PNNL

Safety Conscious Work Environment (SCWE)

Self-Assessment Report

May 2013

Approved by:

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1.0 Executive Summary

In May 2013, an evaluation of Pacific Northwest National Laboratory's (PNNL's) Safety Conscious Work Environment (SCWE) was conducted following the SCWE Self-Assessment Guidance (rev G) issued by the U.S. Department of Energy (DOE) in response to the Defense Nuclear Facility Safety Board (DNFSB) Recommendation 2011-1. Although the DNFSB commitment was limited to the Laboratory's nuclear facility, the Radiochemical Processing Laboratory (RPL), PNNL chose to assess our culture holistically with an emphasis on the nuclear facility. PNNL has a process in place for assessing the culture of operational excellence. This review supplemented and in many cases validated the results and planned actions in PNNL's Operational Culture Evaluation Report issued in March 2013.

The review found an overall strong SCWE with several areas for improvements noted. Strengths included leadership's visibility, accessibility, and vigilance in identifying external influences that could affect safety. One area for improvement (previously identified) involves perceived overreaction that discourages some staff from raising concerns, especially if they are thought to be minor.

The Laboratory appears to have effective venues for reporting concerns: line management, Staff Concerns Program, Differing Professional Opinions, and Directorate Safety and Operation Councils [DSOCs]). Forums such as DSOCs promote teamwork and mutual respect within the directorates. Although it is evident that the relationship among research and field-deployed support staff has strengthened, there was evidence of frustration among non-deployed support services (e.g., craft) and research that could be improved.

Performance monitoring was strong with line management involvement and the Laboratory's risk management portfolio effectively evaluates risk at all levels within the organization. In addition, a Performance Evaluation and Measurement Plan (PEMP) review found that contract incentives and performance measures achieved balanced priorities between mission and safety.

This was the first opportunity that the Laboratory had to consider the 2012 PNNL Engagement Survey results. A brief review of SCWE-related questions found that there is a consistent 13–14% of staff that responded unfavorably to key SCWE-related questions. Additional analysis is necessary to examine the context/demographics of these responses to understand how they reflect upon the Laboratory's safety culture.

2.0 Purpose & Scope

DOE's Implementation Plan (IP) for the DNFSB recommendation 2011-1 commits each defense nuclear Field Office and Contractor to perform extent of condition reviews to determine whether safety culture weaknesses exist and to identify gaps to achieving an outstanding safety culture. This report assesses the extent that PNNL models the behaviors of an outstanding SCWE and identifies strengths and improvement opportunities. The evaluation followed the SCWE Self-Assessment Guidance (rev G) developed for Action 2-4 of the IP.

Primary Team Members

The evaluation team is shown below. The primary team has experience in evaluation activities and related experience in assessing organizational behavior and safety culture. Attachment 1 contains team member biographies.

Team Member Role	Name and Title
Team Lead	Kami Lowry, Integrated Safety Management (ISM) Program Manager, PNNL
Team Advisor (independent)	Joy Kibbee, Facilities and Site Services Performance Assurance, Idaho National Laboratory (INL)
Team Executive (independent)	Lanette Adams, Vice President of Mission Support Alliance (MSA) Safety, Health, Quality & Training, MSA
Safety Culture Subject Matter Expert (SME)	Cindy Caldwell, Environment, Safety, and Health (ES&H) Senior Technical Advisor, PNNL
Others	Russ Haffner, Quality and Assurance Manager, PNNL
	Joe Oretega, Voluntary Protection Program (VPP) Steering Committee member (bargaining unit)
	Steve Goheen, VPP Steering Committee member (research)

3.0 Methodology

A combination of data collection methods were used to provide a more comprehensive understanding of the attitudes and behaviors of the organization. The approach used confirmed the results obtained through the use of one method with results obtained through the use of another method to provide convergent validity of the results. As described in the Self-Assessment Plan (Attachment 2), methods used by the team included the following:

- Direct observations of work place behavior
- Face-to-face interviews
- Focus Group Interviews
- Operational Culture Survey results
- Engagement survey results
- Review of key SCWE-related documentation.

Direct Observation of Work Place Behavior

Behavioral observations were performed at three plan-of-the-day (POD) meetings and one critique. Observations were captured on a meeting observation form that was adopted from the Institute of Nuclear Power Operations. One of the PODs observed was at the nuclear facility.

Individual and Focus Group Interviews

The protocol for semi-structured interviews and focus groups was derived from SCWE Self Assessment Guidance issued by DOE in response to DNFSB recommendation 2011-1 and IAEA-TECDOC-1329. Interview and focus group questions were customized from a database of

interview questions based on the assessment lines of inquiry. Questions were reviewed in advance by the team and modified if necessary.

Fourteen interviews were conducted by the team advisor with another team member present to take notes. Interviews included various levels of staff and management cutting across operations, support, projects and the nuclear facility. Identified personnel were individually scheduled for interviews and asked questions based on their roles and responsibilities associated with SCWE and its attributes. The main focus of the individual interviews was on reporting of issues/concerns. Interviews were designed to determine if PNNL management and staff believe that employees feel comfortable raising issues/concerns without retaliation and if they understand the paths to report. The interviews were also designed to help provide an overall look at the safety and reporting culture across PNNL. Additional individuals were identified and interviewed based on information gathered and questions developed from the focus group interviews. Some individuals provided documents to support the information they had provided during the interview process.

A series of three focus group discussions were held between May 6 through May 10, 2013. Focus group sessions were conducted representing like roles: cognizant space managers (CSMs), support staff, and bargaining unit employees. Each group had at least one team member from the nuclear facility. The group size ranged from seven to eleven participants. Approximately 30 employees participated in the 90-minute focus group sessions. To assure the discussions were open and without any bias, the discussions were facilitated by the independent team executive with the team lead present as the note-taker. A set of questions was developed for each of the three areas of concern: reporting, questioning attitude, and communications. All sessions were well attended, with all attendees actively participating in the discussion. The discussion was open and free-flowing, and all attendees were sincere and offered comments in the spirit of helping the organization to improve.

Operational Culture Survey/Engagement Survey Results

Staff surveys were used to understand perceptions related to behaviors of interest for a broad sample of individuals from within the organization.

PNNL Operational Culture Survey: Beginning in October 2011, deployment of the Operational Culture Survey changed from an annual survey distributed in November or December to all PNNL staff to a survey distributed each quarter to randomly assigned staff members. The quarterly survey format is intended to gather information that more accurately represents performance over the course of the entire year. The Operational Culture Survey questions are linked to the tenets of high reliability/VPP and measure the extent that these beliefs and practices exist and their effectiveness. Over four quarters of 2012, the survey was distributed via email to 4091 staff members and generated a 55% response rate, similar to the fiscal year (FY) 2011 Laboratory-level response rate. A total of 800 comments were received from survey respondents over four quarters. Comments were coded and placed into categories.

Staff Engagement Survey: In November/December 2012, a PNNL Staff Engagement Survey was issued to all PNNL staff by Towers Watson, and results were obtained in May 2013. The assessment contained 44 core questions and one open ended comment question. The overall response rate for the survey was 66%.

Review of Key Documentation

During data collection the team reviewed a wide variety of documents, including:

- Employee concerns policies and procedures relative to harassment and retaliation
- Issues management/corrective action procedures
- Records from Contractor Assurance systems and associated management review meetings
- Contract mechanisms (PEMP)
- PNNL Staff engagement survey 2012
- Summary of survey findings: Research Productivity Sentiment 2012
- Summary of survey findings: Operational Excellence/VPP 2012–2013
- Operational Excellence Culture Evaluation 2013
- Focus Group Interviews Summary Report, March 30, 2012
- Extent of Cause review: Management Judgment, Risk, Acceptance and Culture 2013
- Third party Assessment: 2012 VPP Recertification Review
- Independent Oversight Assessment: Employee Concerns Program (ECP) 2012.

4.0 Assessment Results

Attribute: Demonstrated safety leadership

Management acknowledges that staff expected to do more with less increases potential risk. In early 2012, PNNL initiated workforce restructuring actions to address reductions in programmatic funding and to prepare more adequately for an uncertain FY 2013 funding environment. The restructuring effort reduced the workforce by 212 people in 2012. These budget challenges required the Laboratory to be extremely lean and efficient in the way that we deliver services and manage projects. Many times these efficiencies are asking staff to do more with less and can increase the potential for error.

In anticipation of the restructuring, risk-based changes were made to reduce costs while continuing to safely and reliably meet the needs of research. Examples include reducing environmental and radiation protection program support and reducing overtime costs by performing more maintenance and construction activities on dayshift and adjusting certain craft shift coverage (e.g., power operators).

At the same time, the nationwide uncertainty in funding has caused researchers to lose project funding. Pressure on research staff to obtain funding, comply with requirements, and conduct high quality research with limited resources often forces them to take on multiple roles (e.g., Technical Oversight Representatives, CSM, researcher, sales). Key staff are often overworked

and unavailable; for example, there are concerns that reducing craft overtime has made them chronically understaffed and pressured to rush.

Feedback from 2012 focus groups relayed concerns over the effect of limited resources on quality of work. Specifically, as budgets are reduced, quality suffers because there is no time or money to check the work, and smaller projects are less likely to use the quality SMEs because of the cost. Feedback from 2012 staff survey reflected similar concerns as depicted by the following example comments:

- "As everywhere we are asking our technicians to do more with less. More work, same staffing stretches people thin, work does not get done in a timely manner and milestones can be missed."
- "At this point all support must be paid for directly by the project (i.e., no lab level funding or support) so we have had to eliminate almost all use of additional resources within the lab in favor of being able to fund the staff required to conduct the actual task...hands on part of the process."

Management has acknowledged the situation and continues to monitor leading and lagging indicators of performance. For example, a recent spike in PNNL events prompted a detailed review and analysis. The ongoing analysis did not identify any discernible trends or common causes. While there were a few notable items, such as an increase in environmental and transportation events and an increase in percent of events attributable to human performance indicators vs. management practices, there were no notable patterns in causes, locations, staff type, organizations, hazards, etc. The reportable events will continue to be monitored closely until the trend has stabilized.

