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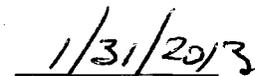
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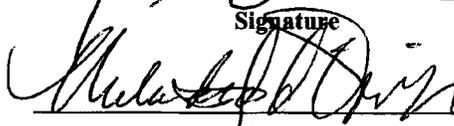


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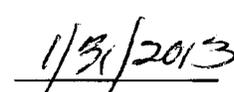


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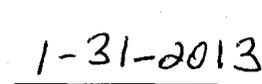
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Management Assessment
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History Sheet

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Executive Summary

Bechtel National, Inc. conducted a sponsored management self-assessment of the Hanford Tank Waste Treatment and Immobilization Plant (WTP) Project's safety culture, specifically focusing on the health and progress being made to improve its safety conscious work environment (SCWE).

Over the past several years the WTP Project has been the subject of a number of high-profile internal and external assessments focused on determining the strengths and weaknesses of the Project's SCWE and its Nuclear Safety and Quality Culture (NSQC). A common objective of each of these assessments was to develop an understanding of the impact, both positive and negative, of the SCWE and the NSQC on the design, procurement, construction, and anticipated operation of the WTP. Recognizing the need for introspection, BNI conducted an internal review of the findings, observations, lessons learned, and other conclusions and recommendations rendered, over time, through these high-profile assessments, the results of which are captured in WTP's *Comprehensive Corrective Action Plan (CCAP) for Strengthening the Nuclear Safety and Quality Culture*. The WTP Project is in the process of implementing the corrective actions of the CCAP. As such, this management sponsored self-assessment presents an opportunity to gauge progress of the efforts to improve the SCWE at WTP.

Improvements in the SCWE are evident at the WTP Project and are a result of considerable effort expended to address a range of cultural, organizational, and programmatic issues identified in the CCAP. Continued growth of the SCWE, however, is dependent on WTP's ability to fully execute upon the CCAP and other related initiatives in place.

To this end, it is essential that the Project maintain its focus on the deliverables outlined in the CCAP to ensure timely and effective completion of corrective actions necessary to cultivate and improve the SCWE. Particular emphasis should be directed at the Strategic Improvement Areas within the CCAP that have experienced schedule delays or extensions to planned completion dates, to ensure that progress against goals is achieved.

Substantial resources are in place which support the Project's commitment to safety and the SCWE and include the employee concerns program (ECP), Human Resources (HR), NSQC and Legal. Recognizing that the maintenance and continued growth of the SCWE is dependent, in part, upon the Project's ability to respond to events and lessons learned that may impact the SCWE, the Project should evaluate, through benchmarking and other means, measures that can be instituted that will improve integration and coordination of Project resources in a durable and sustained manner and that best serves WTP's commitment to continuous improvement in the SCWE.

1 Introduction

Bechtel National, Inc., (BNI) conducted a self-assessment of the Hanford Tank Waste Treatment and Immobilization Plant (WTP) Project's safety conscious work environment (SCWE). An Integrated Safety Management System (ISMS) SCWE self-assessment in response to direction provided by the U.S. Department of Energy (DOE) is submitted in accordance with direction in CCN 253850 and CCN 255105. This assessment was performed in accordance with the DOE Implementation Plan and guidance, which was developed in response to the Defense Nuclear Facilities Safety Board (DNFSB) Recommendation 2011-1.

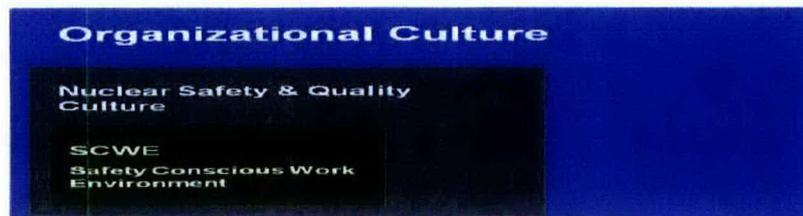
The plan, 24590-WTP-PL-MGT-12-0023, *BNI ISMS Safety Conscious Work Environment Self-Assessment Plan*, describing the over-arching objective of the DOE guidance, with a tailored approach to reflect the unique circumstances of WTP and its safety culture, was provided to the DOE as information under CCN 251580.

