UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
MARQUIS ONE TOWER
245 PEACHTREE CENTER AVENUE, NE, SUITE 1200
ATLANTA, GEORGIA 30303-1257

December 21, 2012

Gary J. Laughlin, Chief Nuclear Officer
and Head of Technical Services
Louisiana Energy Services
National Enrichment Facility, L.L.C.
P.O. Box 1789
Eunice, NM 88231

SUBJECT: LOUISIANA ENERGY SERVICES, NATIONAL ENRICHMENT FACILITY, L.L.C.
U.S. NUCLEAR REGULATORY COMMISSION INSPECTION REPORT NO.
70-3103/2012-007 AND NOTICE OF VIOLATION

Dear Mr. Laughlin:

This refers to an inspection conducted, by the U.S. Nuclear Regulatory Commission (NRC), from November 5 through December 6, 2012, at the Louisiana Energy Services, L.L.C., National Enrichment Facility (LES), located in Eunice, New Mexico. The purpose of the inspection was to verify compliance to Quality Level 1G requirements for the Cylinder Receipt and Dispatch Building (CRDB) and to review and evaluate the licensee's corrective actions related to previously opened items.

The enclosed inspection report, which documents the inspection results, was discussed with you and other members of your staff on December 6, 2012. Areas examined during the inspection are identified in the report. Within these areas, the inspection consisted of a selective examination of records, interviews with personnel, and observations of the as-built condition and configuration of the CRDB. The NRC determined that three Severity Level IV violations of regulatory requirements occurred. The violations involved failure to implement Quality Assurance Program Description requirements; including oversight of commercial grade dedication activities.

These violations were evaluated in accordance with the NRC Enforcement Policy. The current Enforcement Policy is available on the NRC's Web site at www.nrc.gov/about-nrc/regulatory/enforcement/enforce-pol.html. The violations are cited in the enclosed Notice of Violation (Notice) and the circumstances surrounding them are described in the subject inspection report. These violations are being cited in the Notice because they were identified by the NRC.

You are required to respond to this letter and should follow the instructions specified in the enclosed Notice when preparing your response. For your consideration, NRC Information Notice 96-28, "Suggested Guidance Relating to Development and Implementation of Corrective Action," is available on the NRC's Web site. If you have additional information that you believe the NRC should consider, you may provide it in your response to the Notice. The NRC will use your response, in part, to determine whether further enforcement action is necessary to ensure compliance with regulatory requirements.

If you contest these violations or their significance, you should provide a response within 30 days of the date of this letter, with the basis for your denial, to the Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington DC 20555-0001, with copies to: (1) the Regional Administrator, Region II; and (2) the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC.

In accordance with Title 10 of the Code of Federal Regulations (10 CFR) 2.390 of the NRC's "Rules of Practice," a copy of this letter, its Enclosure(s), and your response, if you choose to provide one, will be made available electronically for public inspection in the NRC's public reading room, Agency-Wide Document Access and Management System (ADAMS) on the internet at http://www.nrc.gov/reading-rm/adams.html. To the extent possible, your response should not include any personal privacy, proprietary, classified, or safeguards information so that it can be made available to the Public without redaction.

Should you have any questions concerning this letter, please contact me at (404) 997-4469.

Sincerely,

/RA/

Kathleen O'Donohue, Chief
Construction Inspection Branch 2
Division of Construction Inspection

Docket No. 70-3103
License No. SNM-2010

Enclosures:
1. Notice of Violation
2. NRC Inspection Report 70-3103/2012-007
   w/ Attachment of Supplemental Information

cc: (See page 3)

If you contest these violations or their significance, you should provide a response within 30 days of the date of this letter, with the basis for your denial, to the Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington DC 20555-0001, with copies to: (1) the Regional Administrator, Region II; and (2) the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC.

In accordance with Title 10 of the Code of Federal Regulations (10 CFR) 2.390 of the NRC's "Rules of Practice," a copy of this letter, its Enclosure(s), and your response, if you choose to provide one, will be made available electronically for public inspection in the NRC's public reading room, Agency-Wide Document Access and Management System (ADAMS) on the internet at http://www.nrc.gov/reading-rm/adams.html. To the extent possible, your response should not include any personal privacy, proprietary, classified, or safeguards information so that it can be made available to the Public without redaction.

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Sincerely,

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Docket No. 70-3103
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   w/Attachment of Supplemental Information

cc: (See page 3)
Distribution:
See next page

X PUBLICLY AVAILABLE ☐ NON-PUBLICLY AVAILABLE ☐ SENSITIVE **X** NON-SENSITIVE
ADAMS: **X** Yes ACCESSION NUMBER: ML12356A289 **X** SUNSI REVIEW COMPLETE **X** FORM 665 ATTACHED

OFFICE	RII:DCI	RII:DCI	RII:DCI	RII:DCI	RII:DCI	RII:DCI	RII:DCI
SIGNATURE	JXL2	Via e-mail	EXR4	Via e-mail	SEA1	KFD for BJD4	KFD
NAME	J. Lizardi	B. Davis	E. Heher	J. Seat	S. Alexander	A. Masters	K. O'Donohue
DATE	12/ 21 /2012	12/ 21 /2012	12/ 21 /2012	12/ 21 /2012	12/ 21 /2012	12/ 21 /2012	12/ 21 /2012
E-MAIL COPY	**YES** NO	**YES** NO	**YES** NO	**YES** NO	**YES** NO	**YES** NO	**YES** NO

OFFICIAL RECORD COPY DOCUMENT NAME: G:\CCI\INSPECTION REPORTS\FUEL FACILITIES\LES - NEF\2012\FINAL LES IR 2012-007 REV 01.DOCX

cc:

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Letter to Gary J. Laughlin from K. O'Donohue dated December 21, 2012.

SUBJECT: LOUISIANA ENERGY SERVICES, NATIONAL ENRICHMENT FACILITY, L.L.C. U.S. NUCLEAR REGULATORY COMMISSION INSPECTION REPORT NO. 70-3103/2012-007 AND NOTICE OF VIOLATION

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NOTICE OF VIOLATION

Louisiana Energy Services, L.L.C. Docket No. 70-3103
Eunice, N.M. License No. SNM-2010

During the U.S. Nuclear Regulatory Commission (NRC) inspection conducted from November 5 through December 6, 2012, three violations of NRC requirements were identified. In accordance with the NRC Enforcement Policy, the violations are listed below:

A. Special Nuclear Material (SNM) License Number (No.) 2010 requires, in part, that the licensee shall conduct authorized activities at the Louisiana Energy Services, L.L.C., National Enrichment Facility (LES) in accordance with statements, representations, and conditions in the approved Quality Assurance Program Description (QAPD), Revision (Rev.) 32f and supplements thereto.

LES Quality Assurance Program Description (QAPD), Rev. 32f, Section 21.16, states, in part, that "Corrective Action requirements for the QL-1G Program shall be in accordance with the requirements of Section 16 of the QAPD." Section 16 of the LES QAPD states, in part, that "Conditions adverse to quality, including activities and services, shall be identified promptly and corrected as soon as practical. Conditions adverse to quality are defined as items such as failures, malfunctions, deficiencies, deviations, defective material, defective equipment, or nonconformances."

Contrary to the above, on November 29, 2012, NRC inspectors identified a failure to identify and correct a condition adverse to quality, during a review of one of the commercial grade dedication plans (CGDP), for the cylinder and receipt dispatch building (CRDB) superstructure. The inspectors identified a Certified Material Test Report (CMTR) included in CGDP D-2009-011, that contained errors after numerous reviews and corrections. This CMTR was initially identified as containing errors by the NRC as part of unresolved item (URI) 70-3103/2012-002-04 and documented in NRC inspection report 70-3103/2012-002, dated April 30, 2012. Subsequent to that inspection, the CMTR was revised on April 24, 2012, reviewed and determined to be accurate by LES on October 15, 2012. This is identified as violation (VIO) 70-3103/2012-007-001.

