URS | CH2M Oak Ridge LLC
UCOR
FY 2011 Integrated Safety Management System (ISMS) and Quality Assurance (QA) Declaration

1.0 Introduction

The FY 2011 annual evaluation on the effectiveness of the URS | CH2M Oak Ridge LLC (UCOR) Integrated Safety Management System (ISMS) as required by Title 48 Code of Federal Regulations (CFR) Part 970.5223-1, "Integration of Environment Safety, and health into work Planning and Execution," is presented in this report.

There are four processes that comprise the activities required to be conducted annually to ensure the UCOR ISMS remains an effective system for performing work safely:

- Development of Performance Objectives, Measures and Commitments (POMCs) for DOE/ORO approval;
- Review and update of the ISMS Program Description and submittal to DOE/ORO for approval;
- Annual ISMS Effectiveness Review; and
- Submittal of the UCOR ISMS Declaration of effectiveness to DOE/ORO.

The UCOR prime contract with DOE became effective August 1, 2011. Prior to that date, Bechtel Jacobs Company LLC (BJC) was the prime contractor at ETTP. During contract transition activities, the BJC-GM-1400, *BJC ISMS Program Description* was "blue-sheeted" by UCOR and submitted to DOE for approval. In addition, a similar process was used to approve the BJC/OR-1747, *Environmental Compliance and Protection (EC&P) Program Description*, BJC/OR-1745, *Worker Safety and Health Program (WSHP)*, BJC/OR-301, *Radiation Protection Program for 10 Code of Federal Regulation 835 Occupational Radiation Protection (RPP)*, and BJC/OR-43, *Quality Assurance Program (QAP) Plan.* The UCOR EC&P Program Description, WSHP, RPP Program Description, and QAP implement the environmental, safety and health policies contained in the UCOR ISMS Program Description, UCOR procedures, 10 CFR Part 851 Rule, 10 CFR Part 835, applicable DOE Orders, applicable Occupational Safety and Health Agency (OSHA) regulations found in 29 CFR Part 1910 and 29 CFR Part 1926, and other applicable regulations and consensus standards.

2.0 Scope

The scope of this evaluation is PPD-EH-1400, *UCOR ISMS Program Description*; the evaluation of the UCOR Contractor Assurance System (CAS) and its implementation, and the evaluation of the UCOR Quality Assurance Plan (QAP) and its implementation. The evaluation includes narrative on both UCOR's and BJC's periods of work performance.

3.0 Criteria for Annual ISMS and QA Effectiveness Reviews and Declaration

Criterion 1: DOE Operational Awareness, Oversight, and Contractor Assurance System(s)

The contractor has a Contractor Assurance Program Description (CAPD) that is fully compliant with DOE O 226.1A. Evidence of the fact that the CAPD is effective in identifying, evaluating and addressing issues before they become occurrences or serious accidents is demonstrated through the recognition of a programmatic weakness in conduct of operations that was self-identified in March 2010.

On September 15, 2010, Bechtel Jacobs Company LLC (BJC) submitted an updated Contractor Assurance Program Description (CAPD) to DOE for review and approval. On November 17, 2010, DOE approved the BJC CAPD and recommended one editorial change to the document. The requested change was made and provided to DOE on December 22, 2010. During contract transition activities, the BJC CAPD was blue-sheeted by UCOR and submitted to DOE for approval. DOE approval of the CAPD was provided on July 21, 2011.

During October 2010, the DOE ORO conducted an assessment of the BJC Contractor Assurance Program. The assessment team concluded that the implementation of the Contractor Assurance Program was adequate and no findings were identified. The team did identify two observations. The observations were addressed through the issues management program.

Continued discussion of Criterion 1 is below:

a. Effectiveness of field office operational awareness and oversight of contractor and subcontractor activities. (DOE/ORO)

b. Plans/schedules for conducting full ISMS verification for new contractors (as required by DOE O 450.2 and supporting guidance) or ISMS targeted reviews of contractors as determined by the field managers.

DOE/ORO conducted an ISMS Combined Phase I and II Verification Assessment of BJC's ISMS in 2010. The verification team performed the on-site portion of the review from December 1-10, 2010. The BJC ISMS Program Description, BJC-GM-1400, Rev 13 was approved when DOE/ORO issued the final report on January 28, 2011.

The review team consisted of a multi-disciplined set of subject matter experts. The team performed the verification in accordance with the approved plan.

The purpose of this verification was to verify that BJC had developed and implemented an ISMS that meets DOE's expectations. The verification team, using 28 CRADs, evaluated the ISMS through a detailed and thorough review and offered the following recommendations and conclusions:

1. BJC's ISMS met the requirements of the (a) DEAR clause on Integrated Safety Management of Title 48, CFR Part 970.5223-1, Integration of Environment, Safety, and Health into Work Planning and Execution; (b) DOE Policy 450.4, Safety Management System Policy; (c) DOE Order 450.1A, Environmental Protection Program; and (d) DOE Order 414.1C, Quality Assurance.

2. BJC had prepared an adequate ISMS description, and it was recommended that DOE ORO approve the ISMS description.

3. BJC, with the exception of the Priority 2 findings noted in this report, had adequately implemented its ISMS.

4. BJC was required to resolve the five P2 findings identified in the report, and evaluate the P3 findings as opportunities for improvement.

5. It was recommended that DOE ORO approve the corrective action plans and close the actions performed by BJC in accordance with existing DOE ORO procedures.

6. BJC's ISMS, Quality Assurance Program, and Environmental Management System were satisfactorily implemented at the facility and activity level for managing a Hazard Category 2, 3, and less than Category 3 nuclear facilities, including the quality and environment, safety, and health functional areas.

The Phase II portion of the review determined that BJC adequately implemented their ISMS, with the exception of findings included in the report. The BJC ISMS Program Description, BJC-GM-1400, Rev 13, was approved when DOE/ORO issued the final report on January 28, 2011.

The assessment team identified a total of five Priority 2 (P2) findings and nine Priority 3 (P3) findings (opportunities for improvement). The findings are summarized on the following page.

QA.1.2.P2-OO1	Review and revision of procedures and documents are less than adequate, as required by BJC-PQ-1107, Performance Document Process.
Q.A.1.2.P2-002	Procedure BJC-HR-0711, Exceptions, Extensions, or equivalencies, has not been approved by DOE, as required by DOE Order 426.2.
T&Q.1.2.P2-003	No systematic evaluation of the BJC Training and Qualifications Program has been performed, as required by DOE Order 426.2.
T&Q.1.2.P2-004	The annual training management assessment summary, as required by BJC-HR-0719, Human Resources Training Management Assessments, has not been completed.
MM.1.6.P2-005	A Power Integration Group worker and the instructor did not complete the required Power Distribution Work Permit training, as required by BJC-H R-0710, Training Position Descriptions.
OP.1.1.P3-OO1	The Senior Supervisory Watch was not in the field, as required by SO-10-001, Restart of Work Activities for Power Maintenance Group.
Q.A.1.3.P3-002	BJC-lT-6008, Rev 4, does not explicitly state applied controls are equivalent with DOE Guide 414.1.4.
QA.1.3.P3-003	Form BJCF-728 for the K25/K27 Surveillance Tracking System was improperly completed.
QA.1.5.P3-004	The Fire Protection Program did not include required DOE Order 420.1B reviews in the Integrated Assessment Schedule (BJC-PQ-1420, Management Assessment).
QA.1.8.P3-OOS	The BJC methods of supplier evaluations do not ensure adequacy of a supplier's capability.
QA.1.9.P3-006	The Suspect/Counterfeit Item Process defined in BJC-PQ-1445, Suspect/Counterfeit Items, should be strengthened.
BDP.1.1.P3-007	The baseline beryllium inventory, as required by 10 Code of Federal Regulations (CFR) 850.20(b)(3), needs to be updated to reflect the current status of the beryllium locations.
BDP.2.2.P3-008	The Beryllium Awareness Training Module 27426 (web based) does not include health risks to beryllium worker family members and others who come in contact with beryllium, as required by 10 CFR 850.37, Training and Counseling.
T&Q.1.2.P3-009	The Environmental Management Waste Management Facility Training (EMWMF) Coordinator does not have authority to enter data into the LEARN database, as required in EMWMF-SF-002, Training, Section 9.1.

One Proficiency (PRO) was noted by the review team. The proficiency was in the area of Maintenance Management and is summarized below:

MM.1.2.PRO-OO1	The Power Integration Group process improvement initiatives (e.g., housekeeping and work package development, review, and closure) are noteworthy.

BJC provided a Corrective Action Plan (CAP) to address the findings from the Verification Assessment on February 25, 2011. DOE/ORO approved the BJC CAP on March 17, 2011. All corrective actions were completed by their respective due dates as documented in the Issues/Corrective Action Tracking System (ICATS).

