Safety Conscious Work Environment
Self-Assessment of
Savannah River Remediation

Summary Report
Prepared by Michael D. Matheny
Contractor Assurance Manager

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Executive Summary

Consistent with the direction from the U.S. Department of Energy Savannah River Operations Office (DOE-SR) [Integrated Safety Management System (ISMS) Declaration, ISMS Description Document, and Performance Measures, Objectives and Commitments (POMCs); OSQA-13-0002, Smith to Schlismann; dated 10/10/12] Savannah River Remediation LLC (SRR) performed a Safety Conscious Work Environment (SCWE) self-assessment by conducting a Nuclear Safety Culture (NSC) self-assessment, which includes SCWE. In addition, during an Integrated Independent Evaluation (IIE) of the Tank Farms/Effluent Treatment Project, supplemental topics from the DOE SCWE Self-Assessment Guidance document were evaluated [ref. Safety Conscious Work Environment Self-Assessment Guidance, Revision G which was attached to DOE Memorandum, Fiscal Year 2012 Annual Integrated Safety Management System and Quality Assurance Effectiveness Review Declaration, dated 9/26/12].

Overall, the assessment team found that SRR generally has a healthy nuclear safety culture. However, weaknesses were identified in the following areas:

- Utilizing formal operational decision making and change management processes
- Fostering open communications
- Communicating effectively regarding resource allocation during times of budget constraints, and on operational and organizational issues and decisions
- Identifying and resolving of problems
- Monitoring performance through the use of trending

Relevant also to the SCWE at SRR, the team noted that none of the individuals interviewed expressed concerns of retaliation for raising safety concerns.

Introduction

The SRR SCWE self-assessment was conducted utilizing two processes:

- SRR Nuclear Safety Culture assessment was performed in April 2012 (survey) and August 2012 (interviews, observations and analysis of data)
- Integrated Independent Evaluation (IIE) of the Tank Farms/Effluent Treatment Project performed in November 2012

In August 2012, SRR conducted a Nuclear Safety Culture (NSC) self-assessment with the assistance of the Institute of Nuclear Power Operations. The self-assessment team was composed of nuclear power industry representatives, SRR employees, representatives from other DOE sites, and clerical staff. The assessment team leader was previously a nuclear power plant manager. The team leader has led...
several previous assessments at nuclear power plants and had been assessed numerous times while managing nuclear power operations. The team leader was assisted in the performance of leadership duties by two behavioral scientists, with a combined experience of over 100 such assessments. Six two-person teams, each consisting of an SRR employee and a non-SRR employee, performed interviews, and analyzed the combined data from the survey and interviews. All team members participated in a three-day training class conducted one month prior to the assessment with an emphasis on effective interview techniques. The clerical staff provided daily support to process the large amount of information collected by the teams. DOE-SR and HSS personnel also participated in the training and provided oversight of the assessment during its conduct.

The primary techniques utilized to obtain data and information was the administration of an NSC survey and performance of interviews. An NSC Survey administered in April 2012 was completed by over 50% of the SRR workforce, representing all work disciplines, generating data which was then augmented by interviews. Seventy-nine interviews were performed with approximately 110 people being interviewed. Care was taken to ensure that all major work groups were included in the interviews and interviewees were selected randomly. In addition, workplace meetings were observed by the team (e.g., shift turnovers, management review team meetings, pre-job briefings).

The assessment survey and interview questions were based on the 10 traits and associated attributes of a strong nuclear safety culture which are applied in the nuclear power industry. Interview and survey questions were specifically developed and utilized to ensure that each attribute was assessed adequately. The traits and attributes are shown in Attachment 1.

A comparison was performed of the NSC traits and attributes and the focus areas and attributes from the DOE SCWE Self-Assessment Guidance. Attachment 2 provides the results of the comparison, showing the alignment between the DOE and the NSC attributes. There are multiple NSC attributes that relate to each of the DOE attributes, and the questions related to each of the NSC attributes are consistent with meeting the DOE Self-Assessment objectives.

