



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

October 30, 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.
- NUCLEAR REGULATORY COMMISSION INTEGRATED INSPECTION REPORT
NO. 70-3103/2012-004**

Dear Mr. Laughlin:

This refers to the inspections conducted from July 1 through September 30, 2012, at the Louisiana Energy Services (LES), URENCO USA facility located in Eunice, New Mexico. The purpose of the inspections was to determine whether activities authorized under the license were conducted safely and in accordance with Nuclear Regulatory Commission (NRC) requirements. The enclosed report presents the results of the inspections. The findings were discussed with members of your staff at exit meetings held on July 12, 2012, July 18, 2012, August 9, 2012, and on September 27, 2012, for this integrated inspection report.

During the inspections, the NRC staff examined activities conducted under your license as they related to public health and safety and to confirm compliance with the Commission's rules and regulations, and with the conditions of your license. Areas examined during the inspections are identified in the enclosed report. Within these areas, the inspections consisted of selected examination of procedures and representative records, observations of activities, and interviews with personnel.

The inspections covered the following areas; Operational Safety, Facility Support and Construction. No findings of significance were identified.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosure 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>.

Should you have any questions concerning these inspections, please contact us.

Sincerely,

/RA/

Joselito O. Calle, Chief
Fuel Facility Inspection Branch 2
Division of Fuel Facility Inspection

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

Enclosure:
Inspection Report No. 70-3103/2012-004
w/Attachment: Supplementary Information

cc w/encl: (See page 3)

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cc w/encl: (See page 3)

Distribution w/encl:

- B. Smith, NMSS
- J. Calle, RII
- L. Pitts, RII
- S. Freeman, RII
- K. O'Donohue, RII
- T. Gody, RII
- M. Bailey, RII
- J. Kinneman, NMSS
- P. Habighorst, NMSS
- M. Raddatz, NMSS
- PUBLIC

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NAME	LPitts	SMendez	RGibson	DHartland	MThomas	JSeat	DJackson
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NAME	SAlexander	MMagyar					
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E-MAIL COPY?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO

cc w/encl:

Butch Tongate, Deputy Secretary
New Mexico Department of Environment
Office of the Secretary
1190 St. Francis Drive
P. O. Box 26110
Santa Fe, NM 87502-0157

Matt White, Mayor
City of Eunice
P.O. Box 147/1106 Ave J
Eunice, NM 88231

The Honorable Sam D. Cobb, Mayor
City of Hobbs
200 E. Broadway
Hobbs, NM 88240

Alton Dunn, Mayor
City of Jal
P.O. Drawer 340
Jal, NM 88252

Commissioner Gregory H. Fuller
Chairman
Lea County Board of County
Commissioners
Lea County Courthouse
100 North Main, Suite 4
Lovington, NM 88260

Daniel F. Stenger, Counsel
Hogan and Hartson
555 13th Street, NW
Washington, DC 20004

Michael Ortiz, Chief
Radiation Controls Bureau
Field Operations Division
Environmental Department
Harold S. Runnels Building
1190 St. Francis Drive, Room S 2100
P.O. Box 26100
Santa Fe, NM 87502-0157

Gregory Smith, President and Chief
Executive Officer
Louisiana Energy Services, L.L.C.
Electronic Mail Distribution

Brenda Brooks, Director
Community Affairs and Government
Relations
Louisiana Energy Services, L.L.C.
Electronic Mail Distribution

Perry Robinson, Vice President Regulatory
Affairs and General Counsel
National Enrichment Facility
P.O. Box 1789
Eunice, NM 88231

Richard A. Ratliff, PE, LMP
Radiation Program Officer
Bureau of Radiation Control
Department of State Health Services
Division for Regulatory Services
1100 West 49th Street
Austin, TX 78756-3189

U. S. NUCLEAR REGULATORY COMMISSION
REGION II

Docket No.: 70-3103

License: SNM-2010

Report No.: 70-3103/2012-004

Licensee: Louisiana Energy Services, L.L.C. (LES)

Facility: National Enrichment Facility (NEF)