On August 1, 2011, UCOR assumed the role of primary contractor for the ETTP cleanup contract; DOE accepted the BJC ISMS Program Description for continued use and UCOR "blue-sheeted" the document after transition. The UCOR ISMS program description has been updated and titled PPD-EH-1400, *Integrated Safety Management System Description* (Enclosure 2).

DOE/ORO-EM is scheduled to perform an ISMS & QA Verification of UCOR in August 2012.

c. Self-assessment of the effectiveness of field line management and operational awareness of contractor issues and risks to ensure performance.

UCOR employs a set of management systems that are integral to successfully implement an ISMS. These systems provide the procedures and other administrative tools necessary for an integrated company approach. UCOR ensures continuous improvement of the ISMS through management systems that utilize the guiding principles, core functions, and safety culture elements of ISM.

Immediately following the contract transition period UCOR implemented the *UCOR Management Control Plan (MCP) for Initial Post-Transition Work Execution.* Through the MCP, UCOR implemented a focused process of deliberate operations for the first 30 days of the contract. The MCP established four elements for implementation during the 30-day deliberate operations safety emphasis period:

- Employee and subcontractor safety focus sessions were conducted during the first two days of August 2011, including "All Hands" sessions conducted by the UCOR President and Project Manager and ESH&Q Manager.
- Senior Supervisory Watch (SSW) activities directed to assure compliant work performance within specified work controls.
- Hazard Review Board (HRB) assessments directed to assure adequate preparations for work activities.
- Assignment of corporate safety coaches to conduct initial safety assessments.

A select team evaluated results from the reviews that were conducted during the 30-day deliberate operations safety emphasis period and related to the UCOR Management Control Plan (MCP) for Initial Post-Transition Work Execution. On September 28, 2011, the results were presented to UCOR's Issues/Corrective Action Review Board; good practices were observed while areas for improvement i.e., Radiological Controls and the Work Control process were already being revised. Based upon these results, UCOR returned to normal work controls and lifted the deliberate safety operations period.

The assessment program provides input to the UCOR management team to assess whether UCOR operations are conducted safely, effectively, efficiently, and in accordance with all applicable requirements. These requirements are detailed in the contract, plans, and procedures. The QA organization establishes and maintains the assessment program, but each functional and project organization has responsibility for performing self-assessments, providing useful feedback, and implementing appropriate improvement processes. Not only do the assessment programs strongly

support the feedback and continuous improvement functions of ISMS, they assist in tailoring standards and requirements, guiding principles, and hazard assessment and control implementation functions.

The UCOR assessment program involves independent assessments, management assessments, and event-specific investigations. Independent assessments are governed by procedure BJC-PQ-1401, *Independent Assessment.* Management assessments are governed by procedure BJC-PQ-1420, *Management Assessment*, and event investigations are governed by procedure BJC-GM-1460, *Event Critiques and Investigations*. There were 20 independent assessments and 560 management assessments conducted in FY 2011.

Criterion 2: Quality Assurance Plan (QAP) Implementation

During FY 2011, the ETTP scope of work transitioned from Bechtel Jacobs Company LLC (BJC) to URS | CH2M Oak Ridge LLC (UCOR). During the transition phase the BJC Quality Assurance Program Plan (QAPP) was blue-sheeted by UCOR and submitted to DOE for approval. The UCOR submission was approved by DOE on July 21, 2011. In addition, UCOR blue-sheeted the BJC company-level procedures used to implement the various elements of the QAPP.

The QAPP is organized to reflect the ten criteria of 10CFR830.122 and also incorporates DOE O 414.1C requirements. The QAPP incorporates ASME NQA-1-2004 as the national consensus standard on a graded approach basis. The implementing details of the quality program are documented in procedures that are identified and correlated to the specific criteria to which they apply in a cross-reference matrix found in Appendix C of the QAPP. Implementing procedures are written in such a manner as to allow the use of a graded approach of application for the scope of work or activity to which it applies.

The QAPP integrates quality management system requirements (including Suspect/Counterfeit Item identification and prevention, the Corrective Action Management Program and Safety Software Quality) by addressing the requirements of each specific program in program plans, procedures and/or instructions. In areas where additional codes or standards apply (such as American Welding Society (AWS) or American Society of Mechanical Engineers (ASME) or Non-Destructive Assay / Non-Destructive Evaluation (NDA/NDE) measurements), specific procedures have been developed that are unique to those activities and address the methodology for meeting the requirements.

The EM Corporate QA Performance Metrics summary report is included as Enclosure 3. Since a contractor transition occurred during FY 2011, the information included in the Response Section to each of the Lines of Inquiry includes information from both contractors. This response approach is appropriate since UCOR adopted the existing BJC programs and procedures. The EM Corporate QA Performance Metrics summary report demonstrates effective implementation of the Quality Assurance Plan during FY 2011.

Criterion 3: Activity Level Work Planning and Control, Job Hazard Identification and Analysis, and Development of Hazard Controls

After contract transition in August 2011, an independent assessment was performed to validate that UCOR workers, supervisors and managers demonstrate a satisfactory level of performance and knowledge of systems with specific emphasis on (1) commitment to safety, (2) compliance with procedures and attention to detail, (3) knowledge of systems and area status, (4) proficiency

and understanding of ISMS functions and guiding principles and (5) response to unexpected conditions (if applicable). The conclusion of the assessment was that:

> "the workforce is energized and engaged. Safety is systematically integrated into management and work practices at all observed levels. Tasks are accomplished while protecting the public, the worker, and the environment. This is accomplished through effective integration of safety management into all facets of work planning and execution. The overall management of safety functions and activities is an integral part of task accomplishment."

UCOR recognized that opportunities for improvement were also identified in the areas of hazard analysis and procedural compliance.

In November 2011, UCOR implemented the (URS) Work Planning and Control Program Standard which was developed in coordination with DOE and the Defense Nuclear Facilities Safety Board. The Standard establishes requirements for effective implementation of ISM core functions and guiding principles, and QA criteria into the company's activity level Work Planning and Control Program (IWCP). Implementation of the URS standard, Title 10 CFR Part 851, and the UCOR Worker Safety and Health Program (BJC/OR-1745) is integrated to ensure work planning and execution programs are robust.

Due to the varied nature of the work, a conservative tiered approach is used for UCOR work planning to ensure that the appropriate work package is developed based on the scope. The program delineates three work package types and IWCP Exempt activities. UCOR implements the program through procedure PROC-FS-1001, *Integrated Work Control Program.*

UCOR's implementation of the revised work planning and control process and its associated training will further advance opportunities for improvement. A component of the program is the development of a formal qualification process for Work Control Planners that will ensure the necessary level of knowledge of the Planners is obtained, as well as clearly delineate the expectations for overall Work Planning.

As another example of process improvement, UCOR conducted a Hazard Review Board (HRB) prior to the deliveries and unloading of 40 tons of waste items by B&W Y-12 at the Just in Case (JIC) Yard of EMWMF. The HRB identified some inadequacies in the project's planning and work control. EMWMF and the project collectively resolved the issues, allowing the work to be safely completed. UCOR will hold HRBs for all work to verify that planning is complete and appropriate and that workers are ready to perform the work.

After an appropriate period of time, UCOR will conduct an independent assessment of the Integrated Work Control Program to review: (1) the gaps identified between the UCOR implementation and the URS Corporate Work Planning and Control Standard, (2) the implementation plan to close identified gaps, (3) improvement progress against the implementation plan and (4) state of the UCOR program as measured against the Standard's Appendix B Program Assessment. Also as a pre-requisite to the independent assessment, UCOR will conduct an internal activity level work planning implementation assessment in accordance with Appendix C of the Standard for one or more work activities.

Criterion 4: Nuclear Safety Culture and Establishment of Safety Conscious Work Environment

- UCOR utilizes multiple on-going methods to evaluate its nuclear safety culture including:

    - Direct observations
    - Management assessments
    - Independent assessments
    - Causal factors/root cause analysis
    - Review of key safety culture related processes (i.e., integrated work planning and control)
    - Performance indicator monitoring and trending for nuclear and criticality safety, radiological control, industrial safety, industrial hygiene, environmental compliance and protection, quality, and security

- UCOR will conduct a Safety Conscious Work Environment (SCWE) survey to assess its nuclear safety culture in late 2011 or early 2012. Results of the survey will be used to facilitate the development of a continuous improvement plan. UCOR will monitor and re-survey for validation of improvements.