Attribute: Management engagement and time in the field

Weaknesses have surfaced in management's analysis, acceptance and tolerance of risk. During the past year, two events highlighted the need for improvement in risk analysis, acceptance and tolerance by staff in leadership positions. In both cases, staff made decisions based on their assumptions. Their decisions ultimately created hazardous working environments and potential chemical exposure of staff. In the first event, a visiting scientist's unsafe work practices resulted in a chemical exposure to a staff member. In this case, management relied on the CSM and mentor to oversee the scientist's activities. In the second event, management's tolerance of procedural inadequacies and subsequent lack of response to staff concerns lead to the potential exposure of two staff. In this case, management and staff relied on professional judgment and expertise rather than established processes and procedures.

An extent of cause review was conducted to determine the cultural drivers that influence management decisions regarding risk. Ninety individuals (managers and project managers) were interviewed. The review identified observations associated with the use of personal networks to execute accountabilities, the expanded role of the technical group manager without additional supporting resources and the cultural influences that prevent staff from elevating issues. Areas for potential action are currently being evaluated by management.

Management visibility and accessibility is strong and continues to improve. Managers of various levels (line managers, Project Management Offices [PMOs], Operations Managers) are required to perform work observations. They are also required to complete walk-throughs to identify potential safety and performance issues. Benefits of the walkthroughs and work observations include building relationships and trust with employees. Staff feedback continues to support a strong management presence in the workplace. Data collected for the four quarters of 2012 show a significant increase in the strongly agree response (36%, a 10% increase from 2010) to management visiting the workplace routinely. Staff sentiment in this area approaches our benchmark for outstanding performance. Interestingly, this question also had the highest percentage of staff disagreeing, which appears to be primarily from staff working in remote locations based on survey comments.

One interviewed Chief Operating Officer (COO) stated that s/he not only communicated but also modeled expectations regarding safety culture. If unsafe acts are observed, they will be discussed with personnel; if unsafe conditions are noted, they will be corrected. COOs have a presence in the field and try to influence employee ownership and empowerment. Specifically, another COO sends weekly safety shares/information and email notifications of recent events and associated safety focus topics. This manager also has a personal accountability model hanging in his office. Anyone who visits his office will find a card on his conference table that lists his expectations, which include safety culture.

Input from the 2013 focus group with craft expressed frustration with managers' non-availability. When an issue arises, the job has to stop, as one craft staff member noted, and we have to wait for the manager to respond (e.g., go or no go). Some craft indicated that they have been told to pull their manager out of meetings to resolve the work stoppage issue. When balancing deadlines, customer needs, and procedures, it can be frustrating to stop and wait for the manager/work team lead.

The 2013 focus group feedback indicated that management communications of larger issues is generally thought to be handled well (i.e., sequestration); however, smaller issues are handled inconsistently depending on the person tasked with resolving. Communications by email are not effective for many staff who spend most of their day away from a computer. Face-to-face communications are necessary if a timely response is expected. Generally favorable but mixed perceptions about communication are supported by results from the 2012 PNNL Engagement survey, which showed that 81% of staff reacted favorably to the statement "my immediate supervisor communicates effectively" (13% reacted unfavorably).

Attribute: Open communication and fostering and environment free from retribution

The majority of staff feel their concerns are respected and addressed; however, perceived overreaction discourages some staff from raising concerns. During the four quarters of 2012, survey results showed that 38 percent of respondents strongly agreed with the statement "my concerns are respected and addressed," which is above the Gallup benchmark for outstanding performance. Interviews indicated that DSOCs have encouraged personnel to bring issues to the council. This has been well received, and employees are now bringing issues and potential resolutions to the council for discussion. Part of the reason for the success is that the council

addresses all issues. If a resolution is not possible, the issue and reasons for no further actions are discussed with employees. No issues/problems are discounted or considered "not important."

Overall, staff in all three 2013 focus groups were well aware of venues for reporting and felt comfortable reporting issues. Responsiveness to the issues reported appears to vary. Some felt issues were blown out of proportion, and others felt that there was little or no action taken. In general, safety-related issues are reported and responded to appropriately, although there is still some variability among the responses of SMEs. Issues associated with facilities, efficiency, and Human Resources (HR) are reported but there were examples of lack of response.

Personnel interviewed stated if issue or concerns were identified they could report them through the ECP or management. Most of those interviewed stated they would report to management first and then choose a different path if either directed to do so or were not satisfied with the response from management. They stated they and their co-workers had no reservations about reporting issues to management. All interviewed could provide examples of issues that had been raised and the positive response and encouragement received from management.

Staff interviewed stated they had not witnessed or were not aware of any bullying or humiliating behaviors being displayed by leaders. In fact, one manager stated that he was counseled by his manager, who advised him that some of his body language might send the wrong message during interactions with personnel. The manager stated that he was not aware of this issue and appreciated his manager making him aware of the potential problem.

There continues to be a minority of staff that indicate their concerns were either not respected, not addressed, or both. Comments from both the Research Sentiment Survey and Operational Culture Survey indicate that some staff still perceive responses to safety-related issues as an overreaction and waste of resources. They cite the cost of this resource and question the value, as indicated by the following example comment:

- "Reporting concerns is necessary but sometimes subjects the person who reports them to a lot of meetings, paperwork, etc., which can discourage one from reporting again."

Reporting culture remains strong with an opportunity to improve reporting "minor issues." For the past 2 years, there has been a statistically significant downward trend in 375-2400 (hereafter abbreviated as "2400") reporting, PNNL's hotline for reporting issues. Detailed analysis indicates that the greatest factor affecting the decrease was the transition from older 300 Area facilities to the Physical Sciences Facilities. After the transition to the new facilities the average monthly number of 2400 calls dropped by six. Analysis concluded that the decrease was a valid reflection of the improved working environment and that the reporting culture remains strong. The Laboratory's analysis of reporting culture is supported by 91 percent of survey respondents either agreeing or strongly agreeing that they are encouraged to report concerns even when no harm is done. Feedback from the 2012 focus group participants indicated they were familiar with dialing 2400 for safety events. There appears to be little hesitation to report safety-related events. Many examples were given of a variety of topics reported. There appears to be good discussion with line managers or CSM when it was not clear whether to report an event. Participants were less sure about the reporting processes for non-safety related events (e.g., security or quality). Some reported using 2400, but others were uncertain.

The 2012 focus group participants reported that they are encouraged to report minor events and near-misses; however most reported that there is a concern that reporting minor events will reflect poorly upon them. Participants stated that it is easy to report minor events in which one is not personally involved, but there is hesitation to report personal minor events. Participants also reported a hesitancy to report minor non-safety events because "when we make mistakes, we end up in a fact-finding meeting."

The 2013 focus groups found similar results. In general, critiques were viewed as a waste of time by research staff by many staff. In one example, everything was done by the book, yet a critique was still held. One participant said, "critiques are time consuming and violating." Another said, "Do you ever resolve something with 'It just happened.'? Are all incidents preventable?" Reporting is somewhat discouraged when management responds with new requirements for staff based on one person's accident (e.g., cut arm on poster board and now all boards are less sharp).

Although the reporting culture appears strong, feedback from staff survey indicate that there are individuals who do not feel comfortable reporting minor issues, as shown by the following example comments:

- "It seems employees are highly apprehensive to call 2400 for the little things. Mainly the fear is that they will get in trouble."
- "The lab has a policy to report/discuss concerns when no harm is done, but in practice there seems to be stigma associated with reporting these things to the Project Management/PMOs if it is perceived to slow things down. This is especially true in larger projects."
- "There's a perception that reporting concerns will have negative consequences."

Attribute: Clear expectations and accountability

Effective processes are in place to set clear expectations and accountabilities. Interviews indicated that non-bargaining unit personnel are held accountable for performance during mid-year and end of year performance reviews. If management feels that staff performance is less than adequate, they can work with HR to develop a performance improvement plan (PIP). Potential disciplinary issues are brought to HR so management can receive guidance to determine whether disciplinary action is appropriate and what types of action should take place. There is also a review panel (line management, legal, HR, and other management personnel as appropriate) to assure the disciplinary process is fair and consistent. When asked about bullying or humiliating behaviors, the HR Manager stated they have attended staff meetings to help employees understand the meaning of bullying and an affirmation that it will not be tolerated at the Laboratory. When a staff member reports being bullied, HR personnel must investigate to understand the situation. After further discussion, HR can determine if a bullying issue exists. One example of bullying was provided that occurred between a PNNL employee and a subcontractor.

Response to the 2012 PNNL Staff Engagement Survey indicated that 77% of staff responded favorably to the statement "I think that my performance on the job is evaluated fairly" (14% unfavorable). More analysis will be done to determine the context behind the unfavorable responses.

Attribute: Teamwork and mutual respect

Forums such as PODs and DSOCs promote teamwork and mutual respect within directorates, but the relationship among some research and support functions could be improved. DSOCs have created a forum where employees and management can work together to identify and resolve issues. Employees are comfortable identifying issues, no matter how small, and identify potential resolutions. For example, the National Security Directorate is working with employees to prepare them for travel and potential security and safety issues that employees may encounter. This type of assistance builds trust and strong teams because it shows that management is concerned about employees and their safety and well-being.

Observations of three POD meetings supported open two-way communications, respect, and an atmosphere that encouraged questions. The nuclear facility (RPL) stood out as having a higher level of formality and rigor.

Facilities and Operations (F&O) management shares safety and other important information and communicates feedback on issues. They will typically issue formal lessons learned on key external events with a power point presentation and include it in continuing training. They also complete fact finding on events and near-misses that are below the reportable threshold. Every quarter, there are team meetings with senior managers, team leads, and other management to present and discuss the data. When a near miss occurs, the responsible manager schedules the fact finding meeting and develops immediate and/or long-term corrective actions. Lessons learned are mentioned in the POD, and the facility manager discusses them in quarterly meetings, through formal presentations, and continuing training. Feedback from the 2013 focus groups noted frustration over a recent increase in bureaucracy associated with procedure changes and lack of input in job planning.

Interviews also indicated that a positive relationship exists between research project management and field-deployed support functions which results in a high level of collaboration and cooperation. Support functions like ES&H are considered part of the operations and project management team. The operations manager acts as an arbitrator or a facilitator when disagreements arise between line and support functions to assist in working toward a resolution. One of the Operations Managers stated that he meets monthly with support personnel such as Worker Safety & Health (WS&H), Radiological Control, and Waste Management.