The DOE Guide provides two supplemental topics, Performance Measures and Contract Incentives that were not thoroughly covered during the NSC assessment. These supplemental topic areas were evaluated during a broad scope Integrated Independent Evaluation (IIE) performed in November 2012. Specific SCWE Lines of Inquiry (LOIs) were included as a special topic for the assessment. The IIE utilized the following LOIs:

- **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 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 was to evaluate the issues management system to determine 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 how effectively the organization monitors the SCWE aspects of its safety culture? The recommended team approach was 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 and 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 the organization maintains nuclear facilities in a manner that supports both production and safe performance of work? The recommended approach was to evaluate facility performance metrics to determine what trends and changes represent 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.

Assessment Results

Results from the NSC Self-Assessment and the IIE are summarized below organized by focus areas provided in the DOE SCWE Self-Assessment Guidance. The NSC trait categorization of each issue is annotated parenthetically as a cross reference. More detailed results from the NSC Self-Assessment are shown in Attachment 3 and are presented in the NSC format.

DOE Focus Area 1: Leadership

• Demonstrated safety leadership
  ○ A systematic and formal process for operational decision making has not been established. (Decision Making)
  ○ Management did not provide a consistent message about nuclear safety priorities during the recent period of budget uncertainty. (Resources)
  ○ A formal change management process to guide nontechnical changes does not exist at SRR. (Change Management)
  ○ The team noted that there is a lack of familiarity with nuclear safety culture language among many employees at SRR. While the nuclear safety culture behaviors were noted in many cases, it was often difficult for personnel to put these behaviors in the context nuclear safety culture principles. (General Observation)

• Management engagement in the field – no issues identified.
- Open communication and fostering an environment free from retribution
  - Improvement is needed in the implementation of the company’s clearly stated policy supporting the individual’s right to raise safety concerns without fear of harassment, intimidation, retaliation or discrimination. *(SCWE Policy)*
  - Some concerns were voiced to IE team members versus the use of established means. These employees voiced a desire for an anonymous feedback system as indicated during the NSC assessment. *(Finding from IE)*
- Clear expectations and accountability – no issues identified.

**DOE Focus Area 2: Employee/Worker Engagement**

- Team Work and Mutual Respect
  - While SRR has a Differing Professional Opinion (DPO) program, most of those interviewed were unaware of the details of the process. *(Conflict Resolution)*
  - Communications regarding the basis for key decisions should be improved. The team noted that management failed to take advantage of several opportunities to reinforce nuclear safety through their communications following some key decisions. *(Safety Communication)*

**DOE Focus Area 3: Organizational Learning**

- Credibility, trust and reporting errors and problems
  - The issues management system used by SRR (STAR) is thought by many to be too complex and difficult to use for the average user. Some find it intimidating and easy-to-use references are not readily available for the users. Further, it was also noted that expectations regarding when issues should be entered in STAR were not well understood. The team found that multiple alternative issue management systems are being used to collect and track issues. *(Problem Identification)*
  - Efforts should focus on fully integrating and accepting performance improvement as part of core business. For instance, issue identification (i.e., STAR input) is currently seen as a necessary evil focusing on action closure, rather than an opportunity for feedback and mistake prevention with a focus on innovation and creative problem solving. It is recommended that SRR consider benchmarking with nuclear power sites to integrate issues identification, analysis, trending, sentencing and resolution in order to take a more integrated approach. Management personnel, at all levels within the organization, were also observed placing emphasis on schedule results versus desired outcomes. *(Observation from IE based on supplemental topics)*
- Effective resolution of reported problems
  - There is a lack of confidence that the corrective action program will consistently lead to identified problems being corrected in a timely manner. Some stated their belief that often symptoms are addressed but that underlying issues are not. *(Issue Resolution)*
- Performance monitoring through multiple means
  - There is inadequate communication of trend information related to corrective actions and there is a shortage of effective guidance for use of STAR. It was noted that the existence of
multiple tracking systems makes the trending of issues management data overly difficult. *(Trending)*

