

FACILITY REPRESENTATIVE OVERSIGHT PROGRAM

Office of the Assistant Manager for Nuclear Fuel Supply

Regulatory Management Team

RMT 3.3

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REVISION LOG

Revision	Purpose	Date
0	Establish a team level procedure for facility representative oversight responsibilities.	12/16/09

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1.0 PURPOSE

This document establishes Office of Assistant Manager for Nuclear Fuel Supply (AMNFS) Regulatory Management Team (RMT) guidance to support the implementation of the Department of Energy (DOE) Standard 1063-2006 and the AMNFS Facility Representative Qualification Program Description.

2.0 APPLICABILITY

This procedure is applicable to all personnel within the RMT that implement or support the Facility Representative Program.

3.0 RESPONSIBILITIES

3.1 Facility Representative (FR) Supervisor

- 3.1.1 Ensures development of the FR Triennial Assessment Plan.
- 3.1.2 Walks through facilities periodically.
- 3.1.3 Routinely meets with contractor management to discuss FR activities and maintain knowledge of facility and programmatic changes.
- 3.1.4 Prepares and submits quarterly performance indicators.

3.2 Facility Representative

- 3.2.1 Conducts facility oversight for assigned nuclear facilities at the East Tennessee Technological Park, Paducah, and Portsmouth.
- 3.2.2 Observes and evaluates operational performance and effectiveness of facility management in areas such as: Integrated Safety Management, quality assurance, self-assessment, work control, protection of worker health and safety, and environmental protection.
- 3.2.3 Maintains thorough familiarity of site and facility characteristics, operating procedures, and safety basis authorizations.
- 3.2.4 Acquires knowledge of facility operational status and maintains awareness of major work in progress (and in planning).

- 3.2.5 Communicates the results of observations, reviews, assessments, and other activities to DOE and contractor management through oral and/or written means at least on a monthly basis.
- 3.2.6 Provides input to the quarterly assessment report.
- 3.2.7 Documents walkthroughs and tracks findings in ORION.

4.0 INSTRUCTIONS

4.1 Routine Activities

- 4.1.1 Based upon the available staffing and the recommended coverage levels in DOE-STD-I063-2006, the FR should conduct routine activities consistent with Attachment 7.1.
- 4.1.2 Appropriate entries shall be made into the ORION tracking system.

4.2 Assessments

- 4.2.1 Assessments shall be conducted in accordance with the approved Triennial Assessment Plan. Assessments may be conducted in a teaming arrangement with the following personnel:
 - a. One FR assigned to the facility being assessed.
 - b. One subject matter expert (SME) in the assessment area.

Consideration may also be given to teaming with contractor personnel as well as DOE Program Managers if deemed appropriate by the FR Supervisor.

- 4.2.2 Planning of quarterly assessments is suggested to be consistent with the Centrifuge Demonstration Project Inspection Manual.
- 4.2.3 Prior to formally documenting an assessment, the FR shall meet with the appropriate facility managers or their representatives to ensure factual accuracy of any observations, findings, or concerns. If issues arise that cannot be resolved between the FR and facility management, those issues will be brought to the attention of the FR Supervisor for resolution.
- 4.2.4 Observations, findings, or concerns requiring contractor corrective actions shall be evaluated, tracked, and closed by the FR or SME cognizant of the subject area involved. All items identified through assessments shall be input into ORION.

4.3 Log Keeping

4.3.1 The FR is responsible for making appropriate entries into ORION.

4.3.2 FR entries are suggested to be consistent with DOE-STD-1063-2006.

4.4 Problem Reporting

The FR is the primary point-of-contact for the contractor to notify DOE of reportable occurrences as prescribed in DOE event reporting requirements. The FR will provide input in accordance with DOE event reporting requirements.

Response to Events

4.4.1 FR Actions & Notifications

4.4.1.1 Prompt Onsite Actions

The FR should provide prompt onsite actions consistent with the guidelines delineated in Attachment 7.5.

