP-RAMN-WC-0001, *Work Control Process*, requires that changes made during the development of work packages be documented on work record summary sheets (WRSSs), which are pen-and-ink logs of such changes. For each change, the WRSS entry is required to include a description of the change, the printed name and signature of the individuals documenting and approving the change, and the date. Once field work is complete, the WRSS is retained with the completed work package as a record. In three of the four completed test work packages reviewed by EA, the WRSSs retained as records did not meet the requirements of 24590-WTP-GPP-RAMN-WC-0001. For these three test work packages, a WRSS entry stated that "changes were made from Rev. 0 to Rev. 1," but provided no description of the changes. Additionally, of 26 WRSS entries in these three test work packages, 11 did not contain both a printed name and signature, as required. (See **Deficiency D-BNI-1**.) Lack of complete documentation and a retrievable history complicate record-keeping and could adversely impact work planning, performance trending, causal analysis of problems following any unplanned occurrences, and continuous program improvement.

Further, prior to being issued for use, commissioning test work packages are entered into an eight-week rolling work schedule, as described in 24590-WTP-GPP-RAMN-WC-0003, *Scheduling, Work Authorization and Work Release*. Reliance on this process poses the risk of compressing the work package review and approval process, resulting in the potential for relevant or important information to be missed. Test instructions and draft test work packages are often authored several months before they are entered into the work scheduling process, during which time changes to plant configuration or alignment to job hazards and required controls can result in test work packages requiring substantial revisions prior to implementation. Accomplishing needed revisions in the relatively short eight-week scheduling period creates a vulnerability where schedule pressures may lead to changed conditions that impact safety not being appropriately addressed in final test work packages.

Finally, the involvement and oversight of CTDs and responsible CTEs in the work scheduling process and final test work package updates are described in an informal desktop instruction, COMM-DI-010, *Test Prerequisite Checklist Commissioning Desk Instruction*. This desk instruction implements the requirements of other formal procedures but does not reference those procedures or describe its guidance as requirements. Consequently, there is no method to verify that all requirements are met by the checklist and that requirements will continue to be met as procedures are revised. Also, COMM-DI-010 does not identify when during the eight-week process to perform the testing prerequisite reviews contained in the checklist. (See **OFI-BNI-1**.)

Commissioning Test Development Conclusions

BNI has developed and implements a commissioning test program, integrated with a work control program, to develop safe and effective test work packages for commissioning of the DFLAW process. Key personnel involved in the commissioning test process are appropriately trained and qualified, and roles and responsibilities are clearly identified. CTEs develop test instructions that are clear and performable and ensure that test objectives are satisfied. However, weaknesses at the interface between commissioning personnel and work planners, namely the inadequate tracking of changes to test work packages and an informal CTE oversight process for final test work package review and authorization, increase the potential for errors.

3.2 Commissioning Test Work Package Quality

The objective of this portion of the assessment was to verify that the test work packages adequately delineate required actions to safely meet test objectives, identify and control equipment, and restore systems following test performance. The effectiveness of the work control process and the adequacy of test work packages to properly identify and control hazards were also assessed.

All 16 test work packages reviewed appropriately followed 24590-WTP-GPP-RAMN-WC-0012. Each test work package addressed a specific test scope, for example melter-2 simulant feed operations, melter-1 tuning feed operations, and loss of power. The work packages were clear and understandable, and provided a logical sequence of steps. The instructions were also consistent in format and use of terms (e.g., prerequisites, warnings, cautions, notes, hold points, defined use requirements).

The reviewed test work packages were generally adequate to ensure safe facility and equipment operation. Equipment needed to support the commissioning tests was properly specified and controlled by the test work package. Equipment requiring calibration was identified in the test work package, and calibration information was generally recorded in the relevant section of the test work package. System restoration to pre-test configuration was properly controlled by the test work packages. Hold points were specified in the test work package to ensure that the CTD or person-in-charge validated results prior to continuing the test. Test work packages concluded with a closure section that identified actions to ensure that all data was properly recorded and captured.

For the completed test work packages, all work was performed in accordance with the requirements of the test work packages. Each test work package had an associated job hazard analysis (JHA) that included appropriate warnings and cautions for identified hazards, as well as requirements to perform pre-job briefings. Pre-job briefings required participants to review the JHAs.