The 2013 focus group feedback acknowledged that a questioning attitude is encouraged for safety-related issues but are not always welcome when inefficiencies are questioned across organizations. There appears to be an opportunity for improved communications and relationship building among CSMs and the F&O support function. In addition, the PNNL Staff Engagement survey revealed a consistent number of staff that had unfavorable responses to statements of trust, voicing opinions, and respect. For example, the 2012 PNNL Staff Engagement Survey responses to:

- "I feel comfortable voicing my ideas and opinions even when they are different from others" had 14% of respondents disagree or strongly disagree.
- "Employees are treated with respect regardless of their job" had a 15% unfavorable response rate.
- "There is a feeling of trust between members of my team" had an 11% unfavorable response rate.

More analysis is planned to understand the context and demographics of these responses and is planned over the next year as part of the predictive modeling project.

Attribute: Credibility, trust, and reporting errors and problems

DSOCs have created a forum where employees and management can work together to identify and resolve issues. Interviews indicated that most employees are comfortable identifying issues, no matter how small, and identifying potential resolutions. For example, there are 30–40 DSOC members representing the Operational Systems Directorate (OSD). The members are considered the eyes and ears of the laboratory and are points of contact for personnel to identify issues and potential problems. The DSOC meeting has an agenda and covers hot topics, lessons learned, and new issues from the work and home environment of the employees. It discusses safety as well as operational issues and topics. Personnel who attend the meetings range from craft to senior management. There has been consistently high participation by employees and, in most cases, employees will provide potential resolution to the problems they bring to meetings.

The OSD DSOC chair stated that there is currently not much being recorded in the issues tracking system because employees have been encouraged to help provide resolutions and fix issues as soon as possible. They also stated that they try to rejuvenate personnel and have added icebreakers to the meetings to get people involved from the beginning. The chair provided several examples of issues that personnel have brought to him and the DSOC and identified the actions those same employees had done or are doing to resolve the issues. One that was recently identified involved teamsters and the high number of backing accidents. When the DSOC looked at the trend, they noted that 50% of the vehicle accidents that had occurred were due to backing, which occurs only 1% of time when driving a vehicle. After analyzing the data, it was determined that 50% was too high; the teamsters were involved in discussions about potential resolutions and suggested trying backup cameras on the vehicles. A couple of cameras were ordered and installed on the vehicles. The teamsters will try them for a short period and report the results on and opinions about the effectiveness of cameras to the DSOC. If the cameras are not the right solution, other ideas will be solicited from the teamsters. The DSOC will also revisit issues that have not been resolved after a period of time to ensure that they are given the proper attention.

Planned actions are underway to continue to increase awareness of the DSOCs. Data collected from the Operational Culture Survey for the four quarters of 2012 showed that 43% of staff were not aware of the DSOC, potentially leaving a significant number of Laboratory staff unaware of an important resource.

Staff reward and recognition program for safety, sustainability, security was recently consolidated and streamlined and needs more run time. In 2011, the Laboratory was concerned about the limited effectiveness of multiple standalone programmatic incentive programs such as Safety Sleuth and Pollution Prevention. To reach a broader audience and provide a single avenue for instant recognition in 2012 the safety, sustainability, security awards were consolidated under a centralized recognition program “Recognize Excellence in Everyday Work.” The process was intentionally made simple with no complex review process or paperwork to fill out. Each time a new recognition is posted on the Operational Excellence website, the recipient receives a gift of appreciation, and the recognition is highlighted in *Inside PNNL*. The

new process appears to be catching on, but more run time is needed. The 2012 PNNL Staff Engagement survey found the 30% of staff responded unfavorably to the statement "PNNL makes adequate use of recognition and rewards other than money to encourage good performance."

Attribute: Effective resolution of reported problems

Corrective action management is strong and continues to be monitored. Corrective actions are managed based on risk. Medium to high risk issues are treated with more rigor and require a critique and formal cause analysis. For those higher risk issues, a committee of COOs, Division Directors, and other identified members reviews the issues and corrective actions to ensure that the corrective actions address the causes of the issue, will improve performance, and are sustainable. Once the Corrective Action Plan (CAP) has been completed, the issue and the CAP, along with the evidence of completion and metrics, are reviewed to ensure that corrective actions were effective and achieved desired results. Issues determined to be low risk are brought to the committee for review only if they have been in the tracking system for more than 60 days.

The Laboratory's self-assessment process is aimed at finding smaller issues early and getting them fixed in a timely manner. Program self-assessments are performed routinely both to verify deployment of requirements and to track any identified issues. Self-assessments conducted in Integrated Operations System (IOPS) spaces create actions or "Must Do" items which are tracked and monitored to closure, all within IOPS. Although performance for the "Must Do" items is currently below target (91.1% vs. the target of 95%), targeted improvements are underway. Timely management of issues and actions is a key element of PNNL's Contractor Assurance System (CAS). Data indicate when issues are reported into the Laboratory's corrective action management systems they are closed in a timely manner. The trend for overdue actions, timely documentation, and obtaining Associate Laboratory Director (ALD) approval when the 9-month closure date cannot be met are good, and performance is monitored monthly.

As mentioned previously, DSOCs have allowed personnel to bring issues to the council. This has been well received, and employees are now bringing issues and potential resolutions to the council for discussion. Part of the reason for the success is that the council addresses all issues. If a resolution is not possible, the issue and reasons for no further actions are discussed with employees. No issues/problems are discounted or considered "not important."

Processes are in place that identify, examine and communicate latent organizational weaknesses. PNNL's CAS manages the data provided from tracking and trending and assists in the validation of SCWE attributes. For example, about 18 months ago the Laboratory noted a drop in 2400 hotline calls, events, and issues reported initiated an in-depth analysis of factors that could have caused the change (including a change in our reporting culture). The analysis team concluded that the drop in reporting was tied to moves from older facilities into new ones. The aging infra-structure in the older buildings resulted in more issues reported. Since the moves, 2400 hotline calls have stabilized at the lower level. The analysis helped to validate that there was not a negative trend associated with the safety culture. The Laboratory decided to have a 2400 call campaign regardless of the no negative trend just to re-energize the workforce that resulted in a small spike in reporting.

Attribute: Performance monitoring through multiple means

Performance monitoring is strong with line management involvement. PNNL has an integrated performance analysis and reporting function that aligns performance management with strategy and helps confirm that measures are set at the right level to assure that management is aware of adverse trends. Performance information is made readily available at all levels of the Laboratory. Management is informed through operational awareness, performance and analysis reports, role-based portals/dashboards, and our Operational Culture website. If the metrics show a higher risk in some area, the concern is elevated to more senior level management. Corrective actions are part of the overall contractor assurance program, and the organization provides an Extent of Deployment report every trimester that includes older, repeated, and/or significant issues. This report is provided to managers and SMEs, as appropriate. Information is trended: if there appears to be a negative trend, the organization will perform an in-depth analysis to validate if there is a safety culture issue. If an issue does exist, then a path forward is determined; if not, no further actions are required.

Program managers examine their performance regularly with performance analysis that includes a status of requirements and documentation, the effectiveness and efficiency of the system, overall performance, and emerging issues and trends. Emerging issues and risks are reviewed with the Executive Committee.

Line managers are directly involved in oversight and performance improvement through activity-based observations and space-based walk-throughs. Data from the Operational Excellence Survey indicate that 89% of respondents strongly agree or agree that their supervisor understands how their work is performed, and 80% strongly agree or agree that their supervisor makes sure that their work is performed as planned. Other examples of line management involvement are described below.

- *IOPS hazard assessment enhanced capabilities to target risk more effectively*. In 2012, the IOPS explorer tool was developed. The tool visually displays IOPS information in an easy-to-use web-based format that focuses on IOPS spaces, assessment of IOPS spaces, and hazards within spaces. Operational performance about each IOPS space can be combined with information on inherent risk in each space to produce a heat map that displays potentially higher risk IOPS spaces. Management can also use the tool to identify higher risk spaces that might be good candidates for increased number of targeted, risk-based assessments and increased management attention.
- *Peer reviews conducted in high risk laboratories*. In 2012, the Laboratory Director commissioned an effort to conduct peer reviews in laboratories with high risk operations in six buildings. Teams were formed that included Operations Managers, WS&H representatives, Environmental Compliance Representatives (ECRs), Building Managers, and other SMEs as needed based on work in these facilities. There were no significant issues identified; however, there were some minor issues identified that are being addressed. Some of the common issues identified in all six facilities included housekeeping, chemical storage, and compressed gas cylinder storage.
- *EHS performance summary*. Performance data is being communicated across all levels of the organization. For example, WS&H prepares a performance summary every trimester for each directorate known as a Quad Chart, which articulates safety statistics, events, accomplishments, and emerging issues for that particular directorate.

The predictive model is an innovative leading indicator to predict a work group's likelihood for future adverse events. During FY 2012, a predictive model was constructed to identify workgroups at highest risk for a catastrophic event based on four aspects: work group size, exposure to high risk hazards, worker engagement, and operating experience. By identifying those work groups at highest risk, management can focus their attention and take action to thoroughly understand the factors driving risk and determine whether appropriate mitigations are in place. A pilot was performed with nine of the highest "at-risk" work groups in the Laboratory to gain a better understanding of the factors driving risk and, if necessary, to identify actions that could be taken to mitigate the likelihood and severity of an operational incident. Each of the pilot participants felt that some or part of the information discussed during the pilot process reaffirmed what management was already aware of and for several participants it validated ongoing efforts to reduce incidents. The approach was thought to be a useful tool to raise the awareness of managers. All agreed that the unique combination of experiential and behavioral data added a dimension that provided them with a more complete view of risk and that the 3-year capture of operating experience (incidents) was useful to detect subtle patterns. PNNL's innovative approach to predicting a work group's likelihood for future adverse events was approved for Laboratory-wide deployment in 2013 by the PNNL's Executive Committee.

The Laboratory's risk management portfolio comprehensively evaluates risk at all levels within the organization with continuous improvements identified. PNNL's validated CAS is the foundation by which we demonstrate our ability to accomplish our mission while meeting applicable contract and customer requirements. It enables the Laboratory to demonstrate that we are delivering effective and efficient operational, facility, and business systems while protecting our workers, subcontractors, visitors, the public, and the environment. Assurance processes including staff Roles, Responsibilities, Accountabilities, and Authorities (R2A2s) and tools exist at all levels of the organization and remain robust in identifying risk areas and managing them effectively and efficiently.