4.4.1.2 Follow-up Actions

The FR should provide follow-up actions in accordance with the guidelines delineated in Attachment 7.5.

4.4.2 Off-shift Response Actions

The FR should provide off-shift response actions in accordance with the guidelines delineated in Attachment 7.5.

4.5 Periodic Exit Meetings with the Contractor Facility Management

At the conclusion of an assessment, the FR should conduct an informal meeting with Facility Management to convey any observations noted.

4.6 Monthly Meeting

Once per month, the FR, as necessary, should meet with the FR Supervisor to provide feedback on observations made during the month.

4.7 Tracking, trending, and closure of DOE FR concerns

The closure of formal FR concerns shall be verified by a FR or appropriate SME and documented.

5.0 REFERENCES

- 5.1 DOE O 232.1C, Environment, Safety and Health Reporting
- 5.2 DOE AMNFS Facility Representative Qualification Program Description
- 5.3 DOE O 5480.19, Conduct of Operations for DOE Facilities
- 5.4 10 CFR 835, Occupational Radiation Protection
- 5.5 DOE O 433.1, Maintenance Management Program for DOE Nuclear Facilities
- 5.6 10 CFR 830, Nuclear Safety Management
- 5.7 DOE O 420.1, Facility Safety
- 5.8 DOE Standard 1063-2000 Facility Representatives
- 5.9 Centrifuge Demonstration Project Inspection Manual
- 5.10 Lease Requirements Document for Buildings K-1600 and K-101

6.0 DEFINITIONS

Facility Representative Supervisor – Regulatory Management Team Leader
Facility Representative – Regulatory Management Team Facility Representative

7.0 ATTACHMENTS

- 7.1 Routine Activity Guide
- 7.2 Example of Implementation Functional Review Areas
- 7.3 Sample Facility Walkthrough Items
- 7.4 Principal Surveillance Area Guidance
- 7.5 Response to Events

Attachment 7.1 Routine Activity Guide

NOTE: The following paragraphs provide guidance for use by FRs in performing activities to enhance reliable, safe, and efficient operations and to ensure a systematic safety performance assessment of the facility and the operating contractors activities. This guidance is not intended to be applied as prescriptive unchangeable requirements, but as a collection of suggested activities, which may be tailored in a graded approach to better address specific existing or evolving circumstances.

1.0 Routines (as applicable)

1.1 Contractor Turnover, Shift Briefings, and Plan-of-the Day Meetings

1.1.1 The FR should assess whether the shift supervisor, or assistant shift supervisor, conducts a shift briefing at the start of a new shift which should include, but is not limited to: a) Summary of existing unusual plant lineups; b) Operational Boundary Definition (OBD) ACTION Statements; c) planned evolutions for the shift period; d) shift orders and any significant changes to policies, procedures, or instructions since last on shift; e) scheduled technical specification surveillances; and f) verification that each operator understands his/her shift responsibilities.

1.1.2 The FR should attend Plan-of-the-Day (POD) meetings to stay generally informed of upcoming activities.

1.2 Operational Status/Reporting to FR Team Leader

1.2.1 Routinely, the FR should inform the FR Supervisor on facility status.

1.2.2 The FR should review the Shift Supervisor's or facility logbook to identify problem areas identified since the last logbook review.

1.2.3 The FR should assess whether access is controlled, and that operators conduct all activities in a professional manner. Through observations assess whether operators are attentive in carrying out their duties and that the work areas are free of all non-work-related reading materials and electronic equipment.

1.2.4 The FR should check the status of annunciators and check that operators understand the reasons why they are illuminated. Ensure that action is being taken to return the activity/system to normal.

- 1.2.5 The FR should examine panels containing clear instruments and other protection system elements to affirm required operability.
- 1.2.6 The FR should observe selected instrumentation and recorder traces for abnormalities, as circumstances dictate.
- 1.2.7 By observing Control Room indications, the FR should assess whether available AC and DC electrical sources, including diesel generators, correspond to the requirements of the current facility-operating mode.
- 1.2.8 The FR should look for indications that the system lineups correspond to the OBD requirements of the current facility-operating mode.
- 1.2.9 The FR should verify that operators are adhering to approved procedures for any ongoing activity.
- 1.2.10 The FR should evaluate the status of out-of-service equipment to ensure that adequate actions are being taken to return the equipment/systems to service.