- UCOR management processes are established to identify and resolve latent organizational weaknesses. Linkages among problems and organizational issues are examined and communicated. Open communications and teamwork are embraced. People are encouraged to maintain a questioning attitude and communicate concerns to management. The organization actively reviews and systematically monitors performance through multiple means including:

    - Management walkdowns
    - Issues Management
    - Performance indicators
    - Trend analysis
    - Benchmarking
    - Management assessments
    - Independent assessments
    - External assessments
    - Audits
    - Readiness Reviews
    - Quality Surveillances
    - Occurrence Reports
    - Incident Reports
    - Event Investigation Reports
    - Integrated Work Control Program (PROC-EH-1001) (new in 2011)
    - Employee Concerns Program (BJC-GM-2008)
    - I Care/We Care Safety Concerns Program (BJC-GM-009)
    - Issues Management (BJC-PQ-1210)
    - Event Critiques and Investigations Process (BJC-GM-1460)

- As a learning organization, UCOR gains good practices and lessons learned from benchmarking various processes. To improve the safety culture, in October 2011 representatives from ESH Programs, the Atomic Trades and Labor Council (ATLC), Knoxville Building and Construction Trades Council (KBCTC), and United Steel Workers International Union (USW) conducted a benchmark study in of the Idaho Cleanup Project's "Changing Our Behavior Reduces Accidents" (COBRA) Program.

  To improve the Quality Assurance Program, during the month of October 2011 representatives from UCOR Quality Assurance conducted benchmark studies at both Washington River Protection Solutions Project and River Corridor Closure Project. UCOR QA benchmarked issues management systems and assessment programs.

- Reporting of individual errors is encouraged and valued. A variety of methods are available for personnel to raise safety issues, without fear of retribution.

  - Discussion with Supervisor or Manager
  - Employee Concerns Program (BJC-GM-2008)
  - I Care/We Care Safety Concerns Program (BJC-GM-009)
  - Issues Management (BJC-PQ-1210)
  - Reporting Conditions Adverse to Quality (PROC-PQ-1481)
  - Safety Observation Cards

- UCOR and subcontractor employees are the primary resource for recognizing and reporting conditions that might adversely affect quality or safe operations. All personnel have the right—and responsibility—to openly and freely express concerns, to ask questions, and to exercise suspend/stop work authority without fear of reprisal for raising concerns. To achieve a safety conscious work environment:

  - All personnel are informed that they must take responsibility for reporting concerns.

  - UCOR encourages them to discuss issues with their supervisor/manager

  - If issues or problems cannot be resolved between the Concerned Individual (CI) and supervisor/manager, or if the CI prefers to address concerns through alternative avenues or requests anonymity, contact information for alternative resources is readily available.

- UCOR is committed to providing various avenues for employees to communicate issues and concerns by routinely including contact and process information via the following:

  - On the UCOR Intranet home page
  - In company newsletters
  - In email announcements
  - Strategically located closed-circuit television monitors
  - Through required reading, web-based training, and targeted classroom training.

- Incident reviews are conducted promptly after an incident to identify improvement opportunities and ensure data quality. Team members convene to swiftly perform causal analysis, identify error precursors and latent organizational weaknesses, and develop lessons learned to facilitate organizational learning. Vigorous corrective and improvement action programs are in place and effective. Managers are actively involved to balance priorities to achieve timely resolutions.

    - Occurrence Notification and Reporting (BJC-PQ-1220)
    - PROC-PQ-1481, Reporting Conditions Adverse to Quality
    - Event Investigation and Critique Process (BJC-GM-1460)
    - Causal Analysis (BJC-PQ-1230)
    - Issues Management Process (BJC-PQ-1210)
    - Operating Experience/Lessons Learned Program (BJC-PQ-1240)

- Line managers are actively involved in all phases of work planning and control and performance monitoring including hazard identification and mitigation, problem analysis and resolution per PROC-FS-1001, *Integrated Work Control Program.*

  UCOR will be implementing its new work planning and control process which is based on the (URS) Work Planning and Control Program Standard developed in coordination with DOE and the Defense Nuclear Facilities Safety Board. The Standard establishes requirements for effective implementation of ISM core functions and guiding principles, and QA criteria into the company's activity level Work Planning and Control Program (IWCP). Implementation of the UCOR procedure, Title 10 CFR Part 851, and the UCOR Worker Safety and Health Program (BJC/OR-1745) will be integrated to ensure work planning and execution programs are robust.

- UCOR is committed to creating and maintaining an environment of open communication where employees feel free to raise issues and concerns without fear of reprisal. This is reinforced through

    - New Employee Orientation (NEO) training
    - Recurring communiqués
    - Formal refresher training

- The Employee Concerns Program (ECP) procedure, annual email announcement, ECP poster, and NEO training encourage personnel to raise issues and concerns and include hotline numbers for the ECP and Ethics organizations.

- Personnel are encouraged but not required to report concerns internally. Routes for communication include:

    - I Care/We Care Procedure (BJC-GM-2009)
    - The ECP procedure (BJC-GM-2008)
    - UCOR Dissenting Opinions Process policy (BJC-GM-542)
    - UCOR Intranet home page contain information for raising concerns externally through the DOE's ECP and Differing Professional Opinions programs, the DOE's ARRA Whistleblower Programs, and the DOE Inspector General's office.

- Additional initiatives that include periods of open discussion include:

    - Monthly department safety meetings
    - Labor-management safety meetings
    - President's Accident Prevention Council meetings

- UCOR's ECP is the first DOE contractor to pilot and use an encrypted, secure "cloud" tracking database promoted by DOE HQ ECP Manager as the preferred ECP tracking system for use by DOE field offices and contractors.

- Quarterly and annual ECP reports to UCOR management and the DOE evaluate categories of concerns, cycle time for resolving concerns, and trends.

- As part of the ECP investigation process, lines of inquiry are included as a means to pulse the organization's safety culture and assess employees' willingness to raise safety and other work-related concerns.

- Appropriate and prohibited employee conduct is reviewed as part of the NEO materials, which includes:

    - Maintaining a work environment free from unlawful discrimination and harassment
    - Avoiding any actions that could be perceived to be retaliation for reporting safety issues or employee concerns
    - Avoiding any actions that create even the appearance of impropriety or unethical conduct, and
    - Conducting business affairs in compliance with applicable laws
    - Zero tolerance against bullying, intimidation, fighting, violence, "initiations/hazing," ostracizing, or any form of harassment that might create a hostile work environment.

- Additionally, UCOR policies and procedures further demonstrate its commitment to maintaining a work environment free from all types of unlawful harassment, intimidation, retaliation, or discrimination (HIRD).

    - The *Employee Concerns Program* procedure BJC-GM-2008
    - Human Resources *Anti-Harassment* Policy 304
    - *Dissenting Opinion Process* directive BJC-GM-542

- Between June 2010 and September 2011, 261 managers and supervisors completed HIRD training titled *Conduct and Anti-Harassment*. In June 2010, 61 personnel completed the same HIRD training designed for non-supervisory employees. UCOR will also be conducting additional HIRD training in the near future.

- Significant improvements were made to BJC-PQ-1445, Suspect Counterfeit Items (SCI). Training Module 31141 was developed and added to the Training Position Descriptions of personnel with SCI roles and responsibilities. An effectiveness review of procedural implementation has been scheduled. These activities demonstrate timely responsiveness to issue identification and continuous improvement.

- In September 2011, UCOR Senior Management reviewed an in-depth evaluation of the electrical safety program. The assessment report is the basis for changes to the program and associated procedures. Revisions will more effectively implement corrective actions that resulted from an on-site electrical arc incident in 2009. Comprehensive training will be held for engineers, workers, and oversight personnel.

- UCOR uses a variety of methods to communicate ISMS and QA concepts and information including:

  - "Toolbox Tuesday" bulletins
  - ESH newsletter for company-wide distribution
  - Messages on the UCOR Intranet home page
  - Email announcements
  - Strategically located closed-circuit television monitors
  - Through required reading, web-based training, and targeted classroom training.

- UCOR has a mature operating experience / lessons learned program that is used throughout all levels of the organization to learn from mistakes and make improvements. Subject matter experts utilize lessons learned to identify program weaknesses or potential program enhancements. In addition, lessons learned are used in the work control process to enhance performance in the field. During FY 2011, UCOR (and its predecessor) developed 22 LLs for submission to the DOE system. In addition, 275 LLs were reviewed by UCOR SMEs for potential program enhancements.

- UCOR also utilizes causal analysis as part of the issues management process to ensure that actions identified will prevent recurrence of identified issues/events. The causal analysis uses a graded approach and includes identification of a direct cause for all identified issues while a formal root cause analysis is performed for all significant issues/events. Follow-up actions are identified to correct identified deficiencies and prevent recurrence.

Criterion 5: Safety Performance Objectives, Measures, and Commitments (POMCs)

UCOR provided a suite of ISMS POMCs that include performance analyses for safety and industrial hygiene, radiation control, EC&P, nuclear and criticality safety, quality, and security. The monthly report provides a performance dashboard with supporting data and trending information. The POMCs include both leading (e.g., Corrective Action Completion and Percent of Findings Internally Identified) and lagging indicators (e.g., TRC and DART Rates).

