



**UCOR**  
URS | CH2M  
Oak Ridge LLC

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Extent of Condition Review and Implementation Plan

for Required Actions Noted in

*U. S. Department of Energy's (DOE's) Implementation Plan (IP) for Defense Nuclear  
Facilities Safety Board (Board) Recommendation 2011-1, Safety Culture at the Waste  
Treatment and Immobilization Plant*

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## **1.0 Introduction**

On December 27, 2011, The Secretary of Energy issued the *U. S. Department of Energy's (DOE's) Implementation Plan (IP) for Defense Nuclear Facilities Safety Board (Board) Recommendation 2011-1, Safety Culture at the Waste Treatment and Immobilization Plant.*

Upon receipt of the IP, UCOR conducted an extent of condition review of its policies, processes, and procedures to ensure that they facilitate a mature nuclear safety culture where employees are free to raise issues without concern of reprisal and that the management team is responsive when issues are raised (Attachment 1).

## **2.0 URS | CH2M Oak Ridge LLC (UCOR) Extent of Condition Review**

The UCOR FY 2011 ISMS and Quality Assurance Effectiveness Review Declaration issued in November 2011, addressed Criterion 4 (Nuclear Safety Culture and Establishment of Safety Conscious Work Environment) as shown in Attachment 2.

Using the UCOR ISMS Program and references noted in DOE guidance documents, UCOR initiated a series of actions to assess the safety culture and implement additional nuclear safety culture improvement initiatives at ETTP.

These initiatives were evaluated against the five core functions of ISMS, the Energy Facility Contractors Group (EFCOG) ISMS safety culture focus areas and associated attributes, and the tenets of DOE's Voluntary Protection Program to ensure that the UCOR programs and improvement initiatives were in alignment.

In support of DOE's IP for the Board's Recommendation 2011-1, UCOR further refined its plans to ensure that current and future programs and policies would serve to facilitate the requirements and corrective actions discussed in the IP. These nuclear safety culture improvement initiatives correlate well with the requirements noted in Section 5 of DOE's IP.

As a first step to assessing the existing nuclear safety culture at ETTP, UCOR conducted a survey in December, 2011. The 661 individuals who participated represent approximately 50% of the work force. The survey demonstrated that the safety culture is relatively mature, safety is a key component of the way we think and perform work, supervisors are actively engaged in ensuring that the work culture is safe, employees feel free to communicate safety-related issues openly and honestly, and employees are actively engaged in molding their safety culture. In addition, focus areas for 2012 were generated from the survey results and written communication provided by the survey participants.

Following is a list of CY 2012 focus areas which include improvement initiatives intended for management, supervision, and workers. Items in bold have been implemented; all others are scheduled for implementation in CY 2012.

## I. Leadership

FOCUS AREA: Increasing management presence in the workplace

ACTIONS:

- a) Expectation will be set during nuclear safety culture training
- b) Increased focus on management walkdowns

## II. Employee/Worker Engagement

FOCUS AREA: Increase employee involvement by increasing worker involvement in hazard analysis for the tasks that they are to perform

ACTIONS:

- a) Expectation to be set during nuclear safety culture training
- b) Implementation of safety observation program

FOCUS AREA: Increase peer-to-peer and worker/supervisor communication

ACTIONS:

- a) Expectations to be set during nuclear safety culture training
- b) **Employee round tables/monthly lunch with the boss**
- c) **“Five Minutes with Leo” (five-minute meetings between President and Project Manager Leo Sain and individual employees)**
- d) **Implementation of Safety Conscious Work Environment policy**
- e) **Caught Working Safely Program**

## III. Organizational Learning

FOCUS AREA: Enhance event investigation and nuclear safety culture knowledge and awareness.

ACTIONS:

- a) Review and revise the event investigation reporting procedure. This procedure is being revised by the Work Control Group with review by the ISMS program manager
- b) **Safety Trained Supervisor certification initiative for front line supervision**
- c) Conduct Nuclear Safety Culture Training