- The Key Performance Indicators (KPIs) used at the facility level, as well as the KPIs used at the SRR level, could use improvement in the area of analysis and data presentation/detail. *(Observation from IIE based on supplemental topics)*
- Performance metrics are largely used to status and monitor progress; data analysis and trending to proactively detect and correct emerging performance issues could be improved. *(Observation from IIE based on supplemental topics)*

Questioning attitude – no issues identified. The team found that SRR personnel interviewed have a good questioning attitude and challenge the unknown. *(Questioning Attitude)*

**Conclusions and Recommendations**

Overall, the NSC assessment team found a reasonable alignment between the thoughts expressed by SRR employees and the ten traits and associated attributes of a strong nuclear safety culture applied in the nuclear power industry. Further, the staff demonstrated a respect for nuclear safety. However, three themes were identified that need to be addressed to strengthen the safety culture:

1. Problem identification and resolution was noted as an overall weakness. This key element of the nuclear safety culture is not recognized by most as a core business for the company.
2. Decisions are not being consistently communicated to strengthen commitment to and understanding of nuclear safety culture.
3. SRR has not implemented formal operational decision making and change management processes.

The team assessed SCWE at SRR and noted that no individuals interviewed expressed concerns of retaliation for raising safety concerns or engaging in protected activity.

It is recommended that SRR implement plans to address the cultural weaknesses identified. The results from the November 2012 IIE were consistent with the conclusions from the August 2012 Nuclear Safety Culture self-assessment. As such, it does not appear that a more detailed assessment is warranted. A follow-up assessment after improvement actions have had time to impact the culture would be prudent to verify effectiveness.
Attachment 1
Nuclear Power Industry Traits and Attributes of a Strong Nuclear Safety Culture

1. PERSONAL ACCOUNTABILITY
   a. Standards
   b. Job Ownership
   c. Teamwork

2. LEADERSHIP VALUES AND BEHAVIORS
   a. Constant Examination
   b. Leadership Behaviors
   c. Resources
   d. Incentives & Rewards
   e. Field Presence
   f. Strategic Safety Commitment
   g. Change Management
   h. Roles and Responsibilities

3. RESPECTFUL WORK ENVIRONMENT
   a. Respect Evident
   b. Opinions Valued
   c. High Trust Level
   d. Conflict Resolution

4. DECISION MAKING
   a. Consistent Process
   b. Conservative Bias
   c. Decision Accountability

5. QUESTIONING ATTITUDE
   a. Nuclear Special, Unique
   b. Challenge the Unknown
   c. Challenge Assumptions
   d. Avoid Complacency
   e. Human Performance

6. CONTINUOUS LEARNING
   a. Operating Experience
   b. Benchmarking
   c. Self-Assessment
   d. Training
7. PROBLEM IDENTIFICATION
   a. Identification
   b. Evaluations
   c. Resolution
   d. Trending

8. ENVIRONMENT FOR RAISING CONCERNS
   a. SCWE Policy
   b. Alternative Resolution

9. WORK PROCESSES
   a. Work Management
   b. Design Margins Maintained
   c. Documentation
   d. Procedure Adherence
   e. Active Risk Assessment

10. EFFECTIVE SAFETY COMMUNICATION
    a. Expectations
    b. Work Process Communication
    c. Bases for Decisions
    d. Free Flow of Information
Attachment 2

Alignment of DOE Focus Areas and Attributes of a Safety Conscious Work Environment and NSC Attributes

DOE Focus Area 1: Leadership

- Demonstrated safety leadership
- Management engagement in the field
  *Aligned NSC attributes*: Leadership Behaviors, and Field Presence
- Open communication and fostering an environment free from retribution
  *Aligned NSC attributes*: Respect Evident, Opinions Valued, High Trust Level, Conflict Resolution, SCWE Policy, and Bases for Decisions
- Clear expectations and accountability
  *Aligned NSC attributes*: Standards, Job Ownership, Teamwork, Expectations, Procedure Adherence, and Work Process Communication

DOE Focus Area 2: Employee/Worker Engagement

- Team Work and Mutual Respect
  *Aligned NSC attributes*: Teamwork, Respect Evident, Opinions Valued, High Trust Level, Conflict Resolution, SCWE Policy, Alternative Resolution, and Work Process Communication