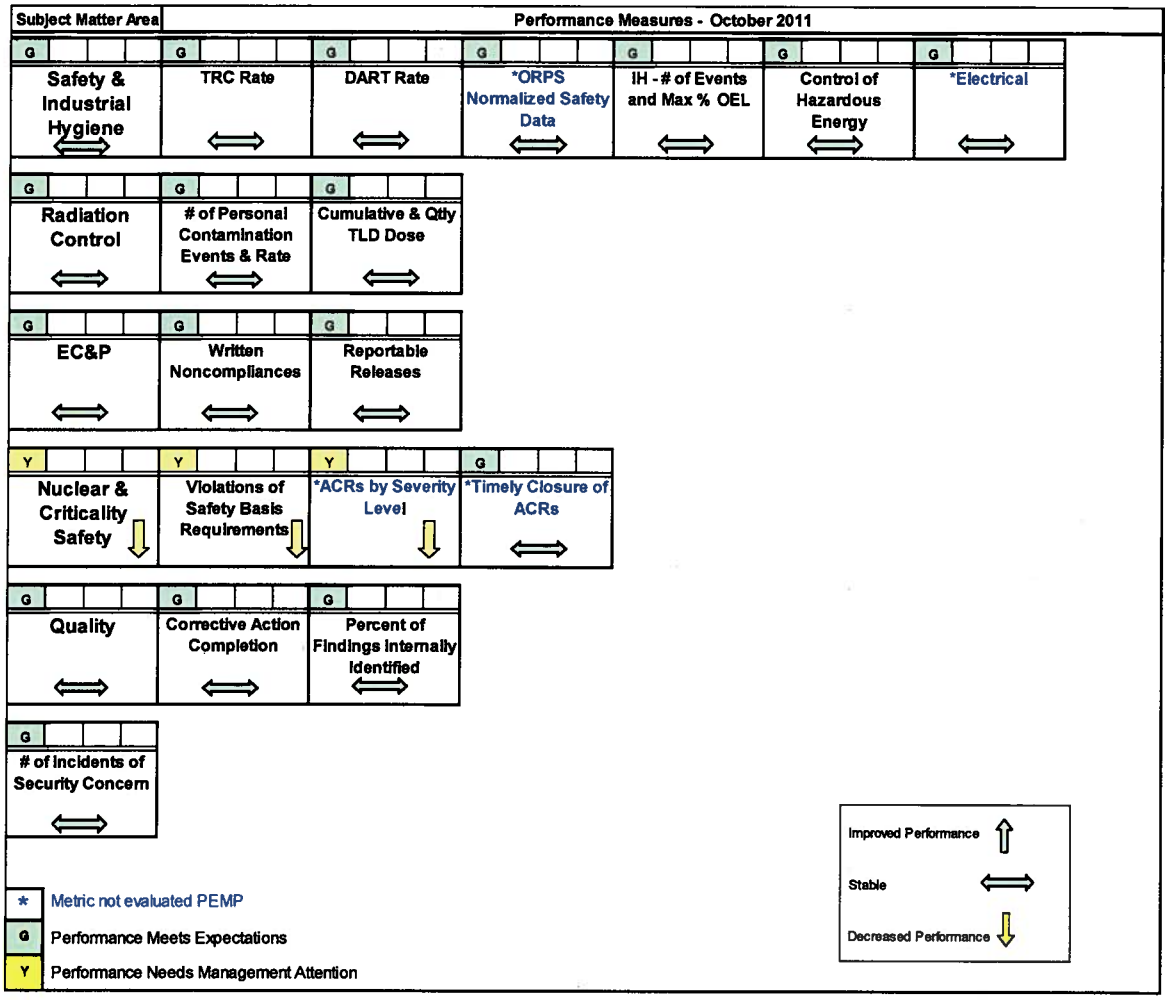
As seen in the UCOR October POMCs report, since August 1, 2011, UCOR achieved zero injuries, zero illnesses, and zero environmental notices of violations and reportable releases to the environment. Through October 2011, the total recordable case (TRC) injury and illnesses incidence rate was zero, as was the days away, restricted, or transferred (DART) rate. This performance is well below the goals set by DOE/ORO (<1.3 for TRC and < 0.33 for DART rate).

No events of individual exposure to hazardous or toxic materials occurred during operations since August 1, 2011. No exposures were experienced, above the permissible exposure limit or threshold limit value, and were experienced by UCOR employees for which industrial hygiene air sampling was performed. No events occurred where a failure to follow prescribed hazardous energy control processes resulted in a burn shock or other injury. There were no reoccurrences of electrical safety incidents or events.

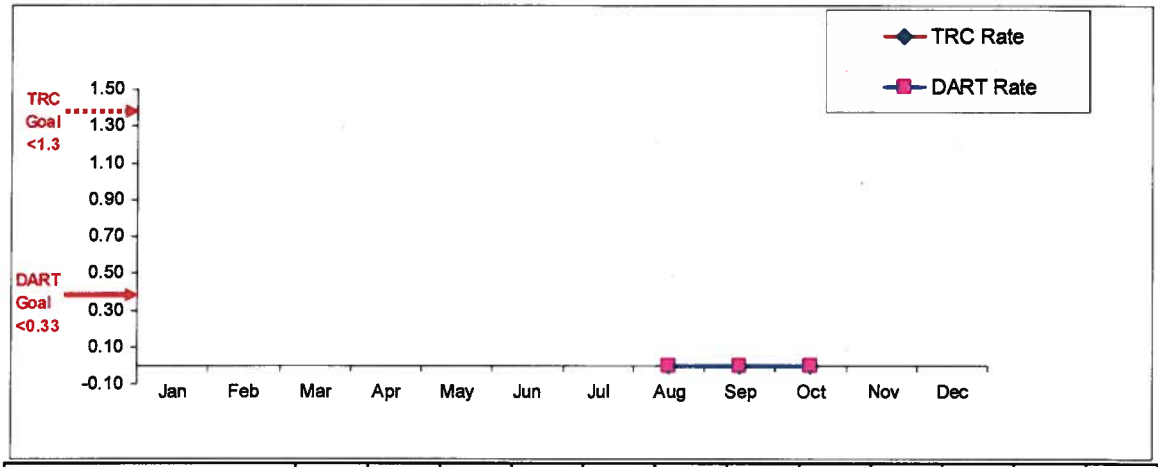
In addition, the October 2011 ISMS POMCs report shows stable performance in key areas as evidenced by the following:

- There were no reportable environmental releases or regulatory written non-compliances in CY 2011.
- There were no personal radiological contamination events for the month of October.

UCOR POMCs Performance Dashboard



CY 2011 TRC/DART Case Rate for UCOR Direct Hires and Subcontractors



Data	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
TRC Rate								0	0	0		
Performance								Green	Green	Green		
DART Rate								0	0	0		
Performance								Green	Green	Green		
# LWCA/LWCR Injuries								0	0	0		
Performance								Green	Green	Green		

Definitions

TRC Rate- OSHA defined number of recordable cases during the reporting month. Case rate normalized over 200,000 hours.

DART Case Rate - Number of Days Away or Restricted Transfer during the reporting month. Case Rate normalized over 200,000 hours.

 # LWCA/LWCR Injuries - Total number of Lost Workday Cases Away or Restricted Transfer

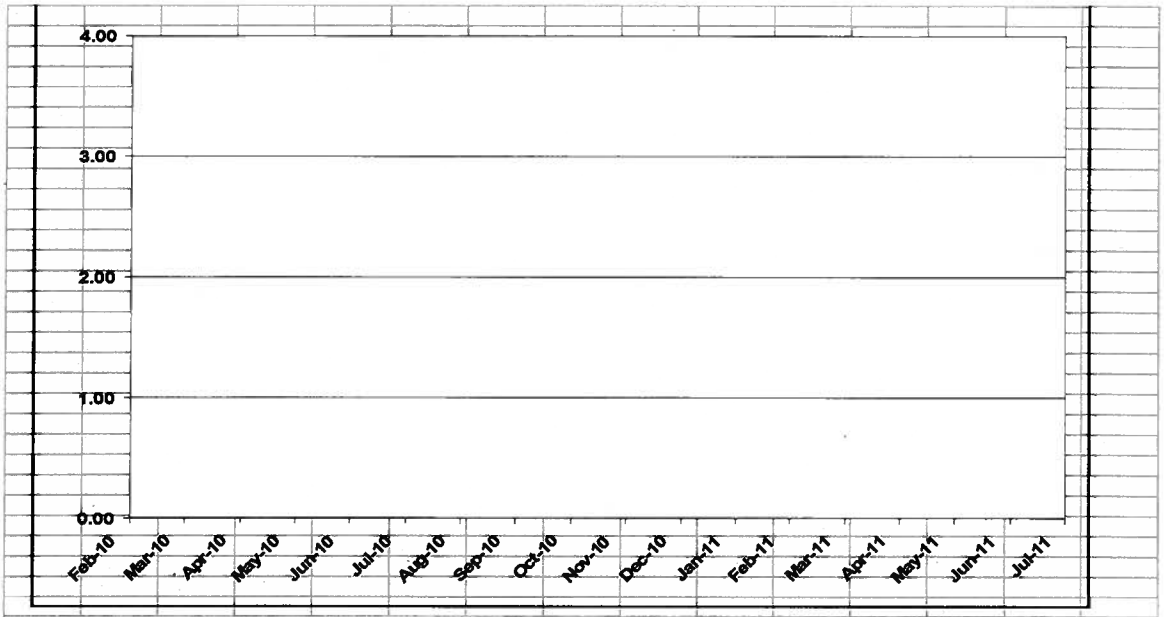
Analysis: There were no recordable or LWCA/LWCR cases for the month of October.