Managing Risk at the Enterprise Level: The contractor assurance processes provide confidence that products, services, and operations are meeting business objectives and customer expectations. Integrated Management System improvements and the associated Core Business Process (CBP) performance are monitored. In addition, the Executive Committee has developed an enterprise risk register that contains high level risks that are tracked and monitored. Each of the risks on the enterprise risk register has a steward and is updated during the trimester performance review cycle. The risks are predominately Strategic or Mega risks, but do include a few Compliance and Operational risks. Collectively, this risk register represents the highest risks at the Laboratory.

Managing Risk at the Program Level: Risk and performance profiles for environmental; radiation protection; WS&H; and safeguards and security programs were further institutionalized and matured during 2012. Essential quantitative and qualitative indicators are in place for all associated programs and are incorporated into processes for evaluating performance. In addition to reporting performance, heat maps are being used for budget/resource planning, assessment planning (for both PNNL and Pacific Northwest Site Office [PNSO]) and focusing SME efforts.

Managing Risk at the Project Level: Processes and tools to facilitate risk management are embedded throughout proposal, planning, and conducting, and closing project work phases via

Electronic Prep and Risk (EPR). PMO project reviews continue to show strong portfolio performance with 99% of projects demonstrating that risks are adequately defined and controlled.

User feedback on the EPR tool indicates staff frustration and lack of integration with other systems. An effort is underway in 2013 to enhance EPR to improve the effectiveness and efficiency of the EPR tool by removing work from the system, enhancing risk management at the lab, and helping to identify those projects that require additional attention earlier in the process (e.g., process safety like risks). Improvements to the EPR tool have been developed and reviewed by many stakeholders, including the project management office directors. In addition to the improvements to the EPR tool, adjustments in the R2A2s associated with reviewing projects is underway to enable the early engagement of the right SME involvement in project planning.

Managing Risk at the Facility Level: Facility Use Agreements (FUAs) and associated facility management procedures are used to manage risks at the facility level. Hazardous material inventory control systems and periodic facility inventory assessments are used to manage radioactive materials and chemicals for each facility. A comprehensive assessment of the radioactive material management in PNNL facilities via the Radioactive Material Tracking (RMT) tool and relationship to the FUAs concluded that these materials are being managing appropriately in accordance with DOE nuclear safety requirements and the FUAs. The Materials and Specimens Risk index for the quarter 2 of FY 2013 is at 0.54 (target <1.0) indicating hazardous materials management is being effectively implemented. Improvements are being made to increase the efficiency of managing materials based on hazard (e.g., integration of operational significance policies and radio frequency identification technology).

Managing Risk at the Activity Level: Managing risk at the activity level is performed via IOPS, off-site work controls, and the F&O work practices.

- IOPS remains an effective tool for managing activity level work. An IOPS governance committee oversees IOPS performance and improvements. Metrics indicate overall good performance with completion of reading assignments (99.7%) and quality Hazard Awareness Summaries (97.2%). Other metrics have identified opportunities for improvement, including overdue permits (91.1%). Efforts were made in 2012 to incorporate user feedback and improve the IOPS permits process by adding several features (e.g., improved user interface with drop down lists, new “Help Me Determine” tool, eliminated and consolidated permit fields, and improved collaboration and notifications). The CSM newsletter is used to communicate changes and request feedback.
- Work in non-IOPS locations is controlled via Off-site Risk Mitigation Plans and SME reviews. Assessments are conducted using a risk-based approach. Results of non-IOPS assessments performed indicate effective risk identification and mitigation of off-site work.
- F&O work has a robust work planning process. However, recent events identified complacency in work planning and execution and corrective actions are being implemented. F&O work planning and control procedures, IT tools, and execution enhancements and improvements are a focus area for 2013. PNNL leadership takes events seriously and is monitoring the complacency risk on the enterprise risk register.

The Laboratory has a mature process to evaluate and strengthen operational culture. Employee engagement is recognized as a key leading indicator of performance, including safety performance. In 2010, PNNL implemented an innovative, holistic process to understand cultural attributes and improve operational performance. The process includes methods for establishing, measuring and assessing operational excellence expectations and has been improved over the past 3 years. Staff survey results, written survey feedback, focus group feedback, interviews, and performance measures provide the primary basis for understanding the Laboratory's culture in the context of operational excellence, and the results are issued in an annual Operational Excellence Cultural Evaluation.

Attribute: Questioning attitude

There is evidence of a questioning attitude among staff; however, there is also evidence that bureaucracy encourages staff work-arounds. A strong questioning attitude existed in all of the groups, although there appears to be some discretion about what is raised as an issue. Staff often weigh the risk of the issue and determine whether it is worth their time and energy to address it formally.

One interviewed COO stated that employees are more likely now than in the past to stop and question work when they are unsure. Previously, employees seemed to believe that stop work was the formal stop work that required documentation and permission from management to continue work activities.

A DSOC chair discussed a recent issue/concern that was brought to him from a staff member. The employee had an issue with two procedures that could not be worked as written and wanted advice on the best path forward. The DSOC chair advised the employee to take the appropriate action when asked to perform the task again and not do the work until the procedures were workable. The employee followed the advice of the chair and stopped work the next time the job was scheduled, notified management of the issue/concern, and redlined the procedures. This demonstrates a questioning attitude and willingness to report issues/concerns.

Use of the DSOC to identify issues/problems by employees also reveals a questioning attitude about safety in the workplace. Employees are raising potential issues/problems related to safety so the council can discuss them and determine if they are a safety issue.

Despite these examples, the 2012 research productivity sentiment survey continues to indicate that research staff are frustrated by the burden of processes and requirements. Feedback from the 2012 focus groups also consistently noted that their frustrations resulted in the use of "work-arounds" to get around a requirement when it did not make sense to them or was perceived as low risk. Feedback from staff survey reflected similar concern, as indicated by the following example comments:

- "While I (and my teams) conduct/manage high quality R&D, we consistently need to "work-around" the organizational obstacles and barriers that hinder our effectiveness, and we are always challenged with having resources that are NOT National Laboratory Caliber. It has become an art for many of us, to make the most out of sub-par equipment and resources in order to conduct our work."

- "I worry that in some circumstances, required procedures can go too far and it may lower the willingness of staff to comply."
- "If safety measures are unreasonably burdensome or make work impossible, they are not well received or safety may not be consulted in the future."

Ongoing initiatives to streamline processes (i.e., IOPS permits) and reduce researcher frustration are expected to improve performance in this area.

The cognizant space manager role is well respected and highly valued; however, challenges still exist that could affect safety. Interviews indicated that CSMs have received increased authority and influence in their laboratory spaces over the past several years. They have the responsibility and the authority to reinforce and ensure expectations are being met, and if behaviors/attitudes are not meeting expectations, they can take actions to correct (i.e., stop work from occurring) or involve the correct personnel to make changes (management, project management, etc.) within their laboratory spaces.

Specific feedback from the 2012 focus groups indicated that the CSM's role is well received, and those interviewed reported receiving management support, even when stopping a researcher's work was required. However, several recent events and comments in the Operational Culture Survey indicate competing pressure for CSMs regarding funding and authorities. For example, one commenter noted that because "CSMs are usually junior and they must fill in the majority of their time on projects, it does not behoove the CSM to upset the senior researchers."

An extent of cause review was conducted to determine the cultural drivers that influence decisions regarding risk. Ninety individuals (managers and project managers) were interviewed. The review identified observations associated with circumstances that could cause staff to challenge the CSM's role and the cultural influences that may prevent CSMs from elevating issues. Management is currently evaluating areas for potential action.

Supplemental Information Topic: Performance Measures and Contract Incentives

1. **Contract incentives achieve a reasonable balance between cost/schedule and safety pressures.**

The FY 2013 Battelle PEMP for PNNL's Management and Operations (M&O) is contained in the Laboratory's operating contract with the DOE (DE-AC05-76RL01830). A review of the PEMP found that contract incentives achieve a reasonable balance between cost/schedule and safety pressures.

As an Office of Science laboratory, PNNL and its fee structure agreement with the DOE are unique and set us apart from other DOE contractors. The PEMP outlines goals, objectives, and notable outcomes that are tied to performance rating and the fee that the Laboratory earns. Performance grades for science and technology (S&T) and M&O are interdependent. Operational performance must fully support the Laboratory's current and future S&T mission. The structure ties the result of a strong safety culture to both profitability and the S&T mission. PNNL must show strong performance on both the M&O and S&T objectives to maximize fee. In addition a set of notable outcomes have been identified to highlight key aspects of

performance deserving special attention by the contractor. From FY 2010 to FY 2012, we had an M&O notable outcome related to demonstrating a strong safety culture that supports the S&T mission. This year, we have a notable outcome under integrated ESH systems to strengthen accountability for subcontractor performance. The PEMP encourages ESH integration of into our business processes and has driven outstanding results in both S&T and M&O.

2. Discussion on the following supplemental areas was incorporated directly into the body of the report:

- Performance metric insights into SCWE
- What evidence exists to show decision making reflects a safety first attitude?
- What evidence exists that demonstrates managers/supervisors perform first hand observations of the work environment, listen to workers, and make changes where necessary?

Specifically refer to the narrative in the following sections for more information:

- Management visibility and accessibility is strong and continues to improve
- Corrective action management is strong and continues to be monitored
- Processes are in place that identify, examine and communicate latent organizational weaknesses
- Performance monitoring is strong with line management involvement
- The Laboratory's risk management portfolio comprehensively evaluates risk at all levels within the organization with continuous improvements identified
- DSOCs have created a forum where employees and management can work together to identify and resolve issues.

3. What evidence exists that demonstrates the organization maintains nuclear facilities in a manner that supports both production and the safe performance of work?

In addition to the Laboratory contractor assurance processes, PNNL's nuclear facility the RPL monitors performance in various ways. Data are collected from quarterly and presented to management at a self-assessment team meeting. R&D self-assessment findings/trends and overall RPL risk is discussed. In addition, assessment data from occurrence reports, radiological control problem reports, Independent Review Committee activity, F&O metrics, facility modification status and activity-based assessments/activity observations are reviewed.