Location: Eunice, NM 88231

Inspection Dates: July 1 through September 30, 2012

Inspectors: R. Gibson, Senior Fuel Facility Inspector, Division of Fuel Facility Inspection (DFFI) (Paragraph B.1)
D. Hartland, Senior Fuel Facility Inspector, DFFI (Paragraph C.1)
S. Mendez, Fuel Facility Inspector, DFFI (Paragraph A.2)
L. Pitts, Senior Fuel Facility Inspector, DFFI (Paragraph A.2)
J. Seat, Construction Inspector, Division of Construction Inspection (DCI) (Paragraphs C.1, C.2 and C.3)
M. Thomas, Senior Fuel Facility Inspector, DFFI (Paragraph A.1)
S. Alexander, Construction Inspector, DCI (Paragraph C.1)
D. Jackson, Construction Project Inspector, Division of Construction Projects (DCP) (Paragraph C.1)
M. Magyar, Construction Inspector, DCP (Paragraph C.1)

Approved: J. Calle, Chief
Fuel Facility Inspection Branch 2
Division of Fuel Facility Inspection

Enclosure

EXECUTIVE SUMMARY

Louisiana Energy Services, L.L.C., National Enrichment Facility (LES NEF)
NRC Integrated Inspection Report 70-3103/2012-004
July 1 - September 30, 2012

Inspections were conducted by regional inspectors during normal shifts in the areas of safety operations, facility support, and construction. The inspectors performed a selective examination of licensee activities that were accomplished by direct observation of safety-significant activities and equipment, tours of the facility, interviews and discussions with licensee personnel, and a review of facility records.

Safety Operations

- The inspectors reviewed the implementation of selected items relied on for safety (IROFS) and their management measures to ensure they were able to perform their intended safety function. (Section A.1)
- The inspectors determined that IROFS C23 was properly implemented for Cascade 3.1 in order to perform its intended safety function. (Paragraph A.2)

Facility Support

- The plant modifications reviewed were adequately evaluated by the licensee for safe operations. The licensee implemented adequate management measures to ensure all safety related changes would be maintained at an acceptable level of performance. (Paragraph B.1)

Construction

- The inspection of activities related to problem identification, resolution, and corrective actions determined that activities were conducted in accordance with program requirements and procedures. (Paragraph C.1)
- The inspectors reviewed completed work plans for Quality Level (QL)-1G structural concrete members associated with IROFS 27e for the Interconnecting Corridor. Structural concrete records reviewed demonstrated compliance with project specifications, procedures, and regulatory requirements. (Paragraph C.2)
- The inspectors reviewed completed work plans and the as-built condition of associated QL 1G structural steel members bounded by IROFS-27e within the SBM-1003 and Interconnecting Corridor. The as-built configuration of the structural steel members was consistent with the completed quality records and in compliance with project specifications, procedures, and regulatory requirements. (Paragraph C.3)

Attachment

Key Points of Contact
List of Items Opened
Inspection Procedures Used
Documents Reviewed

REPORT DETAILS

Summary of Plant Status

During the inspection period, the licensee conducted routine plant operation of the operating Cascades throughout the inspection period. The licensee initiated operation of seven Cascades during the period after being granted authorization. Construction and testing in some areas of Separation Building Module (SBM) 1003 and other applicable process areas continued in preparation for future operation of additional cascades and equipment.

A. Safety Operations

1. Plant Operations (Inspection Procedure (IP) 88020)

a. Inspection Scope and Observations

The inspectors interviewed staff and reviewed records associated with the uranium hexafluoride (UF₆) Handling Area. The inspectors determined that items relied on for safety (IROFS) 4, 5, 10, 11, 12 and C21 are being adequately implemented and properly communicated as described in the Integrated Safety Analysis (ISA) or the Safety Analysis Report (SAR). The inspectors determined that the licensee is operating safely and in compliance with requirements.

The inspectors confirmed that engineered controls reviewed were present and capable of performing their intended safety functions. To complete this confirmation, the inspectors verified the physical presence of passive and active engineered safety controls, evaluated the safety controls to determine their capability and operability, and verified that potential accident scenarios were covered.

The inspectors determined that licensee administrative controls were implemented and communicated. The inspectors reviewed OP-3-0700-01, "General Electrical Operation," Rev. (Rev.) 0; OP-3-0410-01, "Feed System," Rev. 4; and determined that required actions as identified in the ISA Summary have been correctly transcribed into written operating procedures. The inspectors evaluated the procedures' contents with respect to operating limits and operator responses for upset conditions and verified that limits needed to assure safety are adequately described in the procedures.

