



The Operator Training Program is ready for the NRC to inspect.

- Administration of Operator Certification Written Exam, Core System is complete.
- Operator OJT/TPE System Qualifications for systems turned over to LES is complete.

List any exceptions to your program below.

1. Operator Certification Program additional system qualifications will be completed as follows:

System Component(s):	Completion Date:
Feed System*	25 January 2010
Product System*	25 January 2010
Cascade/Dump Software	25 January 2010
Standby Diesels	26 January 2010
Sampling	04 February 2010

*Delta Training between SP5 (Almelo) and NEF

2. Operator Training utilizing Process Control System Trainer is on-going as updated software becomes available.
3. ORM/IROFS Certification is on-going as Boundary Definition Documents and procedures are approved.

Jim Knowles 12/31/09
Program Owner/Date

Jim Knowles 12/31/09 for Allen Sorrell
Program Owner's Director/Date

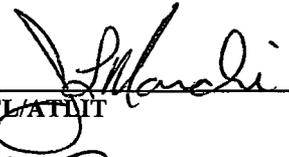
Jeff Coe for Jerome Reed Dec 31, 2009
Vice President of Operations/Date

QA Audit: 2009-A-03-020

Audit of LES Training at The National Enrichment Facility

Joseph Randazzo, LES Lead Auditor
Jim Marchi, Acting Lead Auditor
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Audit Dates April 15-29, 2009

APPROVAL:   5/6/09
ATL/ATMT Date

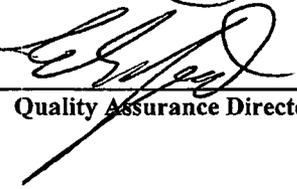
CONCURRENCE:  5/2/09
Quality Assurance Director Date

Table of Contents

QA Audit.....3

1. Summary3

2. LES Training Audit Recommendations3

3. Purpose and Scope4

4. Methodology4

5. Meeting Attendance.....4

6. Audit Report.....5

6.1 Instruction to Workers.....5

6.2 02.02 Compliance with License or Certificate Requirements6

6.3 03.02 Compliance with License or Certificate Requirements7

6.4 02.03 Training Program Procedures.....8

6.5 03.03 Training Program Procedures.....9

6.6 2.04 Changes to the Training Program.....12

6.7 3.04 Changes to the Training Program.....13

6.8 02.05 Observations of Managers, Supervisors, Operators.....14

6.9 03.05 Observations of Managers, Supervisors, Operators.....14

6.10 2.06 Changes in Examinations.....14

6.11 GET.....15

6.12 On-the-Job Training.....15

6.13 Field Engineer Training17

6.14 Construction Training17

7. Procedures and Other Documents.....17

1. QA Audit Summary

The audit of the Operator Training program consisted of a review of Qualification Cards, Classroom Training, Examinations, Interviews, Training Procedures, Change Agents, and On-The-Job Training. All areas were satisfactory with 4 recommendations in the area of On-The-Job Training. Operator retraining could not be assessed as the initial training program is still in progress. Some of the attributes such as evaluation of modifications and corrective actions could not be assessed because there were no examples to review even though these items were programmatically addressed in the Training Procedures.

General Employee Training review included Phase 1 General Employee Training, Phase 2 General Employee Training, and the recently combined RUST General Employee Training. Initial training and associated records were found satisfactory.

The training on construction related procedures included a review of the transition plan from WGI/RUST to LES procedures. The transition from WGI/RUST procedures was effectively implemented and this area was satisfactory.

On an overall basis, the Training Program was found to be adequately and effectively implemented. There were no findings during this evaluation.

2. LES Training Audit Recommendations

1. The documentation used for the OJT/TPE exercise in lesson plan TA001LP00I00 rev11 and TA00200I00 rev1 uses a vendor document as the reference for the students. The OJT/TPE should simulate actual documentation used in the field, in the format of plant procedures. Recommend that the vendor instructions used in the current exercises be revised to reflect plant procedure format.
2. During actual conditions, OJT and TPE qualified personnel will be evaluated against evaluation forms from the OJT/TPE qualification procedure, TQ-3-0100-03-F-3 for OJT and TQ-3-0100-03-F-4 for TPE. The current lesson plan used criteria from the lesson plan, which is not as detailed as the procedure forms. Revise the lesson plans, TA001LP00I00 rev11 and TA00200I00 rev1 to use TQ-3-0100-03-F-3 and TQ-3-0100-03-F-4 to evaluate the practical in the class.
3. The evaluation used for the classroom exercise is a useful tool to check for understanding; however, it does not place the student in a plant environment and does not allow the student's supervisor an opportunity to evaluate the student. Recommend that the qualification structure be changed to include a final evaluation of the TPE student trainer by the supervisor, during the performance of an actual TPE.
4. The classroom exercise used in TA00200I00 rev1 allows the instructor to evaluate more than one person at one time. This does not ensure that the evaluator observes that each student identifies the "errors" placed in the exercise. Recommend that TA00200I00 rev1 be revised to perform this evaluation with only one student, and that the errors used in the exercise are documented.

3. Purpose and Scope

The purpose of the April 2009 (2009-A-03-020) Audit was to assess the adequacy and effectiveness of the LES Training Program, and the status of Training Programs with respect to ORR document IP-88010, *Operator Training and Retraining*. The scope of this audit includes an evaluation of the adequacy and effectiveness of LES Training implementing procedures and activities to ensure compliance with regulatory and program requirements listed below.

- Evaluate GET implementation for the current phase of the project
- Evaluate the On-The-Job-Training (OJT) and Task Performance Evaluation (TPE) process with respect to Operator Training
- Ensure field personnel are trained on procedures
- Ensure procedures are implemented within the scope of this audit for the current phase of the project with respect to Operator Training and Retraining
- Ensure Condition Reports associated with operator training remain effective
- Observation of operator training for classroom implementation

The audit reviewed training attributes for the current phase of the NEF project since several attributes of IP88010 are not yet applicable to the training department.

4. Methodology

The methodology for this audit was the review of documentation and observation of classroom activities. Interviews were conducted with key individuals responsible for implementing the various parts of the program. An Exit interview was held on April 29, 2009 in the Training office trailer where the results of the audit were reviewed with the management team. The individuals in attendance are identified on the exit roster.

5. Meeting Attendance

Entrance Attendance in Trailer 214 April 15, 2009

Larry Kelley	Training Manager
Tim Knowles	Operations Training Supervisor
Chris Bates	Technical Training Supervisor
Dana Voss	Startup and Test Engineer
Joseph Randazzo	LES QA Lead Auditor
Jim Marchi	Acting Lead
Ryan Whitford	Auditor
Andy Auner	Technical Specialist

Exit Attendance in Trailer 214 April 29, 2009

Tim Knowles	Acting Training Manager/Operations Training Supervisor
Chris Bates	Technical Training Supervisor
Dana Voss	Startup and Test Engineer
Joseph Randazzo	LES QA Lead Auditor
Jim Marchi	Acting Lead
Ryan Whitford	Auditor
Andy Auner	Technical Specialist

Audit Contacts

Brad Graham	Senior Operator
Brandon Hanson	Senior Operator
Carl Markert	Operations Manager
Chris Bates	Technical Training Supervisor
Dana Voss	Startup and Test Engineer
Dave Tomar	Operations Training Instructor
Don Dotson	Licensing Manager
Gregg Lindner	Training Instructor
Jim Allen	Technical Instructor
Josh LaGabed	Operator
Larry Kelley	Training Manager
Mark Bogenrieder	Deputy Shift Manager
Matt Kingham	Senior Technical Instructor
Pam Davis	Technical Instructor
Randy Shaffer	Deputy Shift Manager
Robert Lightfoot	Training Specialist
Russell Williams	Shift Manager
Sandra Crow	Training Administrative Assistant
Scott Loose	Operations Instructor
Shawn O'Brien	Operator
Sylvia Juarez	Training Administrative Assistant
Tim Knowles	Operations Training Supervisor
Tom Doray	Training Instructor

6. Audit Report

The individual items reviewed on the checklist are detailed below.

6.1 IP Section 2.01 -Instruction to Workers

Determine compliance with 10 CFR 19.12, "Instructions to Workers"

The following items are contained in 10CFR19.12 and are applicable to all individuals likely to receive in excess of 100mrem:

(a) All individuals who in the course of employment are likely to receive in a year an occupational dose in excess of 100 mrem (1 mSv) shall be--

(1) Kept informed of the storage, transfer, or use of radiation and/or radioactive material;

(2) Instructed in the health protection problems associated with exposure to radiation and/or radioactive material, in precautions or procedures to minimize exposure, and in the purposes and functions of protective devices employed;

(3) Instructed in, and required to observe, to the extent within the workers control, the applicable provisions of Commission regulations and licenses for the protection of personnel from exposure to radiation and/or radioactive material;

(4) Instructed of their responsibility to report promptly to the licensee any condition which may lead to or cause a violation of Commission regulations and licenses or unnecessary exposure to radiation and/or radioactive material;

(5) Instructed in the appropriate response to warnings made in the event of any unusual occurrence or malfunction that may involve exposure to radiation and/or radioactive material; and

(6) Advised as to the radiation exposure reports which workers may request pursuant to § 19.13.

(b) In determining those individuals subject to the requirements of paragraph (a) of this section, licensees must take into consideration assigned activities during normal and abnormal situations involving exposure to radiation and/or radioactive material which can reasonably be expected to occur during the life of a licensed facility. The extent of these instructions must be commensurate with potential radiological health protection problems present in the work place.