This assessment also fulfills a provision contained in the WTP Nuclear Safety and Quality Culture (NSQC) procedure, 24590-WTP-GPP-MGT-061, *Nuclear Safety and Quality Culture*, which states that "NSQC-related internal assessments are conducted annually in accordance with governing WTP assessment processes." This commitment is affirmed in the WTP Performance Evaluation and Measurement Plan, paragraph B.1.6 *Safety and Quality Culture*, which calls for the "conduct of internal and external assessments of the NSQC including comprehensive annual assessments." Acknowledging previous and upcoming external reviews, and BNI's ongoing efforts to implement the NSQC Comprehensive Corrective Action Plan (CCAP), which is consistent with the DNFSB 2011-1 WTP Project-specific activities, this self-assessment recognizes the status and extent of recent activities, completed or near-term, and is focused on areas where a self-assessment will provide additional value-added insights.

The purpose and scope of this management sponsored assessment are to gauge the health and progress being made in improving the SCWE at the WTP Project.

Regarding SCWE, there has been, at times, some confusion with how SCWE relates to safety culture.¹ Many use the terms "SCWE" and "safety culture" interchangeably, as if to suggest they are one and the same. They are, in fact, different, but related concepts, embedded within the organization's overall culture, as depicted in Figure 1.

Figure 1



¹ For purposes of this report the terms "Safety Culture" and "Nuclear Safety and Quality Culture (NSQC)" are used interchangeably.

A strong safety culture is often described as embracing a principle of "safety first." Consistent with this principle, the WTP Project has adopted the following definition for the Project's safety culture (i.e., NSQC):

WTP's values and behaviors – modeled by its leaders and internalized by its members – that serve to make nuclear safety and quality the overriding priority.

Elements typically associated with safety culture include concepts such as procedural adherence, conservative decision making, and safety over cost and schedule. The willingness of employees to identify safety issues (i.e., SCWE) is also a element of safety culture.

At WTP, a SCWE is defined as:

An environment where employees feel free to raise concerns, both to management and the DOE, without fear of retaliation.

For purposes of this self assessment, four factors identified in the DOE sponsored 2012 Hanford Site Organizational Climate Survey provide a framework to conduct this review. These four factors, along with a description of supporting attributes, are as follows:

➤ **Management Support/Encouragement to Raise Safety Concerns**

- Commitment – management maintains and communicates a commitment to safety, with clear expectations for the behaviors of all members of the organization regarding safety-related work. The organization embraces the commitment, understands the expectations and is dedicated to sustaining a SCWE.
- Training – management provides training to ensure all employees possess the necessary knowledge and skills to carry out their individual and collective responsibilities for maintaining a SCWE.
- Communication – management establishes and maintains good communication about safety issues, recognizing that face-to-face communication, with high visibility of managers and supervisors in the field, is essential.
- Trust and accountability – there is a high level of trust within the WTP Project and people at all levels of the organization treat each other with respect. Everyone is accountable to fulfill their safety responsibilities and meet management expectations for behaviors.
- Free flow of information – all employees, including contractors, feel free to raise safety concerns without fear of retaliation. Management encourages employees to raise safety concerns through their avenue of choice, which includes avenues such as the chain of command, the employee concerns program (ECP), and the DOE.

➤ **Internal Avenues of Redress**

- Project Issues Evaluation Reporting (PIER) System – The organization maintains an effective and efficient corrective action program and ensures that safety issues are reported, are resolved in a timely manner commensurate with their significance, and are communicated to interested employees.
- Self assessment – The organization embraces critical self assessment for learning, growth, and improvement, using operational events as a source of experience from which lessons learned can be derived.

➤ **Alternate Problem Identification Processes**

- Alternate avenues – Management recognizes that there are instances in which some concerns may not be addressed through line management and has established effective alternative avenues for handling employee concerns.

➤ **Detection and Prevention of Retaliation**

- Prevention of retaliation – Management takes effective action to prevent retaliation for raising safety concerns. When events occur, managers take prompt and effective corrective action and mitigate any chilling effect on the organization.
- People management – Human resource and labor relations policies, procedures and practices provide an infrastructure that supports the WTP Project's commitment to safety and management's expectation for behaviors.

These four factors and their corresponding attributes provide a basis for reference with the selection of Lines of Inquiry (LOI) discussed later in this self assessment.

2 Purpose and Scope

The purpose and scope of this management sponsored assessment are to gauge the health and progress being made in improving the SCWE at the WTP Project.