Analysis includes a risk-based approach that identifies potential hot spots through the distribution of issues in laboratories within RPL and taking action as necessary. For example, a concern over an increase in contamination events resulted in RPL management and research working together to develop a procedure referred to as "skill-of-the-craft for research." This procedure identifies routine work activities that occur in the laboratories and is a guide for researchers to help minimize the exposure to hazards. The procedure discusses tasks that were resulting in contamination and provides pictures to show configurations that would prevent contamination while handling certain materials (e.g., standard method for changing syringe filters). The

procedure breaks the work activities into two categories, work that needs only IOPS authorization and work that needs additional formal authorization. This assists laboratory personnel to determine what work they can do based on their current training, experience, and education.

RPL tracks deferred maintenance rates and the number and age of lock-out tag-outs (LOTOs) in place, temporary modifications, and inoperable or impaired safety systems. LOTO records are reviewed every quarter by a technician to identify any that are approaching a year of being applied. If the work associated with the LOTO will be completed within a month or two, the LOTO is left in place. If the work will not be completed in a month or two or if the work is no longer required, the LOTO is removed. The deferred maintenance list is reviewed annually and has items to replace components that are normally run to failure. The items on the list have been prioritized and are replaced when funding becomes available.

5.0 Conclusions and Recommendations

PNNL's SCWE self-assessment review found that behaviors, staff sentiment, and performance reflected an overall strong SCWE with several areas for improvement noted. Strengths included leadership's visibility and accessibility and vigilance in identifying external influences that could affect safety. Areas for improvement previously identified include perceived overreaction that discourages some staff from raising concerns, especially if they are thought to be minor.

The Laboratory appears to have effective venues for reporting concerns: line management, Staff Concerns Program, Differing Professional Opinions, and DSOCs. Forums such as DSOCs promote teamwork and mutual respect within the directorates. Although it is evident that the relationship among research and field-deployed support staff has strengthened, there was evidence that of frustration among non-deployed support services (e.g., craft) and research that could be improved.

Performance monitoring was strong with line management involvement and the Laboratory's risk management portfolio effectively evaluates risk at all levels within the organization. In addition, a review of the PEMP found that contract incentives and performance measures achieve balanced priorities between mission and safety.

This was the first opportunity that the Laboratory has to consider the results of the 2012 PNNL Engagement Survey. A brief review of the survey found that there is a consistent 13–14% of staff that responded unfavorably to key SCWE-related questions. More analysis is necessary to understand the context/demographics of these responses to understand how they fit into the Laboratory's safety culture.

The results of this self assessment complemented the Laboratory's existing processes for understanding and assessing our operational culture. The additional use of one-on-one interviews and activity observations strengthened the assessment and will be incorporated into our existing process. In addition, we have compared the results of this assessment with our existing commitments to improve via the Operational Excellence Culture Evaluation and found no gaps.

Attachment 1
TEAM BIOGRAPHIES

Team Lead

Kami Lowry has over 20 years of experience working in the environmental, safety, and health field. As the Integrated Environmental Safety & Health Program Manager at PNNL, she is responsible for the ISM and the Environmental Management System (EMS), including managing audits, assessments, program evaluations, and continuous improvement efforts. Ms. Lowry has been instrumental in integration activities associated with ISM, EMS, and VPP, including SCWE.

Team Advisor (independent)

Joy Kibbee is a Performance Assurance Coordinator for the Facilities and Site Services (F&SS) Organization at INL. A graduate of University of Idaho, Ms. Kibbee holds a B.S. and M.S. in Industrial Education Technology. She is a Qualified Instructor at the INL and is certified in Human Performance Technologies through the University of Idaho. Ms. Kibbee has 12 years of experience as an equipment operator, 3 years as a nuclear training instructor, 5 years as a Human Performance Improvement Practitioner, 2 years as a lead investigator, and 4 years performing assessments for various organizations. Ms. Kibbee is currently the lead event investigator for the F&SS organization as well as the Price-Anderson Amendments Act Compliance Officer and lead over the Work Management Observation Program.

Team Executive (independent)

Lanette Adams has over 30 years' experience working at DOE and commercial nuclear sites. As the Deputy Manager of MSA Safety, Health, Quality & Training (SHQ&T) Organization, she serves as MSA's Safety Culture point of contact and VPP Advisor. She has performed several VPP self-assessments for both MSA and other Hanford contractors. Ms. Adams managed MSA's Integrated Safety Management System (ISMS) Phase I and II implementation and verification efforts following the Mission Support Contract award and continues to orchestrate safety awareness and communication programs, employing tools that share common ISM principles that affect organizational and individual performance, such as VPP and Human Performance Improvement. She was the MSA organizational liaison on the both the DOE-HQ 2012 Hanford Site Organizational Climate & Safety Conscious Work Environment Survey and DOE-RL's Safety Culture Good Practices Evaluation Teams and has provided support to the DOE-HQ SCWE Supervisor Training Development Team. Ms. Adams has a B.S. in Psychology from Washington State University.

Safety Culture SME

Cindy Caldwell is currently a senior technical advisor in the Environment, Health, Safety and Security directorate at PNNL. Her work includes understanding and evaluating operational culture, organizational reliability, and risk management.

She has over 30 years of technical and managerial experience in the field of Safety and Health, including reactor operations, training, and technical support within production and laboratory environments as a DOE contractor. Currently, Ms. Caldwell is the co-chair of the Safety Culture sub-team for the EFCOG ISM Working Group. She is certified by the American Board of Health Physics and has a B.S. in Bacteriology and an M.S. in Radiological Science. In addition, Cindy holds an M.A. in Human and Organizational systems and is currently working toward a Ph.D. in Organizational Development.

Additional Team Members

Russ Haffner has over 25 years of evaluating performance and improving processes across sectors (private to government), industries (low-tech to hi-tech), roles (engineer to program manager), and business functions (design, test, quality, sales, marketing). Mr. Haffner was recently recognized by the U.S. Secretary of Energy for his contribution to developing a performance-based culture within DOE and is currently a Quality Assurance manager at PNNL.

Steve Goheen earned a Ph.D. in Materials Science and Engineering from Northwestern University in 1977. He has been with PNNL for nearly 25 years and has been a member of the VPP Steering Committee since 2006. Dr. Goheen was co-chair of the VPP for 4 years and has been chair of the 24-7 subcommittee for over 5 years. He is a certified Special Government Employee and has served on assessments for VPP several times at the Hanford site as well as at the Los Alamos National Laboratory and at the Nevada National Security Site. In 2007, Dr. Goheen presented a paper at the ISM Workshop in Brookhaven titled “The Value of VPP in Improving Safety Culture in an R&D Environment.”

Joe Ortega has an associate degree in electronics with over 20 years of instrument/electrical/computer experience. He is a member of PNNL’s VPP steering committee and the chair of the committee’s sidewalk and parking lot safety subcommittee.

Attachment 2
SAFETY CONSCIOUS WORK ENVIRONMENT (SCWE)
SELF ASSESSMENT PLAN

PNNL

Safety Conscious Work Environment (SCWE)

Self-Assessment Plan

April 2013

Prepared by: Cindy Caldwell 5-1-2013

Cindy Caldwell — **Date**
ESH Senior Technical Advisor
Pacific Northwest National Laboratory

Approved by: Cameron M Andersen 5-2-13

Cameron Andersen — **Date**
EHS&S Director
Pacific Northwest National Laboratory

M. H. Schlender 5/3/13

Mike Schlender — **Date**
Associate Laboratory Director
Pacific Northwest National Laboratory

1.0 Purpose & Scope

The Department of Energy's (DOE's) Implementation Plan (IP) for Defense Nuclear Safety Board (DNFSB) recommendation 2011-1 commits each defense nuclear Field Office and Contractor to perform extent of condition reviews to determine whether safety culture weaknesses exist and to identify gaps to achieving an outstanding safety culture. The objective of this evaluation is to assess the extent that Pacific Northwest National Laboratory (PNNL) models the behaviors of an outstanding Safety Conscious Work Environment (SCWE) and identify strengths and improvement opportunities.

The evaluation will follow the SCWE Self-Assessment Guidance (rev G) developed for Action 2-4 of the IP. The guidance is based on Attachment 10 of DOE G 450.4-1C, Integrated Safety Management System (ISMS) guide (rev 9/2011). The ISMS Guide identifies three safety culture focus areas and associated attributes. Those that will be used as the SCWE self-assessment lines of inquiry are highlighted:

1. Leadership
    - **a. Demonstrated safety leadership**
    - b. Risk-informed, conservative decision making
    - **c. Management engagement and time in field**
    - d. Staff recruitment, selection, retention, and development
    - **e. Open communication and fostering an environment free from retribution**
    - **f. Clear expectations and accountability**
2. Employee/Worker Engagement
    - a. Personal commitment to everyone's safety
    - **b. Teamwork and mutual respect**
    - c. Participation in work planning and improvement
    - d. Mindful of hazards and controls
3. Organizational Learning
    - **a. Credibility, trust and reporting errors and problems**
    - **b. Effective resolution of reported problems**
    - **c. Performance monitoring through multiple means**
    - d. Use of operational experience
    - **e. Questioning attitude**

2.0 Team Members

The evaluation team is shown below. The team has experience in evaluation activities and related experience in assessing organizational behavior and safety culture.

Primary Team Members

Team Lead
Kami Lowry, ISM Program Manager, PNNL

Team Advisor (independent)
Joy Kibbee, Performance Assurance, INL

Team Executive (independent)
Lanette Adams, Director Safety Culture and Analysis, MSA

Safety Culture SME
Cindy Caldwell, ESH Senior Technical Advisor, PNNL

Others
Russ Haffner, Quality and Assurance Manager, PNNL
VPP Steering Committee member

3.0 Methodology

In addition to a review of written direction and processes, a combination of data collection methods will be used to provide a more comprehensive understanding of the attitudes and behaviors of the organization. The approach used will confirm the results obtained through the use of one method with results obtained through the use of another method to provide convergent validity of the results. Methods to be used by the team will include the following:

Direct observations of work place behavior

Operational Culture survey results

Engagement survey results

Face to face interviews

Focus Group Interview

Documentation associated with key SCWE processes and other related documentation

Direct observation of work place behavior:

Behavioral observations will be used to provide an assessment of particular organizational behaviors and critical processes including work planning, work performance, management meetings, and responses to events. See Attachment 3, meeting observation form.

Individual and Focus Group Interviews:

The protocol for semi-structured interviews and focus groups will be derived from Safety Conscious Work Environment Self Assessment Guidance issued by the Department of Energy in response to DNFSB recommendation 2011-1. Interview and focus group questions are derived from a data base of interview question (Attachment 2).