The inspectors interviewed several operators and technicians and determined that operators and technicians were adequately implementing the required safety controls. The inspectors observed operators' and technicians' performance and determined that they were adhering to applicable safety procedures. The inspectors reviewed the postings and operator aids applicable to the tasks being observed and determined that these postings and operator aids were current, reflect safety controls, and were followed by the operators.

Through interviews and document reviews, the inspectors verified that the licensee conducted periodic surveillance as required by the ISA Summary for IROFS 4, 5, 10, 11, and 12.

The inspectors reviewed the licensee corrective action program (CAP) entries for UF₆ Handling Area and determined that deviations from procedures and unforeseen process changes affecting nuclear criticality, chemical, radiological, or fire safety were documented and investigated promptly. Also, the inspectors evaluated the corrective actions associated with CAP entries related to UF₆ Handling, including those for the IROFS 50 series and determined that the completed corrective actions were adequate.

b. Conclusion

No findings of significance were identified.

2. Verification that the systems structures and components designed to support operation of Cascade 3.1 met license requirements prior to initiation of feed (IP 88020)

a. Inspection Scope and Observations

The inspectors reviewed records associated with the IROFS C23, specifically for the TC 21 centrifuges in verification of Cascade 3.1 IROFS C23 included design features of the centrifuges that would minimize UF₆ releases. The inspectors determined that the design features for IROFS C23 for the TC 21 centrifuges were adequate to minimize releases and they were being adequately implemented and properly communicated as described in the ISA.

The inspectors confirmed that passive engineered controls reviewed were present and capable of performing their intended safety function. The inspectors interviewed operators and technicians and determined that they were adequately implementing the required safety controls. The inspectors reviewed the operator aids and procedures applicable to the operational validation of IROFS C23 and determined that these operator aids were current, reflected the safety controls, and were followed by the operators and technicians. The inspectors also observed the operators and technicians perform the validation and determined that they were adhering to applicable safety procedures.

Through interviews and document reviews, the inspectors verified that the licensee conducted calibration and surveillance activities as required by the ISA Summary and the commercial grade dedication (CGD) process for IROFS C23. The inspectors also reviewed the CGD package for the cascade to verify compliance with applicable procedures and license requirements.

b. Conclusion

The inspectors determined that IROFS C23 for the TC 21 centrifuges was properly implemented and maintained in order to perform its intended safety function. No findings of significance were identified.

B. Facility Support

1. Permanent Plant Modifications (IP 88070)

The inspectors performed a review of the ISA changes and permanent plant modifications (PPMs) that were made during the last year in the Separation Building

Module 1001 UF₆ Handling Area and the West Side Loading Dock Airlock of the expansion area. The inspectors reviewed a sample of modification packages, from minor modifications to engineering change notices. The reviewed changes involved modifications of accident sequences, IROFS, SARs, management measures, and procedures. The inspectors verified that the modifications were performed and authorized according to the applicable procedures, and in compliance with 10 CFR 70.62 and 70.72. The inspectors verified that the licensee addressed baseline design criteria stipulated in 10 CFR 70.64 in the designs of permanent plant modifications.

The inspectors reviewed PPM design packages to ensure that any potential changes to an accident sequence were properly addressed. The inspectors walked down and reviewed PPMs to verify that the “as built” drawings agreed with the field configuration when applicable. For the reviewed PPMs, the inspectors verified that operating procedures were updated to reflect the modifications and that training on the modifications was provided, as necessary. The inspectors verified that the licensee had management measures in place to ensure that IROFS affected by facility changes were capable of performing their intended safety function before approving the modification for operation.

The inspectors verified that the licensee’s quality assurance program was being implemented in accordance with the license. Through interviews and examinations of records, the inspectors determined that the licensee had developed and was maintaining a surveillance schedule to ensure that required tests on system and components important to safety were scheduled and completed in accordance with approved procedures. The inspectors reviewed annual audits of the licensee’s Plant Modification Program performed by an external agency. The inspectors also reviewed annual audits performed by the plant engineers. The inspectors verified that the audits were adequately implemented and in accordance with licensed requirements.