Action: NA

Key	Performance
Green: Meets Expectations	⟺
Yellow: Needs Management Attention	

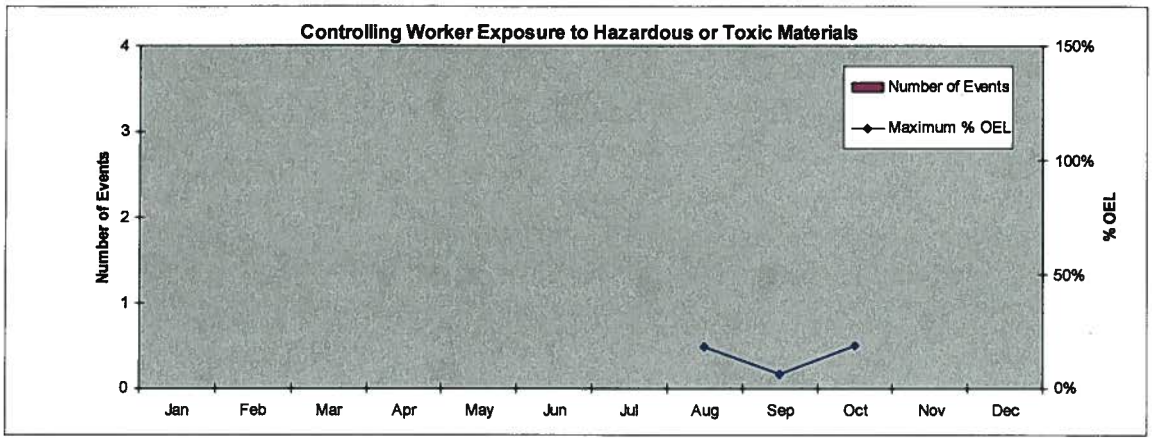
Owner: Angie McGill
Performance Indicator Type: Lagging
Data Source: Safety and Health

ORPS Normalized Safety Data



NOTE: Data trending and graphical analysis will begin at six months. These calculations will be performed using the DOE ORPS Reporting Normalized Scoring Method.

CY 2011 Industrial Hygiene



Data	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Maximum % OEL								18%	6%	19%		
Agent for OEL								Arsenic	Respirable Dust	Arsenic		
Performance								Green	Green	Green		
Number of Events								0	0	0		
Performance								Green	Green	Green		

Definitions:
1) % of Occupational Exposure Limit (OEL) obtained from evaluation of approved industrial hygiene sampling surveys. The maximum %OEL takes into account the applicable protection factor of PPE used.

% OEL is calculated by taking each time-weighted average, then dividing by the respective OEL, then multiplying by 100, to provide the percentage of the OEL.

2) Number of events of individual exposure to hazardous or toxic materials without appropriate personal protective equipment or procedures in place

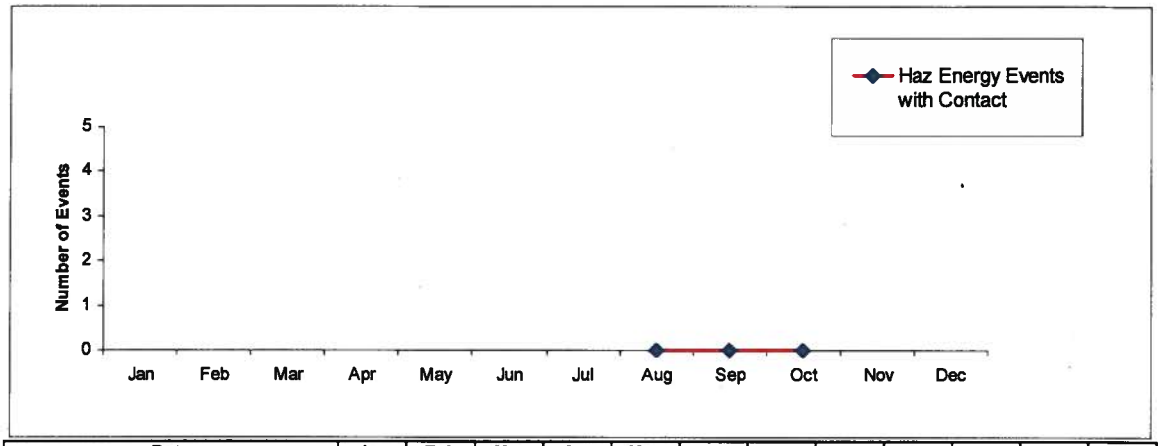
Key	Performance
Green: Meets Expectations	⟺
Yellow: Needs Management Attention	

Analysis: In October, the %OEL was 19% for inorganic arsenic. There were no events of individual exposure to hazardous or toxic materials without benefit of protection.

Action: NA

Owner: Angie McGill
Performance Indicator Type: Lagging
Data Source: Safety and Health

CY 2011 Control of Hazardous Energy



Data	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Haz Energy Events with Contact								0	0	0		
Performance								Green	Green	Green		

Definition

Hazardous Energy Events with Contact - Failure to follow a prescribed hazardous energy control process (e.g., lockout/tagout) or disturbance of a previously unknown or mislocated hazardous energy source (e.g, live electrical power circuit, steam line, pressurized gas) resulting in a person contacting (burn, shock, etc.) hazardous energy.

(DOE M 231.1-2; Reporting Reporting Criteria: Group 2; Subgroup C-1; Criterion 2)

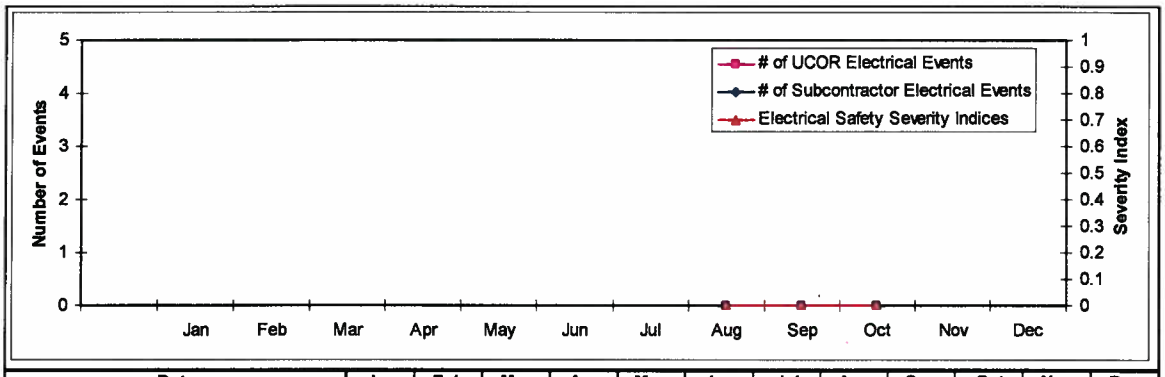
Analysis: There were no Occurrence Reports related to this metric during October 2011.

Action: NA

Key	Performance
Green: Meets Expectations = 0	⟺
Yellow: Needs Management Attention = 1	

Owner: Angie McGill
Perfromance IndicatorType: Lagging
Data Source: Safety and Health

CY 2011 Electrical Events



Data	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
# of UCOR Electrical Events								0	0	0		
# of Subcontractor Electrical Events								0	0	0		
Electrical Safety Severity Indices								N/A	N/A	N/A		
Performance								Green	Green	Green		

Definitions

# of Electrical Events: Number of electrical safety related events by identifying the number of ORPS reports made during each month that have Electrical Safety Related Cause Codes.

Electrical Safety Severity Indices: Measure of the severity of an electrical energy event based on an evaluation of a series of electrical factors. Primary factors include: electrical hazard, environment, shock proximity, arc flash proximity, thermal proximity, and any resulting injury to affected personnel.