This is a Severity Level (SL) IV Violation (Enforcement Policy, Section 6.5.d)

B. SNM License No. 2010 requires, in part, that the licensee shall conduct authorized activities at the LES NEF in accordance with statements, representations, and conditions in the approved QAPD, Revision 32f and supplements thereto.

LES QAPD, Rev. 32f, Section 21.16, states, in part, that "Corrective Action requirements for the QL-1G Program shall be in accordance with the requirements of Section 16 of the QAPD." Section 16 of the LES QAPD states, in part, that "Conditions adverse to quality, including activities and services, shall be identified promptly and corrected as soon as practical. Conditions adverse to quality are defined as items such as failures, malfunctions, deficiencies, deviations, defective material, defective equipment, or nonconformances."

Contrary to the above, on December 4, 2012, NRC inspectors identified a failure to identify and correct a condition adverse to quality during a walkdown of the CRDB superstructure. The inspectors identified a bolted connection that was not in compliance with the design drawing LES-1100-C-STL-108-01-0. Specifically, twelve 7/8-inch diameter bolts were installed where

1-inch diameter bolts were required per the design. This is identified as violation (VIO) 70-3103/2012-007-002.

This is a Severity Level (SL) IV Violation (Enforcement Policy, Section 6.5.d)

C. SNM License No. 2010 requires, in part, that the licensee shall conduct authorized activities at the LES in accordance with statements, representations, and conditions in the approved QAPD, Revision 32f and supplements thereto.

SNM License No. 2010, License Condition 28, defines "Dedication" in part, as "an acceptance process undertaken to provide reasonable assurance that a commercial grade item to be used as a basic component will perform its intended IROFS function and, in this respect, is deemed equivalent to an item designed and manufactured under a 10 CFR 50, Appendix B, Quality Assurance Program. This assurance is achieved by identifying the critical characteristics of the item and verifying their acceptability by inspections, tests, or analyses performed by the purchaser or third-party dedicating entity. In all cases, the dedication process must be conducted in accordance with the applicable provisions of 10 CFR Part 50, Appendix B."

LES QAPD, Rev. 32f, Section 21.5, "Instructions, Procedures, and Drawings," states, in part, "The Project Quality Assurance Plan (PQAP) will document the specific project requirements for instructions, procedures, and drawings."

Project Quality Assurance Plan for the Design, Fabrication, and Construction of the Cylinder Receipt and Dispatch Building, Rev. 2, Section 4.5.4, states, in part, "All QL-1G work shall be performed in accordance with LES procedures."

Contrary to the above, on December 6, 2012, NRC inspectors identified two examples of failure to perform QL-1G commercial grade dedication activities in accordance with LES Procedure EG-3-2100-05, Rev. 16, as follows:

1. LES Procedure EG-3-2100-05, Rev. 16, Section 5.7.2, states, "A Commercial Grade Dedication (CGD) Engineer shall identify the critical characteristics of the item, and in association with Quality Assurance (QA), determine the survey requirements for a non-Appendix B vendor. LES Specification LES-S-S-00002, "Specification for CRDB Civil-Structural Requirements," Rev. 2, Appendix 4, states in part that "Verification of hole size and location is the responsibility of the vendor's Quality Control Program, in accordance with applicable Commercial Grade Dedication Plan(s)." Contrary to the above, dimensional verification for bolt hole size and location, was not defined as a critical characteristic in CGDP D-2010-018 and CGDP D-2010-027 and a commercial survey was not performed for the vendor to allow for vendor verification.

2. For acceptance of dedicated items and services, LES Procedure EG-3-2100-05, Rev. 16, Section 5.6.1, states, "Perform verification inspections, testing and surveys as indicated on the latest revision of EG-3-2100-05-F-3." Contrary to the above, all verification inspections listed in Form EG-3-2100-05-F-3 for CGDP D-2010-0018 were not performed for 56 types of structural components.

These two examples are identified as violation (VIO) 70-3103/2012-007-003.

This is a Severity Level (SL) IV Violation (Enforcement Policy, Section 6.5.d)

Pursuant to the provisions of Title 10 of the Code of Federal Regulations (10 CFR) 2.201, Louisiana Energy Services, LLC is hereby required to submit a written statement or explanation to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555, with copies to the Chief, Technical Support Group, Division of Fuel Cycle Safety and Safeguards, NMSS, and the Regional Administrator, Region II, within 30 days of the date of the letter transmitting this Notice of Violation (Notice). This reply should be clearly marked as a "Reply to a Notice of Violation" and should include for each violation with a required response: (1) the reason for the violation, or, if contested, the basis for disputing the violation or severity level, (2) the corrective steps that have been taken and the results achieved, (3) the corrective steps that will be taken to avoid further violations, and (4) the date when full compliance will be achieved.

If you contest this enforcement action, you should also provide a copy of your response, with the basis for your denial, to the Director, Office of Enforcement, United States Nuclear Regulatory Commission, Washington, DC 20555-0001.

Your response may reference or include previous docketed correspondence, if the correspondence adequately addresses the required response. If an adequate reply is not received within the time specified in this Notice, an Order or a Demand for Information may be issued as to why the license should not be modified, suspended, or revoked, or why such other action as may be proper should not be taken. Where good cause is shown, consideration will be given to extending the response time.

Because your response will be made available electronically for public inspection in the NRC Public Document Room or from the NRC's document system ADAMS, accessible from the NRC Web Site at http://www.nrc.gov/reading-rm/adams.html to the extent possible, it should not include any personal privacy, proprietary, classified, or safeguards information so that it can be made available to the public without redaction. If personal privacy or proprietary information is necessary to provide an acceptable response, then please provide a bracketed copy of your response that identifies such information. If you request withholding of such material, you must specifically identify the portions of your response that you seek to have withheld and provide in detail the bases for your claim of withholding (i.e., explain why the disclosure of information will create an unwarranted invasion of personal privacy or provide the information required by 10 CFR 2.390(b) to support a request for withholding confidential commercial or financial information). If classified or safeguards information is necessary to provide an acceptable response, please provide the level of protection described in 10 CFR 73.21.

In accordance with 10 CFR 19.11, you may be required to post this Notice within two working days. Dated at Atlanta, Georgia this 21st day of December 2012.

NUCLEAR REGULATORY COMMISSION

REGION II

Docket No:	70-3103
License No:	SNM-2010
Report No:	70-3103/2012-007
Licensee:	Louisiana Energy Services L.L.C.
Location:	National Enrichment Facility Eunice, New Mexico
Inspection Dates:	November 5 - December 6, 2012 (In-Office and On-Site Inspections)
Inspectors:	J. Lizardi, Construction Inspector, Construction Inspection Branch 2 (CIB2), Division of Construction Inspection (DCI), Region II (RII) A. Masters, Senior Construction Inspector, CIB2, DCI, RII B. Davis, Senior Construction Inspector, CIB2, DCI, RII E. Heher, Construction Inspector, CIB2, DCI, RII J. Seat, Construction Inspector, CIB2, DCI, RII S. Alexander, Construction Inspector, CIB2, DCI, RII
Accompanying Personnel:	J. Yerokun, Deputy Director, DCI, RII
Approved:	Kathleen O'Donohue, Chief, Construction Inspection Branch 2, Division of Construction Inspection

EXECUTIVE SUMMARY

Louisiana Energy Services, L.L.C., National Enrichment Facility (LES)
Nuclear Regulatory Commission (NRC) Inspection Report No. 70-3103/2012-007
November 5 – December 6, 2012

The NRC conducted an inspection to evaluate procurement, fabrication, as-built construction, and open items associated with the Cylinder Receiving and Dispatch Building (CRDB). The CRDB Superstructure and bunkered area were classified by LES as Items Relied on for Safety (IROFS) 27e and 27c structures, respectively. The inspection included review of LES Commercial Grade Dedication (CGD) Program and applicable CGD activities for critical characteristics of the materials and fabrication of the CRDB Superstructure.