1.3 Facility Walkthroughs

NOTE: Attachment 7.3, "Sample Facility Walkthrough Items," provides supporting guidance on items to observe while conducting walkthroughs.

- 1.3.1 Tour portions of the accessible facility area, including exterior areas. The FR should independently assess the safety conditions and adequacy of facility equipment, radiological controls, and security.

The following items should be observed, on a sampling basis, during the tour:

- 1.3.1.1 General facility housekeeping/equipment conditions, including operability of standby equipment (items such as excessive equipment vibration, leaking equipment, etc.)
- 1.3.1.2 Facility areas (including cabinet interiors) for fire hazards.
- 1.3.1.3 No one performs any action that will affect the operability of a system or component without the permission of the shift supervisor, or facility manager.

- 1.3.1.4 While observing activities in progress assess that facility operations are carried out by qualified personnel or trainees under the direct observation of qualified personnel.
- 1.3.1.5 Procedures that are the latest approved issue are being used in the facility for non-routine operations.
- 1.3.1.6 Appropriate work packages and supporting documentation are available at the job site for ongoing maintenance/modifications activities.

1.4 Routine Communication of FR Findings to Contractor and DOE Management

- 1.4.1 Facility deficiencies and nonconforming items encountered by the FR should be routinely brought to the attention of appropriate facility management for timely corrective action. The FR should keep the FR Supervisor and the FR Group Team Leader informed of significant deficiencies.
- 1.4.2 The FR will prepare any written documentation on the weeks activities in the proper format for inclusion, as appropriate, in periodic reports to the Managing and Operating contractor.

1.5 Critique Attendance

The FR or designee should attend critiques held by Contractor Management or their designees.

2.0 Weekly Facility Surveillances

2.1 General Guidance

- 2.1.1 Weekly facility surveillances are intended to be performance-based evaluations in which the FR performs evaluations of work activities in progress. A major goal of these evaluations is to increase the emphasis on actual observation of ongoing facility activities and to reduce the emphasis on document review as the primary resource for the implementation activity. Performance-based evaluations should stress the most important parts of the activity, and not dwell on matters that have little significance.
- 2.1.2 The responsible FR should perform and document a surveillance from one of the following activity categories: a) Operational Activities; b) OBD Surveillance Activities; c) Instrumentation and Control Maintenance Activities; and d) Maintenance Activities. Although not

a requirement, the goal of the FR program is to equally cover surveillances in each of these categories. FRs should make an effort to coordinate their weekly surveillances towards accomplishment of this goal.

- 2.1.3 When selecting the activity on which to perform the weekly surveillance, an effective thought process involves focusing on the following questions: a) Will this make a difference in safety or reliability? and b) Where will the activity be performed?
- 2.1.4 The FR should review applicable procedures prior to performing observations in the field.
- 2.1.5 Where developed, lines of inquiry should address a broad range of subjects related to the job activity (e.g., Radiation Work Permits, job planning, etc.).
- 2.1.6 The FR should notify the appropriate facility personnel prior to performance of the surveillance.
- 2.1.7 Observations and findings should be evaluated for any further follow-up (e.g., interviews, document reviews, additional observations, etc.).
- 2.1.8 Previous findings and observations should be reviewed to determine any trends.
- 2.1.9 Leads developed as a result of the surveillance shall be placed in the proper quarterly report format as soon as practicable after conclusion of the surveillance activity.
- 2.1.10 During the conduct of surveillances in all categories discussed in this procedure, the FR should make every effort to observe as much of the actual performance of the activity as possible, and to follow up on any observed deficiencies.
- 2.1.11 Observations should be conducted in a non-obtrusive manner if possible.