Evaluation

The above requirements are addressed in the Phase 2 GET training. This training is being selectively provided as appropriate for this stage of the project.

This attribute was satisfactory for this stage of the project.

6.2 IP Section 02.02 - Compliance with License or Certificate Requirements

Determine compliance with license or certificate conditions relating to implementation of training programs for operators.

a. Ensuring that each administrative control, to limit the risk of each credible high consequence and intermediate consequence event (10 CFR 70.61 (b) and (c)), will be available and reliable to perform its intended function (10 CFR 70.61(e)).

Evaluation

IROF Related information is covered in TX200LP00I00, IROFS Overview, and discusses each IROF by system. The objectives include determining applicability, determining if requirements are met, and determining what actions must be taken if a requirement is not met.

b. Fire, chemical, and nuclear criticality safety for operators (content of the nuclear criticality course is reviewed by headquarters in Inspection Procedure (IP) 88015, "Nuclear Criticality Safety Program"; professional training for criticality safety staff is also reviewed by headquarters).

Evaluation

The Nuclear Criticality Safety program is not required until there is more than 50 KG of UF6 on site. General employee training phase 2 contains a module on criticality safety (GAGE2LP02I00, Criticality Safety) and is being taught to those personnel who enter the controlled area. Additionally Chemical Safety is covered in GAGE2LP04I01 and Fire Protection is covered in GAGE2LP06I01. Additional training is under development.

- c. Radiation protection topics (such as general employee training or radworker training)

Evaluation

GET Phase 2 contains a module on radiation protection for the general worker, GAGE2LP03I02, Radiological Safety and ALARA Practices. The course for Nuclear Safety Worker, GXNSWQC00I00, Nuclear Safety Worker, contains details for the radiation worker and includes an exam and a practical exercise to evaluate understanding.

This attribute was satisfactory for this stage of the project.

6.3 IP Section 03.02 - Compliance with License or Certificate Requirements

Specific regulatory requirements related to the licensee or certificate holder's training program will be contained in license or certificate conditions.

- a. In determining the implementation of the approved or required program, pay attention to completion of requirements related to initial training, periodic retraining, on-the-job training, and tests and examination of trainees.

Evaluation

The implementation procedure for operator training is TQ-3-0300-01, NEF Operator Training Program Construction and Startup Phase. It provides for initial training, continuing training (retraining), OJT and TPE, and examinations. The initial training program is not complete, as many of the procedures required for the training have not yet been written; the program meets the requirements for this phase of the project.

- b. Examine five or more records of initial training for new employees for a variety of workers including tests or exams (if tests are required by the program).

Evaluation

A review of initial training, including exams, and OJT evaluations was performed with no adverse conditions noted. Examinations and Records were readily accessible, and matched documentation in the Learning Management System.

- c. Examine five or more records of retraining for experienced employees for a variety of workers including tests or exams (if tests are required by the program).

Evaluation

There has been no retraining in the Operator Training program; the initial training program is not yet complete in this phase of the project. GET continuing training (retraining) was reviewed under item 6.11 of this audit.

- d. Discuss the training program with one or more supervisors and one or more operators or technicians, selected at random, to determine their participation in the training program as indicated by their training records.

Evaluation

Item 6.8 of this audit contained interviews with operators and supervisors selected at random, they stated that training was satisfactory and their records indicate satisfactory completion of training

- e. Discuss the program with the licensee or certificate holder's representative charged with the responsibility for training; discuss any changes made since the last inspection and

determine that substantive changes were reviewed and approved by management and, if required, by the NRC

Evaluation

There have been no NRC inspections of operator training to date. TQ-3-0100-010, Feedback and Evaluation Phase, and TQ-3-0100-05, Training Committees, provide direction to evaluate the effectiveness of training programs. A major portion the evaluation of a training program comes from feedback by students and their supervisors when they return to their plant production duties, since the plan is not yet complete this evaluation information is not available.

This attribute was satisfactory for this stage of the project.

6.4 IP Section 02.03 - Training Program Procedures

Review the licensee or certificate holder's training program to determine whether the licensee or certificate holder has established written procedures.

a. Identification of training requirements

Evaluation

Identification of training requirements is covered in TQ-3-0100-01, Training Systems Development Process, for the overall process and in TQ-3-0100-07, Job/Task Analysis Design, as the implementation document, it describes how to identify training requirements for tasks and activities. This procedure also contains F-1, Training Needs Analysis Worksheet, used to identify and evaluate new training. Additionally TQ-3-0100-10, Feedback and Evaluation Phase, provides direction on Training Requests and other change agents that could identify additional training needs or requirements.

b. Identification of training material

Evaluation

Identification and development of training material is covered in:

- TQ-3-0100-06, Exam Development Process, for the development of examinations
- TQ-3-0100-07, Job/Task Analysis Design, for identification, evaluation, and design of training requirements - This procedure determines how training will be performed and if retraining (continuing training) is required.
- TQ-3-0100-08, Lesson Plan Development Phase, for development of lesson plan related material
- TQ-3-0100-10, Feedback and Evaluation Phase, identifies training needs from change agents such as OE, Plant Modifications, Procedure changes, corrective actions, and provides for Training Requests from plant personnel.
- TQ-3-0100-11, On-The-Job Training Development, for identification and development of On-The-Job related training and evaluation

c. Selection and qualification of instructors

Evaluation

TQ-3-0810-01, Instructor Evaluation and Qualification Program, describes the process of evaluating potential instructors and the requirements for instructor qualification.

d. Maintenance of employee training records

Evaluation

TQ-3-0100-04, Training Records, describes the requirements for training records, including employee-training records. Each program procedure identifies those documents that are considered training records.

e. Ensuring adequate frequency of refresher or re-qualification training

Evaluation

TQ-3-0100-07, Job Analysis/Task Analysis provides the process to identify refresher/continuing training requirements. Additionally each program procedure contains a section on providing for refresher/continuing/Requalification training – training could be the result of a job analysis or required by license basis documents. TQ-3-0100-05, Training Committees, provides for evaluation of training and change agents by curriculum review committees, these committees determine additional training needs.

f. Contractor/visitor training

Evaluation

Contractors and visitors who have unescorted access to site areas must have completed general employee training per TQ-3-0700-01, General Employee Training.

This attribute was satisfactory for this stage of the project.

6.5 IP Section 03.03 - Training Program Procedures

The licensee or certificate holder should have available a training outline that defines requirements, needs, material, and testing.

a. In-house training programs for each position shall cover initial orientation, as well as specific process training (both classroom and on-the-job), and refresher training. Procedures should be available for trainee evaluation and final qualification/certification as an operator.

Evaluation

The positions covered in the training section of the SAR include:

- Operator Training – TQ-3-0300-01, NEF Operator Training Program Construction and Startup
- Mechanical Maintenance Training – TQ-3-0400-01, Maintenance Training Program and TQ-3-0400-03, Mechanical Maintenance Training Guide
- Plant Control and Energy Systems Training – TQ-3-0400-01, Maintenance Training Program and TQ-3-0400-02, PCES Training Guide
- Health Physics Training – TQ-3-0600-01, Radiation Protection Technician Training program
- Chemistry Training – TQ-3-0610-01, Chemistry Training Requirements
- Engineering/Support Personnel Training – TQ-3-0500-01, Engineering Support Personnel Training Program

All procedures cover initial (orientation) and continuing/refresher training, the topics have not been completely identified because some IROFS and systems are still in the design phase. The procedures that cover evaluation are TQ-3-0100-06, Exam Development and TQ-3-0100-11, On-The-Job Training (Task performance evaluation) TQ-3-0300-01 contains the certification guide for the Operator Training Program.

LES Audit 2009-A-03-020

LES Training at NEF

Page 9 of 18

- b. Training material addressing at least the following topics should be available:
1. IROFS, process safety information elements (such as safety and health hazards, relevant material safety data sheets (MSDSs), personal protective equipment, etc.).

Evaluation

The following lesson plans cover the noted areas:

- TX200LP00I00 – IROFS
- GXNSWQC00I00 – Nuclear Safety Worker – Safety and health, PPE
- GAGE2LP04I00 – Chemical Safety – MSDS
- GAGE2LP05I01 – Industrial Safety – PPE

2. Safe work practices (such as confined space entry, lockout/tagout procedures, opening process equipment, hot work, control of entry into hazardous areas, etc)

Evaluation

The following lesson plans cover the noted areas

- HZ126LP00I00 – Lockout/Tagout
- WGI-51 – Confined Space Training
- GF003LP00I00 – Hot Work,

3. Process technology (as required)

Evaluation

Process Technology reviewed include

- OPS-F-VT06LP – Vacuum Technology
- OPSSYS01LP410 Feed/Feed Purification System
- OPSSYS01LP420 Product System
- OPSSYS01LP430 Tails System

4. Operating procedures for all phases of operation

Evaluation

Operating Procedures for all phases are not yet available, most operating phase procedures are in the process of being written, the training material available is related to switchyard, and CAB Operation, examples include:

- OP-700 – Lesson Plan number OP730QC01I00 – Qual card for CAB Electrical Distribution
- OP-710 – Lesson Plan number OA700QC00I00 – Qual card for Switchyard Operation
- OP-3-690 – Lesson Plan number OP690QC00I00 – Qual Card for Fire Water Diesel Pump

Operating procedures are being evaluated and training developed as procedures are being written.

5. Emergency procedures (such as Hazard Waste Operations and Emergency Response (HAZWOPER))

Evaluation

The emergency plan is not required until there are 50KG of UF6 on site, the plan has not been implemented therefore there are no procedures. Emergency Plan Topics are covered in GET Phase 2 – GAGE2LP07I01, Emergency Plan and Implementing Procedures. HAZWOPER is covered in GAGE2LPI01, Chemical Safety and in GXNSWQC00I00, Nuclear Safety Worker.