1. Quality Assurance: Design and Document Control (Inspection Procedure (IP) 88107)

The inspectors reviewed representative samples of engineering change requests (ECRs), design drawings, and condition reports (CRs) related to IROFS 27c and 27e, for the CRDB. The inspectors completed a review of the as-built configuration of the CRDB super structure by sampling as-installed structural components against design drawings and calculations. The inspectors also reviewed quality assurance records associated with these activities to verify they were properly maintained in accordance with associated procedures.

LES effectively established and implemented design control procedures to track ECRs. The implementation procedure and boundary definition document related to IROFS 27e for the CRDB structure were found adequate during previous inspection efforts. No findings of significance were identified. (Section 2)

2. Quality Assurance: Control of Materials, Equipment, and Services (IP 88108)

The inspectors reviewed several structural steel Commercial Grade Dedication Plans (CGDP) for the Quality Level 1-Graded (QL-1G) CRDB (including applicable procedures, CGDP for miscellaneous structural materials, and procurement documents) and performed a walkdown as verification of the as-built condition of the CRDB. Violation (VIO) 70-3103/2012-007-001, "Failure to Identify and Correct Conditions Adverse to Quality with Certified Material Test Report," was identified for the failure to promptly identify and correct errors documented in a Certified Material Test Report (CMTR) included in CGDP D-2009-011. (Section 3)

3. Quality Assurance: Problem Identification, Resolution, and Corrective Action (PIRCA) (IP 88110)

Follow-up of Previously Identified Issues

The following previously identified issues were closed:

- VIO 70-3103/2012-002-006: Failure to Adequately Verify Critical Characteristic of Diameter for Brace Rods,

- URI 70-3103/2012-002-004: Review of Mechanical Testing and Traceability of Certified Material Test Reports,
- URI 70-3103/2012-002-005: Review of Critical Characteristics for Dimensions,
- URI 70-3103/2012-002-002: Failure to Evaluate Potential Nonconforming Conditions,
- URI 70-3103/2012-002-008: Review of Critical Characteristic and CGD Method Changes and Critical Characteristic Verification for CGDP-2010-019,
- URI 70-3103/2012-002-010: Evaluation of Weld Sizes from CRDB Bunkered Area Beam,
- IFI 70-3103/2012-002-007: Review of Phase 2 and 4 Brace Rods, and
- VIO 70-3103/2012-002-009: Failure to Identify and Correct Conditions Adverse to Quality,
- URI 70-3103/2012-002-03: Review of Test Methods Used for Chemical Analysis to Produce Certified Material Test Reports. (Section 4)

4. 10 CFR, Part 21, Inspection-Facility Construction (IP 88111)

The inspectors reviewed the licensee's process for identification, documentation, evaluation, and disposition of nonconforming items. The inspectors verified the licensee established and implemented procedures and program activities that met the requirements of Title 10 of the Code of Federal Regulations (10 CFR) Part 21. (Section 5)

5. Structural Steel and Supports Activities (IP 88133)

The inspectors reviewed work packages, specifications, and procedures associated with the fabrication and erection of QL-1G structural components associated with the CRDB super structure. The inspectors reviewed CGDPs supporting the dedication of structural components for the CRDB super structure. The inspectors also reviewed quality assurance records for structural steel and support activities. The following violations were identified:

- VIO 70-3103/2012-007-002, "Failure to Identify and Correct Conditions Adverse to Quality with Installation of Roof Beams in CRDB," was identified for the failure to promptly identify and correct nonconforming as-built installation for structural steel components. (Section 6.a.1)

- VIO 70-3103/2012-007-003, "Failure to Follow Procedures," was identified for the failure to dedicate commercial grade items in accordance with project procedures. (Section 6.a.1)

REPORT DETAILS

1. Summary of Facility Status

The licensee continued to conduct routine plant operation of the operating Cascades at the time of the inspection. The Cylinder Receipt and Dispatch Building (CRDB) and other applicable process areas continued in preparation for future operation.

2. Design and Documentation Control (IP 88107)

a. Scope and Observations

The inspectors reviewed implementation of Louisiana Energy Services, L.L.C., National Enrichment Facility (LES) design and document controls per the provisions required by LES Quality Assurance Program Description (QAPD), Revision (Rev.) 32f. The purpose of this inspection was to determine whether quality assurance records furnished evidence of the quality of items and activities affecting Items Relied on for Safety (IROFS) 27e and 27c for the CRDB. The inspectors reviewed a sample of work plans, quality control (QC) inspections, and construction documents to verify quality assurance records furnished evidence of the quality of items and activities affecting IROFS 27e for the CRDB super structure. The inspectors reviewed a sample of design and construction documents produced as part of engineering and design change process activities. They also reviewed a sample of controlled design documents including engineering change requests (ECRs), design drawings, work plans, nonconformance reports (NCRs), and condition reports (CRs) associated with IROFS 27c and 27e construction and design activities. LES implementing procedures applicable to the CRDB were reviewed during previous U.S. Nuclear Regulatory Commission (NRC) inspection efforts. Referenced drawings and work plans were reviewed to verify that relevant ECRs were properly posted, tracked, and incorporated. The inspectors also reviewed design specifications, drawings, and procurement documents to verify the applicable design bases were translated into applicable quality documents and controlled in accordance with LES procedures.

b. Conclusion

Representative samples of ECRs, design drawings, and CRs related to IROFS 27c and 27e for the CRDB were reviewed and found adequate. LES effectively established and implemented design control procedures to track ECRs. No findings of significance were identified.

3. Control of Materials, Equipment, and Services (IP 88108)

a. Scope and Observations

The inspectors conducted in-office and on-site inspections in order to evaluate Quality Level-1 Graded (QL-1G) procurement and fabrication activities of IROFS 27e associated with the CRDB. The inspectors focused on the applicable commercial grade dedication activities for critical characteristics of welding filler materials, bracing rods, turnbuckles, clevises, pins, raw steel materials, and structural steel members used in the installation

of the CRDB Superstructure. Initial inspection of several of these commercial grade dedication plans (CGDP) were documented in NRC Inspection Reports (IRs) 70-3103/2010-002 and 70-3103/2012-002.

The inspectors reviewed CGDPs D-2010-007, D-2010-008, D-2010-009, D-2010-011, D-2010-015, D-2010-017, D-2010-019, D-2010-018, D-2010-027, and their applicable acceptance methods. A combination of Acceptance Method 1, "Special Test/Inspection and Standard Receipt Practices," Acceptance Method 2, "Commercial Grade Survey," and Acceptance Method 3, "Source Verification," was selected by LES for verification of critical characteristics. Inspectors reviewed established measures and controls of materials, equipment, and services related to the Quality Level (QL)-1 structural steel components to determine whether the licensee maintained an adequate program.

1. Review of Commercial Grade Dedication Plan D-2009-011

The inspectors reviewed LES CGDP D-2009-011, Revision (Rev.) 2, and LES Specification LES-S-S-00002, "CRDB Civil-Structural Requirements," to verify adequate definition and implementation of technical requirements and acceptance criteria for critical characteristics. This CGDP documented the commercial grade dedication of raw steel materials used for the fabrication of the structural steel components, including beams and connections in the CRDB. Because this plan was previously inspected by the NRC, this inspection focused on corrective actions taken that resulted from the previous NRC inspection, which was documented in NRC IR Number (No.) 070-3103/2012-002. This inspection also focused on sampling documentation to verify traceability of material used for components in the CRDB building to the material test reports included in the CGDP.

Special Nuclear Material (SNM) License Number (No.) 2010 requires, in part, that the licensee shall conduct authorized activities at the LES in accordance with statements, representations, and conditions in the approved QAPD and supplements thereto.

LES QAPD, Rev. 32f, Section 21.16, states, in part, that "Corrective Action requirements for the QL-1G Program shall be in accordance with the requirements of Section 16 of the QAPD." Section 16, of the LES QAPD, states, in part, that "Conditions adverse to quality, including activities and services, shall be identified promptly and corrected as soon as practical. Conditions adverse to quality are defined as items such as failures, malfunctions, deficiencies, deviations, defective material, defective equipment, or nonconformances."