Analysis:

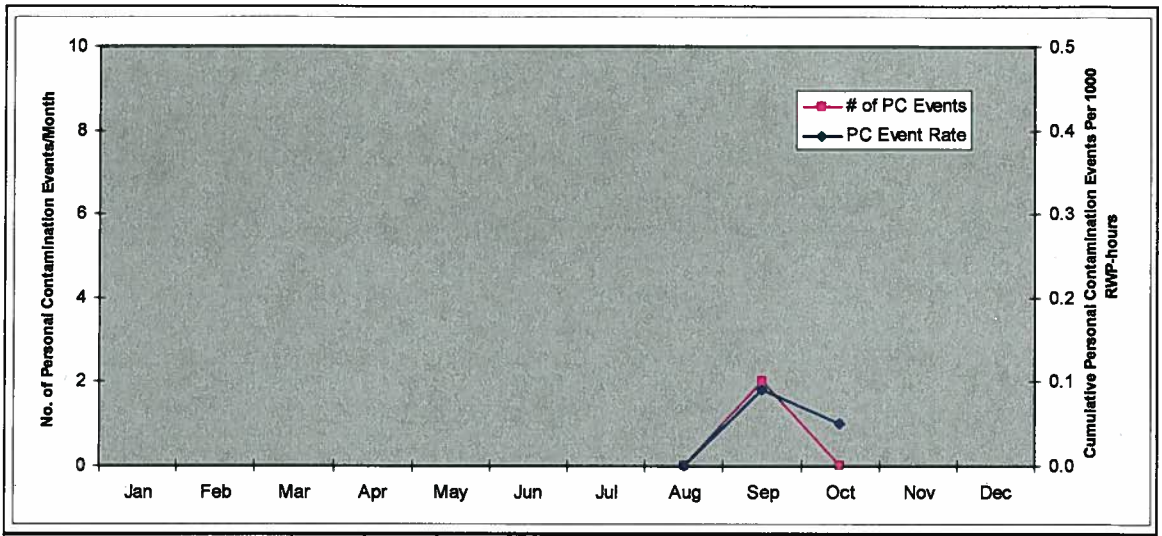
There were no electrical events in October that reached the reporting threshold.

Action: NA

Key	Performance
Green: Meets Expectations = 0	⟺
Yellow: Needs Management Attention = 1	

Owner: Bobby Gray
Performance Indicator Type: Lagging
Data Source: Electrical

CY 2011 Personal Radiological Contamination Events



Data	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
# of PC Events								0	2	0		
Performance								Green	Yellow	Green		
PC Event Rate								0	0.09	0.05		
Performance								Green	Yellow	Green		

Definitions

Personal Contamination Events are recorded when an individual is identified with radioactive material (non-radon) on skin or personal clothing.

Personal Contamination Event Rate is expressed as a rate per 1,000 RWP hours worked.

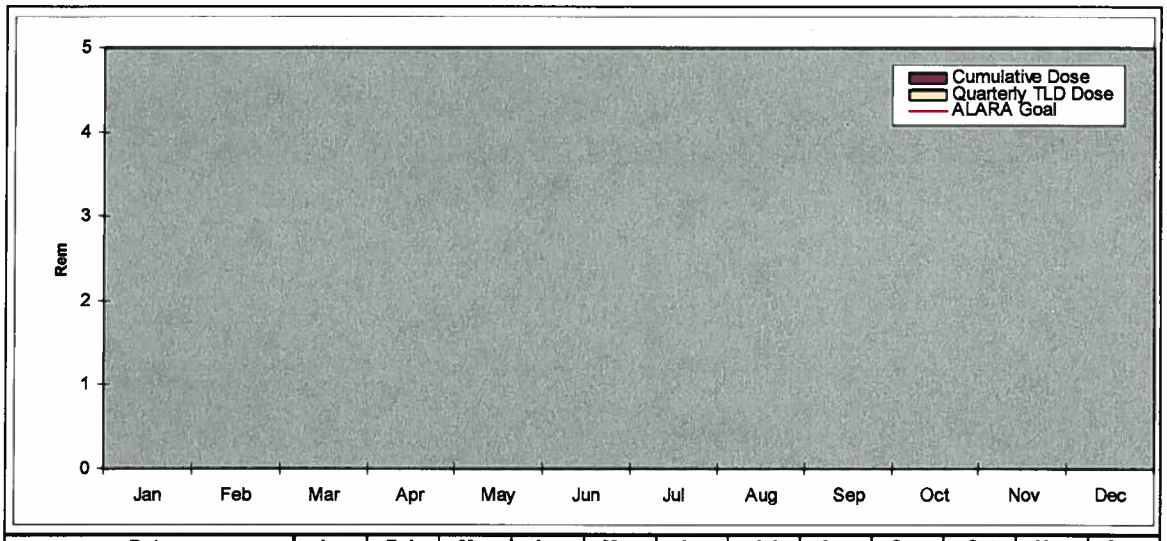
Analysis: There were no personal contamination events on UCOR Projects during the month of October.

Action: N/A

Key	# of PCEs Performance	PCE Rate Performance
Green	⟺	⟺
Yellow = 2		

Owner: Rodney Bauman
Performance Indicator Type: Lagging
Data Source: Radiological Protection

CY 2011 Cumulative Dose vs. ALARA Goal



Data	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Cumulative Dose												
Performance												
Quarterly TLD Dose												
Performance												
ALARA Goal												

Definition

Cumulative Dose is the sum of the TLD dose determined on a quartely basis.

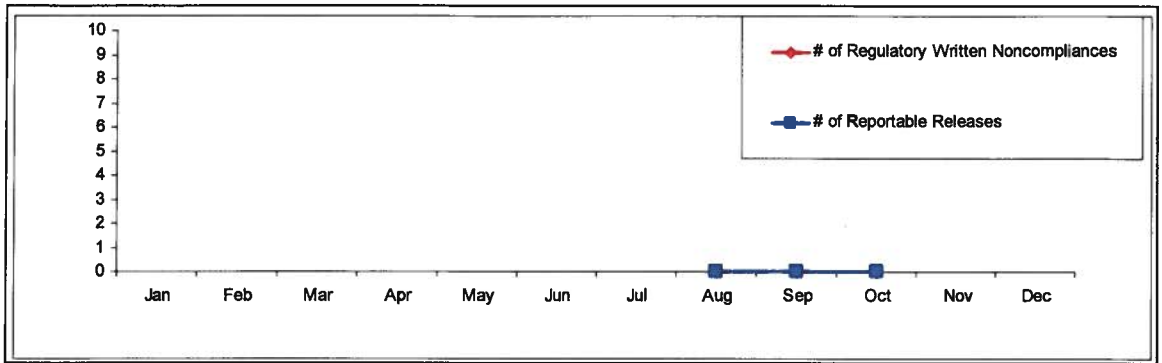
Analysis:
TLD data unavailable due to analysis turn around time. 3rd Quarter (June, July, August) TLDs are collected in October; results will be available 1st Quarter 2012.

Action: NA

Key	Cumulative Dose	QtrlyTLD Dose
Green	⟺	⟺
Yellow		

Owner: Rodney Bauman
Performance IndicatorType: Lagging
Data Source: Radiological Protection

CY 2011 Environmental Compliance and Protection



Data	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
# of Regulatory Written Noncompliances								0	0	0		
Performance								Green	Green	Green		
# of Reportable Releases								0	0	0		
Performance								Green	Green	Green		

Definitions

(1) Regulatory Written Noncompliances: Written notices from outside regulatory agencies indicating a contractor facility or activity is considered to be in noncompliance with a schedule or requirement (as defined in DOE M 231.1-2, Section 6.3, Group 9). This metric includes any written notification from an outside regulatory agency that a site/facility is considered to be in noncompliance with a schedule or requirement (e.g., Notice of Violation, Notice of Intent to Sue, Notice of Noncompliance, Warning Letter, Finding of Violation, Finding of Alleged Violation, Administrative Order or a similar type of notification or enforcement action). It also includes any environmental enforcement action involving 10 or more cited violations, and/or an assessed fine of $10,000 or more. Note: Fines and penalties that are issued subsequent to initial notices of noncompliance or violation will not be counted as an additional entry on this metric if no new violation or noncompliance are addressed within the assessment of fines or penalties.

(2) Reportable Releases: Any release or exceedance of radionuclides, hazardous substances, or regulated waste streams that are reportable to federal, state, or local agencies/authorities (e.g., those that exceed reportable quantities) in other than routine required reports.