3 Background

Throughout the life of the Project, WTP has been the subject of a number of reviews and assessments, both internal and external, focused on determining the strengths and weaknesses of the Project's safety culture and its impact on the design, procurement, construction, and anticipated operation of the WTP. A chronology of these assessments and other related efforts and events is provided in Appendix A – *WTP NSQC Timeline*. While Appendix A represents 2009 through 2012, WTP began implementation of safety culture program in 2000, with additional attention applied at various intervals over the succeeding years. The Nuclear Safety and Quality Imperative, initiated in 2006 was a major restructuring of the Project approach to NSQC and SCWE. In 2010, attention once again focused on raising the bar in terms of NSQC and SCWE. As a follow on result a variety of actions were implemented and through learning additional actions are incorporated into leadership improvements in these areas.

With regard to this management sponsored self-assessment, several recent Project initiatives serve as important contributors in the Project's efforts to cultivate a SCWE and more broadly, the NSQC at the WTP Project. These recent initiatives provide a framework for the review conducted herein and are a result of the findings, observations, lessons learned, and other conclusions and recommendations rendered, over time, in many of the reviews and assessments identified in Appendix A.

These recent initiatives, intended to address improvement with the SCWE at the WTP Project, include the following areas of importance.

➤ *Participation in the 2012 Hanford Organizational Climate and SCWE Survey*

In June 2012, BNI participated in the DOE-sponsored *Hanford Organizational Climate and SCWE Survey*. The objective of the survey was to provide measurement of employee perceptions of organizational culture associated with the attributes of safety culture and SCWE. The survey was

designed to examine 21 factors that provide information on the safety culture and SCWE attributes for the overall Hanford site and for each parent organization, including BNI. The 21 factors were grouped into four focus areas: Leadership Involvement, Employee Engagement, Learning Organization, and SCWE. The focus areas and factors used in the survey were based upon the model of safety culture proposed in the *DOE Integrated Safety Management (ISM) Safety Culture Focus Areas and Associated Attributes* (as identified in DOE Guide 450.4-1C, Attachment 10)

Of the 21 factors examined in the survey, four corresponded with SCWE. These four factors, discussed in Section 1 of this report, are as follows:

1. Management Support/Encouragement to Raise Safety Concerns
2. Internal Avenues of Redress
3. Alternate Problem Identification Processes
4. Detection and Prevention of Retaliation

Overall employee perceptions about SCWE, as depicted through scores associated with the 4 SCWE factors examined in the survey, are presented in Table 1.²

Table 1

Focus Area	Factor	Score
Safety Conscious Work Environment	Management Support/Encouragement to Raise Safety Concerns	4.15
	Internal Avenues of Redress	3.68
	Alternate Problem Identification Processes	3.90
	Detection and Prevention of Retaliation	4.37

Observations and feedback regarding the 2012 *Hanford Organizational Climate and SCWE Survey* will be a subject of discussion within the LOIs later in this report. In instances where survey information is identical, or substantially similar to, other surveys conducted by the Project between 2005 and 2011, comparisons and trends will be discussed.

- *Development of a Comprehensive Corrective Action Plan for Strengthening the Nuclear Safety and Quality Culture at the Hanford Tank Waste Treatment and Immobilization Plant (CCAP)*

The CCAP, which is the product of a review of the findings and recommendations of several key reports and surveys,³ established a set of manageable actions targeted to address gaps and weaknesses in the following six areas, identified in the plan as Strategic Improvement Areas.

² Scores of 4.15 and 4.37 indicate organization-wide agreement among employees with the presence of a positive workplace climate. Scores of 3.68 and 3.90, which reflect only moderate agreement among employees that a desirable climate exist within their workplace, present potential areas for improvement.

³ See (1) *Independent Oversight Assessment of Nuclear Safety Culture and Management of Nuclear Safety Concerns at the Hanford Site Waste Treatment and Immobilization Plant*, dated January 2012, (2) *Assessment and Recommendations for Improving the Safety and Quality Culture at the Hanford Waste Treatment and Immobilization Plant*, Dated November 30, 2011 (3) *2011 BNI WTP NSQC Manual and Non-Manual Employee Surveys*, (4) *Defense Nuclear Facilities Safety Board Recommendation 2011-1*.