Contrary to the above, on November 29, 2012, NRC inspectors identified a failure to identify and correct a condition adverse to quality during a review of one of the CGDP for the CRDB superstructure. The inspectors identified a Certified Material Test Report (CMTR) included in CGDP D-2009-011 that contained errors after numerous reviews and corrections. This CMTR was initially identified as containing errors by the NRC, as part of unresolved item (URI) 70-3103/2012-002-04, and documented in NRC inspection report (IR) 70-3103/2012-002, dated April 30, 2012. The licensee initiated CR 2012-847 to address and evaluate the issue identified by the NRC and documented in NRC IR No. 070-3103/2012-002. CR 2012-847 documented that all corrective actions were completed and that this CR was closed on May 13, 2012. The CR also documented that

"this type of error was previously identified, under CR 2011-1447, and actions were taken to eliminate future test report errors." CR 2011-1447, was initiated on May 3, 2011, and closed December 4, 2011.

As a corrective action from CR 2012-847, the licensee submitted the CMTRs identified by the NRC back to the independent testing laboratory to correct the identified discrepancies. CMTR No. LOU031-11-30-57735-5 was last revised on April 24, 2012, and re-submitted to the licensee for their review. The latest revision of the CMTR was reviewed by LES and determined to be accurate on October 15, 2012. LES included the CMTR in the documentation for CGDP D-2009-011. However, on November 29, 2012, NRC inspectors identified that the CMTR incorrectly documented the test sample width, thickness, and area. The licensee initiated CR 2012-3473 to address and evaluate this issue. This issue was identified as VIO-70-3013/2012-007-001.

2. Review of Commercial Grade Dedication Plan D-2010-019

During an NRC inspection in March 2012, the inspectors reviewed CGDPs D-2010-019 and documented the review in Inspection Report 070-3103/2012-002. As part of this review, Unresolved Item (URI) 70-3103/2012-002-008: Review of Critical Characteristic and CGD Method Changes and Critical Characteristic Verification for CGDP-2010-019 was opened to further evaluate the licensee's commercial grade survey of Tensile Testing Metallurgical Laboratory and the license's methodology for changing critical characteristics in GCDP D-2010-019 between Rev. 2 and Rev. 4. Additional reviews of these items are further discussed in Sections 4(e) and 6 of this inspection report.

3. Review of Commercial Grade Dedication Plan D-2010-007, -008, -009, -015, and -017

During an NRC inspection in March 2012, the inspectors reviewed CGDPs D-2010-007, D-2010-008, D-2010-009, D-2010-015, and D-2010-017 to verify the adequacy of dedication activities for welding filler metals. The review was documented in Inspection Report 070-3103/2012-002. For these CGDPs, LES verified critical characteristics (CCs) by performing independent testing. The inspectors reviewed the CMTRs, which were contained in construction work packages, from qualified testing suppliers to determine if test results met the acceptance criteria required by their respective CGDPs. As part of this review, URI 70-3103/2012-002-003: Review of Test Methods Used for Chemical Analysis to Produce Certified Mill Test Reports, was opened for discrepancies identified in CMTRs. Additional review of these items is discussed in Section 4(i) of this inspection report.

4. Review of Commercial Grade Dedication Plan D-2010-018, and D-2010-027

Review of CGDPs D-2010-018 and D-2010-027 is further discussed in Section 6 of this inspection report.

b. Conclusion

Violation (VIO) 70-3103/2012-007-001, "Failure to Identify and Correct Conditions Adverse to Quality with Certified Material Test Report," was identified for the failure to promptly identify and correct errors documented in a CMTR included in

CGDP D-2009-011, CRDB Material. VIO 70-3103/2012-007-001 was considered to be more than minor because the CMTR was required for verification of the critical characteristics for the CGD of the material and contained errors leaving the verification of the critical characteristic indeterminate.

4. Quality Assurance: Problem Identification, Resolution, and Corrective Action (PIRCA) (IP 88110)

Follow-up of Previously Identified Issues

a. (Closed) VIO 70-3103/2012-002-006: Failure to Adequately Verify Critical Characteristic of Diameter for Brace Rods

This violation was documented in NRC IR No. 70-3103/2012-002, dated April 30, 2012. The violation was associated with a failure to adequately verify the critical characteristic of diameter for brace rods used in the CRDB as part of the CGD process. The licensee provided a response to the violation in letter dated May 24, 2012. The NRC replied to LES's response in a letter dated July 20, 2012, stating that the violations would remain open until the NRC verified implementation of the corrective actions. The inspectors reviewed the licensee's corrective action plan documented in CR 2012-867 and CR 2012-1156, that were initiated to address the violation. Corrective actions included procedure changes and engineering evaluations. Based on the review of documents and discussions with licensee personnel, the inspectors determined that the corrective actions were adequately implemented. VIO 2012-002-006 was closed.

b. (Closed) URI 70-3103/2012-002-004: Review of Mechanical Testing and Traceability of Certified Test Reports

This URI was documented in NRC IR No. 70-3103/2012-002, dated April 30, 2012. The URI was initiated to further evaluate several discrepancies identified by the NRC inspectors regarding apparent errors found on the CMTR, contained in CGDP D-2009-011. The inspectors reviewed the licensee's corrective action plan to address items documented in CR 2012-753, CR 2012-847, and CR 2012-900. Licensee evaluations in those documents concluded that some CMTRs indicated that the tensile tests were not always in strict compliance with Figure 3 of ASTM A-370-09, as required by the procurement specifications provided to the independent testing laboratories. However, the licensee's evaluation determined that this had no effect on the testing data provided for the material. Based on the review of documents, sampling of materials used in the CRDB, and discussions with licensee personnel the inspectors determined there were no findings of significance. URI 2012-002-004 was closed.

c. (Closed) URI 70-3103/2012-002-005: Review of Critical Characteristics for Dimensions

This URI was documented in NRC IR No. 70-3103/2012-002, dated April 30, 2012. The URI was initiated to further evaluate several discrepancies identified by the NRC inspectors regarding apparent discrepancies found on the Heat Code Log (HCL) data sheet, contained in CGDP D-2009-011. The inspectors reviewed the licensee's corrective action plan to address items documented in CR 2012-744, CR 2012-768, and CR 2012-1459. Licensee's evaluation concluded that although the HCL did contain discrepancies, these discrepancies had no effect on the testing data, or traceability, of the material. Based on the review of documents, sampling of materials used in the

CRDB, and discussions with licensee personnel the inspectors determined there were no findings of significance. URI 2012-002-005 was closed.

d. (Closed) URI 70-3103/2010-002-02: Failure to Evaluate Potential Nonconforming Conditions

This URI was documented in NRC IR No. 70-3103/2012-002, dated April 30, 2012. The URI was initiated to further evaluate several discrepancies identified by the NRC inspectors regarding apparent discrepancies found on the HCL data sheet, contained in CGDP D-2009-011. The inspectors reviewed the licensee's corrective action plan to address items documented in CR 2012-744, CR 2012-768, and CR 2012-1459. Licensee's evaluation concluded that although the HCL did contain discrepancies, these discrepancies had no effect on the testing data, or traceability, of the material. Based on the review of documents, sampling of materials used in the CRDB, and discussions with licensee personnel, the inspectors determined there were no findings of significance. URI 2012-002-005 was closed.

e. (Closed) URI 70-3103/2012-002-008: Review of Critical Characteristic and CGD Method Changes and Critical Characteristic Verification for CGDP-2010-019

URI 70-3103/2012-002-008 was documented in NRC IR No. 70-3103/2012-002 to further evaluate the licensee's commercial grade vendor survey and methodology, for changing critical characteristics in GCDP D-2010-019 between Rev. 2 and Rev. 4. The licensee opened CR 2012-719 to evaluate commercial grade survey 2010-C-08-013 used for Method 2 verification of critical characteristics (CC) in GCDP D-2010-019. The inspectors reviewed the licensee's condition report and found that a commercial grade survey checklist was not used when conducting the audit. Although a checklist was not used, the inspectors determined the survey included the appropriate quality controls to support Method 2 verification of CCs.