DOE Focus Area 3: Organizational Learning

- Credibility, trust and reporting errors and problems
  *Aligned NSC attributes*: Opinions Valued, High Trust Level, Challenge the Unknown, Challenge Assumptions, Avoid Complacency, Operating Experience, Benchmarking, Self-Assessment, Identification, Evaluations, Resolution, and Trending
- Effective resolution of reported problems
  *Aligned NSC attributes*: Conflict Resolution, Evaluations, Resolution, Trending, SCWE Policy, and Alternative Resolution
- Performance monitoring through multiple means
  *Aligned NSC attributes*: Field Presence, Operating Experience, Benchmarking, Self-Assessment, Evaluations, Resolution, and Trending
- Questioning attitude
  *Aligned NSC attributes*: Challenge the unknown, Challenge Assumptions, Avoid Complacency, Operating Experience, Benchmarking, and Self-Assessment
Attachment 3

Nuclear Safety Culture Self-Assessment Details

In August 2012, SRR conducted a Nuclear Safety Culture (NSC) self-assessment. The self-assessment team was composed of nuclear power industry representatives, SRR employees, representatives from other DOE sites, and clerical staff. The assessment team leader was previously a nuclear power plant manager. The team leader has led several previous assessments at nuclear power plants and had been assessed numerous times while managing nuclear power operations. The team leader was assisted in the performance of leadership duties by two behavioral scientists, with a combined experience of over 100 such assessments. Six two-person teams, each consisting of an SRR employee and a non-SRR employee, performed interviews, and analyzed the combined data from the survey and interviews. All team members participated in a three day training class conducted one month prior to the assessment with an emphasis on effective interview techniques. DOE-SR and HSS personnel also participated in the training and provided oversight of the assessment during its conduct.

The primary techniques utilized to obtain data and information was the administration of a NSC survey and performance of interviews. A NSC Survey administered in April 2012 was completed by over 50% of the SRR workforce, representing all work disciplines, generating data which was then augmented by interviews. Seventy-nine interviews were performed with approximately 110 people being interviewed. During the assessment, 79 interviews were conducted with 110 employees. Care was taken to ensure that all major work groups were included in the interviews and interviewees were selected randomly. Most of the interviews were with a single individual, but a few group interviews were also performed. About 20 questions were asked during each hour long interview. Eight meeting and field observations were also used as input. A scoring process was used promptly following each interview and observation. A score was given based on the judgment of the team performing the interview or observation. If the interviewee response or observed activity exceeded the expected industry standards, a score of “E” was given. If the response met industry standards, a score of “M” was recorded and if the response was below those standards a score of “B” was noted. The team was encouraged to set a high bar when grading the results of the interviews. This created a degree of bias against conclusions that responses exceed expectations, but was deemed appropriate based on the goal of identifying areas for improvement and setting high expectations for the safety culture at SRR.

Interviews were performed with Senior Managers, Middle Managers, First Line Supervisors, and Individual Contributors. The scored responses were reviewed collectively to identify potential areas of strength and weakness. Additional interview questions were assigned for subsequent interviews in areas of potential weakness or strength to confirm noted trends. In addition, attributes with an inadequate number of data points were highlighted for the future interviews to ensure that all traits and attributes were adequately reviewed. The results of the interviews and observations performed related to each Trait are provided below. The interview results are included in the specific trait reviews that follow for each of the 10 NSC traits.
Personal Accountability - All individuals take personal responsibility for safety

For this trait, 61 data points were collected and reviewed. In addition, the team considered the results from the pre-assessment survey. Overall, it was concluded that Personal Accountability was consistent with the expectations for a healthy nuclear safety culture for all three attributes of this trait. The scores for the responses to the interview questions for this trait are as follows:

<table>
<thead>
<tr>
<th>Standards</th>
<th>5(E)/16(M)/3(B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Job Ownership</td>
<td>0(E)/22(M)/0(B)</td>
</tr>
<tr>
<td>Team Work</td>
<td>2(E)/13(M)/0(B)</td>
</tr>
</tbody>
</table>

In general, it was concluded that personnel accept their responsibility and demonstrate team work to accomplish objectives in a manner that is consistent with nuclear safety.