6. Reporting unusual events or non-routine operations

Evaluation

Lesson Plan OXALPOP00I00, Abnormal Operating Procedures, addresses unusual events as applicable to this point in the project.

c. The inspector should determine that the trainer adequately demonstrates competence regarding both training skills and course curriculum by interviewing both the trainers and the trainees.

Evaluation

Training courses reviewed - Switchyard Training, Fire protection Training, CAB Electrical, Lockout/Tagout. Eight operations and training personnel were interviewed, all comments were positive.

d. Documentation of all training, evaluations, and qualification/certification activities for all employees should be verified. Training records should be accessible and easily referenced. Information should include: name of employee, date of training, name of trainer, and means used to determine that training was understood.

Evaluation

Documentation for the personnel reviewed in this attribute and in the GET attribute noted no issues. Grades are included in the records or contained the signoff completion for the TPE. The files are maintained in accordance with TQ-3-0100-04, Training Records. The information was also contained in the training database, OnTrack.

e. Refresher training should be provided at least every 2 years, or as specified in the facility license or certificate. Content of material to be covered should include at least the following: safety and health hazards, relevant MSDSs, job-specific chemical hazards, safe work practices, emergency procedures, and standard operating procedures. Employee participation/feedback in deciding course content is highly recommended. The inspector should interview trainers and trainees to determine that refresher training is actually conducted according to the schedule.

Evaluation

The only refresher training provided at this point in the project is Phase 1 General Employee Training, which is on a 1 year requal cycle. Safety and use of PPE is included in this training, a test and score of 80% is required to pass the course. Health Hazards, MSDS, Emergency Procedures, are contained in phase 2 GET – refresher training is not yet required. GET requal is provided routinely to ensure training qualifications do not expire.

f. The training program for contractors, maintenance personnel, and visitors should be appropriate given the hazards in the area they will be working in or visiting. Every person who enters the facility should go through a site-specific general orientation covering safety and health hazards, emergency procedures, and alarms. In addition, maintenance employees and contractors (if relevant) should undergo training in safe work practices, process hazards, etc., as relevant to the work they will be performing.

Evaluation

All personnel working on site with unescorted access are provided phase 1 general employee training and construction safety training. Additional training is provided to contractors as applicable. During Hot Acceptance Testing (HAT), all personnel involved in the process received applicable Nuclear Safety Training and phase 2 GET. Personnel who do not receive the training are escorted by personnel who have received training.

This attribute was satisfactory for this stage of the project.

6.6 IP Section 2.04 - Changes to the Training Program

Review changes to the licensee or certificate holder's training program to determine whether the licensee or certificate holder has in place a mechanism to update the facility's training program through the incorporation of management-approved recommendations coming out of changes to items relied on for safety (IROFS) and other radiological, criticality safety, emergency preparedness, and nuclear chemical process safety program elements (e.g., hazard identification and assessment; management of change; incident investigation and audits), pertaining to employee training.

Evaluation

Mechanisms are in place to update training programs through the following:

- TQ-3-0100-05, Training Committees – Modifications, Corrective actions, and other change agents are reviewed by the Curriculum Review Committee where changes to training programs are approved. Periodic review of programs like Criticality Safety and Radiological Safety provide a mechanism for feedback to the training programs.
- AD-3-1000-01, Requirements for Procedures includes a review of training applicability for new procedures or changes to procedures per the change management process procedure.
- AD-3-1000-10, Change Management Process includes a line item in F-1 (#2) to evaluate changes for Training.
- CA-3-1000-01, Performance Improvement Program and Nonconformance Reports, directs corrective actions be developed for conditions adverse to quality – corrective actions can be assigned to training for specific actions in training programs. This can include Hazards and incident evaluations.
- CA-3-1000-05, Industry Operating Experience (OE), Section 5.7 directs relevant OE in training programs be reviewed.

- EG-3-4100-02, Plant Modification, requires plant modification be reviewed by Training in section 5.4.3.h.
- TQ-4-0100-02, Training Request Tracking describes the process used in ZIA to track training information via TRs (Training Requests).

This attribute was satisfactory for this stage of the project.

6.7 IP Section 3.04 - Changes to the Training Program

The licensee or certificate holder must have in place a mechanism for ensuring that recommendations from other process safety program elements are incorporated.

a. A tracking system to ensure that each recommendation is addressed on a timely basis. The inspector should cross-check with the features of the tracking system identified in the hazard identification and assessment element.

Evaluation

Tracking recommendations from other process safety elements is accomplished via the site tracking system called ZIA using CR actions (condition report) , AITs (Action item Tracking), and TRs (Training Requests).

CRs used corrective actions to provide feedback to training programs; these actions are tracked to completion. There are currently not many examples where training programs have been changed due to CR Actions. One example, CR2007-0011 was written because of inadequate 70.72 evaluations, action 2 required training to track completion of discussion training action and action 3 required a change to the lesson plan.

TRs are used to track changes to training related materials when they are not a condition adverse to quality. These are identified through student feedback, exam analysis, curriculum committee meetings, and other sources. Some examples include

- TR2008-1063, for course OAHP2LP00I00 Radiation Protection Phase 2, management and student feedback resulted in a recommendation to revise the training material to incorporate plant specific procedures and radiological instrumentation.
- TR2008-3400, directed a review of maintenance procedure MA-6-0640-01r0 for training impact. The procedure was being revised at this time to include operational checks. Training is required on this monitor. Created 2009-292-TR to track development of a training module on the Oxygen Monitors.

b. Management-approved findings, from incident investigations or audit programs, that highlight deficiencies in the training program, should be addressed in a timely manner to ensure that chemical hazards at the facility are covered sufficiently. The inspector should cross-check with the incident investigation and audit elements.

Evaluation

There are no examples where training programs addressed deficiencies in this phase of the project. No deficiencies requiring training action in chemical hazards have been identified.

c. Training actions activated by management of change procedures should be addressed before the change is implemented. All personnel affected by the change should undergo training - this should be verified by the pre-startup safety checklist.

Evaluation

Operations procedures are evaluated prior to implementation and turnover of a system, procedures related to the Switchyard, Fire Protection, CAB Electrical, and HVAC have all been evaluated.

This attribute was satisfactory for this stage of the project.

6.8 IP Section 02.05 - Observations of Managers, Supervisors, Operators

Discuss and observe training with selected staff in a variety of positions, such as operators, maintenance mechanics, instrument and control technicians, etc., to determine whether the training is adequate.

Evaluation

Operations' is the only group that has been able to go into the field and perform operations on the equipment they were trained on – the interviews were limited to Operators. All personnel indicated that training was adequate.

This attribute was satisfactory for this stage of the project.

6.9 IP Section 03.05 - Observations of Managers, Supervisors, Operators

Determine by discussion, document review, and observation, that the training program ensures that each individual receives performance-based IROFS and/or safety control training (knowledge and skills) to understand his or her personal and organizational authority and responsibility for safety.

Evaluation

This phase of the project does not allow for observation of plant activities and operating document review, as there is no operating plant. The interviews in item 6.8 indicate the training is satisfactory.

This attribute was satisfactory for this stage of the project.

6.10 IP Section 2.06 - Changes in Examinations

Examine the changes to selected tests given under the training program to determine that tests required by the program were administered and scores or results achieved satisfied program criteria.

Evaluation

Five different operations exams were reviewed, there was passing criteria, some remedial training and retesting was required. Exam analysis sheets for those exams were also reviewed.

- Health Physics Exam and exam analysis 7/27/07

- Math Exam and exam analysis 7/13/07
- Chemistry Exam and exam analysis 1/30/09
- Drawings/Prints Exam and exam analysis 7/16/07
- Heat Transfer/Fluid Flow Exam and exam analysis 8/17/07

This attribute was satisfactory for this stage of the project.

6.11 GET

Section 11.3 of the SAR outlines content of General Employee Training. Evaluate that LES is meeting the GET requirements for this phase of the project.

Evaluation

GET Phase 1 Training was observed at the Eunice Community Center. Twenty-seven students were in attendance. Three individuals failed to make the 80% passing grade. They were remediated and passed the exam on the following day. The results are satisfactory and no issues were identified.

All exams were reviewed for evidence of tampering or mistakes associated with electronic grading. No issues were identified. The exams are considered satisfactory.

GET Phase 2 Training was conducted at LES trailer 2-16 on 3/19/09. Nine (9) students were in attendance. Three (3) students rescheduled and two (2) did not attend the class. All nine (9) students received a score of greater than 80% on their examination.

All exams were reviewed for evidence of tampering or mistakes associated with electronic grading. No issues were identified. The exams are considered satisfactory.

GET Phase 1 Requalification was conducted by Instructors at the NMJC Training Center on various dates, using the following Lesson Plans:

- GAQ01LP00102 (QA)
- GXE01LP01101 (ECI)
- GAC01LP01101 (CAP)
- GXS01LP00103 (SCWE)

Fifteen students attended the training classes, fourteen passed and one failed.

Training was requested to check the data base for the individual that failed the 2/23/09 class. The computer print out indicates that he satisfactorily passed the class on 3/2/09.

All exams were reviewed for evidence of tampering or mistakes associated with electronic grading. No issues were identified. The exams are considered satisfactory.

A random sample of personnel were checked in the training computer database to validate that it accurately reflected the training status, the printout documents that GET training are current for these individuals.

