

		Number: EA OLOI 30-03 Revision: (Rev. 0) Effective Date: April 13, 2018
Targeted Assessment of Safety Culture Sustainment Processes Objectives and Lines of Inquiry		
Authorization and Approval	 <hr/> Director, Office of Environment, Safety and Health Assessments Date: 04/13/18	 <hr/> Lead, Office of Environment, Safety and Health Assessments Date: 04/13/18

1.0 PURPOSE

The mission of the U.S. Department of Energy (DOE) Office of Environment, Safety and Health Assessments (EA-30), within the independent Office of Enterprise Assessments (EA), is to assess the effectiveness of safety and emergency management systems and practices used by line and contractor organizations and to provide clear, concise, rigorous, and independent evaluation reports of performance in protecting workers, the public, and the environment from the hazards associated with DOE activities. In addition, EA conducts targeted assessments and studies where warranted based on circumstances or performance, or as deemed important to mission sustainment.

The purpose of this targeted assessment is to examine progress in monitoring and improving safety culture. Evaluating maturity in safety culture is consistent with the Department's expectations for continuous improvement, oversight's role, and DOE's understanding that expertise in managing culturally develops over time. (Note that the phrase 'managing culturally' is used intentionally in a maturity sense to distinguish between efforts to manage safety culture as a compliance type program vs. using cultural insights to improve safety and performance.)

This assessment is also being conducted within the context of a U.S. Government Accountability Office (GAO) audit recommendation related to safety culture. In response to congressional requesters, the GAO conducted a performance audit during the period June 2014 to July 2016 to examine whether organizational cultures support DOE contractor employees to raise concerns without fear of reprisal. The audit report GAO-16-618, *Whistleblower Protections Need Strengthening*, retrospectively examined the five-year period from 2009 through 2014. The report highlighted safety culture activities associated with the Defense Nuclear Facilities Safety Board (DNFSB) Recommendation 2011-1, *Safety Culture at the Waste Treatment and Immobilization Plant*, and commented on the safety culture self-assessments and the

independent assessments conducted by EA. The GAO made six recommendations, including that DOE conduct independent assessments of the environment for raising concerns.

EA is aware that considerable attention has been devoted to safety culture improvement over the past several years at individual sites, by contractor organizations and through collaborative efforts such as the Energy Facility Contractors Group. In considering recommendations by the GAO, EA determined that an assessment was warranted to gain insights about progress in safety culture maturity. This assessment will examine enhancements made or underway since the Department's strategic focus on safety culture in response to the DNFSB 2011-1 recommendation. This assessment will examine progress toward the Department's vision of continuous improvement in safety culture as described DOE G 450.4-1C, *Integrated Safety Management System Guide*, dated September 29, 2011. This vision was reaffirmed in a January 9, 2018 memorandum, *Personal Commitment to Excellence in Health and Safety*, from the Secretary and Deputy Secretary expressing their expectations that DOE operations and activities are supported by a safety culture that is "Built on an environment of trust, open communications, and mutual respect that encourages a questioning attitude and continuous learning."

Results of the assessment will provide conclusions and recommendations, as appropriate, to improve contractor safety culture particularly with respect to reporting, analyzing and acting on employee concerns and self-assessment as a driver of continuous improvement. The assessment will also address DOE oversight of contractor safety culture activities as discussed in DOE O 226.1B, *Implementation of Department of Energy Oversight Policy*, dated April 25, 2011, and the companion guide G 226.1-2A, *Federal Line Management Oversight of Department of Energy Nuclear Facilities*, dated April 14, 2014. EA's intent is to use insights developed from this evaluation to determine future EA focus areas on safety culture, to identify and share good practices that might be instructive to other DOE elements, and to provide conclusions and recommendations as may be appropriate to improve DOE field and program office safety culture oversight or mission direction and support.

2.0 APPLICABILITY

The following Objectives and Lines of Inquiry (OLOI) is approved for use by all EA-30 Assessors.

3.0 FEEDBACK

Comments and suggestions for improvements on this OLOI can be directed to the Director, Office of Environment, Safety and Health Assessments.

4.0 OBJECTIVES AND LINES OF INQUIRY

EA assessments undertaken for the purpose of understanding the status of significant managerial emphasis areas employ Objectives and Lines of Inquiry. The current revision of EA's OLOIs are available at <http://www.energy.gov/ea/criteria-and-review-approach-documents>.

The assessment approach is designed to be diagnostic in nature, seeking to understand how DOE operating contractors have progressed in developing safety culture competence and applying cultural insights to enhance safety and mission accomplishment. In preparing the OLOIs, EA conducted document reviews to examine the evolution of the Department's emphasis on safety cultural competency. DOE G 450.4-1C, Attachment 10 provides a DOE recommended set of Safety Culture Focus Areas and Associated Attributes, and Attachment 11 establishes the International Atomic Energy Agency (IAEA) safety culture

Capability Maturity Model as a recommended reference. DOE G 226.1-2A, *Federal Line Management Oversight of Department of Energy Nuclear Facilities*, dated April 14, 2014, describes a variety of safety culture models that may be applied consistent with DOE's overarching expectations for safety culture.