- Realignment and Maintenance of the Design and Safety Bases
- Management Processes of the WTP NSQC
- Timeliness of Issues Identification and Resolution
- Roles and Responsibilities, Authorities and Accountabilities (R2A2s)
- Management and Supervisory Behaviors
- WTP Construction Site Unique Issues

The CCAP established near-term actions to be implemented in each of the Strategic Improvement Areas (SIA) and also outlines the WTP Project's approach to measure effectiveness from which it is anticipated longer-term actions can be developed to assure sustained effectiveness.

At the close of 2012, executive sponsors for the SIAs had completed 22 of the 50 actions in the CCAP. Several of the actions expected to close in fourth quarter 2012, were rescheduled in anticipation of new management assignments at the DOE. At the same time other actions were extended into 2013 to ensure a quality effort and result was applied to the activities. A summary of progress against CCAP goals and objectives is provided in Appendix B.

Observations and feedback regarding the CCAP will be a subject of discussion within the LOIs later in this report.

➤ *SCWE Training*

As recognized in the CCAP, initiatives to strengthen the NSQC include efforts to improve behaviors through development and implementation of SCWE training for all WTP employees. To this end, a three-hour SCWE training program was developed specifically for WTP to enhance awareness and improve behaviors necessary to sustain continued improvement in support of a healthy NSQC. The WTP training was based on and incorporated materials developed and used extensively at commercial nuclear sites.⁴

The course curriculum includes material which was customized for the WTP Project through a work-shopping process with a group of managers and employees, including the NSQC Change Agents who had been identified to lead and facilitate implementation of the improvement actions under the CCAP. Course materials include two short videos and a set of case studies which were analyzed in small groups. Both the videos and case studies were based on real world experiences. A core group of 18 instructors was selected from across the Project based on their demonstrated leadership behaviors and their ability to influence others. Classes were structured to use a team training model (two instructors per class). Classes were introduced by a senior manager who provided his/her personal message about SCWE.

Training was scheduled and structured to include work groups of 20 to 30 people, such that managers, supervisors and employees co-participated. The purpose of this structure was to improve transparency and alignment of expectation by assuring that management heard the messages communicated to employees and that the employees heard the messages being communicated to management.

Observations and feedback regarding SCWE training will be a subject of discussion within the LOIs later in this report.

⁴ WTP retained the firm Pillsbury Winthrop Shaw Pittman, a recognized resource in the nuclear industry with experience in SCWE training, to assist the Project in the development of WTP specific SCWE training materials.

➤ *NSQC Metrics*

As part of the actions outlined in the CCAP, senior leadership acknowledged the need to develop and implement a comprehensive set of quantitative and qualitative metrics necessary to track and trend the health of the NSQC.⁵ Following a benchmarking review of metrics commonly used at commercial nuclear power plants and other similar nuclear projects, a portfolio of 17 annual survey metrics, and 26 Project management metrics was introduced in December, 2012 to replace the set of four NSQC metrics, which were previously in use at WTP. Fundamentally, this portfolio of metrics is intended to provide information that can be monitored to discern the health of the NSQC. From the overview important insights can be gained about performance gaps and management, in turn, can take actions to address identified shortcomings.

Metrics were developed and organized to the following construct:

- Metrics are institutionalized through inclusion in the *WTP Nuclear Safety and Quality Culture Plan*, 24590-WTP-PL-MGT-10-0001.
- Two types of metrics populate the portfolio
 - Metrics having specific thresholds or performance targets prescribed
 - Metrics where specific thresholds or performance targets not prescribed
- Metrics are divided into two groups
 - NSQC Health
 - NSQC Comprehensive Corrective Action Plan

Observations and feedback regarding the NSQC metrics will be a subject of discussion within the LOIs presented later in this report.

➤ *Establishment of the Nuclear Safety Review Board (NSRB)*

The WTP Nuclear Safety Review Board (NSRB) is organized as an externally affiliated advisory group to the WTP Project Director. The NSRB is part of the WTP Project's tailored implementation of NEI 09-07, *Fostering a Strong Nuclear Safety Culture*. The NSRB is in place to help ensure an appropriately conservative approach to project implementation of NEI 09-07 is achieved, while maintaining consideration for the engineering, procurement, construction, and commissioning (EPCC) nature of the WTP.