The inspectors reviewed the licensee’s problem identification and resolution program to verify that issues relating to the preparation and installation of permanent plant modifications were entered into the CAP and that the effectiveness of the corrective actions was adequate.

b. Conclusion

The plant modifications reviewed were adequately evaluated by the licensee for safe operations. The licensee implemented adequate management measures to ensure all safety related changes would be maintained at an acceptable level of performance. No findings of significance were identified.

C. Construction

1. Quality Assurance: Problem Identification and Resolution (IP 88110)

a. Inspection Scope and Observations

The inspectors assessed the adequacy of the licensee’s programs for problem identification, evaluation, and CAP to conditions adverse to quality during the past 12 months. The inspectors reviewed procedure CA-2-1000-01, Continuous Improvement Program, which prescribed corrective action program aspects and requirements,

including trending. Procedure CA-3-1000-01, Performance Improvement Program, contained provisions for identifying, reporting, and documenting conditions adverse to quality, including establishing measures to assure that conditions adverse to quality are promptly identified. It also described the follow-up and closure processes, including management responsibilities, and ensured the implementation in a timely manner. The inspectors verified that these procedures were approved and adequately implemented.

Based on a sample of closed condition reports (CRs), the inspectors verified that conditions adverse to quality were appropriately classified according to their significance and corrective actions were taken in a timely manner. The sample covered a diverse selection of sources, including problems identified in audits and assessments, findings from NRC inspections, and concerns identified as adverse trends. To assess the CAP implementation, the inspectors reviewed the thresholds for problem identification, the effectiveness of immediate and preventive corrective actions, the accuracy and thoroughness of problem documentation, and the adequacy of corrective actions for previously identified compliance issues. The inspectors also observed ongoing work activities to verify that corrective actions were put into practice.

The inspectors conducted reviews to evaluate management's quality assurance oversight of the corrective action process, reviewed documents associated with program implementation, and observed multiple Corrective Action Program Screening Committee meetings. The inspectors reviewed applicable trending reports that resulted from Corrective Action Program Screening Committee meetings and periodic CR evaluations. The inspectors also conducted interviews with employees and management to establish that the appropriate levels of management are involved in the identification, screening, and resolution of conditions adverse to quality.

The inspectors reviewed a sample of audit reports, assessments, and surveillance reports to verify that the licensee reports the results of these reviews to management, periodically assesses the CAP, and identifies trends. A sample of associated CRs was also reviewed to verify that the licensee initiated corrective actions as necessary.

b. Conclusion

The inspection of activities related to problem identification, resolution, and corrective actions determined that activities were conducted in accordance with program requirements and procedures. No findings of significance were identified.

2. Structural Concrete Activities (IP 88132)

a. Scope and Observations

Inspectors conducted an on-site inspection to determine if structural concrete members were constructed in accordance with project specifications, procedures, and NRC regulations. The inspection focused on Quality Level (QL)-1G foundation members associated with IROFS 27e for the Interconnecting Corridor (ICC).

Inspectors performed a walk-down of the ICC to verify soundness of the floor/foundation system. Inspectors also reviewed completed work plans (WPs) 1101-CIVIL-822-001, Excavation of ICC Footings and Foundations; and 1101-CIVIL-822-002, Placement of Structural Concrete ICC; associated with the construction of the ICC foundation.

Inspectors verified that the appropriate geotechnical testing was performed prior to construction of selected concrete footers. Inspectors verified that appropriate reinforcing steel and anchor-bolt inspections were performed prior to concrete placement. Inspectors verified that the appropriate concrete testing and inspections were performed, and that concrete test data demonstrated conformance to project specifications. Inspectors also reviewed receipt inspection documentations for reinforcing steel and anchor bolts to verify conformance with project specifications.

b. Conclusion

Inspectors reviewed completed work plans for QL-1G structural concrete members associated with IROFS 27e for the ICC. Structural concrete records reviewed demonstrated compliance with project specifications, procedures, and NRC regulatory requirements. No findings of significance were identified.