As of the date of this audit, there has been no GET Phase 2 Requalification training.

6.12 On-the-Job Training

Evaluate Procedures are in place to direct On-the-Job Training and Task Performance Evaluations (On-the-Job Evaluations) and meet the criteria described in item 6.5 of this checklist.

Evaluation

Observed TA001LP00I00 rev11 - Train the Trainer OJT and TA00200I00 rev1, Train the Trainer TPE. The following was observed:

- The instructor followed the Lesson Plan in both classes.
- The lesson plan followed the procedure, TQ-3-0100-03, On-The-Job Trainer qualification.
- The instructor's teaching skills were good (Voice, Eye contact, Use of presentation materials, Kept students involved).
- The conduct of students was evaluated using TQ-3-0100-01 Attachment 1, Trainee Conduct Standards. The only delta observed was some students were on the Web or email during the class presentation, this is not allowed during class. This was corrected by the instructor after the break.
- The operations manager observed the TPE exercise and provided critical feedback on the training. This was discussed with the Operations Training Supervisor and TR2009-1013 was generated to include a satisfactory evaluation by a shift manager.
- The OJT and TPE performed as exercises during the class used the manufacturer instructions for office equipment. These instructions were not in the same format as plant procedures and confused some students.
- The OJT and TPE performance referenced the lesson plan but did not include any reference to the evaluation forms in the procedure. The evaluation forms in the procedure are used for evaluations performed in the field and should also be used in class.

For a records review - Three (3) different TPE records (Qual Cards) were selected, the evaluators from those records were reviewed; they were Subject Matter Expert (SME) designated by Training Equivalencies. All evaluators had satisfactorily completed OJT/TPE training.

During an interview with the Operations Manager it was confirmed that his expectations were being met during the observed TPE exercise, specifically what issues would fail an individual TPE (tools not ready, skipped step, procedure could not be followed, incorrectly performing the step).

Recommendations

1. The OJT/TPE should simulate actual documentation used in the field. Revise the manufacturer instructions used in the lesson plan into plant procedure format.
2. OJT and TPE qualified personnel will be evaluated against forms from the OJT/TPE qualification procedure. Revise the lesson plan to use TQ-3-0100-03-F-3 and TQ-3-0100-03-F-4 to evaluate the practical requirement in the class instead of the lesson plan.
3. The classroom evaluation is a useful tool to check for understanding; however, it does not place the student in a plant environment and does not allow the student's supervisor an opportunity to evaluate the student. Add a requirement to

have the student's supervisor, or designee, perform an evaluation of the student performing an actual TPE.

4. The classroom exercise allows more than one person to be evaluated as an evaluator at one time. This does not ensure each evaluator identifies each "error" in the exercise. Revise the lesson plan to perform this exercise with only one student.

6.13 Field Engineer Training

Review the training performed for field engineers on procedures.

Evaluation

This checklist item has been adequately covered by the Engineering audit 2009-A-01-004. Welder Training and Qualls are covered in surveillance 2009-S-03-020.

6.14 Construction Training

Review the training performed for construction related procedures.

Evaluation

The transition plan developed by construction and training for the transition from WGI/RUST to LES Construction Management was reviewed. The transition plan included a gap analysis, a series of memos, and training and qualification records for Construction Engineers. The transition of procedures was effectively implemented and included procedure training, no further review is required.

7. Procedures and Other Documents

AD-3-1000-10, Change Management Process
CA-3-1000-01, Corrective Action Program
EG-3-4100-02, Plant Modification Training Systems Development
TQ-3-0100-01, TSD Process
TQ-3-0100-02, Exam Administration and Security
TQ-3-0100-03, On-The-Job Training and Task Performance Evaluation
TQ-3-0100-04, Training Records
TQ-3-0100-05, Training Committees
TQ-3-0100-06, Exam Development Process
TQ-3-0100-07, Job/Task Analysis Development and Design
TQ-3-0100-08, Lesson Plan Development Phase
TQ-3-0100-09, Implementation Phase
TQ-3-0100-10, Feedback and Evaluation Phase
TQ-3-0100-11, On-The-Job Training Development
TQ-3-0300-01, NEF Operator Training Program, Construction and Development Phase
TQ-3-0600-01, Radiation Protection Technician Training Program
TQ-3-0700-01, General Employee Training
TQ-3-0710-01, Nuclear Criticality Safety Training
TQ-3-0810-01, Instructor Evaluation and Qualification Program
TQ-3-1000-01, Functional Area Training

Training Material

GAC01LP01I01, GET CAP
GAGE2LP02I00, Criticality Safety
GAGE2LP04I00, Chemical Safety – MSDS
GAGE2LP04I01, Chemical Safety
GAGE2LP05I01, Industrial Safety – PPE
GAGE2LP07I01, Emergency Plan
GAQ01LP00I02, GET QA
GF003LP00I00, Hot Work,
GXE01LP01I01, GET ECI
GXNSWQC00I00, Nuclear Safety Worker – Safety and health, PPE
GXS01LP00I03, GET SCWE
HZ126LP00I00, Lockout/Tagout
OA700QC00I00, Qual card for Switchyard Operation
OP690QC00I00, Qual Card for Fire Water Diesel Pump
OP730QC01I00, Qual card for CAB Electrical Distribution
OPS-F-VT06LP, Vacuum Technology
OPSSYS01LP410, Feed/Feed Purification System
OPSSYS01LP420, Product System
OPSSYS01LP430, Tails System
OXALPOP00I00, Abnormal Operating Procedures,
TA001LP00I00, Train the Trainer OJT
TA002LP00I00, Train the Trainer TPE
TX200LP00I00, IROFS
WGI-51, Confined Space Training

QA Audit Checklist for LES Training Audit 2009-A-03-020

Condition Reports and Action Items Checklist Date April 15 – April 29, 2009

Page 1 of 20

**QA Audit Checklist for LES Training
Audit 2009-A-03-020**

Condition Report and Action Items Checklist Date April 15 – April 29, 2009

Prepared by: Ryan Whitford

Performed by: Joseph Randazzo – Lead Auditor
Jim Marchi, Acting Lead Auditor
Ryan Whitford – Auditor
Andy Auner, Technical Specialist

Approved by: Gene Sergent, LES QA Director

Regulatory Documents

- LES QAPD, Quality Assurance Program Description
- LES SAR, Safety Analysis Report
- LES ISA Summary, Integrated Safety Analysis Summary
- IP 88010, Operator Training/Retraining
- 10CFR50, Appendix B, Quality Assurance Criteria, Section 2, QA Program
- ANSI/ASME NQA-1-1994

LES Procedures

- AD-3-1000-10, *Change Management Process*
- CA-3-1000-01, *Corrective Action Program*
- EG-3-4100-02, *Plant Modification*
- *Training Systems Development*
- TQ-3-0100-01, *TSD Process*
- TQ-3-0100-02, *Exam Administration and Security*
- TQ-3-0100-03, *On-The-Job Training and Task Performance Evaluation*
- TQ-3-0100-04, *Training Records*
- TQ-3-0100-05, *Training Committees*
- TQ-3-0100-06, *Exam Development Process*
- TQ-3-0100-07, *Job/Task Analysis Development and Design*
- TQ-3-0100-08, *Lesson Plan Development Phase*
- TQ-3-0100-09, *Implementation Phase*
- TQ-3-0100-10, *Feedback and Evaluation Phase*
- TQ-3-0100-11, *On-The-Job Training Development*
- TQ-3-0300-01, *NEF Operator Training Program, Construction and Development Phase*
- TQ-3-0600-01, *Radiation Protection Technician Training Program*
- TQ-3-0700-01, *General Employee Training*
- TQ-3-0710-01, *Nuclear Criticality Safety Training*
- TQ-3-0810-01, *Instructor Evaluation and Qualification Program*
- TQ-3-1000-01, *Functional Area Training*

QA Audit Checklist for LES Training Audit 2009-A-03-020
 Condition Reports and Action Items Checklist Date April 15 – April 29, 2009

Page 3 of 20

Item	Requirement	Audit Point	Item Examined	Recommendation/Finding/Comment	Sat Unsat
				Training requirements placed on LES. No additional items were found.	

QA Audit Checklist for LES Training Audit 2009-A-03-020
 Condition Reports and Action Items Checklist Date April 15 – April 29, 2009
 Page 4 of 20