The NSRB conducted its first meeting on November 12 - 15, 2012, the purpose of which was to enhance board members' knowledge and understanding of the current environment and initiatives related to the NSQC. Observations and feedback from this meeting, and others scheduled in 2013, will be incorporated by the Project into various NSQC initiatives and considered in decision-making by the senior leadership team in its efforts to achieve continuous improvement in the NSQC.

➤ *Departmental Manager Meetings*

Departmental Manager Meetings provide employees the opportunity to interact with the WTP Project Director and other senior leadership in a relatively small group setting. The format is a 20-minute

⁵ See Near Term Additional Corrective Action B-3 of the *Comprehensive Corrective Action Plan for Strengthening the Nuclear Safety and Quality Culture at the Hanford Tank Waste Treatment and Immobilization Plant*, 24590-WTP-PL-MGT-12-0005, Rev 2

update on the status of the project and where it is heading, followed by a 40-minute question-and-answer period. Employee feedback from these meetings has been constructive. These meetings are scheduled to continue in 2013.

➤ *Leadership Involvement in the Identification and Reinforcement of Key Behaviors and Integration of Strategic Business and Culture Goals*

As a result of a review and deliberation of NSQC behaviors in July 2012, the WTP leadership team agreed to introduce and promote a set of key behaviors that, in their collective judgment, will strengthen organizational performance and the NSQC at WTP. Central to this review and deliberation was an acknowledgement that changing culture starts with leadership and that constructive change can be accomplished through the organization modeling the desired behaviors demonstrated by the organization's leaders. Three behaviors selected by leadership which will benefit organizational performance and the NSQC are as follows:

- Demonstrate active listening.
- Spend at least five hours per week "on-the-floor" interacting with staff.
- Conclude meetings with management asking each participant to state actions and commitments (with due dates) to promote ownership and accountability.

More recently, the Senior Leadership Team has been engaged in an examination of the WTP Project's strategic business and culture goals with the purpose of identifying opportunities for improved integration and alignment. Beginning with a baseline of the WTP Project's current state behaviors and values the examination developed a future state description of behaviors and values more closely aligned with the project's mission and purpose. The WTP Project Director took an active role in developing a set of cultural values as a result of his participation in facilitated organizational development meetings and employee discussion opportunities. The following summary, as presented by the Project Director to his leadership team on December 18, 2012 and internally referred to as "From / To's", captures the results of the current state versus future state examination.

- Trusting
 - From: We have 'meetings after the meeting' and talk about other people's behaviors.
 - To: We raise issues about behaviors in the meetings so learning can take place and we can improve.
- Accountable
 - From: We tolerate behaviors inconsistent with the WTP Covenants and actions that don't support trust or when acted upon, over rely on antecedents such as training and coaching.
 - To: We quickly and professionally discuss behaviors that are inconsistent with the WTP Covenants and actions that don't support trust directly with the person, and management consistently applies consequences as appropriate to assure behaviors continue to improve.
- Decisive
 - From: We are challenged to adjudicate differing opinions, accepting the most conservative answer even when it may be incorrect, adds little value, and doesn't advance the mission.
 - To: We seek to understand each other's perspective, quickly resolve minor issues on a working level and elevate major issues with recommendations, align on a path

forward that we can accept, have a good sound basis for the decision and are prepared to defend it.

- Interdependent
 - From: We make sure our piece is right and all elements are OK (bunker mentality), but problems remain in the interfaces.
 - To: We ensure our piece aligns with every activity and function it affects. We openly communicate between disciplines, functions, suppliers and customers.
- Self Critical
 - From: We become closed to a questioning attitude and stop listening for the opportunity to improve.
 - To: We are self-critical, transparent and open to feedback as a learning tool, practicing active, respectful and mutual listening to find opportunities to improve quality and safety, and further the mission.
- Disciplined in Execution
 - From: Variable interpretation of requirements and unreliable implementation of processes.
 - To: Uniform interpretation of requirements and universal application of processes, with consequences consistently applied for non-compliances.

At the time of this management sponsored self assessment, the result of the “From/To’s” review was being integrated into a communication plan that will be addressing business and culture goals along with mission objectives for 2013.

➤ *Reliability Validation Process*

In response to management concerns regarding quality, the WTP Project has developed a structured Reliability Validation Process (RVP) described in 24590-WTP-PL-MGT-12-0011, *Project Execution Plan for the Reliability Validation Process*. The RVP scope includes three unique scope elements.