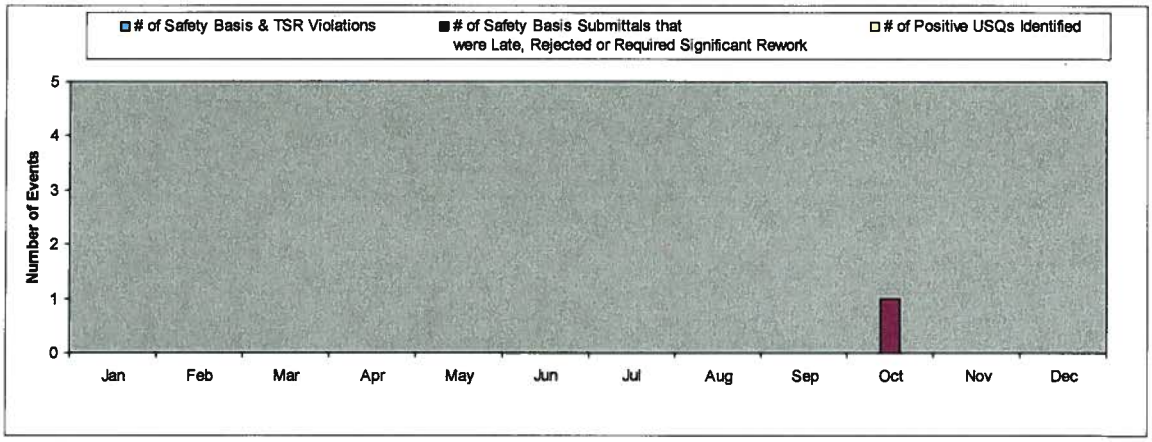
Analysis: During October 2011, UCOR and its supporting subcontractors experienced no (0) written Environmental Noncompliance notices from outside regulatory agencies and no (0) reportable releases for the Contractor Projects. Compared to previous years during which more noncompliance notices were logged, the most recent trend represents a stable but improving level of performance through the most recent two calendar years. During CY 2010, two reportable releases where logged. No (0) reportable releases logged over the last ten months of CY 2011 represents an improving level of performance.

Action: No actions were required during the October 2011 reporting period.

Key	Performance
Green: Meets Expectations = 0	⟺
Yellow: Needs Management Attention = 1	

Owner: Rodney Kingrea
Performance Indicator Type: Lagging
Data Source: Environmental Compliance & Protection

CY 2011 Nuclear Facility Safety



Data	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
# of Safety Basis & TSR Violations								0	0	0		
Performance								Green	Green	Green		
# of Safety Basis Submittals that were Late, Rejected or Required Significant Rework								0	0	1		
Performance								Green	Green	Yellow		
# of Positive USQs Identified								0	0	0		
Performance								Green	Green	Green		

Definition:
1) Safety Basis and TSR Violations per month

2) Safety basis submittals are technically sound and timely (i.e., are not rejected or require rework and are on schedule)

3) Positive USQs identified per month

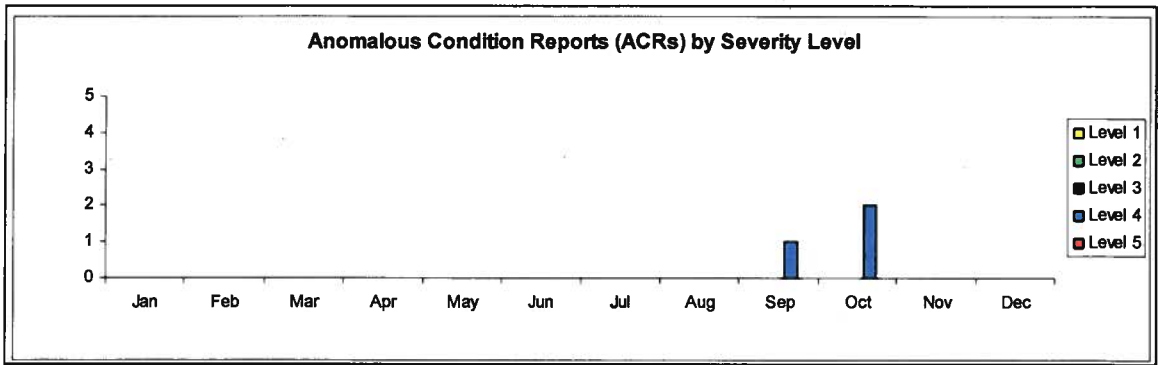
Analysis: DOE rejected K25/27 DSA and TSR Rev. 17A citing flawed controls for the installed NaF Traps.

Action: K25/27 project has the lead to resolve the DOE comments by November 30, 2011.

Key	Performance
Green: Meets Expectations = 0	⇩
Yellow: Needs Management Attention = 2	

Owner: Mike Hitchler
Performance Indicator Type: Lagging
Data Source: Nuclear Facility Safety

CY 2011 Nuclear Criticality Safety



Data	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Level 1								0	0	0		
Performance								Green	Green	Green		
Level 2								0	0	0		
Performance								Green	Green	Green		
Level 3								0	0	0		
Performance								Green	Green	Green		
Level 4								0	1	2		
Performance								Green	Green	Yellow		
Level 5								0	0	0		
Performance								Green	Green	Green		

Definitions

Number of new Nuclear Criticality Safety Anomalous Condition Reports.
Level 1—An unplanned nuclear criticality resulting in actual or potential facility damage.
Level 2—Violation of the double contingency criticality specifications, such that no valid controls are available to prevent a criticality accident.
Level 3—Violation of an NCS requirement or infraction of procedures, such that only one credible, unlikely, independent, and concurrent change in process conditions could result in a criticality.
Level 4—Violation of an NCS requirement or infraction of procedures that does not violate the double contingency principle.
Level 5—Administrative errors, changes in facility conditions, such as rainwater in-leakage, or other abnormal conditions that do not impact the double contingency principle, but warrant review by NCS.

Key	Performance
	⇩
Green: Meets Expectations = 0	
Yellow: Needs Management Attention = 2	

Analysis: ACR-ET-11-0015 was issued because NCSE-ET-K25-1528 was revised to allow packaging of pipe with lower than 10 wt% fissile material. Lower enriched material allows for more total U mass, and thus more overall water content in models, which resulted in higher calculated keff. This new information not incorporated into NCSE-ET-K25-1618, which credited boxes with lower calculated keff. The Severity Level is 4. The ACR originated on the K-25 project.

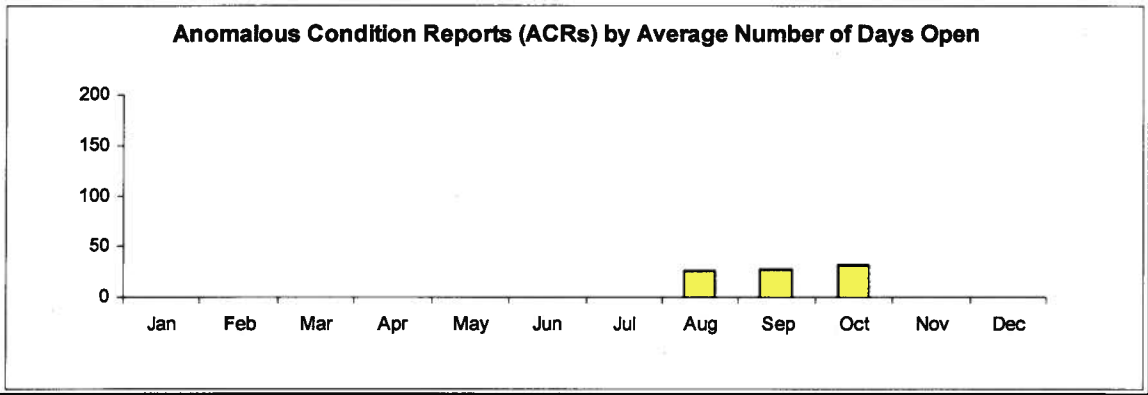
ACR-ET-11-0016 was issued because crews were cutting SVL/BOP lines from compressors in the field and loading them into a box. The work package requires an independent verification of the mass totals of the items to be placed into the box prior to loading. The verification process was not completed in the order specified in the work package. The Severity Level is 4. The ACR originated on the K-25 project.

Action: ACR-ET-11-0015 remains open. Closure actions are to place a hold on the work package that implements NCSE-ET-K25-1528 (SWP-07-3018 R4 C the lower enrichments in NCSE-ET-K25-1528 .

ACR-ET-11-0016 was closed the same day it opened. The box packaged contains less than the 252 grams U-235 allowed under NCSE-ET-K25/ K27-1635. The crew was re-trained to the work package by the project manager. No further actions were necessary to re-establish compliance in the field.

Owner: Mike Hitchler
Performance Indicator Type: Lagging
Data Source: Nuclear Facility Safety

CY 2011 Nuclear Criticality Safety



Data	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Days Open								26	28	31		
Performance								Green	Green	Green		

Definition

The average number of days that ACRs are open. This will be a 12 month cumulative running average.