Item	Requirement	Audit Point	Item Examined	Recommendation/Finding/Comment	Sat Unsat
2 Ryan	<p>02.02 Compliance with License or Certificate Requirements. Determine compliance with license or certificate conditions relating to implementation of training programs for operators for:</p> <p>a. Ensuring that each administrative control, to limit the risk of each credible high consequence and intermediate consequence event (10 CFR 70.61 (b) and (c)), will be available and reliable to perform its intended function (10 CFR 70.61(e)). </p> <p>b. Fire, chemical, and nuclear criticality safety for operators (content of the nuclear criticality course is reviewed by headquarters in Inspection Procedure (IP) 88015, "Nuclear Criticality Safety Program"; professional training for criticality safety staff is also reviewed by headquarters). </p> <p>c. Radiation protection topics (such as general employee training or radworker training). </p>	<p>Verify item a. is covered</p> <p>Verify item b is covered</p> <p>Verify item C is covered</p>	<p>ANS 8.20 TX200LP00100 GAGE2LP02100</p>	<p>2.a. IROF Related information is covered in TX200LP00100, IROFS Overview, discusses each IROF by system. The objectives include determining applicability, determining if requirements are met, and determining what actions must be taken if a requirement is not met.</p> <p>2.b. The Nuclear Criticality Safety program is not required until there is more than 50 KG of UF6 on site. General employee training phase 2 contains a module on criticality safety (GAGE2LP02100, Criticality Safety) and is being taught to those personnel who enter the controlled area. A draft lesson plan was reviewed and meets the requirements of ANS 8.20, Nuclear Criticality Safety Training. The reference to IP88015 requires training per ANS 8.20 The remainder of the items are covered in GET Phase 2, specifically Chemical Safety is covered in GAGE2LP04101 and Fire Protection is covered in GAGE2LP06101</p> <p>2c. GET Phase 2 contains a module on radiation protection for the general worker. GAGE2LP03102, Radiological Safety and ALARA Practices. The course for Nuclear Safety Worker, GXNSWQC00100, Nuclear Safety Worker, contains details for the radiation worker and includes an exam and a practical exercise to evaluate understanding.</p> <p>Additional Information - 10CFR70.61 contains the following requirements:</p> <p>b) The risk of each credible high-consequence event must be limited. Engineered controls, administrative controls, or both, shall be applied to the extent needed to reduce the likelihood of occurrence of the event so that, upon implementation of such controls, the event is highly unlikely or its consequences are less severe than those in paragraphs (b)(1)-(4) of this section. High consequence events are those internally or externally initiated events that result in:</p> <p>(1) An acute worker dose of 1 Sv (100 rem) or greater total effective dose</p>	<p>SAT</p>

QA Audit Checklist for LES Training Audit 2009-A-03-020
 Condition Reports and Action Items Checklist Date April 15 – April 29, 2009

Page 5 of 20

Item	Requirement	Audit Point	Item Examined	Recommendation/Finding/Comment	Sat Unsat
NRC INSPECTION MANUAL INSPECTION PROCEDURE 88010 OPERATOR TRAINING/RETRAINING Attribute 03.02					

QA Audit Checklist for LES Training Audit 2009-A-03-020

Condition Reports and Action Items Checklist Date April 15 – April 29, 2009

Page 6 of 20

Item	Requirement	Audit Point	Item Examined	Recommendation/Finding/Comment	Sat Unsat
3 Ryan	<p> 03.02 Compliance with License or Certificate Requirements. Specific regulatory requirements related to the licensee or certificate holder's training program will be contained in license or certificate conditions. In addition, training for administrative controls that are IROFS is required for 10 CFR 70.62 (d) to assure the IROFS are available and reliable. The license or certificate may require the licensee or certificate holder to implement a training program described in the application.</p> <p>a. In determining the implementation of the approved or required program, pay attention to completion of requirements related to initial training, periodic retraining, on-the-job training, and tests and examination of trainees. </p> <p>b. Examine five or more records of initial training for new employees for a variety of workers including tests or exams (if tests are required by the program). </p> <p>c. Examine five or more records of retraining for experienced employees for a variety of workers including tests or exams (if tests are required by the program). </p> <p>d. Discuss the training program with one or more supervisors and one or more operators or technicians, selected at random, to determine their participation in the training program as indicated by their training records. </p> <p>e. Discuss the program with the licensee or certificate holder's representative charged with the responsibility for training; discuss any changes made since the last inspection and determine that substantive changes were reviewed and approved by management and, if required, by the NRC; review and discuss the licensee or certificate holder's evaluation of the overall effectiveness of the training program. The inspection should be directed at assessing the sufficiency of the training program in addressing the radiological, fire, criticality safety, and chemical safety aspects of hazards that can affect operations with special nuclear material (SNM) at the facility. The principal objective of the training program is to ensure that employees have been adequately prepared to perform their job tasks in a safe and effective manner. </p>	<p>Verify prescribed program is in place.</p> <p>Review training records</p>	<p>TQ-3-0100-05 TQ-3-0100-010 TQ-3-0300-01</p> <p>OnTrack Qualification report</p> <p>Operator Training Records</p>	<p>3.a. The implementation procedure for operator training is TQ-3-0300-01; NEF Operator Training Program Construction and Startup Phase, provides for initial training, continuing training (retraining), OJT and TPE, and examinations. The initial training program is not complete, as many of the procedures required for the training have not yet been written; the program meets the requirements for this phase of the project.</p> <p>3.b. A review of initial training, including exams, and OJT evaluations was performed with no adverse conditions noted. Examinations and Records were readily accessible, and matched documentation in the Learning Management System. The following individuals records were reviewed: Timothy Bahra, Bradley Graham, George Gardner, Mark Bogenrieder, and Adam Woodward.</p> <p>3.c. There has been no retraining in the Operator Training program, the initial training program is not yet complete in this phase of the project. GET continuing training (retraining) was reviewed under item 11 of this audit.</p> <p>3.d. Item 8 of this audit contained interviews with operators and supervisors selected at random, they determined that training was satisfactory and the records indicate satisfactory completion of training.</p> <p>3.e. There have been no NRC inspections of operator training to date. TQ-3-0100-010, Feedback and Evaluation Phase, and TQ-3-0100-05, Training Committees, provide direction to evaluate the effectiveness of training programs. A major portion of the evaluation of a training program comes from feedback by students and their supervisors when they return to their plant production duties, since the plan is not yet complete this evaluation information is not available.</p>	

QA Audit Checklist for LES Training Audit 2009-A-03-020

Condition Reports and Action Items Checklist Date April 15 – April 29, 2009

Page 7 of 20

Item	Requirement	Audit Point	Item Examined	Recommendation/Finding/Comment	Sat Unsat
NRC INSPECTION MANUAL INSPECTION PROCEDURE 88010 OPERATOR TRAINING/RETRAINING Attribute 02.03					
4 Andy	<p>02.03 Training Program Procedures. Review the licensee or certificate holder's training program to determine whether the licensee or certificate holder has established written procedures for:</p> <p>a. Identification of training requirements. </p> <p>b. Identification of training material. </p> <p>c. Selection and qualification of instructors. </p> <p>d. Maintenance of employee training records. </p> <p>e. Ensuring adequate frequency of refresher or requalification training. </p> <p>f. Contractor/visitor training. </p>	Verify: Training procedures are in place for each item.	<p>TQ-3-0100-01</p> <p>TQ-3-0100-04</p> <p>TQ-3-0100-05</p> <p>TQ-3-0100-06</p> <p>TQ-3-0100-07</p> <p>TQ-3-0100-08</p> <p>TQ-3-0100-10</p> <p>TQ-3-0100-11</p> <p>TQ-3-0700-01</p> <p>TQ-3-0810-01</p>	<p>a. Identification of training requirements is covered in TQ-3-0100-01, Training Systems Development Process, for the overall process and in TQ-3-0100-07, Job/Task Analysis Design, as the implementation document and describes how to identify training requirements for tasks and activities. This procedure also contains F-1, Training Needs Analysis Worksheet, used to identify and evaluate new training. Additionally TQ-3-0100-10, Feedback and Evaluation Phase, provides direction on Training Requests and other change agents that could identify additional training needs or requirements.</p> <p>b. Identification and development of training material is covered in:</p> <ul style="list-style-type: none"> • TQ-3-0100-06, Exam Development Process, for the development of examinations • TQ-3-0100-07, Job/Task Analysis Design, for identification, evaluation, and design of training requirements - This procedure determines how training will be performed and if retraining (continuing training) is required. • TQ-3-0100-08, Lesson Plan Development Phase, for development of lesson plan related material • TQ-3-0100-010, Feedback and Evaluation Phase, identifies training needs from change agents such as OE, Plant Modifications, Procedure changes, corrective actions, and provides for Training Requests from plant personnel. • TQ-3-0100-11, On-The-Job Training Development, for identification and development of On-The-Job related training and evaluation <p>c. TQ-3-0810-01, Instructor Evaluation and Qualification Program, describes the process of evaluating potential instructors and the requirements for instructor qualification.</p> <p>d. TQ-3-0100-04, Training Records, describes the requirements for training records, including employee-training records. Each program procedure identifies those documents that are considered training records.</p> <p>e. TQ-3-0100-07, Job Analysis/Task Analysis provides the process to identify refresher/continuing training requirements. Additionally each program procedures contain a section on providing for refresher/continuing/Requalification training – training could be the result of a job analysis or required by license basis documents. TQ-3-0100-05, Training Committees, provides for evaluation of training and change agents by curriculum review committees, these committees determine additional training needs.</p> <p>f. Contractors and visitors who have unescorted access to site areas must have completed general employee training per TQ-3-0700-01, General Employee Training.</p>	SAT