Operational Culture Survey/Engagement Survey results

Staff surveys will be used to understand perceptions related to behaviors of interest for a broad sample of individuals from within the organization.

Review of key documentation:

During data collection the team will review a wide variety of documents including:

- Employee concerns policies and procedures relative to harassment and retaliation.
- Issues management/corrective action procedures
- Records from the Contractor Assurance systems and associated management review meetings
- Contract mechanisms
- Employee engagement survey 2012
- Summary of survey findings: Operational Excellence/VPP 2012 -2013
- Operational Excellence Culture Evaluation 2012
- Focus Group Interviews Summary Report. March 30, 2012.
- Extent of Cause review: Management Judgment, Risk, Acceptance and Culture 2013.
- Third party Assessment: 2012 VPP Recertification Review
- Independent Oversight Assessment: Staff Concerns Program 2012

4.0 Schedule

The performance period for this evaluation is from December 2012 to March 2013. The Team Lead will issue a final report no later than May 31, 2013.

- April 2012: Review plan finalized
- May 2013: Review of supporting documentation (assessments, presentations, reviews, reports)
- May 2013: On-site evaluation, summary conclusions and report development

Final Report

The Team Leader will develop a report to document the results of the evaluation. These results will be reported to PNNL leadership and PNSO.

The format for the report will be the following:

Title and Signature Page(s) - The cover and title page state the subject, and the date of the verification. A signature page should be provided. The final report will include a signature from the team leader and team advisor that signify the team's agreement as to the report content and conclusions.

Executive Summary – The summary provides a synopsis of the review, strengths and weaknesses identified, and conclusions drawn. The executive summary will introduce information and direct the reader to those portions of the report that provide more detail concerning the information. The executive summary will include:

- a brief synopsis of the self-assessment which provides information concerning the team's evaluation;
- a discussion of noteworthy practices and opportunities for improvement, and
- whether contract incentives and performance measures achieve balanced priorities and include safety culture elements, and
- a conclusion regarding the effectiveness of SCWE-related processes and whether noted opportunities for improvement indicate a need for a further, more in-depth assessment of safety culture, and the team's recommendations for improvement.

Introduction - The introduction will provide information related to the team composition, use of the LOI's, and a summary of the review process and methodologies used in the self-assessment.

Assessment Results - The report will present both a summary level discussion of self-assessment results as they pertain to the three ISM safety culture Focus Areas and the supplemental review area previously discussed within this guidance document, along with an analysis as they pertain to each of the SCWE-related attributes under each focus area. The attribute-level analysis should include the team's summary evaluation of the level of implementation and effectiveness for each attribute.

Any deviations from the LOI guidance should be discussed, along with the reasons for the deviation(s) and the appropriate approvals for these deviations.

Conclusions and Recommendations - This section will summarize the team's overall interpretation of the self-assessment results. It will include a discussion concerning the effectiveness of SCWE-related processes, (including but not limited to Employee Concerns Program and Differing Professional Opinions) and whether contract incentives and performance measures achieve balanced priorities and include safety culture elements. This section should also include an overview of SCWE-related opportunities for improvement, the team's recommendations for improvement, and the team's conclusion as to whether a further, more in-depth assessment of safety culture is needed.

Attachment 1

SCWE SELF-ASSESSMENT
LINES of INQUIRY

SCWE SELF-ASSESSMENT
LINES of INQUIRY

Focus Area 1: LEADERSHIP

Demonstrated safety leadership

- Line managers enhance work activities, procedures and process with safety practices and policies.
- Leaders acknowledge and address external influences that may impose changes that could result in safety concerns.
- Line managers clearly understand their work activities and performance objectives, and how to safely conduct their work activities to accomplish their performance objectives.
- Line managers demonstrate their commitment to safety through their actions and behaviors, and support the organization in successfully implementing safety culture attributes, by conducting walk-throughs, personal visits, and verifying that their expectations are met.
- The organizational mission and operational goals clearly identify that production and safety goals are intertwined, demonstrating commitments consistent with highly reliable organizations.

Management engagement and time in field

- Maintaining operational awareness is a priority. Line managers are in close contact with the front-line employees. Line managers listen and act on real-time operational information. Line managers identify critical performance elements and monitor them closely.
- Line managers spend time on the floor and in employee work areas. Line managers practice visible leadership by placing ―eyes on the work,‖ asking questions, coaching, mentoring, and reinforcing standards and positive behaviors. Deviations from expectations are corrected promptly and, when appropriate, collectively analyzed to understand why the behaviors occurred.
- Managers set an example for safety through their personal commitment to continuous learning and by direct involvement in high-quality training that consistently reinforces expected employee behaviors.

Open communication and fostering an environment free from retribution

- A high level of trust is established in the organization.
- Reporting individual errors is encouraged and valued. Individuals feel safe from reprisal when reporting errors and incidents.
- Individuals at all levels of the organization promptly report errors and incidents and offer suggestions for improvements.
- A variety of methods are available for personnel to raise safety issues and line managers promptly and effectively respond to personnel who raise safety issues.
- Leaders proactively detect situations that could result in retaliation and take effective action to prevent a chilling effect.
- The organization addresses disciplinary actions in a consistent manner; disciplinary actions are reviewed to ensure fair and consistent treatment of employees at all levels of the organization.

Clear expectations and accountability

- Line managers provide ongoing performance reviews of assigned roles and responsibilities reinforcing expectations and ensuring key safety responsibilities and expectations are being met.
- Personnel at all organizational levels are held accountable for standards and expectations. Accountability is demonstrated both by recognizing excellent performance as well as identifying less-than-adequate performance. Accountability considers intent and organizational factors that may contribute to undesirable outcomes.
- Willful violations of requirements and performance norms are rare. Individuals and organizations are held accountable in the context of a just culture. Unintended failures to follow requirements are promptly reported, and personnel and organizations are acknowledged for self-identification and reporting errors.

Focus Area 2: EMPLOYEE/WORKER ENGAGEMENT

Teamwork and mutual respect

- Open communications and teamwork are the norm.
- Individuals at all levels of the organization listen to each other and effectively engage in crucial conversations to ensure meaning, intent and viewpoints are understood; and that differing points of view are acknowledged.
- Discussion on issues focus on problem solving rather than on individuals.
- Good news and bad news are both valued and shared.

Focus Area 3: ORGANIZATIONAL LEARNING

Credibility, trust and reporting errors and problems

- Credibility and trust are present and continuously nurtured so that a high level of trust is established in the organization.
- Organizations, managers and line supervisors provide accurate, relevant and timely information to employees. Line managers are skilled in responding to employee questions in an open, honest manner.
- Reporting individual errors is encouraged and valued. Individuals are recognized and rewarded for self-identification of errors.
- Line managers encourage and appreciate safety issue and error reporting.
- Managers and line supervisors demonstrate integrity and adhere to ethical values and practices to foster trust.
- Managers and line supervisors demonstrate consistency in approach and a commitment to the vision, mission, values and success of the organization as well as the individuals (people).
- Mistakes are used for opportunities to learn rather than blame.
- Individuals are recognized and rewarded for demonstrating behaviors consistent with the safety culture principles.

Effective resolution of reported problems

- Vigorous corrective and improvement action programs are established and effectively implemented, providing both transparency and traceability of all corrective actions. Corrective action programs effectively prioritize issues, enabling rapid response to imminent problems while closing minor issues in a timely manner to prevent them from escalating into major issues.

- Results from performance assurance activities are effectively integrated into the performance improvement processes, such that they receive adequate and timely attention. Linkages with other performance monitoring inputs are examined, high-quality causal analyses are conducted, as needed, and corrective actions are tracked to closure with effectiveness verified to prevent future occurrences.
- Processes identify, examine and communicate latent organizational weaknesses that can aggravate relatively minor events if not corrected. Organizational trends are examined and communicated.
- Organizational systems and processes are designed to provide layers of defenses, recognizing that people are fallible. Lessons learned are shared frequently; prevention and mitigation measures are used to preclude errors from occurring or propagating. Error-likely situations are sought out and corrected, and recurrent errors are carefully examined as indicators of latent organizational weaknesses.
- Incident reviews are conducted promptly after an incident to ensure data quality and to identify improvement opportunities. Causal analysis expertise is applied effectively to examine events and improve safe work performance. High-quality causal analysis using multi-discipline analytical perspectives is the norm. Causal analysis is performed on a graded approach for major and minor incidents, and near-misses, to identify causes and follow-up actions. Even small failures are viewed as windows into the system that can spur learning.
- Performance improvement processes require direct worker participation. Individuals are encouraged, recognized and rewarded for offering innovative ideas to improve performance and to solve problems.

Performance monitoring through multiple means

- Line managers maintain a strong focus on the safe conduct of work activities. Line managers maintain awareness of key performance indicators related to safe work accomplishment, watch carefully for adverse trends or indications, and take prompt action to understand adverse trends and anomalies. Management employs processes and special expertise to be vigilant for organizational drift.
- Performance assurance consists of robust, frequent, and independent oversight conducted at all levels of the organization. Performance assurance includes independent evaluation of performance indicators and trend analysis.
- Line managers throughout the organization set an example for safety through their direct involvement in oversight activities and associated performance improvement.
- The organization actively and systematically monitors performance through multiple means, including leader walkarounds, issue reporting, performance indicators, trend analysis, benchmarking, industry experience reviews, self-assessments, peer reviews, and performance assessments.
- The organization demonstrates continuous improvement by integrating the information obtained from performance monitoring to improve systems, structures, processes, and procedures.
- Line managers are actively involved in all phases of performance monitoring, problem analysis, solution planning, and solution implementation to resolve safety issues.
- The organization maintains an awareness of its safety culture maturity. It actively and formally monitors and assesses its safety culture on a periodic basis.

Questioning attitude

- Line managers encourage a vigorous questioning attitude toward safety, and foster constructive dialogues and discussions on safety matters.

- Individuals cultivate a constructive, questioning attitude and healthy skepticism when it comes to safety. Individuals question deviations, and avoid complacency or arrogance based on past successes. Team members support one another through both awareness of each other's actions and constructive feedback when necessary.
- Individuals pay keen attention to current operations and focus on identifying situations where conditions and/or actions are diverging from what was assumed, expected, or planned. Individuals and leaders act to resolve these deviations early before issues escalate and consequences become large.