3. Structural Steel and Support Activities (88133)

a. Scope and Observations

Inspectors conducted an on-site inspection to determine if structural steel members were constructed in accordance with project specifications, procedures, and NRC regulations. The inspection focused on QL-1G structural steel members associated with IROFS 27e for the SBM-1003 and the ICC.

The inspectors reviewed completed work plans and the as-built condition of associated QL-1G structural steel columns, girders, beams, braces, and trusses. The inspectors performed inspection activities on structural steel members associated with the following work plans:

- WP 1003-CIVIL-823-001; Structural Steel Erection for SBM 1003, Sequence 1
- WP 1003-CIVIL-823-005; Structural Steel Erection for SBM 1003, Sequence 2, Priority 5
- WP 1003-CIVIL-823-011; Structural Steel Erection for SBM 1003, Sequence 4, Priority 11
- WP 1003-CIVIL-823-017; Structural Steel Erection for SBM 1003, Sequence 5, Priority 17
- WP 1101-CIVIL-823-001; ICC Structural Steel Erection, Volume 1

Inspectors reviewed approved drawings and verified that applicable Engineering Change Requests (ECRs) were incorporated into or referenced by the drawings. Inspectors observed the as-built condition of structural steel members to verify conformance with the approved drawings. Specifically, the inspectors verified that members were properly sized, oriented, fireproofed when required, and free of visible defects. Inspectors verified that connections contained the appropriate size, grade, and quantity of bolts or welds. Inspectors reviewed bolting maps and test data to ensure that bolts had received the proper qualification, torque, and inspection. The inspectors reviewed receipt inspection documents for structural members and bolts to ensure traceability and conformance to project specifications.

b. Conclusion

The inspectors reviewed completed work plans and the as-built condition of associated QL-1G structural steel members bounded by IROFS-27e within the SBM-1003 and ICC. The as-built configuration of the structural steel members was consistent with the completed quality records and in compliance with project specifications, procedures, and NRC regulatory requirements. No findings of significance were identified.

D. Review of Previously Identified Issues

1. (Closed) Violation (VIO) 70-3103/2011-006-02, Failure to Submit Alternate Acceptance Criteria to NRC for Review and Approval

The inspectors reviewed licensee actions to restore compliance with NRC regulations for VIO 70-3103/2011-006-02, Failure to Submit Alternate Acceptance Criteria to NRC for Review and Approval. Louisiana Energy Services, L.L.C., National Enrichment Facility was required to use the visual inspection requirements of AWS D1.1 or submit the alternate acceptance criteria for weld inspection to the NRC for review and approval prior to the use of those criteria.

Louisiana Energy Services, L.L.C., National Enrichment Facility submitted license amendment request 11-04 for alternate acceptance criteria for weld inspections dated March 22, 2011, and supplemental information provided on March 29, 2011, and April 11, 2011. The NRC staff completed a safety evaluation dated July 1, 2011 and found that the proposed revisions to the safety analysis report to be acceptable and consistent with the requirements of 10 CFR Part 70.

The inspectors also reviewed the licensee's reply to the violation and determined that the licensee had appropriately restored compliance with NRC regulations and the conditions of their license. This violation is closed.

2. (Closed) VIO 70-3103/2010-002-003, Failure to Perform Sub-Grade Visual Inspection

Inspectors reviewed licensee actions to restore compliance with NRC regulations for VIO 70-3103/2010-002-003, Failure to Perform Subgrade Inspection. The violation involved the licensee's failure to perform and document a visual inspection of subgrade material prior to proceeding with work, as required by approved work instructions.

Inspectors reviewed the licensee's response to the violation and CR 2010-2379, which captured the disposition of VIO 70-3103/2010-002-003. Inspectors reviewed WP 1003-CIVIL-811-002 to ensure that the required visual inspection had been documented. Inspectors reviewed procedure EG-3-6000-01, Construction Work Plans, which was revised to require work steps to be performed in the sequence written, unless deviations are specifically authorized within the body of the work plan. Inspectors also reviewed the outline and attendance rosters for awareness briefings provided to project employees to address the requirements for work instruction sequencing and sign-off. Inspectors observed in-process work activities and reviewed associated work plans 0000-CIVIL-812-007, Backfill Area East of SBM1003, and 1003-CIVIL-823-101, Floor Penetration Cable Tray Supports, to ensure that work instructions were being completed in the

proper sequence and that hold/verification/witness points were not bypassed. Inspectors determined that the licensee had appropriately restored compliance with NRC Regulations and the conditions of their license. This violation is closed.