QA Audit Checklist for LES Training Audit 2009-A-03-020

Condition Reports and Action Items Checklist Date April 15 – April 29, 2009

Page 8 of 20

Item	Requirement	Audit Point	Item Examined	Recommendation/Finding/Comment	Sat Unsat
NRC INSPECTION MANUAL INSPECTION PROCEDURE 88010 OPERATOR TRAINING/RETRAINING Attribute 03.03					
5 Andy	<p>03.03 Training Program Procedures. The licensee or certificate holder should have available a training outline that defines requirements, needs, material, and testing</p> <p> a. In-house training programs for each position shall cover initial orientation, as well as specific process training (both classroom and on-the-job), and refresher training. Procedures should be available for trainee evaluation and final qualification/certification as an operator. </p> <p>b. Training material addressing at least the following topics should be available: </p> <p> 1. IROFS, process safety information elements (such as safety and health hazards, relevant material safety data sheets (MSDSs), personal protective equipment, etc.) </p> <p> 2. Safe work practices (such as confined space entry, lockout/tagout procedures, opening process equipment, hot work, control of entry into hazardous areas, etc.) </p> <p>3. Process technology (as required). </p>	<p>Identify required procedures and requirements</p>	<p>TQ-3-0100-04 TQ-3-0100-06 TQ-3-0100-11 TQ-3-0300-01 TQ-3-0400-01 TQ-3-0400-02 TQ-3-0400-03 TQ-3-0500-01 TQ-3-0600-01 TQ-3-0610-01 TQ-3-0700-01 TX200LP00100 GXNSWQC00100 GAGE2LP04100 GAGE2LP05101 HZ126LP00100 GF003LP00100</p> <p>OPS-F-VT06LP OPSSYS01LP410 OPSSYS01LP420 OPSSYS01LP430 OP730QC01100 OXALPOP00100 GAGE2LP07101 GAGE2LP101 OP730QC01100 QA700QC00100 OP690QC00100</p>	<p>a. The positions covered in the training section of the SAR include:</p> <ul style="list-style-type: none"> • Operator Training – TQ-3-0300-01, NEF Operator Training Program Construction and Startup • Mechanical Maintenance Training – TQ-3-0400-01, Maintenance Training Program and TQ-3-0400-03, Mechanical Maintenance Training Guide • Plant Control and Energy Systems Training – TQ-3-0400-01, Maintenance Training Program and TQ-3-0400-02, PCES Training Guide • Health Physics Training – TQ-3-0600-01, Radiation Protection Technician Training program • Chemistry Training – TQ-3-0610-01, Chemistry Training Requirements • Engineering/Support Personnel Training – TQ-3-0500-01, Engineering Support Personnel Training Program <p>All procedures cover initial (orientation) and continuing/refresher training, the topics have not been completely identified because some IROFS and systems are still in the design phase.</p> <p>The procedures that cover evaluation are TQ-3-0100-06, Exam Development and TQ-3-0100-11, On-The-Job Training (Task performance evaluation) TQ-3-0300-01 contains the certification guide for the Operator Training Program.</p> <p>b.1 The following lesson plans cover the noted areas:</p> <ul style="list-style-type: none"> • TX200LP00100 – IROFS • GXNSWQC00100 – Nuclear Safety Worker – Safety and health, PPE • GAGE2LP04100 – Chemical Safety – MSDS • GAGE2LP05101 – Industrial Safety – PPE <p>b.2 The following lesson plans cover the noted areas</p> <ul style="list-style-type: none"> • HZ126LP00100 – Lockout/Tagout • WGI-51 – Confined Space Training • GF003LP00100 – Hot Work, 	SAT

QA Audit Checklist for LES Training Audit 2009-A-03-020

Condition Reports and Action Items Checklist Date April 15 – April 29, 2009

Page 9 of 20

Item	Requirement	Audit Point	Item Examined	Recommendation/Finding/Comment	Sat Unsat
	<p>4. Operating procedures for all phases of operation. </p> <p>5. Emergency procedures (such as Hazard Waste Operations and Emergency Response (HAZWOPER)). </p> <p>6. Reporting unusual events or non-routine operations. </p> <p> NOTE: On-the-job training should, as a minimum, include: equipment familiarization, completing log sheets, equipment startup/shutdown activities, limiting operating conditions, control of process variables, and applying</p>			<p>b.3 Process Technology reviewed include</p> <ul style="list-style-type: none"> • OPS-F-VT06LP – Vacuum Technology • OPSSYS01LP410 Feed/Feed Purification System • OPSSYS01LP420 Product System • OPSSYS01LP430 Tails System <p>b.4 Operating Procedures for all phases are not yet available, most operating phase procedures are in the process of being written, the training material available is related to switchyard, and CAB Operation, examples include:</p> <ul style="list-style-type: none"> • OP-700 – Lesson Plan number OP730QC01I00 – Qual card for CAB Electrical Distribution • OP-710 – Lesson Plan number OA700QC00I00 – Qual card for Switchyard Operation • OP-3-690 – Lesson Plan number OP690QC00I00 – Qual Card for Fire Water Diesel Pump <p>Operating procedures are being evaluated and training developed as procedures are being written.</p> <p>b.5 The emergency plan is not required until there are 50KG of UF6 on site, the plan has not been implemented therefore there are no procedures. Emergency Plan Topics are covered in GET Phase 2 – GAGE2LP07I01, Emergency Plan and Implementing Procedures. HAZWOPER is covered in GAGE2LPI01, Chemical Safety and in GXNSWQC00I00, Nuclear Safety Worker.</p> <p>6. Lesson Plan OXALPOP00I00, Abnormal Operating Procedures, addresses unusual events as applicable to this point in the project.</p>	

QA Audit Checklist for LES Training Audit 2009-A-03-020
 Condition Reports and Action Items Checklist Date April 15 – April 29, 2009
 Page 11 of 20

Item	Requirement	Audit Point	Item Examined	Recommendation/Finding/Comment	Sat Unsat
	<p>d. Documentation of all training, evaluations, and qualification/certification activities for all employees should be verified. Training records should be accessible and easily referenced. Information should include: name of employee, date of training, name of trainer, and means used to determine that training was understood. </p> <p>e. Refresher training should be provided at least every 2 years, or as specified in the facility license or certificate. Content of material to be covered should include at least the following: safety and health hazards, relevant MSDSs, job-specific chemical hazards, safe work practices, emergency procedures, and standard operating procedures. Employee participation/feedback in deciding course content is highly recommended. The inspector should interview trainers and trainees to determine that refresher training is actually conducted according to the schedule. </p> <p>f. The training program for contractors, maintenance personnel, and visitors should be appropriate given the hazards in the area they will be working in or visiting. Every person who enters the facility should go through a site-specific general orientation covering safety and health hazards, emergency procedures, and alarms. In addition, maintenance employees and contractors (if relevant) should</p>			<p>All training good, self study/OJT/TPE training meets needs, both had opportunity to operate switchyard breakers – not problems, Operate fire equipment with no problems, CAB TPE is all simulation, there is no single location for getting Qual Cards, Almelo Training was good, Gregg Lindner – Training Instructor - taught Fire Systems and Switchyard Mr. Lindner noted that the students were very capable, preferred hands on training, and provided him timely feedback. Matt Kingham – Senior Technical Instructor – taught support topics such as lockout/tagout, noted students were very capable</p> <p>All Training verified on OnTrack</p> <p>d. Documentation for the personnel reviewed in this attribute and in the GET attribute noted no issues. Grades are included in the records or contained the signoff completion for the TPE. The files are maintained in accordance with TQ-3-0100-04, Training Records. The information was also contained in the training database, OnTrack.</p> <p>e. The only refresher training provided at this point in the project is Phase 1 General Employee Training, which is on a 1 year requal cycle. Safety and use of PPE is included in this training, a test and score of 80% is required to pass the course. Health Hazards, MSDS, Emergency Procedures, are contained in phase 2 GET – refresher training is not yet required. GET requal is provided routinely to ensure training qualifications do not expire. TQ-3-0700-01</p> <p>f. All personnel working on site with unescorted access are provided phase 1 general employee training and construction safety training. Additional training is provided to contractors as applicable. During HAT all personnel involved in the process received applicable Nuclear Safety Training and phase 2 GET. Personnel who do not receive the training are escorted by personnel who have received training.</p>	

QA Audit Checklist for LES Training Audit 2009-A-03-020

Condition Reports and Action Items Checklist Date April 15 – April 29, 2009

Page 12 of 20

Item	Requirement	Audit Point	Item Examined	Recommendation/Finding/Comment	Sat Unsat
	undergo training in safe work practices, process hazards, etc., as relevant to the work they will be performing.				
NRC INSPECTION MANUAL INSPECTION PROCEDURE 88010 OPERATOR TRAINING/RETRAINING Attribute 02.04					

QA Audit Checklist for LES Training Audit 2009-A-03-020

Condition Reports and Action Items Checklist Date April 15 – April 29, 2009

Page 13 of 20

Item	Requirement	Audit Point	Item Examined	Recommendation/Finding/Comment	Sat Unsat
6 Andy	02.04 Changes to the Training Program. Review changes to the licensee or certificate holder's training program to determine whether the licensee or certificate holder has in place a mechanism to update the facility's training program through the incorporation of management-approved recommendations coming out of changes to items relied on for safety (IROFS) and other radiological, criticality safety, emergency preparedness, and nuclear chemical process safety program elements (e.g., hazard identification and assessment; management of change; incident investigation and audits), pertaining to employee training.	Verify procedures are in place to update the training program for plant changes and management approved recommendations	TQ-3-0100-05 AD-3-1000-01 AD-3-1000-10 CA-3-1000-01 CA-3-1000-05 EG-3-4100-02 TQ-4-0100-02	<p>Mechanisms are in place to update training programs through the following:</p> <ul style="list-style-type: none"> • TQ-3-0100-05, Training Committees – Modifications, Corrective actions, and other change agents are reviewed by the Curriculum Review Committee where changes to training programs are approved. Periodic review of programs like Criticality Safety and Radiological Safety provide a mechanism for feedback to the training programs • AD-3-1000-01, Requirements for Procedures includes a review of new procedures or changes to procedures per the change management process procedure • AD-3-1000-10, Change Management Process includes a line item in F-1 (#2) to evaluate changes for Training • CA-3-1000-01, Performance Improvement Program and Nonconformance Reports, directs corrective actions be developed for conditions adverse to quality – corrective actions can be assigned to training for specific actions in training programs. This can include Hazards and incident evaluations. • CA-3-1000-05, Industry Operating Experience, Section 5.7 directs relevant OE in training programs be reviewed • EG-3-4100-02, Plant Modification, requires plant modification be reviewed by Training in section 5.4.3.h • TQ-4-0100-02, Training Request Tracking describes the process used in ZIA to track training information via TRs (Training Requests) 	SAT