Although all 16 test work packages reviewed were generally adequate, EA identified weaknesses that are discussed below. DOE Order 422.1, *Conduct of Operations*, requires that "written technical procedures…ensure safe and effective facility and equipment operation." DOE Order 433.1B, *Maintenance Management Program for DOE Nuclear Facilities*, requires contractors to define a "process for developing and implementing documented and approved work instructions on safety SSCs [structures, systems, and components]," which BNI implements in 24590-WTP-PD-RAMN-MN-0003, *DFLAW Nuclear Maintenance Management Program Description*. Section 3.6 of 24590-WTP-PD-RAMN-MN-0003 states that both technical procedures and work instructions "include actions required to perform job hazard analysis, requirements for identification of prerequisites, precautions/limitations, potential impacts on other SSCs, as well as verification by subject matter experts and validation by worker representatives." EA identified several aspects of the test work packages that did not meet these requirements.

EA identified the following three test work packages that included steps that did not adhere to the ranges specified in their prerequisites or precautions and limitations section. The first two had not yet been issued for field use, and therefore were still in draft. These types of errors are contrary to requirements that technical procedures and work instructions adhere to precautions, limitations, and other prerequisites in accordance with 24590-WTP-PD-RAMN-MN-0003 (see **OFI-BNI-2)**:

- Test work package 24590-WTP-COWP-WC-20-03309, *Melter 1 Tuning Feed Operation*, stated that the melter level must be maintained between 29.0 and 31.0 inches of test fluid; however, the range in the procedure was 28.5 to 31.5 inches. The author and the CTD stated that this error would be corrected before the test work package was issued for use.

- Prerequisites in test work package 24590-WTP-COWP-WC-21-03780, *Capacity Test*, were contradictory in that two sequential steps could not both be met. The author and the CTD stated that this error would be corrected before the test work package was issued for use.
- Completed test work package 24590-WTP-COWP-WC-19-02360, *Lab Bottled Argon Gas Commissioning Test Instruction*, stated that the system shall not be operated with less than 25 inches of liquid; however, at no time during the test was the minimum of 25 inches of liquid checked or verified. It further stated that system pressure shall not exceed 135 pounds per square inch gauge (psig); however, steps in the test work package provided a range of 120 to 150 psig. (See **Deficiency D-BNI-2**.) As a result, the 135 psig limit was exceeded during the test, requiring documentation in a test deficiency report and further evaluation. Though this evaluation determined that the test results were acceptable despite not adhering to the stated limits, exceeding test parameters could result in unacceptable results or adverse safety consequences.

All reviewed test work packages contained notes that expected alarms could be ignored; however, no expected alarms were identified. By not identifying the expected alarms, CTEs and operators must make subjective judgments in the field. Additionally, all reviewed test work packages stated that conditions would be verified by field walkdowns prior to work being performed, but the test work packages did not contain a step to perform or document this walkdown. (See **OFI-BNI-3**.)

JHAs are completed several months prior to the performance of the procedure. To confirm that the conditions of the JHA are still valid, 24590-WTP-GPP-RAMN-WC-0001 requires that a job site review (JSR) be conducted immediately prior to the performance of the commissioning test. Procedure 24590-WTP-GPP-RAMN-WC-0001 further requires that the person-in-charge complete a JSR checklist. However, the completed test work packages EA reviewed did not include completed JSR checklists or any other documentation that the JSR was performed. (See **OFI-BNI-4**.) Lack of complete documentation and a retrievable test history could impact work planning, performance trending, causal analysis of problems following any unplanned occurrences, and continuous program improvement.

Finally, EA identified the following discrepancies in test work packages. (See **OFI-BNI-5**.)