3. (Closed) VIO 70-3103/2010-003-001, Failure to Correct Conditions Adverse to Quality

Inspectors reviewed licensee actions to restore compliance with NRC regulations for VIO 70-3103/2010-001-001, Failure to Correct Conditions Adverse to Quality. The violation involved the licensee's failure to adequately correct conditions adverse to quality involving WP documentation issues identified in 2009, in that there were continuing repetitive work plan documentation issues identified on November 17, 2010. Specifically, WP 1003-CIVIL-822-025, Steps 7 and 8 were not signed off as completed although they were precursors to work that had already been completed; the Actual Work Performed Log of WP 1003-CIVIL-822-029 was not properly maintain commensurate with the completion of work; and Steps 3 and 4 of WP 1001X-CIVIL-853-007 were not properly signed off commensurate with the status of work activities.

Inspectors reviewed CRs 2010-3699 and 2010-3696 which were generated to address the discrepancies associated with WP 1003-CIVIL-822-025. Inspectors reviewed data associated with Step 7 activities and determined that the activities had been completed. Inspectors verified that Step 7 was signed off within the WP. Inspectors verified that concrete compressive strength requirements of Step 8 were within specification and that Step 8 was signed off within the WP.

Inspectors reviewed CRs 2010-3697 and 2010-3688 which were created to address the deficiencies in WPs 1003-CIVIL-822-029 and 1001X-CIVIL-853-007 respectively. These CRs stated that the discrepancies associated with these to WPs were reconciled through field notes. Inspectors verified that the WPs were up-to-date. Inspectors reviewed CR 2010-3722, which captured the disposition of VIO 70-3103/2010-003-001, and documented the licensee's corrective actions to prevent recurrence. Inspectors reviewed the outline and attendance rosters for work plan development and execution training provided to project employees. Inspectors reviewed weekly WP audits which were performed for each building under construction. Inspectors reviewed revisions made to the General Work Plan Training and General Employee Training. Inspectors observed in-process work activities and reviewed associated WPs 0000-CIVIL-812-007, Backfill Area East of SBM1003, and 1003-CIVIL-823-101, Floor Penetration Cable Tray Supports, to ensure that work instructions were being completed in the proper sequence and that hold/verification/witness points were not bypassed. Inspectors determined that the licensee had appropriately restored compliance with NRC Regulations and the conditions of their license. This violation is closed.

E. Exit Meeting

The inspection scope and results were presented to members of the licensee's staff at on July 12, 2012, July 18, 2012, August 9, 2012, and September 27, 2012, to senior licensee representatives and staff. No dissenting comments were received from the licensee during these exit meetings. Proprietary information was discussed but not included in the report.

SUPPLEMENTARY INFORMATION

1. KEY POINTS OF CONTACT

<u>Name</u>	<u>Title</u>
R. Kohrt	Plant Engineering Supervisor
D. Lakin	Performance Assessment and Feedback Manager
L. Lorati	CDG Manager
A. Riedy	ISA Engineer
B. Robinson	Head of Construction
G. Silvey	Quality Control
Z. Smith	Construction Director
J. Smouse	H-Y Tech Quality Assurance/Quality Control
T. Taylor	Licensing Engineer
W. Warren	Baker Quality Assurance
R. Williams	Shift Operations Manager

2. LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

VIO 70-3103/2010-002-003	Closed	Failure to Perform Sub-grade Visual Inspection
VIO 70-3103/2010-003-001	Closed	Failure to Correct Conditions Adverse to Quality
VIO 70-3103/2011-006-002	Closed	Failure to Submit Alternate Acceptance Criteria to NRC for Review and Approval

3. INSPECTION PROCEDURES USED

IP 88020	Operation Safety
IP 88070	Permanent Plant Modifications
IP 88110	Quality Assurance: Problem Identification, Resolution and Corrective Action
IP 88132	Structural Concrete Activities
IP 88133	Structural Steel and Supports Activities
IP 38703	Commercial Grade Dedication
IP 43004	Inspection of Commercial-Grade Dedication Programs