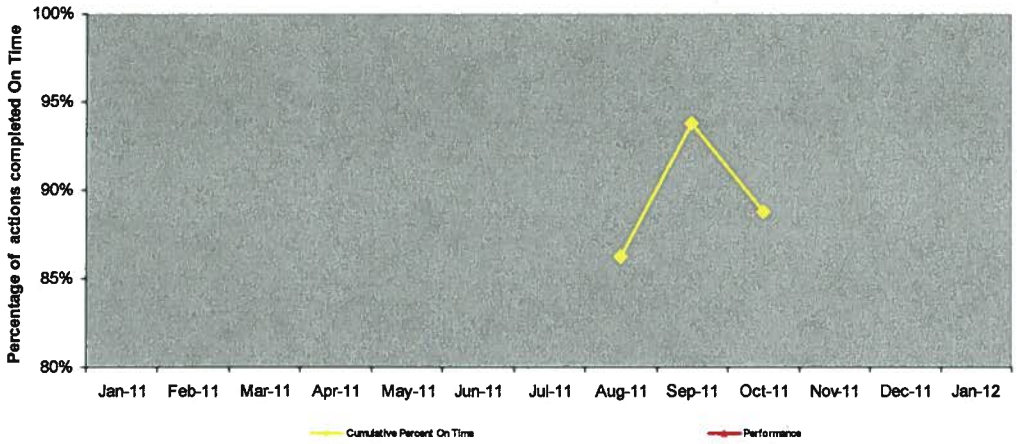
Analysis: Two ACRs were generated in October and one of them was closed the same day it opened. Only one ACR remains open at the end of the month. It is a Severity Level 4 for the K-25 project.

Action: NA

Key	Performance
Green: Meets Expectations	⟺
Yellow: Needs Management Attention	
>45 Days	

Owner: Mike Hitchler
Performance Indicator Type: Lagging
Data Source: Nuclear Criticality Safety

Corrective Action Completion



	Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jun-11	Jul-11	Aug-11	Sep-11	Oct-11	Nov-11	Dec-11	Jan-12
Cumulative Percent On Time								86%	94%	89%			
Performance								Green	Green	Green			
Total # Actions Completed								29	32	20			
Total # Completed On Time								25	30	17			

Definition

This metric measures the cumulative percentage of corrective actions completed on time.

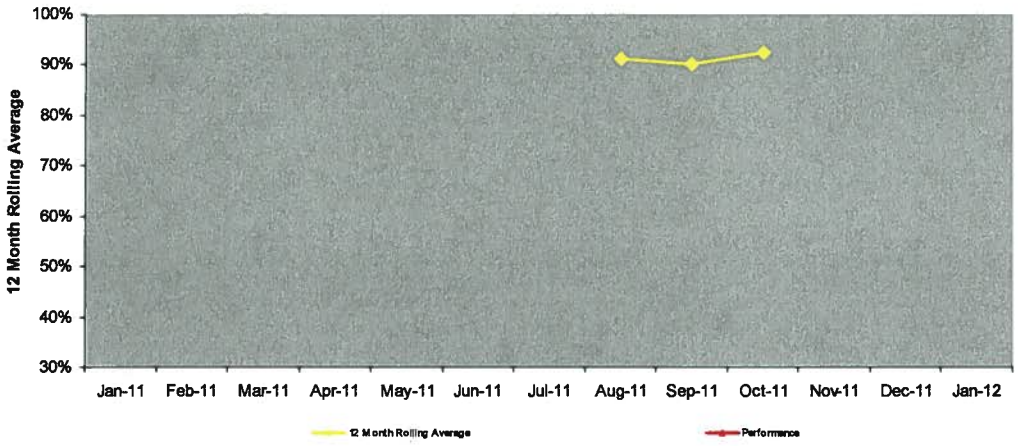
Analysis: Percentage of actions completed is within goal.

Action: NA

Key	Performance
Green: Meets Expectations	⟺
Yellow: Needs Management Attention	
<85%	

Owner: Susan Kimmerly
Performance Indicator Type: Lagging
Data Source: QA

Percent of Findings Internally Identified



	Jan-11	Feb-11	Mar-11	Apr-11	May-11	Jun-11	Jul-11	Aug-11	Sep-11	Oct-11	Nov-11	Dec-11	Jan-12
12 Month Rolling Average								91%	90%	92%			
Performance								Green	Green	Green			
Total # Findings Identified								53	39	38			
# Identified Internally								48	35	37			

Definition

Definition: This metric measures the percentage of issues identified internally versus total issues. Due to monthly fluctuations, this data is presented as a 12 month rolling average.

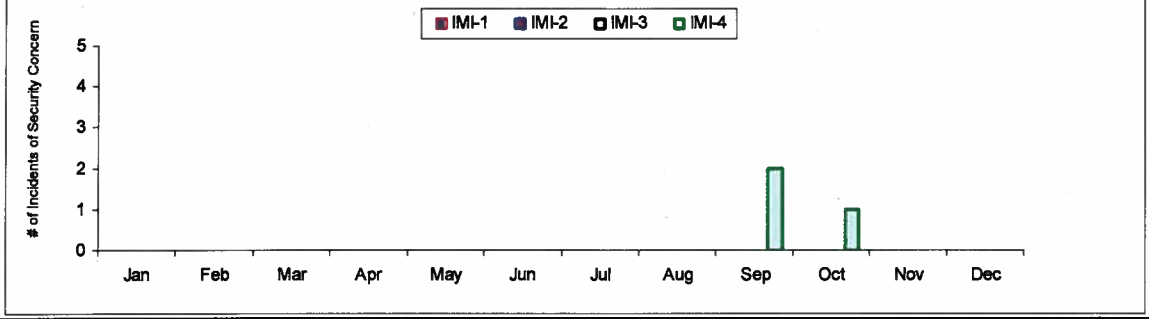
Analysis: The percentage of internally identified Findings has been above 90% for the past three months.

Action: NA

Key	Performance
Green: Meets Expectations	⟺
Yellow: Needs Management Attention	
<85%	

Owner: Susan Kimmerly
Performance Indicator Type: Lagging
Data Source: QA

CY 2011 Security



Data	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
IMI-1								0	0	0		
Performance								Green	Green	Green		
IMI-2								0	0	0		
Performance								Green	Green	Green		
IMI-3								0	0	0		
Performance								Green	Green	Green		
IMI-4								0	2	1		
Performance								Green	Green	Green		

Definition

Incidents of security concern are events that, at the time of occurrence, have yet to be determined to be a violation of law, but are of such concern to the Safeguards and Security Program as to warrant immediate review, inquiry, and subsequent assessment and reporting. Criteria for this metric are established by DOE Order 470.1, Safeguards and Security Program, and DOE Notice 471.3, Reporting Incidents of Security Concern.

The four levels of Incidents of Security Concern designated by Impact Measurement Index (IMI) levels are the following:

IMI-1 – Incidents that pose an immediate danger or short-term threat to national security interests and/or critical DOE assets; potentially create a serious security situation; or create high visibility media interest.

IMI-2 – Incidents that pose a near- or long-term threat to national security interests and/or critical DOE assets or that potentially create a crisis or dangerous situation.

IMI-3 – Incidents that could pose long-term threats to DOE security interests or that potentially degrade the overall effectiveness of the Department's protection program.

IMI-4 – Incidents that, in combination and over time, could pose a long-term threat to DOE security interests by adversely impacting the level of security awareness and program responsiveness necessary to protect the Department's security interests.

Key	Performance
Green: Meets Expectations	⟺
Yellow: Needs Management Attention >2	

Analysis: The October IMI-4 was assigned due to Official Use Only being sent unencrypted outside the UCOR firewall.

Action: Individual has been counseled for the correct UCI requirements and issued a formal warning.

Owner: Cheryl Cabbil
Performance Indicator Type: Lagging
Data Source: Transportation

4.0 UCOR 2011 ISMS & QA Annual Review Conclusions

In accordance with DOE directives, UCOR reviewed the implementation of the ISMS and QA programs during FY 2011 for the purpose of declaring the effectiveness of each. These declarations are based on a broad range of feedback information, the most significant of which is the ISMS Phase I and II Verification Review conducted by DOE in December 2010. These declarations are provided relative to criteria specified by DOE in the *Fiscal Year 2011 Annual Integrated Safety Management System and Quality Assurance Criteria and Declaration Guidance.*

Based on an evaluation of responses to the DOE criteria, UCOR declares the ISMS and QA program to be effective. The UCOR ISMS continues to be a well-designed, generally well executed and effective management system for safely accomplishing work at ETTP while protecting site workers, the public, and the environment. These declarations are made with the understanding that some areas have been identified for improvement (i.e., work planning and control) and are undergoing process changes which will provide significant improvements in implementation.

As required, UCOR has performed the review and update of the ISMS Program Description and is submitting the document to DOE-ORO for approval.

The status of FY 2012 Performance Objectives, Measures, and Commitments (POMCs) through October 2011 indicates that performance to ES&H metric goals has been outstanding and that programmatic goals have been met. In addition, POMCs for FY 2012 have been established and are presented as required.