Questioning Attitude - Individuals avoid complacency and continuously challenge existing conditions, assumptions, and activities to identify discrepancies that might result in error or inappropriate action.

For this trait, 107 data points were collected and reviewed. In addition, the team considered the results from the pre-assessment survey. Overall, it was concluded that the trait Questioning Attitude was consistent with the expectations for a healthy nuclear safety culture for all five attributes. The scores for the responses to the interview questions for this trait are as follows:

| Nuclear is recognized as special and unique | 3(E)/21(M)/1(B) |
| Challenge the unknown                  | 4(E)/19(M)/3(B) |
| Challenge assumptions                  | 3(E)/14(M)/2(B) |
| Avoid complacency                      | 2(E)/20(M)/1(B) |
| Human performance                      | 1(E)/13(M)/0(B) |

Results from the interviews and pre-assessment survey indicated that personnel understand the distinctive nature of their work with radioactive waste. The interviews also revealed examples of when personnel challenged uncertainties. The team found that SRR personnel have a good questioning attitude and challenge the unknown.
**Safety Communication - Communications maintain a focus on safety.**

For this trait, 92 data points were collected and reviewed. In addition, the team considered the results from the pre-assessment survey. One Weakness was identified related to “Bases for Decisions.” The scores for the responses to the interview questions for this trait are as follows:

<table>
<thead>
<tr>
<th>Trait</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expectations</td>
<td>2(E)/19(M)/6(B)</td>
</tr>
<tr>
<td>Work process communications</td>
<td>1(E)/19(M)/2(B)</td>
</tr>
<tr>
<td>Bases for decisions</td>
<td>0(E)/12(M)/12(B)</td>
</tr>
<tr>
<td>Free flow of information</td>
<td>0(E)/17(M)/2(B)</td>
</tr>
</tbody>
</table>

Weakness:
Bases for decisions – Communications regarding the basis for key decisions should be improved.

The team noted that management failed to take advantage of several opportunities to reinforce nuclear safety through their communications following some key decisions. In each case, management took actions consistent with a strong nuclear safety culture, but did not well explain to the staff the basis for the decision. For example, a recent decision to defer work on Tank 12 work was seen as an example of when safety took priority over schedule. However, the basis for the decision was not understood by those interviewed. A second example related to a work stoppage just prior to the assessment. The stand down represented a conservative decision to address a safety concern, but again the basis was not well communicated. Those interviewed indicated that they thought they could find the reason for the work stoppage but it was not proactively distributed. Personnel commented that more communication from management is needed reinforce nuclear safety culture.

In general, the team found that personnel thought communications about safety were reasonable and available. However, at times the bases for decisions regarding nuclear safety related actions were not communicated effectively.
Leadership Values and Behaviors - Leaders demonstrate a commitment to safety in their decisions and behaviors.

For this trait, 166 data points were collected and reviewed. In addition, the team considered the results from the pre-assessment survey. Two Negative Observations that were related to "Resources" and "Change Management" were identified. The scores for the responses to the interview questions for this trait are as follows:

- **Constant examination**: 1(E)/17(M)/1(B)
- **Leader behavior**: 0(E)/20(M)/3(B)
- **Resources**: 0(E)/10(M)/6(B)
- **Incentives, sanctions & rewards**: 2(E)/14(M)/5(E)
- **Field presence**: 0(E)/15(M)/7(E)
- **Strategic commitment to safety**: 1(E)/17(M)/5(B)
- **Change management**: 1(E)/8(M)/7(B)
- **Roles, responsibilities and authorities**: 0(E)/25(M)/1(B)

**Negative Observations:**

**Resources** - Management is not always providing a consistent message about nuclear safety priorities during the current period of budget uncertainty. Specifically, it appears that information on budget decisions are stalling at the 2nd level of management, and concern about staffing levels was the lowest score for any question on the employee survey. In some cases, employees expressed concerns during the interviews about the impact of potential staffing reductions on nuclear safety.