4. PARTIAL LIST OF DOCUMENTS REVIEWED

Procedures:

CALC-M-00069, Centrifuge Rotor Mass Verification Formula, Rev. 2
CALC-S-00119, Determination for Bounding External Event Consequence Calculation, Rev. 2, dated September 2, 2011
CALC-S-00136, Impact on IROFS C23 due to Crashed/Idle Machine, Rev. 1, dated February 1, 2012
CDM/Ckn/12/01, Support Document for Failure Mode and Effect Analysis (FMEA) for the UF6 conversion, Issue 4, dated April 19, 2012
CDM/RKO/11/016, Potential Failure Mode and Effects Analysis (Process FMEA), Issue 01, dated November 15, 2011
CGDP No : C23-0045, TC21 Centrifuge - IROFS C23
EG-3-2100-02-F2, OAR Review Comment Sheet, Rev. 13, dated May 22, 2012
EG-3-5200-01, IROFS27e Structural Inspection Surveillance, Rev. 4
EG-TQ-2012-023, Technical Question, dated June 25, 2012

ISA-IAD-0001, Centrifuge Damage Ratio, Rev. 1, dated February 3, 2012
 NEF-BD-C23, Design Feature of Centrifuge to Minimize Releases, Rev. 2, dated June 11, 2012
 OP-3-0450, IROFS C23 Surveillance Procedure
 ORM 3700-6, Design Feature of Centrifuges to Minimize Release, Rev. 0
 RD/12/001, Determination of too Low Rotor Mass from the Run-up and Rundown Data Measured during the Run-up Procedure in Vacuum, Issue 01, dated June 1, 2012
 RD/12/008, Assessment of Relative Crash Gas Quantities for Tc12 Low Mass Rotor and a Tc21 below Nominal Frequency Regarding UF6 Conversion, Issue 01, dated January 1, 2012
 RD/12/028, Method to Measure ratio Moment of Inertia of the Rotor Divided by the Efficiency of the Centrifuge Motor from the CMS Data During Run Up, Issue 02, dated January 31, 2012
 RD/10/067, Reactions of crashed gas with centrifuge UF6 Holdup, Issue 01, dated March 17, 2010
 RD/11/143, Available Free HF in Crashed Tc12 or TC21 Centrifuges, Issue 01, dated October 11, 2011
 RD/12/89, Method to measure the ratio moment of inertia of the TC21 rotor divided by the efficiency of the TC21 motor form CMS data during run up, Issue 02, dated November 6, 2012
 RD/12/097, Assessment of Relative Crash Gas Quantities for TC21 low mass rotor and a TC21, below nominal frequency regarding UF₆ conversion , Issue 02, dated June 6, 2012
 RDO-Tt 006/11, Crashed Test Procedure, Issue 02, dated June 16, 2011
 TC/2012/012, Issue 01, dated January 3, /2012
 CA-3-1000-01, Performance Improvement Program, Rev. 20
 CA-2-1000-01, Continuous Improvement Program, Rev. 3
 CA-2-1000-02, Quality Principles, Rev. 0
 RM-3-2000-01, Record Management Program, Rev. 15
 EG-3-6000-01, Construction Work Plans, Rev. 17

LES Work Plans:

0000-CIVIL-812-007
 1001-MECH-530-001
 1001X-CIVIL-853-007
 1003-CIVIL-811-002
 1003-CIVIL-822-025
 1003-CIVIL-822-029
 1003-CIVIL-823-101

Drawings:

ARC-1101-STL-101-4, Plan Views
 ARC-1101-STL-300-4, Elevation/Section Views
 ARC-1101-STL-500-4, Details
 ARC-1101-STL-501-4, Details
 BC-1003-HSG-E101, PSC Cascade Hall-Partial Second Floor Framing PLA
 BC-1003-HSG-E103, Second Floor Framing Plan Seq. 5
 BC-1003-HSG-E105, Third Floor Framing Plan Seq. 1 and Seq. 2
 BC-1003-HSG-E110, Roof Framing Plan Seq. 3 and Seq. 4
 BC-1003-HSG-5003, Beam Detail
 BC-1003-HSG-5102, Column Detail
 BC-1003-HSG-5102A, Column Detail
 BC-1003-HSG-5118, Vertical Brace Detail