2.2 *Operational Activity*

2.2.1 General Objective

The general objective of this performance-based surveillance is to observe specific areas of routine operation (e.g., shift routines and operating practices, Control Area activities, communications, log

keeping, operations turnovers, special system lineups, use of procedures, etc.) at the facility, as they are being accomplished, and to evaluate whether the contractor is operating the facility safely, and in conformance with requirements. In accomplishing these evaluations, the FR conducts direct observation of safety significant activities and equipment, tours of the facility, interviews and discussions with contractor personnel, independent verification by the contractor of safety system status and limiting conditions for operation (LCO).

2.2.2 The FR should consult Attachment 7.4 for additional guidance in planning this activity.

2.3 *OBD Surveillance Requirement Activity*

2.3.1 General Objective

The general objective of this performance-based surveillance is to observe and evaluate the adequacy of work activities associated with the conduct of a surveillance activity required by the OBD. Through this activity, a comprehensive examination of most aspects of a single surveillance requirement would be accomplished. It is desirable to observe surveillance activities in different functional areas on successive observations. These areas may include mechanical, electrical, instrumentation, operations, reactor engineering, etc.

2.3.2 The FR should consult Attachment 4 for additional guidance in planning this activity.

2.4 *Instrumentation and Control (I&C) Maintenance Activities*

2.4.1 General Objective

The general objective of this performance-based surveillance is to observe and evaluate the adequacy of work activities associated with the conduct of corrective and/or preventive maintenance on instrumentation components and systems.

2.4.2 During the evaluation of I&C maintenance, particular attention should be paid to the adequacy of communication between the operations personnel (i.e., Control Room) and the I&C technicians while the maintenance activities are being performed.

2.4.3 The FR should consult Attachment 7.4 for additional guidance in planning this activity.

2.5 *Maintenance Activities*

2.5.1 General Objective

The general objective of this performance-based surveillance is to observe and evaluate the adequacy of work activities associated with the conduct of corrective and/or preventive maintenance on non-I&C components and systems. Through observations of work in progress, the FR should evaluate whether the maintenance activities for safety structures, systems, and components (SSCs) are being conducted in a manner, which results in reliable, safe operation of the facility and equipment.

2.5.2 The FR should consult Attachment 7.4 for additional guidance in planning this activity.

3.0 Non-routine Startup & Special Operational Evolution Coverage (Day and back-shift)

The FR should be available to review the preparations for and to witness the performance of non-routine startups of the facility as well as special operational evolutions that may take place.

Attachment 7.2
Lease Requirements Document Functional Areas

1. ORGANIZATION PLAN
2. MANAGEMENT CONTROLS AND OVERSIGHT
3. OPERATIONS
4. ENGINEERING AND CONSTRUCTION
5. TRAINING AND QUALIFICATION
6. QUALITY ASSURANCE
7. MAINTENANCE
8. RADIATION PROTECTION
9. NUCLEAR CRITICALITY SAFETY
10. FIRE PROTECTION
11. ENVIRONMENTAL PROTECTION
12. NUCLEAR MATERIAL SAFEGUARDS
13. EMERGENCY PREPAREDNESS
14. WASTE MANAGEMENT
15. SAFETY ANALYSIS
16. SECURITY
17. CHEMICAL SAFETY
18. PACKAGING AND TRANSPORTATION
19. OPERATIONAL SAFETY AND HEALTH – WORKER PROTECTION

Attachment 7.3

Sample Facility Walkthrough Items

Proper use of health physics equipment (e.g., respirators, personnel dosimetry, protective clothing, and proper frisking on exiting radiological boundaries).

Adequate posting/marketing of respirator, confined space, radiological, and construction areas.

General facility cleanliness/housekeeping.

Operator use of procedures/round sheets.

Operator response to alarms/indications.

Accessibility to exits/safety equipment.

Damage or deterioration of equipment, signs, or operator aids.

Adequate lighting/ventilation.

Permanent/temporary storage of equipment/supplies.

Adequate operator staffing commensurate with facility activities/safeguards and security requirements.