- Test work package 24590-WTP-COWP-WC-20-03309 references a step that does not exist. It also states that equipment should be operated in "normal" mode; however, the operating procedure directs "on" and never indicates "normal." EA brought these discrepancies to the attention of the package author, who plans to ensure they are corrected before the work package is issued for use.
- Test work package 24590-WTP-COWP-WC-19-02360 references an incorrect step and further states a requirement for double hearing protection without specifying to whom the requirement applies. EA brought these discrepancies to the attention of the package author, who plans to ensure they are corrected before the work package is issued for use.
- Test work package 24590-WTP-COWP-WC-21-03780 contains a step that states "RECORD Initials/Date as Verifier in Table 3" but does not state what is being verified. It also contains a note that states: "Start of test status for glass filled ILAW [immobilized low-activity waste] containers is either: a) Ss = Staged (not ready for export), b) Rs = Ready for export"; however, no information is included to inform the performers of the test work package of the difference between a filled container that is staged and a filled container that is ready for export. Attachments 2 (*Melter Operations Data Sheet*) and 3 (*Container Data Sheet*) of the test work package reference tables from which data is to be retrieved, but the attachments do not describe what these tables are or where they are located; the test instruction included information about the table references, but this information was not included in the test work package.

- In one of the completed test work packages, a table documenting calibration expiration dates contained a pen-and-ink change documenting the date the calibration had been performed. This change was inconsistent with all other work packages reviewed by EA.
- A reference section is included in each test work package to list all procedures used to support the testing. The accuracy of the reference section varied greatly from package to package. For example, 24590-WTP-COWP-WC-20-03309 contained 13 referenced documents; however, five of these were missing from the list, and one procedure was listed that was not referenced in the test work package.

Test Package Quality Conclusions

All reviewed test work packages adequately capture test objectives and appropriately verify and control the use of calibrated equipment. Additionally, test work packages contain appropriate guidance to return systems to service after testing, and the testing closeout process helps ensure that all required data is captured. However, weaknesses identified in the procedures and test work packages, including inconsistencies in test parameters and inadequate documentation that some important steps were completed, could impact the safe and effective operation of equipment and the ability to identify and address the causes of problems if they occur.

3.3 ORP Oversight

The objective of this portion of the assessment was to evaluate the adequacy of ORP oversight of BNI's commissioning test procedure development and implementation processes, including program oversight and field oversight of test execution.

ORP has a dedicated WTP organization at the assistant-manager level to provide project and safety oversight of BNI during DFLAW design, construction, and commissioning. Facility Representatives (FRs) in the Operations Oversight Division (OOD), who report to the Assistant Manager for Safety and Quality, provide oversight of operations. For each commissioning test or surveillance, Federal oversight is performed by a multi-disciplined, cross-organizational team from these and other ORP organizations to ensure that the team includes appropriate expertise for the activity. The teams perform a variety of oversight activities, ranging from formally documented surveillances to informal field observations, using a graded approach to ensure that the level of oversight is commensurate with the significance of the activity. All ORP oversight is performed using DOE-PRO-PAI-50085, *Integrated Oversight*.

ORP personnel effectively document oversight results in the Integrated Oversight System and transmit the results to BNI for appropriate action. During interviews, ORP personnel described well-established relationships with BNI personnel in which ORP personnel routinely provide real-time feedback during oversight activities to ensure that issues are addressed, in addition to formally documented oversight activities. ORP personnel stated in interviews that they monitor BNI's daily condition report list to verify that identified issues are being entered into BNI's issues management system for evaluation and disposition.

Staffing is adequate for oversight of DFLAW commissioning activities, but OOD has had challenges maintaining a full complement of qualified FRs to oversee operations. Though staffing levels have improved over the past year, only one of the five incumbent staff assigned to WTP is fully qualified, and challenges continue as additional FRs will be needed as DFLAW operations begin. This staffing challenge was further supported by ORP's FR staffing analysis for WTP, which indicated a needed increase from five in fiscal year 2021 to seven in fiscal year 2022. During interviews, OOD leadership summarized plans to improve FR staffing and qualification levels in the near term, but continued

management attention is warranted to ensure that staffing levels remain adequate to provide effective oversight once DFLAW enters the operations phase.