The licensee opened CR 2012-806 to evaluate the changes to CCs between Rev. 2 and Rev. 4 for CGDP D-2010-019. The inspectors reviewed the licensee's procedure for changing CCs and the licensee's evaluation documented in CR 2012-806. The inspectors concluded that the CCs were changed and approved in accordance with project procedures. Based on the review of documents and discussions with licensee personnel, the inspectors determined there were no findings of significance. URI 70-3103/2012-002-008 was closed.

f. (Closed) URI 70-3103/2012-002-010: Evaluation of Weld Sizes from CRDB Bunkered Area Beam

This URI was documented in NRC IR No. 70-3103/2012-002, dated April 30, 2012. It was initiated to further evaluate inconsistencies identified by the NRC inspectors regarding weld sizes from Girder Beam B480. The inspectors reviewed the licensee's corrective action plan to address this item documented in CR 2012-722. Licensee evaluations in those documents concluded that the welds in the beam were in compliance with licensee and code commitments. The NRC inspectors independently verified all the welds in Beam B480 and several welds in the adjacent beam. Based on the review of documents, inspection of beam welds, and discussions with licensee personnel, the inspectors determined there were no findings of significance. URI 2012-002-010 was closed.

g. (Closed) IFI 70-3103/2012-002-07: Review of Phase 2 and 4 Brace Rods (Commercial Grade Dedication Plan D-2009-11)

This Inspector Follow-up Item (IFI) was initiated during an inspection that occurred March 5 – 30, 2012. During this inspection, inspectors reviewed Commercial Grade Dedication Plan (CGDP) D-2001-011, which was used to dedicate raw materials used in the fabrication of structural components for the CRDB superstructure. Portions of this material were used to fabricate brace rods for the CRDB superstructure. The IFI was initiated to follow up on questions concerning surveillance requirements and order quantities for CRDB Phase II brace rods. LES created CR 2012-770 to track this item. Inspectors reviewed CRs 2012-770, 2012-1058, and 2012-1651. The inspectors determined that the brace rods in question were not dedicated commercial items, rather, were properly procured and fabricated as QL-1G components. Based on the review of documents, the inspectors determined there were no findings of significance. IFI 70-3103/2012-002-07 was closed.

h. (Closed) VIO 70-3103/2012-002-09 Failure to Identify and Correct Conditions Adverse to Quality

The inspectors reviewed corrective actions performed by LES for VIO 2012-002-009 associated with bent column diagonal bracing and a missing nut on a bolted structural connection. The corrective actions for this VIO were documented in CR 2012-723 for the bent column bracing and CR 2012-724 for the missing nut.

The inspectors reviewed CR 2012-723, which concluded that the cause of the deficiency was improperly manufactured bracing members. The inspectors reviewed NCR 2012-723, which was written to evaluate and correct the bent column bracing. The inspectors verified that the deficient bracing was repaired in accordance with the NCR and that the as-built condition of similar diagonal bracing was acceptable.

The inspectors reviewed CR 2012-724, which concluded that the nut was removed to provide structural movement for assembly of other members and never replaced. The inspectors reviewed NCR 2012-724, that was written to evaluate the structural bolting assembly and inspect similar connections for missing fasteners. The inspectors verified that the missing bolting assembly was replaced and that similar connections were properly fastened. The inspectors also reviewed CRs 2012-1157, 2012-1262, and 2012-2990 all of which addressed the inspection and evaluation of bolted structural connections.

Based on the review of documents, field inspection, and discussions with licensee personnel, the inspectors determined that the corrective actions were adequately implemented. VIO 2012-002-009 was closed.

i. (Closed) URI 70-3103/2012-002-03: Review of Test Methods Used for Chemical Analysis to Produce Certified Material Test Reports

During an NRC inspection in March 2012, the inspectors reviewed CMTRs from CGDP D-2010-007, D-2010-008, D-2010-009, D-2010-015, D-2010-017. As part of this review, URI 70-3103/2012-002-003: Review of Test Methods Used for Chemical Analysis to Produce Certified Mill Test Reports, was opened for discrepancies identified in CMTRs.

At the time this URI was opened, it was not clear to the inspectors if the chemical analysis methods used for welding electrode testing were the methods referenced in ASTM E350. After further review of the CGD plans D-2010-007, D-2010-008, D-2010-009, and associated CMTRs, the inspectors determined that the methods used for chemical analysis were not the methods referenced on ASTM E350. Condition Report 2012-3619 documented this condition. Although ASTM E350 was listed as the reference standard for chemical analysis methods in the CGD inspection form, the CGD plan did not reference this standard. Also, the chemical tests results met the acceptance criteria in AWS 5.17 as required by the CGD plan. Therefore, although this issue should be corrected, it constitutes a violation of minor significance that is not subject to enforcement action, in accordance with Section IV of the Enforcement Policy. URI 70-3103/2012-002-03 was closed.

5. 10 CFR, Part 21, Inspection-Facility Construction (IP 88111)

a. Scope and Observations

The inspectors reviewed the licensee's process for identification, documentation, evaluation, and disposition of nonconforming items to verify that it met the requirements of Title 10 of the Code of Federal Regulations (10 CFR) Part 21, "Reporting of Defects, and Noncompliance." The inspectors reviewed the licensee's corrective action program to verify the licensee effectively implemented the requirements of 10 CFR 21.21(a) regarding evaluating identified deviations. The inspectors reviewed procedure LS-3-1000-01, Implementation of 10 CFR 21, to verify:

- it included a specific responsible officer to notify of identified defects or failures to comply,
- included requirements for the responsible officer to notify the NRC of identified defects or failures to comply related to significant safety hazards, and
- it accurately reflected the provisions of 10 CFR 21.21, regarding time frames for reporting identified defects or failures to comply.

Several CRs were reviewed to determine the effectiveness of procedure CA-3-1000-01, Performance Improvement Program, at identifying adverse conditions. When applicable, the inspectors reviewed the Part 21 Substantial Safety Hazard Evaluation Form included in the CRs, to verify the information and data used in the evaluation appeared to be factual and complete. The inspectors also verified if the results of the evaluations for a "substantial safety hazard or failure to comply," were reasonable.

Several NCRs were reviewed to determine the effectiveness of EG-3-2100-09, Identification, Disposition, and Resolution of Nonconforming Items, at identifying and evaluating nonconformances and deviations. None of the CRs or NCRs reviewed resulted in the identification of a defect or failure to comply that required reporting. The inspectors assessed the interfaces between procedures LS-3-1000-01, CA-3-1000-01, and EG-3-2100-09 to verify the corrective action program identified items for evaluation consistent with the requirements of 10 CFR 21.

A complete list of the documents reviewed is listed in Section 12.

b. Conclusion

The inspectors verified the licensee established and implemented procedures and program activities that met the requirements of 10 CFR Part 21. No findings of significance were identified.

6. Structural Steel and Supports Activities (IP 88133)

a. Scope and Observations

This portion of the inspection evaluated structural steel activities associated with IROFS 27e and 27c for the CRDB. The purpose of the inspection was to determine by direct observation and independent evaluation whether as-built installation, testing, and inspection performance related to CRDB QL-1 and QL-1G structural steel activities were accomplished in accordance with applicable codes and standards, design specifications, drawings, procedures, and regulatory requirements.

During the inspection, quality assurance documentation and drawings were reviewed by the inspectors to verify whether activities performed on-site were in accordance with license and regulatory commitments. The inspectors held discussions with civil engineering staff regarding the structural steel and bolt installation activities, procedures, and specifications.

The NRC inspectors walked down areas of the CRDB Superstructure to verify that the as-built condition of several structural members met design drawings and related requirements. The inspectors independently verified dimensions and part numbers in order to determine if adequate parts were installed in accordance with design requirements and if these parts were traceable to the work plans and procurement documentation. The work plans were also reviewed to verify adequate documentation and signature of quality control hold points. Inspectors sampled roof beams, box struts, brace rods, and connections along grid lines 2.7 and 3.1. During this walkdown, the inspection identified a condition adverse to quality that was not previously identified or documented by the licensee.