Supplemental Information Topic: Performance Measures and Contract Incentives

Contract incentives achieve a reasonable balance between cost/schedule and safety pressures.
What incentives are in place to prevent budget or schedule pressures from impairing the effectiveness of formal processes for identifying, documenting, and resolving: nuclear safety, quality, and technical concerns; along with issues raised by employees; and issues associated with the management of complex technical issues?

Performance metric insights into SCWE
What insight does Performance Assurance System data provide regarding SCWE and whether the organization learns from safety concerns? The recommended team approach is to evaluate the issues management system to determine whether: 1) when employees raise issues, are they involved in determining the solution, 2) do they receive feedback on the resolution of their concerns, 3) do workers actively participate in the preparation and execution of corrective actions, 4) are employees a part of improvement initiatives at their work locations, and 5) whether performance indicator trends show that the system is being effectively used by workers and managers to identify and address issues (e.g., trends could exist in: the rate of corrective action completion, the number of overdue corrective actions, the average age of incomplete corrective actions, or the number of issues deemed as recurring).

What evidence exists to show decision making reflects a safety first attitude? The recommended approach is to evaluate operations and management information/metrics to determine whether trends and changes are present in performance indicators, such as: 1) rate of unplanned LCO entries; 2) rate and nature of procedural violations; 3) the rate of deferred/overdue training; 4) currency of SCWE-related procedures and policies (e.g., Differing Professional Opinion process, Employee Concerns Program); and 5) number of problem identification reports submitted on a periodic basis (e.g., monthly).

What evidence exists to show how effectively the organization monitors the SCWE aspects of their safety culture? The recommended team approach is to evaluate performance assurance system information to determine what trends and changes are present in performance indicators such as: 1) rates of overdue/delayed/cancelled audits & assessments; 2) the number and quality of findings; 3) turnover in audit/assessment staff; 4) rate and nature of externally- vs. internally-identified findings; and 5) the rate and nature of reportable events.

What evidence exists that demonstrates managers/supervisors perform first hand observations of the work environment, listen to workers, and make changes where necessary? The recommended team approach is to evaluate performance assurance system information to determine what trends and changes are present in performance indicators such as: 1) the number of management observations by

senior managers; 2) the number of management observations that identify deficiencies or best practices; and 3) the number of deficiencies or best practices that result in change.

What evidence exists that demonstrates the organization maintains nuclear facilities in a manner that supports both production and the safe performance of work? The recommended team approach is to evaluate facility performance metrics to determine what trends and changes are present in performance indicators such as: 1) the number and age of LO/TO hanging; 2) the number and age of temporary modifications; 3) the rates of deferred maintenance; and 4) the number and age of inoperable or impaired safety systems.

Attachment 2:

DATABASE SCWE INTERVIEW QUESTIONS

Interview Questions for Mid-Level Management and First Line Supervisors

LEADERSHIP

Attribute: Demonstrated safety leadership

1. What is your safety philosophy?
    a. How do you communicate your expectations throughout your organization?
    b. How often and by what means do you reinforce those expectations?
2. Does anyone besides your immediate supervisor provide you direction? If so, who are they and have they provided expectations related to safe performance of work to you? If so, what are those expectations and how have they imparted them to you?
3. What is your expectation regarding workforce actions when they determine:
    a. They cannot perform the activity consistent with governing procedures?
    b. They encounter conditions during the performance of work that were not expected?
4. When subcontractors perform work within your area of responsibility:
    a. How do you establish the flow down of requirements and associated R2A2 to subcontractor personnel?
    b. How have you assured yourself that subcontractor management, supervision and/or staff are competent to fulfill their R2A2?
    c. What actions have you taken that demonstrate your commitment to safety? Examples?
5. How do you ensure that work is performed safely **and** on schedule?"
6. Give some examples how you demonstrate that work must be performed safely and completed on time?
7. How effectively and clearly does senior management give direction? Examples? Please explain.
8. How does senior management communicate current safety issues and safety improvement focus areas? Examples? Please explain.
9. Has safety leadership improved at your facility/site during the past 2 years? Examples? Please explain.
10. What do you think your biggest issue is regarding performing work safely?

Attribute: Management engagement and time in field

1. How much time do you spend and how often are you in the field monitoring work performance and reinforcing expectations? Is this enough to effectively monitor expectations? Provide an example of where your observations and intervention resulted in a positive change affecting safe performance of work?

2. Do you see managers above you in the field enough to effectively monitor work performance and reinforce expectations?

3. Do you know enough of what goes on around the workgroup levels at the plant? Examples? Please explain.

4. How do managers and supervisors provide coaching, mentoring, and feedback for their field observations with the group they observed? Examples? Please explain.

5. What are the organization's expectations or requirements for management spending time in the field? Do you feel this expectation is being met? Do you have an example of a work activity improvement that happened as a result of your management time in the field?

Attribute: Open communication and fostering an environment free from retribution

1. When a safety concern is raised, what happens?

2. What are some reasons you might not raise a safety issue, other than fear of retaliation?

3. What are some forms that retaliation might take in your organization? Are there subtle forms that outsiders might not see or understand?

4. What is the level of trust in your organization, up the line, down the line, and in your peer group? Why did you answer the way you did?

5. Do you have an example of when a safety concern was raised, how it was addressed? Who was it raised to? How long did it take to address the issue? How was it documented?

6. Have you ever had to deal with an issue that involved retaliation to the worker that raised an issue?

7. Do you have an example of where disciplinary action was imposed on a worker that was previously involved with raising a safety issue?

8. Do you have an example of something you do to detect the presence of retaliation in the workplace?

9. Do you have an example where a worker in your group used an alternate method of raising an issue? Did that bother you that they used this method?

10. Describe your organization's process and methods for reporting issues, errors and problems. Do you have any examples where a worker documented an issue formally in the problem reporting system? How did you feel about this?

11. Have expectations for raising issues without reprisal been communicated to your employees? How was this accomplished? How often are the communicated?

12. What sort of backlog do you have for problem reports and what is the typically response time to address an issue?

Attribute: Clear expectations and accountability

1. What are your responsibilities, authorities, and accountabilities for safe performance of work? Are these documented? How are you held accountable to these?

2. How do managers and supervisors recognize excellent performance?

3. How do managers hold personnel accountable for less-than-adequate performance? Examples? Please explain.

4. How does your supervisor reinforce his/her expectations for the safe performance of work? Examples? Please explain.

5. Is safety a part of your performance review?

6. How do your subordinates react to their peers bringing forward a safety issue? Has any inappropriate behavior been addressed by you?

7. How do you know that your disciplinary process is fair? Does it consider how the organization may have contributed to the action? Does it consider the possibility of retaliation for raising safety issues? What do you do to make sure actions taken are perceived as fair by the workforce?

EMPLOYEE/WORKER ENGAGEMENT

Attribute: Teamwork and mutual respect

1. How do individuals and teams work across workgroup boundary lines maintain a focus on doing work safely? Examples? Please Explain.

2. Do you have any examples where bullying or humiliating behaviors were demonstrated by peers of management? Examples? Please explain. Were they addressed and how?

3. Does your peer group tolerate bullying or humiliating behavior? Can you give examples?

4. When disagreements about safety are brought up, what happens?

5. Can you identify a situation where an employee was recognized for bringing up an issue by management?

6. Can you identify a situation where an employee issue seemed to interfere with addressing a problem the employee raised with management?

ORGANIZATIONAL LEARNING

Attribute: Credibility, trust and reporting errors and problems

1. Describe the most important safety related issue or concern that is on your mind. Have you taken any actions to resolve it?

2. Do you have an example where an employee was encouraged to offer innovative ideas, concerns, suggestions, differing opinions, and questions to help identify and solve problems? Examples? Please explain.

3. Do you have an example where employees openly discuss factors in a mistake they were involved with? Are employees concerned about potential personal consequences when discussing a mistake? How are mistakes viewed by the organization? Examples? Please explain.

4. Typically, is there open sharing of information on important facility/organization issues and changes that are expected? Examples? Please explain

5. Do you have an example of an employee who was encouraged and/or who was shown appreciation for raising safety issue and error reporting? Please explain.

6. Do you have any examples where your manager made a decision regarding safety that you had to implement? How did this affect your trust level in the manager?

7. Do you have an example of someone who made an honest mistake and how they were dealt with by management? What happened to that person? Have you noticed any difference in how mistakes that affect production are handled to compare to mistakes that affected safety?

Attribute: Effective resolution of reported problems

1. How do your corrective action programs communicate feedback and closure to individuals who have identified issues related to safety?

2. Does your corrective action process take steps to determine if the corrective actions taken are effective? How does it work?

3. How are problem reports viewed by management?

4. How timely are issues addressed?

5. Are workers contacted to discuss their issues in the process? If so, when does the communication occur?

6. Are there performance indicators that are available to show the health of the corrective action management system? Who looks at them? Has any action resulted from the PIs?

7. Do you have an example of using a lessons learned in your organization?

8. How often do workers bring up issues? In what way or system? How do you know this is good enough?

9. Do you have an example of a worker(s) being encouraged to raise issues?

10. Do you have an example where the cause of an issue was focused on the individual alone?

11. Do you have an example where you identified the cause of an issue within the organization such as poor communication, or poor procedures?

Attribute: Performance monitoring through multiple means

1. Is safety information discussed with the workforce? Do you have any examples of recent safety performance items shared/discussed by you?

2. Is safety performance measured?

3. Do you have an example of safety performance information that was used to improve overall performance?

4. Are near-misses routinely reported? When they are reported, does management take them seriously and learn from them?

Attribute: Questioning attitude

1. Do you have an example of your staff stop a job to question work in progress? Examples? Please explain.

2. Do you have an example of any dialogue and debate regarding evaluating issues related to safe production? Examples? Please explain.

3. Do you have an example of different approaches being discussed with the workforce before work is performed? What are some examples?

4. How would you rate the questioning attitude of your organization? Is questioning "status quo" a valued and expected practice or discouraged? Is this practice routine or the exception?

5. Do you have an example of a discussion being held, either formally or informally, about how tasks can be improved?

6. Is there time given to communicate improvements/ideas?

Interview Questions for General Worker and Staff

LEADERSHIP

Attribute: Demonstrated safety leadership

1. Are you aware of safety related expectations of your supervisor and can you describe them? How does your supervisor communicate his/her safety expectations to you?