**Change Management** - A formal change management process to guide nontechnical changes does not exist at SRR. Changes like the control room consolidation planned for the tank farms potentially can negatively impact nuclear safety. A process is needed to ensure that non-technical aspects of such changes are well planned and executed. Several comments from the interview supported the need for a process to formally plan and communicate regarding upcoming changes.

In general, the team found that personnel thought leadership met most of the leadership attributes and that the leadership team was appropriately involved. There was some concern that ongoing budget issues were a distraction for the management team.
Decision-making - Decisions that support or affect nuclear safety are systematic, rigorous, and thorough.

For this trait, 58 data points were collected and reviewed. In addition, the team considered the results from the pre-assessment survey. One weakness identified related to “Consistent Process.” The scores for the responses to the interview questions for this trait are as follows:

<table>
<thead>
<tr>
<th>Trait</th>
<th>Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consistent process</td>
<td>S(E)/16(M)/3(B)</td>
</tr>
<tr>
<td>Conservative bias</td>
<td>0(E)/22(M)/0(B)</td>
</tr>
<tr>
<td>Accountability for decisions</td>
<td>2(E)/13(M)/0(B)</td>
</tr>
</tbody>
</table>

Weakness:
Consistent process – A systematic and formal process for operational decision making has not been established.

The team concluded that personnel generally believed that decision making at SRR is sound and that safety is maintained as a high priority as decisions are made. However, the lack of a formal process to ensure consistency was also noted. Some commented that informal processes are followed that may not consider all risks or reasonable alternatives.

Respectful Work Environment (WE) - Trust and respect permeate the organization creating a respectful work environment.

For this trait, 80 data points were collected and reviewed. In addition, the team considered the results from the pre-assessment survey. One negative observation was identified related to “Conflict Resolution.” The scores for the responses to the interview questions for this trait are as follows:

<table>
<thead>
<tr>
<th>Trait</th>
<th>Scores</th>
</tr>
</thead>
<tbody>
<tr>
<td>Respect is evident</td>
<td>1(E)/19(M)/2(B)</td>
</tr>
<tr>
<td>Opinions are valued</td>
<td>0(E)/16(M)/1(B)</td>
</tr>
<tr>
<td>High level of trust</td>
<td>2(E)/17(M)/3(B)</td>
</tr>
<tr>
<td>Conflict resolution</td>
<td>1(E)/12(M)/5(B)</td>
</tr>
</tbody>
</table>
Negative Observation:
Conflict Resolution – While SRR has a Differing Professional Opinion (DPO) program, most of those interviewed were unaware of the details of the process. In interviews with Human Resources it was determined the DPO process has not been used since SRR became a company in 2009. In other interviews, this was also stated along with a statement that sometimes issues do not get passed the first line manager.

The team found that personnel generally view trust and respect as positive in most segments of the organization. Levels of trust were generally higher for the lower levels of the organization; however, it was noted that the SRR president is highly respected and available. Other comments noted times when discipline seemed too harsh and instances when employees' advice was not sought when needed.

Continuous Learning (CL) - Opportunities to learn continuously about ways to ensure safety are valued, sought out, and implemented.

For this trait, 138 data points were collected and reviewed. In addition, the team considered the results from the pre-assessment survey. One negative observation was identified related to “Training.” The scores for the responses to the interview questions for this trait are as follows:

- Operating experience: 0(E)/20(M)/4(B)
- Benchmarking: 5(E)/7(M)/2(B)
- Self-assessment: 1(E)/33(M)/3(B)
- Training: 2(E)/13(M)/6(B)

Negative Observation:
Training – Some of those interviewed expressed concern about recent reductions in training for operations and the need for additional training for engineers. There were positive comments about some supplemental training efforts and the coaching and mentoring programs that have been implemented.

The team found that operating experience related to internal events is reviewed and used to enhance continuous learning. Similarly, the results from self-assessments are used to enhance programs and processes.
Problem Identification (PI) - Issues potentially impacting safety are promptly identified, fully evaluated, and promptly addressed and corrected commensurate with their significance.