BC-1003-HSG-5119, Vertical Brace Detail
 BC-1003-HSG-11015, Beam Detail
 BC-1003-HSG-11017, Beam Detail
 BC-1003-HSG-11411, Truss Detail
 BC-1003-HSG-11411A, Truss Detail
 BC-1003-HSG-11411B, Truss Detail
 BC-1003-HSG-11411C, Truss Detail
 BC-1003-HSG-17064, Beam Detail
 BC-1003-HSG-17065, Beam Detail
 BC-1003-HSG-17078, Beam Detail
 BC-1003-HSG-17083, Beam Detail
 BC-1003-HSG-17103, Column Detail
 BC-1003-HSG-17104, Column Detail
 BC-1003-HSG-17204, Horizontal Brace Detail
 BC-1003-HSG-17205, Horizontal Brace Detail
 BC-1003-HSG-17206, Horizontal Brace Detail
 BC-1003-HSG-17077, Beam Detail
 LES-1003-C-ARC-002-01-0, SBM 1003 Overall First Floor Plan Elevation 3415'0"
 LES-1003-C-STL-000-01-0; General Notes, Abbreviations, and Legend
 444758-1003-C-STL-000-02, Steel SBM-1003 Standard Bracing Detail
 444758-1003-C-STL-000-03, Steel SBM-1003 Miscellaneous Connections
 444758-1003-C-STL-001-01, Steel SBM-1003 UF6 and Link Corridor Areas Second Floor Framing Plan
 444758-1003-C-STL-004-01, Steel SBM-1003 UF6 Area Framing Elevation at Grid Line 1
 444758-1003-C-STL-004-02, Steel SBM-1003 UF6 Area Framing Elevations at Grid Lines 2, 3, and 4
 444758-1003-C-STL-006-01, Steel SBM-1003 PSC and Cascade Hall Third Floor Framing Plan
 444758-1003-C-STL-007-01, Steel SBM-1003 PSC and Cascade Hall Roof Framing
 444758-1003-C-STL-007-02, Steel SBM-1003 Cascade Hall Roof Trusses
 444758-1003-C-STL-007-03, Steel SBM-1003 Roof Truss Sections and Details
 444758-1003-C-STL-008-01, Steel SBM-1003 Cascade Hall Walkable Ceiling Framing Plan
 444758-1003-C-STL-009-02, Steel SBM-1003 Cascade Hall and PSC Areas Framing Elevations at Grid Lines 11, 14, 17, 20, 23, 26, and 29
 444758-1003-C-STL-009-03, Steel SBM-1003 Cascade Hall and PSC Areas Framing Elevation
 444758-1003-C-STL-009-05, Steel SBM-1003 PSC Area Framing Elevation at Grid Line B

Work Plans:

1003-CIVIL-823-001; Structural Steel Erection for SBM 1003, Sequence 1
 1003-CIVIL-823-005; Structural Steel Erection for SBM 1003, Sequence 2, Priority 5
 1003-CIVIL-823-011; Structural Steel Erection for SBM 1003, Sequence 4, Priority 11
 1003-CIVIL-823-017; Structural Steel Erection for SBM 1003, Sequence 5, Priority 17
 1101-CIVIL-822-001, Excavation of ICC Footings and Foundations
 1101-CIVIL-822-002, Placement of Structural Concrete ICC
 1101-CIVIL-823-001, ICC Structural Steel Erection Volume 1

Condition Report (CR):

CR-2012-2266, Minor discrepancies found with the torquing documentation in WP 1101-CIVIL-823-001

Miscellaneous:

QC Receipt Inspection Plan Report for LES-PO-4500022919, dated January 20, 2012
QC Receipt Inspection Plan Report for LES-SC-2003, dated November 18, 2010

Engineering Change Request (ECR):

ECR-5918
ECR-6042
ECR-6046A
ECR-6047
ECR-6049
ECR-6054
ECR-6072
ECR-6086
ECR-6093
ECR-6215
ECR-6253
ECR-6279C
ECR-6413
ECR-6733A
ECR-6867E
ECR-7082
ECR-7091E
ECR-7095C