SNM License No. 2010 requires, in part, that the licensee shall conduct authorized activities at the LES in accordance with statements, representations, and conditions in the approved QAPD and supplements thereto.

LES QAPD, Rev. 32f, Section 21.16 states, in part, that “Corrective Action requirements for the QL-1G Program shall be in accordance with the requirements of Section 16 of the QAPD.” Section 16 states, in part, that “Conditions adverse to quality including activities and services shall be identified promptly and corrected as soon as practical. Conditions adverse to quality are defined as items such as failures, malfunctions, deficiencies, deviations, defective material, defective equipment or nonconformances.”

Contrary to the above, on December 4, 2012, NRC inspectors identified a failure to identify and correct a condition adverse to quality during a walkdown of the CRDB superstructure. The inspectors identified a bolted connection 12, A490, 7/8-inch diameter bolts that were not in compliance with design drawing LES-1100-C-STL-108-01-0, dated March 5, 2010. The connection was between roof beams numbered 102

and 103, located along grid line 3.1. The "Bolted Connection Schedule" on the design drawing required 12, 1-inch diameter, A490 bolts to be installed in this connection.

LES QC completed final QC inspection for approval of installation of this bolted connection on September 15, 2010. The QC inspection form documented that 1-inch diameter A490 bolts were adequately and properly installed, contrary to the as-found condition by the NRC inspectors on December 4, 2012. The QC inspections for the bolted connections along grid line 3.1 were documented on Form EG-3-6000-04-F-1, Bolted Connection Worksheet, which was Attachment 7a on page 189 of Work Plan 1100-CIVIL-823-097. The worksheet was reviewed by the Construction Engineer and signed on February 10, 2011. LES initiated CR-2012-3575 to evaluate this issue.

1. Review of Commercial Grade Dedication Plans D-2010-018, and D-2010-027

Through direct observation and independent evaluation, the inspectors reviewed the construction activities and documentation associated with the CRDB superstructure (IROFS 27e) to determine whether the activities were accomplished in accordance with design specifications, drawings, and procedures. The inspectors sampled as-installed structural components to verify that the components were installed in accordance with design drawings and specifications. The inspectors reviewed procurement documents to verify design requirements were translated into procurement documents.

Portions of the CRDB superstructure were procured, fabricated, and erected under LES's Quality Level (QL)-1G Quality Assurance (QA) program. For these portions of the structure, the inspectors sampled QL-1G work plans, design specifications, and procurement documents to verify the activities were conducted in accordance with the applicable QA requirements and design requirements. Other portions of the CRDB superstructure were procured as commercial components and then dedicated as basic components. For these portions of the structure, the inspectors reviewed the applicable CGD activities for the dedication of roof beams, turnbuckles, clevises, pins, structural purlins, purlin braces, column bracing, roof decking, diagonal brace rods, and moment frames.

The inspectors reviewed CGDP D-2010-018 and CGDP D-2010-027, Rev. 2, to verify the adequacy of dedication activities for roof beams, general structural components, moment resisting frames, and end columns. For the components dedicated in CGDP D-2010-018 and CGDP D-2010-027, Rev. 2, LES verified CCs by performing independent measurements of critical dimensions and by performing a commercial survey of the vendor's quality controls for welding activities. The inspectors reviewed the independent measurements performed by LES to assure the critical dimensions were verified in accordance with the dedication plan. The inspectors also reviewed LES's commercial survey of the steel building vendor to assure adequate verification of the vendor's welding program and quality controls for welding activities.

LES Design Specification LES-S-S-00002, Rev. 4, specifies the structural design requirements and the critical attributes for the components dedicated in GCDP D-2010-018 and CGDP D- 2010-027, Rev. 2. Appendix 4 of this specification states in part that, "The dimensional verification requirements listed in this Appendix will ensure compliance with Sections 10 and 21 of the vendor's QAPD. The dimensional critical characteristics for the defined critical attributes will be verified prior to release for installation by qualified Quality Control Personnel as required by Sections 10 and 21 of

the vendor's QAPD." The dimensional critical characteristic for each component is described in Appendix 4, General Notes Dimensional Verification, of specification LES-S-S-00002, Rev. 4, which states, "Verification of hole size and location is the responsibility of the vendor's Quality Control Program, in accordance with applicable Commercial Grade Dedication Plan(s)." Although the specification defines bolt hole size and location as a critical characteristic, the sampling plan for the components being dedicated in CGDP D-2010-018 and CGDP D-2010-027, Rev. 2, did not include bolt hole size and location as a critical characteristic to be verified. LES was unable to produce QA records demonstrating that bolt hole size and location was verified as part of the CGD process. In addition, LES did not conduct a source surveillance or commercial survey of the vendor's, or its subcontractors', quality for verifying bolt hole size and location to allow vendor verification of this critical characteristic.

While reviewing the verification of critical characteristics, the inspectors observed that LES generated CR 2012-3085 to document a number of components not listed on the Quality Control inspection sampling charts, used to identify the components to be inspected and the number of samples to take during the fabrication of the components. In their review, LES identified 77 components which were not sampled in accordance with CGDP D-2010-018 and CGDP D-2010-027, Rev. 2. LES evaluated the 77 components which were not sampled in accordance with the CGDP in Nonconformance Report (NCR) 2012-3085. In their review, LES demonstrated that 21 of the components were actually procured and fabricated, in accordance with their QL-1G QA requirements, and therefore; already a basic component. LES determined that the dimensional critical characteristic for the remaining 56 components were not verified for acceptance in accordance with the CGDP. The NCR accepted the 56 components for use-as-is partially based on the vendor's performance of dimensional measurements and automated production processes. However, LES did not complete source surveillance or commercial survey to allow the vendor to verify the critical characteristic through dimensional verifications or automated processes.

SNM License No. 2010, License Condition 28, defines "Dedication" in part, as "an acceptance process undertaken to provide reasonable assurance that a commercial grade item to be used as a basic component will perform its intended IROFS function, and in this respect, is deemed equivalent to an item designed and manufactured under a 10 CFR 50, Appendix B, quality assurance program. This assurance is achieved by identifying the critical characteristics of the item and verifying their acceptability by inspections, tests, or analyses performed by the purchaser or third-party dedicating entity. In all cases, the dedication process must be conducted in accordance with the applicable provisions of 10 CFR Part 50, Appendix B."

LES QAPD, Rev. 32f, Section 21.5, "Instructions, Procedures, and Drawings," states, in part, "The Project Quality Assurance Plan (PQAP) will document the specific project requirements for instructions, procedures, and drawings."

Project Quality Assurance Plan for the Design, Fabrication, and Construction of the Cylinder Receipt and Dispatch Building," Rev. 2, Section 4.5.4, states, in part, "All QL-1G work shall be performed in accordance with LES procedures."

Contrary to the above, on December 6, 2012, NRC inspectors identified two examples of failure to perform QL-1G commercial grade dedication activities, in accordance with LES Procedure EG-3-2100-05, Rev. 16, as follows:

1. LES Procedure EG-3-2100-05, Rev. 16, Section 5.7.2, states "A Commercial Grade Dedication (CGD) Engineer shall identify the critical characteristics of the item and in association with Quality Assurance (QA) determine the survey requirements for a non-Appendix B vendor. LES Specification LES-S-S-00002, "Specification for CRDB Civil-Structural Requirements," Rev. 2, Appendix 4, states "Verification of hole size and location is the responsibility of the vendor's Quality Control Program, in accordance with applicable Commercial Grade Dedication Plan(s)." Contrary to the above, dimensional verification for bolt hole size and location was not defined as a critical characteristic in Commercial Grade Dedication Plans (CGDP) D-2010-018 and CGDP D-2010-027 and a commercial survey was not performed to credit the vendor to allow for vendor verification.

2. For acceptance of dedicated items and services, LES Procedure EG-3-2100-05, Rev. 16, Section 5.6.1, states "Perform verification inspections, testing and surveys as indicated on the latest revision of EG-3-2100-05-F-3." Contrary to the above, all verification inspections listed in Form EG-3-2100-05-F-3 for CGDP D-2010-018 were not performed for 56 components.