Review of logbooks (e.g., lockout/tagout, shift supervisor, and equipment status).

General facility/equipment condition/availability.

Control of ignition sources and flammable material.

Availability of emergency equipment (e.g., first aid and fire extinguisher).

Control of activities in the operating areas (e.g., maintenance, construction, inspections, and tours).

Temporary modification control.

Shift turnover.

Operator aids.

Equipment calibration/surveillance/inspection schedules.

Shift Orders.

Attachment 7.4

Principal Surveillance Area Guidance

Operational Activities

To conduct performance-based surveillances of “routine” Operational Activities the FR should focus primarily on the following areas:

- Shift routines and operating practices
- Control Area activities
- Communications
- Logkeeping
- Operations turnovers
- Special system lineups
- Procedural use

Information gained from reviewing logs may be used to assess, through direct interview of on-shift operators, the operating staff’s current knowledge of facility conditions, awareness of off normal conditions and trends, LCOs in effect, work and tests in progress, and the effectiveness of shift turnover.

When observing work in progress, the FR should evaluate the following:

- Are procedural controls (including work authorizations, tagouts, and equipment lineup verifications) in place?
- Are operators familiar with tagout actions and the current validity of tags hung on the equipment, as well as action being taken to remove old tags?
- Do equipment operators identify equipment problems during tours?
- Do equipment operators communicate problems to supervision?
- Are the problems getting fixed?
- Are there known problems that have not been fixed?
- Are there known problems that have not been reported?
- Do operators understand when a deficiency report is to be generated?
- Are operators aware of the work activities in their area of the facility?
- What is the operator’s overall impression of how management addresses all problems that are identified?

Attachment 7.4 (Cont.) Principal Surveillance Area Guidance

OBD Surveillance Requirement Activities

By attending the POD meeting, the FR can determine which OBD surveillances are scheduled for performance the next day.

For the OBD surveillance selected, the FR should identify the surveillance procedure utilized by the facility to perform the required surveillance, and review the procedure against upper tier documents, such as the Auditable Safety Analysis (ASA) and other design basis document, as appropriate. Such a review is intended to verify that the surveillance procedure, if carried out as described, will meet the technical design requirements of the system being tested/surveyed.

Some of the areas that may be observed and evaluated are:

- System tagout once control room approval for removal from service is obtained;
- Actual conduct of portions of the surveillance test;
- Restoration of the system to service.

Instrumentation and Control Maintenance Activities

By attending the POD meeting and maintaining contact with the I&C Coordinator, the FR can determine which I&C maintenance activities are scheduled for performance the next day.

The FR should select for review and observation corrective and/or preventive maintenance activities that are in progress in connection with the following:

- Instrumentation sensing process variables.
- Instrumentation involving engineered safety features actuation systems.
- Equipment important to safety, such as the instrument air system used for safety-related control components.
- Radiation monitoring systems.
- Safe shutdown systems.
- Normal plant control systems.
- Display instruments.

Attachment 7.4 (Cont.) Principal Surveillance Area Guidance

When selecting I&C maintenance activities in progress, consideration should be given to the impact of the component or system on the operation of the unit. An example of this would be maintenance on transmitters, pressure switches, or indicators, as opposed to replacement of indicating lights or the cleaning or changing of filters in process control cabinets.

Also, “troubleshooting” activities should be observed periodically. While observing troubleshooting activities, particular attention should be given to the use of jumpers and the possibility of LCO violations.

Maintenance Activities

By attending the POD meeting, the FR can determine which maintenance activities are scheduled for performance the next day.

For performance of this surveillance, the FR may select a maintenance activity of any of the following types: corrective, preventive, or predictive.

In instances where only selected portions of maintenance activities are observed, discussions with maintenance personnel can be conducted to obtain information about aspects of the job that were not observed, including radiological controls, fire prevention controls, and materials used. Maintenance personnel may be questioned to determine if they are familiar with their assigned maintenance task.