Accordingly, this assessment will evaluate contractor approaches broadly, recognizing the absence of a single consensus standard. The report, *Independent Oversight Evaluation of Line Self-Assessments of Safety Conscious Work Environment – February 2014*, and the site performance culture sustainment plans developed per Action 2-13 in the *U.S. Department of Energy Implementation Plan for Defense Nuclear Facilities Safety Board Recommendation 2011-1 – December 2011*, (Implementation Plan) will serve as baseline references for maturity evaluation. Self-assessments of safety culture/safety conscious work environment (SCWE) not addressed under the 2011-1 Implementation Plan commitments will be evaluated in accordance with the *Plan for the Independent Oversight Evaluation of Line Self-Assessments of Safety Conscious Work Environment*, April 2013, for consistency of maturity comparisons.

The fundamental questions the evaluation will seek to understand are: (1) What is being done in safety culture now; (2) Why are these things being done; (3) How does leadership view the current safety culture (e.g., improving, good, problematic in some areas, etc.); and, (4) What is the basis for that executive perspective.

The Objectives for the evaluation are:

1. Identify key themes that reflect what DOE and contractor organizations have learned about safety culture since the Department's renewed emphasis on the topic in 2011.
2. Identify efforts organizations have undertaken since that time to enhance competencies to understand and utilize cultural insights to improve and sustain mission operations.
3. Examine management attention to organizational alignment on key cultural factors such as trust, open communication and engagement to improve safety and operations
4. Identify future improvements planned and/or underway to sustain positive cultures that promote the safe accomplishment of mission goals

The lines of inquiry are intended to serve as guides for team members not as substitute for the judgement and knowledge of the team members in seeking to elicit information and insights.

Lines of Inquiry:

1. What is the history of the organization's involvement with safety culture? (e.g., initiatives, self-assessments, external assessments, Energy Facility Contractors Group (EFCOG) participation) (Note: if external assessments were used, inquire about the criteria for selecting the external assessors, contract scope of work and measurements, and assessment approach.)
2. How was the organization's safety culture sustainment plan developed; how were the recommendations of the *Independent Oversight Evaluation of Line Self-Assessments of Safety Conscious Work Environment – February 2014* report addressed; and, what have been the accomplishments and lessons learned to date?
3. What is the organization's conceptual model of safety culture? (e.g., focused predominately on worker safety, systems safety, or from an organizational culture perspective in which safety, performance and other aspects are addressed collectively)
4. What are the organizational structures (roles and responsibilities, reporting relationships and key processes) supporting management attention to safety culture?
5. What is the current status of safety culture efforts and projected continuous improvement efforts?
6. What is the involvement of the Senior Leadership Team and first line supervisors in fostering a desired safety culture, periodic monitoring and promotion of continuous improvement?

7. How has Senior Leadership Team encouraged reporting and ensured effective analysis of and acting upon employee concerns? How do the Federal oversight authorities assure contractor Employee Concerns Program (ECP) effectiveness?
8. What are the roles and functions of the groups responsible for coordinating the ongoing emphasis on safety culture (Safety Culture Improvement Team, Safety Culture Monitoring Panel, etc.)?
9. What indicators are used to routinely monitor safety culture, and what is the relationship of safety culture monitoring with the Contractor Assurance System? (Note that culture indicators may be qualitative, quantitative or both.) How are these measures verified?
10. What culture or organizational change models are used to guide continuous safety culture improvement? (e.g., DOE G 345.4-1C, *Integrated Safety Management System Guide*, Attachment 10, *Safety Culture Focus Areas and Associated Attributes*, Institute of Nuclear Power Operations, IAEA, National Academy of Sciences, Engineering and Medicine Board on Chemical Sciences and Technology recommendations for laboratory safety culture, etc.)
11. What is the organizational philosophy for improvement? (e.g., correction of deficiencies, focusing on strengths, emphasizing front line employee behavior, emphasizing organizational factors, engaging local employee improvement teams, focusing on organization wide improvement interventions, etc.)
12. What barriers or inhibitors are perceived to hinder achieving or maintaining the desired safety culture?
13. What are perceived as the key success factors for sustaining a culture of safe mission performance?
14. What safety culture training/qualification standards have been developed for leaders, managers, employees, safety culture self-assessment team leaders and assessors, analysts, etc.?

5.0 APPROACH:

The primary goal of this assessment is to gather data to ascertain if contractor safety cultures are maturing consistent with DOE expectations for continuous improvement. The inquiry will examine progress in achieving an environment in which discussion of employee concerns is encouraged, and the attributes of leadership, employee engagement and continuous learning are established as prime enablers of excellence in mission performance. Particular attention will be focused on whether organizations have evolved from theoretical discussions about what safety culture is to the application of practical tools, methods and systems that engage management and employees collaboratively in performance improvement, the sustainment of safe daily work practices, and the ability to manage unexpected occurrences.