QA Audit Checklist for LES Training Audit 2009-A-03-020
Condition Reports and Action Items Checklist Date April 15 – April 29, 2009
 Page 14 of 20

Item	Requirement	Audit Point	Item Examined	Recommendation/Finding/Comment	Sat Unsat
7 Andy	<p>03.04 Changes to the Training Program. The licensee or certificate holder must have in place a mechanism for ensuring that recommendations from other process safety program elements (hazard identification and assessment, incident investigation, management of change, and audit programs) pertaining to employee training are incorporated into the training program. As a minimum, the following should be addressed in updating the licensee or certificate holder's training program:</p> <p>a. A tracking system to ensure that each recommendation is addressed on a timely basis. The inspector should cross-check with the features of the tracking system identified in the hazard identification and assessment element. </p> <p>b. Management-approved findings, from incident investigations or audit programs, that highlight deficiencies in the training program, should be addressed in a timely manner to ensure that chemical hazards at the facility are covered sufficiently. The inspector should cross-check with the incident investigation and audit elements. </p> <p>c. Training actions activated by management of change procedures should be addressed before the change is implemented. All personnel affected by the change should undergo training - this should be verified by the pre-startup safety checklist. </p>	<p>Verify there is a mechanism in place to ensure recommendations from other process safety mechanisms are in place</p>		<p>7.a Tracking recommendations from other process safety elements is accomplished via the site tracking system called ZIA using CR actions (condition report) , AITs (Action item Tracking), and TRs (Training Requests).</p> <p>CRs used corrective actions to provide feedback to training programs; these actions are tracked to completion. There are currently not many examples where training programs have been changed due to CR Actions. One example is CR2007-0011 written because of inadequate 70.72 evaluations, action 2 required training to track completion of discussion training action and action 3 required a change to the lesson plan.</p> <p>TRs are used to track changes to training related materials when they are not a condition adverse to quality. These are identified through student feedback, Exam analysis, curriculum committee meetings, and other sources. Some examples include</p> <ul style="list-style-type: none"> • TR2008-1063, For course OAHPLP00100 Radiation Protection Phase II Revise material to incorporate plant specific procedures and radiological instrumentation. Based on student and management feedback form course ending MAy2, 2008. • TR2008-2292, Develop additional Instructor Notes in GET Lesson Plans to address the following: Increased detail on the Enrichment Industry in general, I.E. number of plants, technologies used, etc. Stress reducing usage of acronyms wherever possible during presentations. Increased information/references on Urenco business news and NEF organization. Information and policy updates (as noted in observation) • TR2008-3400, Review maintenance procedure MA-6-0640-01r0 for training impact Action taken: Reviewed procedure. Procedure being revised at this time to include operational checks. Training is required on this monitor. Created 2009-292-TR to track development of a training module on the Oxygen Monitors <p>7.b There are no examples where training programs addressed deficiencies in this phase of the project. No deficiencies requiring training action in chemical hazards have been identified.</p> <p>7.c. Operations procedures are evaluated prior to implementation and turnover of a system, procedures related to the Switchyard, Fire Protection, CAB Electrical, and HVAC have all been evaluated.</p>	SAT

QA Audit Checklist for LES Training Audit 2009-A-03-020

Condition Reports and Action Items Checklist Date April 15 – April 29, 2009

Page 15 of 20

Item	Requirement	Audit Point	Item Examined	Recommendation/Finding/Comment	Sat Unsat
NRC INSPECTION MANUAL INSPECTION PROCEDURE 88010 OPERATOR TRAINING/RETRAINING Attribute 02.05					
8 Ryan	02.05 Observations of Managers, Supervisors, Operators. Discuss and observe training with selected staff in a variety of positions, such as operators, maintenance mechanics, instrument and control technicians, etc., to determine whether the training is adequate. Discuss procedural expectations with these selected staff to determine whether the staff can effectively implement procedures.	Discuss existing training with operators to determine training is adequate.		<p>Operations is the only group that has been able to go into the field and perform operations on the equipment they were trained on – the interviews were limited to Operators.</p> <p>Training courses reviewed - Switchyard Training, Fire protection Training, Cab Electrical, Lockout/Tagout</p> <p>Randy Shaffer – Deputy Shift Manager – All training was good, especially the hands on. Most of the OJT/TPE was done as simulate due to lack of access to equipment. There is very little opportunity to actually operate equipment in this phase of the project, when operated as many people on shift as possible participate</p> <p>Mark Bogenrieder - Deputy Shift Director – All Training was good. Fire protection was excellent, good follow up by instructors if information changes, no problems related to training noted in operation of plant equipment, some problems with lack of SME TPE evaluators on shift (operations qualifies 2-3 people one each system), Database information was up to date, system equipment availability is limited</p> <p>Josh LaGabel – Operator – All training was good, excellent fire protection as the instructor walked through every component. He was looking forward to delta training between Almelo systems and NEF systems. He noted system information was difficult to obtain as design and identification of components has not been finalized.</p> <p>Brad Graham – Senior Operator – All training was very effective, Fire Systems was very good. Fire Brigade Training was excellent.</p> <p>Shawn O'Brien – Operator</p> <p>Brandon Hanson – Senior Operator</p> <p>All training good, self study/OJT/TPE training meets needs, both had opportunity to operate switchyard breakers – not problems, Operate fire equipment with no problems, CAB TPE is all simulation, there is no single location for getting Qual Cards, Almelo Training was good,</p> <p>Gregg Lindner – Training Instructor - taught Fire Systems and Switchyard</p> <p>Mr. Lindner noted that the students were very capable, preferred hands on training, and provided him timely feedback.</p> <p>Matt Kingham – Senior Technical instructor – taught support topics such as lockout/tagout, noted students were very capable</p> <p>All Training verified on OnTrack</p>	SAT
NRC INSPECTION MANUAL INSPECTION PROCEDURE 88010 OPERATOR TRAINING/RETRAINING Attribute 03.05					

QA Audit Checklist for LES Training Audit 2009-A-03-020
 Condition Reports and Action Items Checklist Date April 15 – April 29, 2009

Item	Requirement	Audit Point	Item Examined	Recommendation/Finding/Comment	Sat Unsat
9 Ryan	03.05 Observations of Managers, Supervisors, Operators. Determine by discussion, document review, and observation, that the training program ensures that each individual receives performance-based IROFS and/or safety control training (knowledge and skills) to understand his or her personal and organizational authority and responsibility for safety. Shutdown authority when IROFS and/or safety control is in doubt, and restart authority should be addressed in the procedures.			This phase of the project does not allow for observation of plant activities and operating document review, as there is no operating plant. The interviews in item 8 indicate the training is satisfactory.	
NRC INSPECTION MANUAL INSPECTION PROCEDURE 88010 OPERATOR TRAINING/RETRAINING Attribute 02.061					
10 Jim	02.06 Changes in Examinations. Examine the changes to selected tests given under the training program to determine that tests required by the program were administered and scores or results achieved satisfied program criteria.	Review 5 exams and answer sheets, verify scores satisfy program criteria		5 different operations exams were reviewed, the passing criteria for all was achieved. Exam analysis sheets for those exams were also reviewed. Health Physics Exam and exam analysis 7/27/07 Math Exam and exam analysis 7/13/07 Chemistry Exam and exam analysis 1/30/09 Drawings/Prints Exam and exam analysis 7/16/07 Heat Transfer/Fluid Flow Exam and exam analysis 8/17/07	SAT

QA Audit Checklist for LES Training Audit 2009-A-03-020

Condition Reports and Action Items Checklist Date April 15 – April 29, 2009

Page 17 of 20

Item	Requirement	Audit Point	Item Examined	Recommendation/Finding/Comment	Sat Unsat
11 Jim	Section 11.3 of the SAR outlines content of General Employee Training. Evaluate that LES is meeting the GET requirements for this phase of the project.			<p>GET Phase 1 Training was conducted by Tom Doray at the Eunice Community Center. 27 students were in attendance. 3 individuals failed to make the 80% passing grade. They were remediated and passed the exam on the following day. The results are satisfactory and no issues were identified.</p> <p>Peter LohBerger GET Phase 1 3/4/09 Arheal Carrillo GET Phase 1 3/4/09 Robert Garcia GET Phase 1 3/4/09 Greg Fore GET Phase 1 3/4/09 Chriselda Enaro GET Phase 1 3/4/09</p> <p>All exams were reviewed for evidence of tampering or mistakes associated with electronic grading. No issues were identified. The exams are considered satisfactory.</p> <p>GET Phase 2 Training was conducted by Instructor Tom Doray at LES trailer 2-16 on 3/19/09. 9 students were in attendance. 3 students rescheduled and 2 did not attend the class. All 9 students received a score of greater than 80% on their examination.</p> <p>Allen Sorrell GET Phase 2 3/19/09 Thomas Jury GET Phase 2 3/19/09 Jay Laughlin GET Phase 2 3/19/09 Irene Wiebe GET Phase 2 3/19/09 Stephen Cowne GET Phase 2 3/19/09</p> <p>All exams were reviewed for evidence of tampering or mistakes associated with electronic grading. No issues were identified. The exams are considered satisfactory.</p> <p>GET Phase 1 Requalification was conducted by Instructors Sandra Crow and Sylvia Juarez at the NMJC Training Center on various dates, using the following Lesson Plans:</p> <ul style="list-style-type: none"> • GAQ01LP00I02 (QA) • GXE01LP01I01 (ECI) • GAC01LP01I01 (CAP) • GXS01LP00I03 (SCWE) <p>15 students attended the training classes, 14 passed and 1 failed:</p> <p>Shannon Jackson GET Phase 1 Requal 2/17/09 Terry Ahels GET Phase 1 Requal 2/27/09</p>	SAT