For this trait, 88 data points were collected and reviewed. In addition, the team considered the results from the pre-assessment survey. The team concluded that this overall trait is a weakness for SRR. Two attribute weaknesses related to problem identification and problem resolution were identified. In addition, a negative observation related to problem trending was noted by the team. The scores for the responses to the interview questions for this trait are as follows:

- Problem identification: 0(E)/12(M)/11(B)
- Problem evaluation: 0(E)/17(M)/3(B)
- Problem resolution: 1(E)/10(M)/10(B)
- Problem trending: 0(E)/15(M)/9(B)

Weaknesses:
Problem Identification – The issues management system used by SRR (STAR) is thought by many to be too complex and difficult to use for the average user. Some find it intimidating and easy-to-use references are not readily available for the users. Further, it was also noted that expectations regarding when issues should be entered in STAR were not well understood. The team found that multiple alternative issue management systems are being used to collect and track issues. As a result, it is overly difficult for management to evaluate issues and recognize some needed improvements. Two of the lowest survey results were directly related to problem identification.

Problem Resolution – There is a lack of confidence that the corrective action program will consistently lead to identified problems being corrected in a timely manner. Some stated their belief that often symptoms are addressed but that underlying issues are not. One of the lowest rated survey results suggests a belief that problems are not correct when first identified.

Negative Observation:

Trending – There is inadequate communication of trend information related to corrective actions and there is a shortage of effective guidance for use of STAR. It was noted that the existence of multiple tracking systems makes the trending of issues management data overly difficult.
The team found a general level of frustration related to use of the STAR system and some gave examples of issues they knew were identified but never resolved. For example, concerns related to facility infrastructure were given a number of times during the interviews.

Environment for Raising Concerns (RC) - A safety conscious work environment is maintained where personnel feel free to raise safety concerns without fear of retaliation, intimidation, harassment, or discrimination.

For this trait, 45 data points were collected and reviewed. In addition, the team considered the results from the pre-assessment survey. One negative observation related to "SCWE Policy" was identified. The scores for the responses to the interview questions for this trait are as follows:

SCWE 3(E)/17(M)/3(B)
Alternate concerns process 0(E)/19(M)/3(B)

Negative Observation:
SCWE Policy – Improvement is need in the implementation of the company’s clearly stated policy supporting the individual’s right to raise safety concerns without fear of harassment, intimidation, retaliation or discrimination. During some interviews, a reluctance to use the formal processes was identified. Also, while there was consistent agreement that use of the “Time Out” process is encouraged, some workers stated that they were none the less reluctant to call a time out for fear of being recognized as someone who stops work. It was also noted that there is no informal process for workers to raises concerns anonymously. Finally, it was noted that there is no formal training for managers and supervisors on how to respond when safety concerns are raised.

The team noted that none of the individuals interviewed expressed concerns of retaliation for raising safety concerns.
Work Processes (WP) - The process of planning and controlling work activities is implemented so that safety is maintained.

For this trait, 94 data points were collected and reviewed. In addition, the team considered the results from the pre-assessment survey. One negative observation related to "Documentation" was identified. The scores for the responses to the interview questions for this trait are as follows:

<table>
<thead>
<tr>
<th>Trait</th>
<th>Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work management</td>
<td>3(E)/51(M)/7(B)</td>
</tr>
<tr>
<td>Design margins</td>
<td>13(E)/87(M)/7(B)</td>
</tr>
<tr>
<td>Documentation</td>
<td>3(E)/67(M)/22(B)</td>
</tr>
<tr>
<td>Procedure adherence</td>
<td>5(E)/126(M)/35(B)</td>
</tr>
<tr>
<td>Active risk management</td>
<td>2(E)/45(M)/11(B)</td>
</tr>
</tbody>
</table>

Negative Observation:
Documentation – Some work packages do not have enough detail regarding risk management. While the interviews indicated that work packages are complete and effective, the team noted a lack of knowledge about risk management tools and practices.

Most of those interviewed noted that the documentation is normally complete and detailed. It was also noted that some labeling deficiencies were said to be present in the facility.