These two examples are identified as VIO 70-3103/2012-007-003.

2. Review of Commercial Grade Dedication Plan D-2010-019

The inspectors performed a review of CGD D-2010-019 for the commercial grade dedication of the roof bracing clevises, pins, and turnbuckles of the CRDB super structure. The inspectors reviewed the CGDP and supporting documentation to verify the critical characteristics were adequately defined to support the design function of the components. The inspectors also reviewed QA records associated with the sampling, source surveillances, and commercial surveys performed by LES for verification of the critical characteristics and acceptance of the components. The inspectors reviewed design specification LES-S-S-00002, Rev. 4, to determine if the selected critical characteristics and acceptance criteria were consistent with the design requirements and of sufficient scope to ensure that the components were capable of performing the intended IROFS function. The inspectors also performed a review of receipt inspection documentation to verify adequate material traceability and records.

b. Conclusion

Two violations were identified as described below:

- A violation of Section 16, Corrective Actions, of the LES QAPD, was identified involving failure to identify and correct conditions adverse to quality VIO 70-3103/2012-007-002, "Failure to Identify and Correct Conditions Adverse to Quality with Installation of Roof Beams in CRDB." VIO 70-3103/2012-007-002 was considered to be more than minor because the installation of the smaller diameter bolts left the structural integrity of the connection indeterminate.

- A violation, with two examples, of Section 21.5, Instructions, Procedures, and Drawings, of the LES QAPD, was identified for the failure to follow procedures for the dedication activities associated with CGDP 2010-018, Rev.2: VIO 70-3103/2012-007-003, "Failure to Follow Procedure." Example 1 of VIO 70-

3103/2012-007-003 was considered to be more than minor because the CC of bolt hole size and location was not verified leaving the acceptability of the components within GCDP D-2010-018 indeterminate. Example 2 of VIO 70-3103/2012-007-003 was considered more than minor, because the dimensional CCs were not verified leaving the acceptability of the 56 components, listed in NCR 2010-3085, indeterminate. In addition, the justification for use-as-is in NCR 2012-3085 was considered unacceptable because the engineering conclusion to accept the items based on the vendor's quality processes was not supported by QA records, Source Surveillances, or Commercial Surveys as required by LES Procedure EG-3-2100-05, Commercial Grade Dedication Process, Rev. 16.

7. Exit Meeting

The inspection scope and results were summarized by the regional inspectors on December 6, 2012. NRC inspectors described the areas inspected and discussed the inspection results in detail with senior licensee representatives, and other staff. Although proprietary documents and processes were occasionally reviewed during this inspection, the proprietary natures of these documents or processes were not included in this report. No dissenting comments were received from the licensee.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

8. Key Points of Contact

Louisiana Energy Services, L.L.C., National Enrichment Facility:

L. Lorati, Commercial Grade Dedication Lead
R. Olivas, CRDB Construction Engineer
T. Taylor, Licensing Engineer
T. Hendrix, CRDB Construction Engineer
C. Slama, Vendor Licensing Engineer
C. Fuhlage, Design Engineer
J. Laughlin, Chief Nuclear Officer
R. Page, Director of Engineering

9. List of Inspection Procedures Used

IP 88107	Quality Assurance: Design and Document Control
IP 88108	Quality Assurance: Control of Materials, Equipment, and Services
IP 88110	Quality Assurance: Problem Identification, Resolution, and Corrective Action (PIRCA)
IP 88111	10 CFR, Part 21, Inspection-Facility Construction
IP 88132	Structural Concrete Activities
IP 88133	Structural Steel and Supports Activities

10. List of Items Opened, Closed and Discussed

Item Number	Status	Description
VIO 2012-007-001	Opened	Violation (VIO): Failure to Identify and Correct Conditions Adverse to Quality with Certified Material Test Report
VIO 2012-007-002	Opened	VIO: Failure to Identify and Correct Conditions Adverse to Quality with Installation of Roof Beams in CRDB
URI 2012-002-004	Closed	Unresolved Item (URI): Review of Mechanical Testing and Traceability of Certified Material Test Reports
URI 2012-002-005	Closed	URI: Review of Critical Characteristics for Dimensions
IFI 2012-002-007	Closed	Inspector Follow-up Item (IFI): Review of Phase 2 and 4 Brace Rods

URI 2012-002-003	Closed	URI: Review of Test Methods Used for Chemical Analysis to Produce Certified Material Test Reports
URI 2012-002-010	Closed	URI: Evaluation of Weld Sizes from CRDB Bunkered Area Beam
URI 2012-002-008	Closed	URI: Review of Critical Characteristic and CGD Method Changes and Critical Characteristic Verification for CGDP-2010-019
VIO 2012-002-006	Closed	VIO: Failure to Adequately Verify Critical Characteristic of Diameter for Brace Rods
VIO 2012-002-009	Closed	VIO: Failure to Identify and Correct Conditions Adverse to Quality (Two Examples)
VIO 2012-007-003	Opened	VIO: Failure to Follow Procedures

11. List of Acronyms

10 CFR	Title 10 of the Code of Federal Regulations
ADAMS	Agency-Wide Document Access and Management System
ASTM	American Society for Testing and Materials
CC	critical characteristic
CGD	Commercial Grade Dedication
CGDP	commercial grade dedication plan
CMTR	certified material test report
CR	condition report
CRDB	Cylinder Receipt and Dispatch Building
ECR	engineering change request
HCL	Heat Code List
IFI	Inspector Follow-up Item
IP	Inspection Procedure
IR	Inspection Report
IROFS	Items Relied on for Safety
LES	Louisiana Energy Services, L.L.C., National Enrichment Facility
NCR	nonconformance report
No.	Number
Notice	Notice of Violation
NRC	U.S. Nuclear Regulatory Commission
PQAP	Project Quality Assurance Plan
QA	quality assurance
QAPD	Quality Assurance Program Description
QC	quality control
QL	Quality Level
QL-1G	Quality Level 1-Graded
Rev.	revision
SNM	Special Nuclear Material
URI	unresolved item
VIO	violation

12. Documents Reviewed

LES Procedures:

CA-3-1000-01, Performance Improvement Program, Rev. 22
EG-3-2100-05, Commercial Grade Dedication Process, Rev. 13
EG-3-2100-07, Review of Test Results Supporting Commercial Grade Dedication, Rev.2
EG-3-2100-09, Identification, Disposition, and Resolution of Nonconforming Items, Rev. 6
LS-3-1000-01, Implementation of 10 CFR 21, Rev. 3
LS-3-1000-01, Implementation of 10 CFR 21, Rev. 4
LS-3-1000-01, Implementation of 10 CFR 21, Rev. 5
LS-3-1000-05, Notifications and Event Reporting, Rev. 7

Specifications:

LES-S-S-00002, Specification for CRDB Civil-Structural Requirements, Rev. 3
LES-S-S-00002, Specification for CRDB Civil-Structural Requirements, Rev. 4

Drawings:

LES-1100-C-STL-102-01-0, Steel Cylinder Receipt & Dispatch Building Shell – Phase IV
LES-1100-C-STL-107-01-0, Steel Cylinder Receipt & Dispatch Building Shell – Phase IV
LES-1100-C-STL-108-01-0, Steel Cylinder Receipt & Dispatch Building Shell – Phase IV
LES-1100-C-STL-109-01-0, Steel Cylinder Receipt & Dispatch Building Shell – Phase IV
LES-1100-C-STL-110-01-0, Steel Cylinder Receipt & Dispatch Building Shell – Phase IV
LES-1100-C-STL-112-01-0, Steel Cylinder Receipt & Dispatch Building Shell – Phase IV
LES-1100-C-STL-117-01-0, Steel Cylinder Receipt & Dispatch Building Shell – Phase IV
LES-1100-C-STL-200-01-0, Phase II Key Plan Erection Drawing Index
LES-1100-C-STL-202-01-0, Phase II Stakeout Plan
LES-1100-C-STL-206-01-0, Phase II Frame Elevation at Grid 27.8 and Schedules
LES-1100-C-STL-207-01-0, Phase II Frame Elevation at Grid 28.8 and Schedules
LES-1100-C-STL-209-01-0, Phase II Frame Elevation at Grid 30.8 and Schedules
LES-1100-C-STL-210-01-0, Phase II Frame Elevation at Grid 31.9 and Schedules
LES-1100-C-STL-214-01-0, Phase II Frame Roof Bracing Plan and Schedules
LES-1100-C-STL-405-01-0, Phase I Frame Elevation at Grid 18.8 Sections and Schedules
LES-1100-C-STL-408-01-0, Phase I Frame Elevation at Grid 21.8 Sections and Schedules
LES-1100-C-STL-411-01-0, Phase I Details and Schedule
LES-1100-C-STL-412-01-0, Phase I Roof Bracing Plan and Schedules
LES-1100-C-STL-415-01-0, Phase I Sidewall Bracing Along Grid L, Grid P and Grid V.1 Details
LES-1100-C-STL-417-01-0, Phase I Wind Bracing Details
OHT2314, Brace Clip
OHT2371, Purlin Kicker
OHT2421, Brace Angle
OHT2496, Brace Strut
OHT8155, Brace Strut
OHT8157, Plate
OHT8349, Pipe Strut
OHT8492, Roof Beam
OHT8493, Roof Beam
OHT8494, Roof Beam

Commercial Grade Dedication Plans:

D-2009-011, Structural Beams and Connectors for the CRDB Structure
D-2010-018, Steel for CRDB
D 2010-019, Turnbuckles, Clevises, and Pins
D-2010-027, CRDB Rooftop Steel

Work Plans:

1100-CIVIL-823-097, Structural Steel Erection for CRDB Phase 4
1100-CIVIL-823-120, Fabrication of CRDB Phase 4 Structural Brace Rods
1100-CIVIL-823-121, Fabrication of CRDB Phase 2 Structural Brace Rods

Condition Reports (CR):

CR-2010-2299	Material Specifications
CR-2011-1447	Materials & Testing Report Discrepancies
CR-2011-3338	Effectiveness Review of LS-3-1000-01, Implementation of 10 CFR 21, Revision 2
CR-2011-3927	10 CFR Part 21 Program Deficiencies
CR-2012-0171	Typographical error listed on test reports
CR/NCR 2012-0723	1100-CRDB – Phase 2 – Bowing/Bent Wall Brace Angles
CR/NCR 2012-0724	1100-CRDB – Phase 2 – Crane Steel missing one nut on one bolt
CR-2012-726	A typographical error was identified on EG-3-2100-17-F-1 in Commercial Grade Dedication Plan D-2009-011. Also, incorrect document number for specification ASTM A992
CR-2012-738	Inconsistent listing of Product Names found in documentation for CGDPs D-2010-008 and D-2010-015
CR-2012-743	CRDB - Bldg 1100 - Potential Non-Conformance with Roof Brace Rod Design Requirement
CR-2012-753	Test methods not reported with vendor test results
CR-2012-754	Chemical constituents missing from test reports
CR-2012-755	Documentation of technical requirements did not follow procedure
CR-2012-757	Vendor failed to perform tests according to purchase order
CR 2012-770	During CRDB Commercial Grade Dedication inspection the NRC asked if there was a brace rod surveillance for the fabrication of Phase II brace rod sampling at Birmingham Fastener
CR-2012-0782	During CGDP inspection of CRDB, the NRC identified the following: Commercial Grade Dedication plan, D2009-011, CMTR LOU031-12-14-59336-1 appears that only chemical composition is addressed, tensile strength not included, is this acceptable? Also, the test evaluation form EG-3-2100-17 for this test report makes reference to ASTM 1011, however, CMTR references ASTM A653 and has no data to support this ASTM.
CR-2012-796	Incorrect material grade
CR-2012-807	Testing performed not in accordance with specification LES-S-S-00002
CR-2012-847	Reports for tensile testing the steel in the CRDB Superstructure in commercial grade dedication plan D2009-011 have questionable thickness dimensions recorded.
CR-2012-860	Testing not performed in accordance with specification LES-S-S-00002
CR-2012-867	During Brace Rod Diameter Inspections in the CRDB in work plan 1100-CIVIL-823-140, there were a number of inspections with Unsat results.
CR-2012-900	Procurement, CGD Engineering, and Design Engineering reviews of Certified Material Test Reports (CTMR's) for CRDB CGD Plans may not be fulfilling QAPD Section 21.10 and 21.11 requirements.

CR 2012-1058	CRDB Roof Beam Fabrication Documentation Inconsistencies
CR 2012-1157	Cylinder Receipt and Dispatch Building Quality Verification Report
CR-2012-1459	During review of Extent of Cause on DACE 2012-1156 (CRDB Brace Rods), it was determined that some of the critical dimensions called for in CGDP 2010-018 Fabrication of QL-1G Superstructure Steel and QL-1G Fabrication work plans for the CRDB (i.e. Brace Rod Diameter, web and flange thicknesses, etc) were not performed since the raw material measurements were performed in D2009-011.
CR-2012-1651	GAP Analysis between QL-1G Fabrication activities and Commercial Grade Dedication
CR-2012-1658	Audit 2012-A-06-008, QA Program Audit Finding 7. Area: Licensing, 10 CFR 21.
CR-2012-1706	Due to Heat Log Issues, We have no objective evidence to support several Critical Characteristics in D2009-011 (CRDB Superstructure Material Testing and Raw Dimension CGDP)
CR/NCR-2012-2919	Brace Struts visual inspections not performed
CR 2012-2990	During Closure of NCR 2012-1699, inaccessible A490 bolting locations identified.
CR 2012-2988	Evaluation of inaccessible bolting.
CR/NCR-2012-3085	Components not sampled in accordance with commercial grade dedication plan.
CR-2012-3473	CMTR LOU031-57735-5
CR-2012-3575	Incorrect size bolts used in CRDB structural connection (NCR 2012-3575)
CR-2012-3219	Insufficient Documentation of 10 CFR 21 Screening in CR 2012-867
CR-2012-3237	Insufficient Documentation of 10 CFR 21 Screening in CR 2012-847
CR-2012-3619	Potential Minor Violation - Chemical Testing verification failure to perform iaw ASTM E350
NCR-2010-2299	Tensile Strength of Select material used in Fabrication of CRDB Structural Steel
NCR-2012-782	CGDP D2009-011 identifies material as ASTM A1011 Gr 60 where ASTM A653 Gr 60 and ASTM A1011 Gr 55 was used.
NCR-2012-796	Incorrect material grade
NCR-2012-860	Testing not performed in accordance with specification LES-S-S-00002
NCR-2012-867	Brace Rod Diameter Inspections Failed Acceptance Criteria – South Wall Brace Rods
NCR-2012-1459	CRDB Material Heat Lots with Thickness Measurement Outside Allowable Tolerances

<u>Engineering Change Request (ECR):</u>

ECR-2012-0782	Revise material Specification for CRDB 1100 Building Struts, Girts, Purlins & Blocking
ECR-5846	CRDB Metal Building Bolted Connection Bolt Lengths

Audit/Surveillance/Evaluation Reports:

Surveillance Report 2012-S-01-004, Document source verification performed by LES QC for manufacturing of CRDB structural steel assemblies and components, Rev. 1
Surveillance Report 2012-S-07-001, Vendor Surveillance, Huntington Beach, CA, Rev. 1
Surveillance Report 2010-S-08-637, Source inspection of fabricated items at subcontractor facility in San Antonio, Texas,

Miscellaneous:

Project Quality Assurance Plan for the Design, Fabrication, and Construction of the Cylinder Receipt and Dispatch Building, Rev.2
Archon Engineering Calculation, ARC-803, Rev.5
Detailed Apparent Cause Evaluation, CR Number: 2012-1157
Certified Material Test reports for Fasteners manufactured by BBC Fasteners, Dyson Corporation, and Mackson Incorporated
Work Order, 175908
Detailed Apparent Cause Evaluation (DACE) 2012-900, Rev. 0