QA Audit Checklist for LES Training Audit 2009-A-03-020
Condition Reports and Action Items Checklist Date April 15 – April 29, 2009

Item	Requirement	Audit Point	Item Examined	Recommendation/Finding/Comment	Sat Unsat
12 Andy	<p>Evaluate Procedures are in place to direct On-the-Job Training and Task Performance Evaluations (On-the-Job Evaluations) and meet the criteria described in item 5 of this checklist.</p> <p>IF possible observe On-The-Job Training or Task Performance Evaluations</p>	Evaluate OJT/TPE Training and execution	<p>TA001LP-00100rev11</p> <p>TA00200-100rev1</p> <p>TQ-3-0100-03</p> <p>TQ-3-0100-01</p> <p>TQ-3-0100-11</p> <p>TQ-3-0100-11</p> <p>SME Equivalencies</p> <p>OS670LP-00100 Records</p> <p>OAHP2QC-0105 Records</p> <p>OS721LP-00100 Records</p>	<p>Observed TA001LP00100rev11 - Train the Trainer OJT and TA00200100rev1, Train the Trainer TPE</p> <ul style="list-style-type: none"> • The instructor followed the Lesson Plan in both classes • The lesson plan followed the procedure, TQ-3-0100-03, On-The-Job Trainer qualification • The instructor's teaching skills were good • The conduct of students was evaluated using TQ-3-0100-01 Attachment 1, Trainee Conduct Standards. The only delta observed was some students were on the Web or email during the class presentation. This was corrected by the instructor after the break. • The operations manager observed the TPE exercise and provided critical feedback on the training. This was discussed with the Operations Training Supervisor and TR2009-1013 was generated to include a satisfactory evaluation by a shift manager. • The OJT and TPE performed was using the coffee machine and the coffee machine vendor instructions • The OJT and TPE performance referenced the lesson plan but did not include any reference to the evaluation forms in the procedure. <p>For a records review - Three different TPE records (Qual Cards) were selected, the evaluators from those records were reviewed, they were SMEs designated by Training Equivalencies. All evaluators had satisfactorily completed OJT/TPE training.</p> <p>During an interview with the Operations manager it was confirmed that his expectations were being met during the observed TPE exercise, specifically what issues would fail an individual (tools not ready, skipped step, procedure could not be followed, incorrectly performing the step).</p> <p>There were no actual OJT/TPEs scheduled during the audit period.</p> <p>Recommendations</p> <ol style="list-style-type: none"> 1. The OJT/TPE should simulate actual documentation used in the field. Revise the vendor instruction used in the lesson plan into plant procedure format. 2. OJT and TPE qualified personnel will be evaluated against forms from the OJT/TPE qualification procedure. Revise the lesson plan to use TQ-3-0100-03-F-3 and TQ-3-0100-03-F-4 to evaluate the practical in the class instead of the lesson plan. 3. The classroom evaluation is a useful tool to check for understanding; however, it does not place the student in a plant environment and does not allow the student's supervisor an opportunity to evaluate the student. Add a requirement to have the student's supervisor, or designee, to perform a satisfactory evaluation of the student performing an actual TPE. 	SAT With Rec

QA Audit Checklist for LES Training Audit 2009-A-03-020

Condition Reports and Action Items Checklist Date April 15 – April 29, 2009

Page 19 of 20

Item	Requirement	Audit Point	Item Examined	Recommendation/Finding/Comment	Sat Unsat
				<p>4. The classroom exercise allows more than one person to be evaluated as an evaluator at one time. This does not ensure each evaluator identifies each "error" in the exercise. Revise the lesson plan to perform this exercise with only one student.</p> <p>Documents reviewed for this evaluation: TA001LP00100rev11 - Train the Trainer OJT TA00200100rev1, Train the Trainer TPE TQ-3-0100-01, TSD Process TQ-3-0100-03, On-The-Job Training and Task Performance Evaluation TQ-3-0100-11, On-The-Job Training Development SME Equivalencies for Woodward, Dillard, and Whitely OS670LP00100, CAB HVAC TPE OAH2QC0105, Radiological Source Control Qual Card OS721LP00100, CUB Electrical TPE</p>	
13 Jim	Review the training performed for field engineers on procedures			This checklist item has been adequately covered by the Engineering audit 2009-A-01-004. Welder Training and Quals are covered in surveillance 2009-S-03-020.	SAT
14 Ryan	Review of the training performed for construction related procedures	Evaluate transition from WGI/RUST to LES Construction Management		The transition plan developed by construction and training for the transition from WGI/RUST to LES Construction Management was reviewed. The transition plan included a gap analysis, a series of memos, and training and qualification records for Construction Engineers. The transition of procedures was effectively implemented, no further review is required.	SAT

QA Audit Checklist for LES Training Audit 2009-A-03-020

Condition Reports and Action Items Checklist Date April 15 – April 29, 2009

Page 20 of 20

Audit Contacts

Audit Entrance Meeting 04/15/2009

Audit Exit Meeting 04/29/2009

Personnel Contacted During the Audit

Brad Graham – Senior Operator
Brandon Hanson – Senior Operator
Carl Markert - Operations Manager
Chris Bates – Technical Training Supervisor
Dana Voss – Startup and Test Engineer
Dave Tomar – Operations Training Instructor
Don Dotson – Licensing Manager
Gregg Lindner – Training Instructor
Jim Allen – Technical Instructor
Josh LaGabed – Operator
Larry Kelley – Training Manager
Mark Bogenrieder - Deputy Shift Manager
Matt Kingham – Senior Technical Instructor
Pam Davis – Technical Instructor
Randy Shaffer – Deputy Shift Manager
Robert Lightfoot – Training Specialist
Russell Williams – Shift Manager
Sandra Crow – Training Administrative Assistant
Scott Loose – Operations Instructor
Shawn O'Brien – Operator
Sylvia Juarez – Training Administrative Assistant
Tim Knowles – Operations Training Supervisor
Tom Doray – Training Instructor

LES-Training Audit Plan 2009-A-04-020

Page 1 of 1

Audit Purpose & Scope:

The purpose of this audit is to assess the adequacy and effectiveness of the LES Training Program.

The scope of this audit includes an evaluation of the adequacy and effectiveness of LES Training implementing procedures and activities to ensure compliance with regulatory and program requirements listed below.

Audit Schedule: Entrance Meeting: 9:00 AM, April 15, 2009
Exit Meeting: 3:00 PM, April 29, 2009

Audit Team: Joseph Randazzo, Lead Auditor Ryan Whitford, Auditor
Jim Marchi, Acting Lead Andy Auner, Technical Specialist

Audit Activities:

- Evaluate GET implementation for the current phase of the project
- Evaluate the On-The-Job-Training (OJT) and Task Performance Evaluation (TPE) process with respect to Operator Training
- Ensure field personnel are trained on procedures
- Ensure procedures are implemented within the scope of this audit for the current phase of the project with respect to Operator Training and Retraining
- Ensure Condition Reports associated with operator training remain effective
- Observation of operator training for classroom implementation

Audit Contacts: Larry Kelly, LES Training Manager
Tim Knowels, LES Operations Training Supervisor

Applicable Regulatory Documents:

- 10 CFR 50, Appendix B, Quality Assurance Criteria, II, QA Program
- ANSI/ASME NQA-1-1994 with NQA-1a-1995 Addenda, Section 2, QA Program
- NRC Inspection Plan 88010, Operator Training/Retraining
- Safety Analysis Report, Revision 19a, Section 11, Management Measures
- QAPD requirements defined in Sections 2, QA Program

Applicable LES Implementing Procedures:

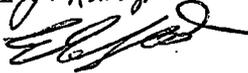
- AD-3-1000-10, *Change Management Process*
- CA-3-1000-01, *Corrective Action Program*
- EG-3-4100-02, *Plant Modification*
- TQ-3-0100-01, *TSD Process*
- TQ-3-0100-02, *Exam Administration and Security*
- TQ-3-0100-03, *On-The-Job Training and Task Performance Evaluation*
- TQ-3-0100-04, *Training Records*
- TQ-3-0100-05, *Training Committees*
- TQ-3-0100-06, *Exam Development Process*
- TQ-3-0100-07, *Job/Task Analysis Development and Design*
- TQ-3-0100-08, *Lesson Plan Development Phase*
- TQ-3-0100-09, *Implementation Phase*
- TQ-3-0100-10, *Feedback and Evaluation Phase*
- TQ-3-0100-11, *On-The-Job Training Development*
- TQ-3-0300-01, *NEF Operator Training Program, Construction and Development Phase*
- TQ-3-0600-01, *Radiation Protection Technician Training Program*
- TQ-3-0700-01, *General Employee Training*
- TQ-3-0710-01, *Nuclear Criticality Safety Training*
- TQ-3-0810-01, *Instructor Evaluation and Qualification Program*
- TQ-3-1000-01, *Functional Area Training*

Previous Audits, Findings & CRs

- LES-Training-2007-001, Operator Fundamentals Training Program

Audit Methodology: Document reviews, personnel interviews and direct observation of activities.

Prepared By: Joseph Randazzo, Lead Auditor  Date: 04/13/2009

Approved By: Gene Sergent, QA Director  Date: 4/27/09