2. Do you believe that the organization views safety more important than schedule? Examples? Please explain.

3. How does management communicate current safety issues and safety improvement focus areas? Examples? Please explain.

4. Has safety leadership improved at your facility/site during the past 2 years? Examples? Please explain.

5. How does your supervisor support senior management policies and direction? Examples? Please explain.

6. How do your Line managers' actions demonstrate their commitment to safety? Examples? Please explain.

7. What do you think the organization's biggest issue is regarding performing work safely?

Attribute: Management engagement and time in field

1. How often do you see supervisors/managers in the field monitoring work performance and reinforcing expectations? Can you provide examples of where their observations and intervention resulted in either a positive or negative change affecting safe performance of work?

2. Does management really know what goes on around the workgroup levels at the plant? Examples? Please explain.

3. Typically, do the managers and supervisors provide feedback on their field observations? Examples? Please explain.

4. When out in the field, do leaders typically reinforce safety standards and display behaviors that reflect safety as an overriding priority? Examples? Please explain.

5. Do changes happen as a result of management time in field?

Attribute: Open communication and fostering an environment free from retribution

1. What are some reasons you might not raise a safety issue, other than fear of retaliation?

2. What are some forms that retaliation might take in your organization? Are there subtle forms that outsiders might not see or understand?

3. What is the level of trust in your organization, up the line, down the line, and in your peer group? Why did you answer the way you did?

4. How do managers and supervisors respond to employee questions and concerns? Examples? Please explain.

5. When management resolves conflicts, are the outcomes typically fair and reasonable? Examples? Please explain.

6. Do you feel comfortable to go to your supervisor, employee control program, or (if a contractor) the DOE to report problems? Examples? Please explain.

7. When peers raise a safety concern, what happens?

Attribute: Clear expectations and accountability

1. What are your responsibilities, authorities, and accountabilities for safe performance of work? Where are these documented? How are you held accountable to these?

2. Is safety a part of your performance review?

3. If a procedure or activity is incorrect, do you feel comfortable stopping work to resolve the problem? Examples? Please explain.

4. How does your supervisor reinforce his/her expectations for the safe performance of work? Examples? Please explain.

5. Is your disciplinary process is fair? Does it consider how the organization may have contributed to the action? Does it consider the possibility of retaliation for raising safety issues?

EMPLOYEE/WORKER ENGAGEMENT

Attribute: Teamwork and mutual respect

1. Is it common for work teams to discuss safety during pre-job briefs, work planning walk-downs or team meetings? Examples? Please explain.

2. How collaborative and cooperative are the different work groups associated with project and operational activities? Examples? Please explain.

3. Are bullying or humiliating behaviors clearly not tolerated or demonstrated by leaders – either formally or informally? Examples? Please explain.

4. How often do safety conversations with your peers and your supervisor occur? Examples? Please explain.

5. When disagreements about safety are brought up, what happens? How do individuals and teams work across workgroup boundary lines maintain a focus on doing work safely? Examples? Please Explain.

6. Does your peer group tolerate bullying or humiliating behavior? Can you give examples?

7. When disagreements about safety are brought up, what happens?

ORGANIZATIONAL LEARNING

Attribute: Credibility, trust and reporting errors and problems

1. Are managers, supervisors and other leaders willing to accept performance and change their behavior? Examples? Please explain.

2. Do you trust your supervisor to make good decisions in regards to your safety?

3. When someone makes an honest mistake that affects safety, what happens to that person? What about mistakes that affect production?

4. Do managers respond in a timely manner to issues that are brought to their attention? Describe the most important safety related issue or concern that is on your mind. Have you taken any actions to resolve it?

5. Do you have an example where an employee was encouraged to offer innovative ideas, concerns, suggestions, differing opinions, and questions to help identify and solve problems? Examples? Please explain.

6. Do you have an example where employees openly discuss factors in a mistake they were involved with? Are employees concerned about potential personal consequences when discussing a mistake? How are mistakes viewed by the organization? Examples? Please explain.

7. Typically, is there open sharing of information on important facility/organization issues and changes that are expected? Examples? Please explain

8. Do you have an example of an employee who was encouraged and/or who was shown appreciation for raising safety issue and error reporting? Please explain.

Attribute: Effective resolution of reported problems

1. How well are you informed about corrective actions taken (including results) to correct problems that affect your workgroup?

2. Are you encouraged to solve problems or invited to participate in performance improvement processes? Examples? Please explain.

3. How do your corrective action programs communicate feedback and closure to individuals who have identified issues related to safety?

4. Typically how effective are corrective actions taken to resolve workplace safety concerns?

Attribute: Performance monitoring through multiple means

1. How does supervision share safety or other information?

2. Do you have an example of safety performance information shared by your supervision?

Attribute: Questioning attitude

1. Do you have an example of stopping a job to question work in progress? Examples? Please explain.

2. How would you rate the questioning attitude of your organization? Is questioning "status quo" a valued and expected practice or discouraged? Is this practice routine or the exception?

3. Is there time given to communicate improvements/ideas? Do you have an example of discussions about how tasks can be improved?

Interview Questions for Senior Management

LEADERSHIP

Attribute: Demonstrated safety leadership

1. What is your safety philosophy?
    a. How do you communicate your expectations throughout your organization?
    b. How often and by what means do you reinforce those expectations?
2. How do you and your subordinate managers integrate safety responsibilities when establishing mission and operational goals?
3. How do you and your subordinate managers establish safety expectations, communicate their expectations to employees, and verify their performance expectations are being met?
4. Do you have examples of situations where external factors could have impacted the safe performance of work and actions that were taken by the organization?
5. How do you and your subordinate managers encourage (and cultivate the use of) a questioning attitude?
6. How is the contract incentivized to achieve a reasonable balance between cost/schedule and safety pressures? For example, what incentives are in place to prevent budget or schedule pressures from impairing the effectiveness of formal processes for identifying, documenting, and resolving safety, quality, and technical concerns and issues raised by employees and for managing complex technical issues? If not so incentivized, how do you assure you are not critically diminishing the effectiveness of important Safety Management Programs, specifically including those associated with issue identification and corrective action management, when faced with undue budget and schedule pressures?
7. How do you link safety to strategic issues like budget, production, workforce planning, equipment reliability, backlog work-downs, etc.? Examples? Please explain.
8. Has safety leadership improved at your facility/site during the past 2 years? Examples? Please explain.
9. How have you assured your subordinate management, supervision and/or staff are competent to fulfill their responsibilities?

Attribute: Management engagement and time in field

1. What are the organizations expectations or requirements for management spending time in the field?
2. What are management's expectations for observing field activities?
3. Do changes happen as a result of management time in field?
4. What is the value of management field presence?

Attribute: Open communication and fostering an environment free from retribution

1. What are some forms that retaliation might take in your organization? Are there subtle forms that outsiders might not see or understand?

2. What is the level of trust in your organization, up the line, down the line, and in your peer group? Why did you answer the way you did?

3. Do you have an example of something the organization does to detect the presence of retaliation in the workplace?

Attribute: Clear expectations and accountability

1. How do employees know what standards of behavior and work performance are expected of them in the conduct of work? Examples? Please explain.

2. What are your responsibilities, authorities, and accountabilities for safe performance of work? Are these documented? How are you held accountable to these?

3. What gives you confidence that your disciplinary process is fair? Does it consider how the organization may have contributed to the action? Does it consider the possibility of retaliation for raising safety issues? What do you do to make sure actions taken are perceived as fair by the workforce?

EMPLOYEE/WORKER ENGAGEMENT

Attribute: Teamwork and mutual respect

1. Do you have any examples where bullying or humiliating behaviors were demonstrated by peers of management? Examples? Please explain. Were they addressed and how?

ORGANIZATIONAL LEARNING

Attribute: Credibility, trust and reporting errors and problems

1. How are employees encouraged to offer innovative ideas, concerns, suggestions, differing opinions, and questions to help identify and solve problems? Examples? Please explain.

2. Describe the most important safety related issue or concern that is on your mind. Have you taken any actions to resolve it?

3. How is information shared on important facility/organization issues and significant changes? Examples? Please explain

Attribute: Effective resolution of reported problems

1. How do your corrective action programs communicate feedback and closure to individuals who have identified issues related to safety?

2. Are there performance indicators that are available to show the health of the corrective action management system? Who looks at them? Has any action resulted from the PIs?

Attribute: Performance monitoring through multiple means

1. What methods does the organization use to understand operational performance and manage risk? How does organization integrate safety into the indicators? Examples? Please explain.

2. How does the organization communicate the results of safety indicator trending to staff? Examples? Please explain.

Attribute: Questioning attitude

1. How is dialogue and debate encouraged – as well as modeled by management -when evaluating issues related to safety? Examples? Please explain.

2. How would you rate the questioning attitude of your organization? Is questioning "status quo" a valued and expected practice or discouraged? Is this practice routine or the exception?

Attachment 3:

MEETING OBSERVATION FORM

Meeting Name: _____

Key Managers Present: _____

Meeting Descriptors	Y N NA Circle only one	Comments
Content		
Was there an agenda for the meeting?	Y N NA	
Were agenda items prioritized and assigned approximate time?	Y N NA	
Were safety aspects discussed, if applicable?	Y N NA	
Was the purposed of the meeting clear?	Y N NA	
Was any material used in the meeting provided in advance?	Y N NA	
Leader Behaviors		
Did the leader generally maintain focus and efficient use of time?	Y N NA	
• Did the meeting start on time?	Y N NA	
• Did the meeting end on time?	Y N NA	
• Were there distracting side-bar conversations?	Y N NA	
• Were inappropriate behaviors challenged?	Y N NA	
Did the leader behaviors contribute to candid discussions?	Y N NA	
Did the leader seek out differing points of view?	Y N NA	
Did the leader draw out less active participants?	Y N NA	
Were actionable items assigned by name and with a due date?	Y N NA	
Participant Behaviors		
Did attendees appear to be prepared and knowledgeable?	Y N NA	
If there were “stand-ins”, did they actively participate?	Y N NA	
Did all attendees participate in discussions?	Y N NA	
Did all attendees have access to handouts?	Y N NA	
Did participants meet obligations from prior meeting?	Y N NA	
Other:	Y N NA	
Other:	Y N NA	