# Attachment 1

ATTRIBUTES FOR CONSIDERATION	UCOR ACTIONS
1. Communication of SCWE expectations and training.	<ul style="list-style-type: none"> <li>« EM/UCOR SCWE policy statement issued January 2012</li> <li>« Maintain and promote multiple processes for raising &amp; closure of issues               <ul style="list-style-type: none"> <li>- Employee Concerns Program (PROC-CN-2008)</li> <li>- I Care/We Care Safety Concerns Program (POL-UCOR-009)</li> <li>- Issues Management (PROC-PQ-1210)</li> <li>- Reporting Conditions Adverse to Quality (PROC-PQ-1481)</li> <li>- Safety Observation Cards</li> <li>- Differing Professional Opinions Process (PROC-CT-1515)</li> <li>- UCOR Homepage externally through DOE</li> <li>- 5 Minutes with Leo</li> </ul> </li> <li>« EM/UCOR SCWE policy required reading assignment for all employees and subcontractors</li> <li>« EM/UCOR SCWE policy added to UCOR-4087, <i>Safety &amp; Health Handbook</i></li> <li>« Company communications: <i>UCOR Newslines</i>; <i>The Safety Advocate</i>; Information Monitors; Takes 5s; Safety Pauses; RTW Focuses; UCOR Announcements; VPP Communications Plan; PAPC; Subcontractor Safety Forums</li> <li>« Safety Trained Supervisors (STs)</li> <li>« Management field presence (GMOS Leading Indicator)</li> <li>« Management briefing/training &amp; company-wide training</li> </ul>
2. Contractors and federal organizations must complete SCWE self-assessments and provide reports to HQ program office.	<ul style="list-style-type: none"> <li>« DOE Action</li> <li>« UCOR Newslines</li> <li>« UCOR Safety Culture Survey</li> <li>« Future Assessments</li> </ul>
3. Power of employee perceptions.	<ul style="list-style-type: none"> <li>« Safety Culture Survey - December 2011</li> <li>Positive employee recognition ("Caught Working Safety", VPP Passport)</li> <li>« Open and timely communications</li> </ul>
4. Balanced priorities and performance measures.	<ul style="list-style-type: none"> <li>« DOE approved performance metrics</li> <li>« Meeting with DOE to develop Work Control &amp; Safety Culture Metrics</li> </ul>
5. Technical issue resolution process (ease of use and response time).	<ul style="list-style-type: none"> <li>« Reviewed and revised as necessary, PROC-CT-1515, <i>Differing Professional Opinion Process per DOE O 442.2, Differing Professional Opinions for Technical Issues Involving Environmental, Safety and Health Technical Concerns</i></li> <li>« Reviewed and revised as necessary, BJC-EH-2018, <i>Suspension of Work (Procedure)</i></li> <li>« Reviewed and revised as necessary, PROC-CN-2008, <i>Employee Concerns Program (Procedure)</i></li> </ul>
6. Delineation of federal roles, organizational responsibilities and interfaces.	<ul style="list-style-type: none"> <li>« DOE-EM</li> </ul>

## Attachment 1 (Continued)

<p>7. Each site must adopt sustainment mechanisms it considers most beneficial to continuously monitor and improve the safety culture. Sustainment tools include:</p>	
(a) ISMS Declaration	<ul style="list-style-type: none"> <li>« Evaluate safety culture</li> <li>« Management processes to identify, resolve &amp; trend issues</li> <li>« Multiple avenues for gaining employee feedback</li> <li>« Learning organization using lessons learned</li> </ul>
(b) Periodic self-assessments	<ul style="list-style-type: none"> <li>« BBS Safety Observation Program</li> <li>« Rad Walkdowns</li> <li>« ES&amp;H Walkdowns/Inspections</li> <li>« Management Walkdowns</li> </ul>
(c) HSS independent reviews	<ul style="list-style-type: none"> <li>« DOE Action</li> </ul>
(d) Reviews by outside experts	<ul style="list-style-type: none"> <li>« Independent review/assessment</li> </ul>
(e) Performance measures	<ul style="list-style-type: none"> <li>« Enhance internal data collection and trend analysis</li> <li>« Automate safety observation data collection processes</li> </ul>
(f) Continuing training	<ul style="list-style-type: none"> <li>« Required Reading Assignments</li> <li>« VPP and Management Roadshows</li> <li>« VPP Passports</li> <li>« New Employee Orientation (NEO)</li> <li>« Consolidated Annual Training (CAT)</li> </ul>
(g) Employee surveys	<ul style="list-style-type: none"> <li>« Paper and electronic surveys</li> <li>« Employee interviews</li> </ul>
(h) Contract incentives	<ul style="list-style-type: none"> <li>« DOE Action</li> </ul>

## Attachment 2

The UCOR FY 2011 ISMS and Quality Assurance Effectiveness Review Declaration  
Issued November 2011

### **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.*