The evaluation approach will include document review, interviews with a small number of individuals in each organization who have direct responsibility for safety culture management activities, and a small sampling of managers and staff to solicit their perspectives on safety culture improvement. The principle inquiry mode will be discussion and dialogue. Members of the management team will be requested to complete an organizational performance rating scale to provide an additional data set. It is anticipated that the EA team will spend approximately one week at each participating site interacting with DOE and operating contractor personnel.

The specific set of interactions will be coordinated with the participating organizations. In some cases, it may be productive for key individuals to provide brief presentations on the history and current status of safety culture activities during the first day, combined with interviews the next two days. If important meetings of key groups, such as safety culture working groups, occur during the onsite activities these may be observed. Depending on local factors group interviews may be more efficient than individual interviews, for example a group of six to eight line managers, supervisors, subject matter experts (SMEs) or front-line workers. There is no intent to seek statistically representative sampling, rather EA intends to interact with key individuals and organizational units that have perspectives reflective of the general organizational efforts. Onsite time will focus on data collection, full analysis of data will be done afterwards.

At the conclusion of onsite activities, it is anticipated that an informal closeout will be held with the organizational points of contract and management representatives of the respective organizations. EA will provide formal feedback on each evaluation to contractor and local DOE management in the form of field notes including observations, conclusions or recommendations. The final targeted assessment report will focus on key themes from the combined inquiries emphasizing maturity trends, factors of success and barriers to continuing improvement.

Document Review

1. Safety Culture self-assessments (contractor) or external assessments (DOE or other) – including survey results (past three years)
2. Safety Culture Sustainment Plans (or similar documents) including actions items completed or in progress
3. Senior Leadership Team / Safety Culture Working Group charters, meeting minutes, reports
4. Safety Culture improvement project reports
5. Review of 2014 Safety Culture Best Practices Workshop presentations
6. Employee Concerns (last 18 months, appropriately redacted) [question – do subcontractors have their own ECP, or do they use the prime contractor ECP?]
7. Differing Professional Opining information (last 18 months appropriately redacted.)
8. Part 708.1 of Regulation 10 C.F.R.708: *DOE Contractor Employee Protection Program* records for the last 18 months; appropriately redacted
9. Organization Charts
10. Executive bios (with photos if available)
11. Contractor Assurance System (CAS) reports – last three years
12. Schedule of safety culture improvement related meetings during on-site data collection week
13. Safety culture metrics
14. Safety culture training records (note: where organizations have developed their own training, request course syllabi)
15. DOE site office oversight reports of contractor ECP and safety culture sustainment/improvement efforts
16. Contractor sustainability reports with action item status
17. Occurrence Reporting and Processing System tracking and trending results – last three years

Interviews

Strategy: Selected individuals with primary responsibilities for safety culture sustainment processes, monitoring and improvement activities will be interviewed. Similarly, selected DOE senior management and staff responsible for oversight of contractor safety culture activities will be interviewed. If the contractor model of Safety Culture integrates other improvement efforts (e.g., Behavior-Based Safety, Human Performance Improvement, Operational Excellence, Leadership Development, etc.) individuals responsible for these activities may be interviewed. A few group interviews may be conducted with small groups of employees (e.g., first line supervisors, new employees, long tenured employees) may be requested to elicit employee perceptions about safety culture improvement perspectives. However, priority will be focused on interacting with contractor individuals responsible for safety culture sustainment processes as defined by contractor safety culture sustainment plans and reports, and DOE personnel responsible for oversight of those sustainment processes.

Organizational members by position for interviews (exact composition will be agreed upon with input of contractor and local DOE leadership):

1. Senior Leadership Team members (contractor & DOE) with primary responsibilities for safety culture improvement
2. Safety Culture Improvement Team/ working group members (Team leader interview plus group interview)
3. ECP Managers (contractor & DOE)
4. CAS Manager/SMEs Training point of contact for Safety Culture training
5. Union safety steward(s)
6. Corporate board member(s) who may be on site during data collection visit
7. *Department/Program Managers (small diverse group of six to eight persons to discuss safety culture improvement)
8. *First line leaders/supervisors (as above – small diverse group of six to eight persons to discuss safety culture improvements)
9. *Group interview of long-tenured staff (small diverse group of six to eight persons to discuss safety culture improvements)
10. *Group interview of new staff (approximately two years' tenure – small group of six to eight persons to discuss safety culture perceptions)

*These small group interviews are listed as examples to obtain employee perspectives on how safety culture improvement efforts are progressing. Interviews of one to six persons would focus on individuals/groups responsible for guiding and monitoring safety culture improvements.

Observations (as available)

1. Senior Leadership Team culture meetings
2. Safety Culture working group meetings (e.g., Safety Culture Improvement Panels)
3. Improvement project team meetings
4. CAS team meetings