As described in DOE-PRO-PAI-50085, contractor noncompliance identified through ORP oversight activities is documented in assessment reports and transmitted to BNI and other site contractors as "adverse conditions" for the contractor's evaluation and action. Adverse conditions are screened for risk and priority through BNI's issues management processes, which are elements of an ORP-approved Contractor Assurance System (CAS). ORP relies on its oversight of BNI's CAS to ensure these adverse conditions are appropriately addressed. ORP's issues management system does not provide a formal process for ensuring contractor problems identified during DOE oversight activities are evaluated and corrected on a timely basis, as required by section 4.b(4) of DOE Order 226.1B, *Implementation of Department of Energy Oversight Policy*. Further, DOE-PRO-PAI-50085 does not contain a mechanism to ensure that, for high-significance findings, the contractor has analyzed the underlying causal factors, identified and implemented corrective actions to address the causes and prevent recurrence, and conducted a review to verify the effectiveness of the corrective actions as required by DOE Order 226.1B, section 4.b(4). (See **Finding F-ORP-1**.) A follow-up function is provided in ORP's issues management process, but its use is at the discretion of the ORP personnel documenting the activity. ORP personnel expressed in interviews that use of the follow-up process is informal; several had never used it. No criteria are provided specifying what constitutes a high-significance issue, or when follow-up, other than through routine CAS oversight, is required or recommended.

ORP Oversight Conclusions

ORP generally provides effective oversight of BNI's commissioning test program. A multi-disciplined, cross-organizational team performs a variety of oversight activities using a graded approach. Though staffing is currently adequate, continued attention to staffing and qualification of oversight personnel is warranted. Documentation and follow-up on ORP contractor oversight results require improvement to ensure that processes are in place to verify that the contractor evaluates and corrects DOE-identified issues on a timely basis, and to ensure that the contractor has implemented corrective actions to address the causes and prevent recurrence of high-significance issues and has verified the effectiveness of those actions.

4.0 BEST PRACTICES

There were no best practices identified as part of this assessment.

5.0 FINDINGS

Findings are deficiencies that warrant a high level of attention from management. If left uncorrected, findings could adversely affect the DOE mission, the environment, the safety or health of workers and the public, or national security. DOE line management and/or contractor organizations must develop and implement corrective action plans for findings. Cognizant DOE managers must use site- and program-specific issues management processes and systems developed in accordance with DOE Order 226.1 to manage the corrective actions and track them to completion.

Office of River Protection

Finding F-ORP-1: ORP's issues management process does not provide a mechanism for ensuring that contractor problems identified during DOE oversight activities are evaluated and corrected on a timely

basis, or to ensure that the contractor has implemented corrective actions that address the causes and prevent recurrence of high-significance issues and has verified the effectiveness of those actions. (DOE Order 226.1B, section 4.b(4))

6.0 DEFICIENCIES

Deficiencies are inadequacies in the implementation of an applicable requirement or standard. Deficiencies that did not meet the criteria for findings are listed below, with the expectation from DOE Order 227.1A for site managers to apply their local issues management processes for resolution.

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Deficiency D-BNI-1: BNI did not fully document changes to work packages in WRSSs. (24590-WTP-GPP-RAMN-WC-0001, section 6.11)

Deficiency D-BNI-2: BNI issued and implemented test work package 24590-WTP-COWP-WC-19-02360 with inconsistent prerequisites, precautions, and limitations. (24590-WTP-PD-RAMN-MN-0003, section 3.6)

7.0 OPPORTUNITIES FOR IMPROVEMENT

EA identified five OFIs to assist cognizant managers in improving programs and operations. While OFIs may identify potential solutions to findings and deficiencies identified in assessment reports, they may also address other conditions observed during the assessment process. These OFIs are offered only as recommendations for line management consideration; they do not require formal resolution by management through a corrective action process and are not intended to be prescriptive or mandatory. Rather, they are suggestions that may assist site management in implementing best practices or provide potential solutions to issues identified during the assessment.

Bechtel National, Inc.

OFI-BNI-1: Consider changing COMM-DI-010 to provide more formal requirements for interface between commissioning personnel and work planners during commissioning test package finalization, and references to procedures being implemented.

OFI-BNI-2: Consider strengthening work package development and review processes to ensure that precautions, limitations, and other prerequisites in work instructions are consistently applied.

OFI-BNI-3: Consider adding requirements that test work packages identify expected alarms and include steps to perform and document a field walkdown prior to test initiation.

OFI-BNI-4: Consider including the JSR checklist in the completed test work package record.

OFI-BNI-5: Consider establishing a requirement for verification of internal references in test work packages, to eliminate errors like those noted in this report.

Appendix A
Supplemental Information

Dates of Assessment

Remote assessment: August-October 2021

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