To conduct performance-based surveillances of “routine” Maintenance Activities, the FR should focus primarily on the following aspects:

- Are activities being conducted in a manner sufficient to assure the safety of personnel and prevent damage to plant structures, systems, and components?
- Are activities being conducted in a manner sufficient to assure adequate control of plant risk and, where appropriate, compliance with OBD requirements?
- Are post-maintenance activities adequate? Are SSCs returned to service after the performance of maintenance capable of performing their intended function?

When observing work in progress, the FR should evaluate the following:

- Did the contractor maintenance personnel obtain approvals and determine that appropriate safety tagout boundaries were established before initiating the work?
- Did the operations department and the maintenance workers communicate appropriately throughout the maintenance activity?

**Attachment 7.4 (Cont.)
Principal Surveillance Area Guidance**

- Were appropriate ignition, fire prevention, and personnel safety controls established and implemented?
- Were adequate radiological controls, including radiation work permits and appropriate as-low-as-reasonably-achievable reviews established and implemented?
- Are applicable OBD LCO being met? If an LCO Action Statement is entered to perform elective maintenance, is the unavailability of equipment taken out-of-service excessive? Are activities being given appropriate priority?
- Are systems and their redundant trains operable in accordance with OBD requirements?
- Is adequate operations implementation being provided for maintenance or modification activities performed on or near equipment, which is still in service?
- Is contingency guidance being provided to operations personnel when sensitive maintenance activities are being performed?

When observing troubleshooting activities, particular attention should be given to the following:

- Use of jumpers and the possibility of LCO violations.
- Proper authorization for removal of equipment from service.
- Appropriate troubleshooting activity control and successful completion.
- Proper restoration of the equipment to its normal configuration after completion of the troubleshooting activity.

Adequacy of post-maintenance testing may be confirmed by the following:

- Observation of the equipment in operation (instrument responding to changes in plant conditions).
- Observing the tests performed on the equipment, providing they are performed with the system in a normal lineup.
- Independently verifying the alignment of valves and switches.
- Verifying that the applicable technical specification surveillance tests are re-performed after the maintenance activity is complete.

Attachment 7.5 “Response to Events”

Prompt Onsite Actions

1. Make an initial determination of facility status and the need for further immediate action.
2. Notify the FR supervisor of the situation and plans for FR follow-up/coverage of the event.
3. Observe facility parameters and discuss with the appropriate facility personnel the current facility status.
4. Evaluate the significance of the event, the performance of safety systems, and the actions taken by the operating personnel.
5. Confirm that proper notification of the event has been made by Contractor Management.
6. In consultation with the AMNFS and/or FR Supervisor, evaluate the need for further or continued DOE response to the event. If applicable, discuss findings related to the event with DOE Headquarters.
7. Request Management to inform the DOE before initiating repairs of failed equipment. This should be consistent with actions required to respond to the event.
8. Attend any critiques of the event.

Follow-up Actions

Review and collect information, which will be of use in more detailed evaluation of the event. The following items should be considered:

1. Details regarding the cause of the event;
2. Event chronology;
3. Functioning of safety systems as required by facility conditions;
4. Consistency of personnel actions with approved procedures, and the nature of the event;
5. Radiological consequences (onsite or offsite) and personnel exposure, if any;
6. Management proposed actions to correct the cause of the event;

Attachment 7.5 (Cont.)
“Response to Events”

7. Corrective actions taken or planned to be taken prior to resumption of facility operation;
8. Verification that facility and system performance were within the limits of analyses described in the facility ASA.

Off-shift Response Actions

1. FRs shall be “on call,” 24-hours per-day.
2. Upon being notified by Contractor Management of an event occurring at the facility during off-shift hours, the FR shall determine whether immediate presence at the facility is warranted for immediate follow-up action, or whether follow-up action can be safely carried out during the next day’s scheduled shift.
3. If immediate follow-up action is deemed necessary by the FR, he/she should notify the FR Supervisor of the situation as soon as possible including any known follow-up action plan details.
4. Subsequent to arrival at the facility, the FR should perform follow-up action in accordance with the applicable guidance listed above.