- Foundational Process Reviews
- Facility and System Reviews
- RVP Issues Management Process

The RVP embodies the principles of a SCWE because it is dependent on a self-critical analysis of processes and behaviors, and because in developing the methodology for conducting RVP the Project utilized a facilitated collaborative approach to identify and implement its practices. The RVP plan also incorporates definite roles, responsibilities, accountabilities, and authorities (R2A2s) and clearly identifies the decision makers and avenues for reaching decisions.

4 Description of Assessment Methodology

In view of the large numbers of recent assessments, both internal and external, conducted at the WTP Project of the SCWE and the NSQC, and the recent Organizational Climate and SCWE all employee survey; and, in recognition of the broad list of initiatives and activities currently underway on the Project, this assessment does not rely on employee interviews, as would typically be the case in this type of

review.⁶ Rather, this assessment is based primarily on a review of Project documents, survey results, performance indicators, self assessments, and corrective action program data, along with other relevant documents and information that provide insights into the SCWE at the WTP Project. Where necessary, the team contacted management personnel to gain perspective and opinion on matters related to the SCWE.

As appropriate, data presented reflect information extracted from the WTP Project's NSQC metrics. The color assignments depicted in Figure 2 are employed to assist the reader in differentiating data, particularly in instances where trends may be provided.

Figure 2

Color	Mean Score (1-5 Scale)	Description
Green	4.50	Excellent/High
Blue	3.75	Good
Yellow	3.00	Needs Improvement
Red	3.00	Poor

5 Assessment Lines of Inquiry (LOI)

The LOIs, tailored to this method of review, were formulated using the definition of the SCWE, its four factors, and the corresponding attributes discussed in Section 1 of this report. Table 2 captures the LOIs selected for application in this management sponsored self assessment.

Table 2

LOI 1.1	Commitment – Management maintains and communicates a commitment to safety, with clear expectations for the behaviors of all members of the organization regarding safety-related work. The organization embraces the commitment, understands the expectations and is dedicated to sustaining a SCWE.
LOI 1.2	Training – Management provides training to ensure all employees possess the necessary knowledge and skills to carry to carry out their individual and collective responsibilities for maintaining a SCWE.
LOI 1.3	Communication – Management establishes and maintains good communication about safety issues, recognizing that face-to-face communication, with high visibility of managers and supervisors in the field, is essential.
LOI 1.4	Trust and Accountability – There is a high level of trust within the WTP and people at all levels of the organization treat each other with respect. Everyone is accountable to fulfill their safety responsibilities and meet management expectations for behaviors.
LOI 1.5	Free Flow of Information – All employees, including contractors, feel free to raise safety concerns without fear of retaliation. Management encourages employees to raise safety concerns through their avenue of choice, which includes avenues such as the chain of command, the ECP, and the DOE.

⁶ Extensive data regarding employee perceptions and opinions was made available through the DOE sponsored Hanford Organizational Climate and SCWE Survey, as well as through feedback from the SCWE training. Data from each of these resources is discussed throughout this report.

Table 2

LOI 2.1	Project Issues Evaluation Reporting – The organization maintains an effective and efficient corrective action program and ensures that safety issues are reported, are resolved in a timely manner commensurate with their significance, and communicated to interested employees.
LOI 2.2	Self Assessment – The organization embraces critical self assessments for learning, growth and improvement, using operational events as a source of experience from which lessons learned can be derived.
LOI 3.1	Alternate Avenues – Management recognizes that there are instances in which some concerns may not be addressed through line management and has established effective alternative avenues for handling employee concerns.
LOI 4.1	Prevention of Retaliation – Management takes effective action to prevent retaliation for raising safety concerns. When events occur, managers take prompt and effective corrective action and mitigate any chilling effect on the organization.
LOI 4.2	People Management – Human resource and labor relations policies, procedures and practices provide an infrastructure that support the WTP Project’s commitment to safety and management’s expectation for behaviors.

6 Assessment Discussion

Insights regarding the LOI’s with a conclusion statement supported by a discussion are provided.

➤ Management Support/Encouragement to Raise Safety Concerns

LOI 1.1: Commitment – Management maintains and communicates a commitment to safety, with clear expectations for the behaviors of all members of the organization regarding safety-related work. The organization embraces the commitment, understands the expectations and is dedicated to sustaining a SCWE

Conclusion

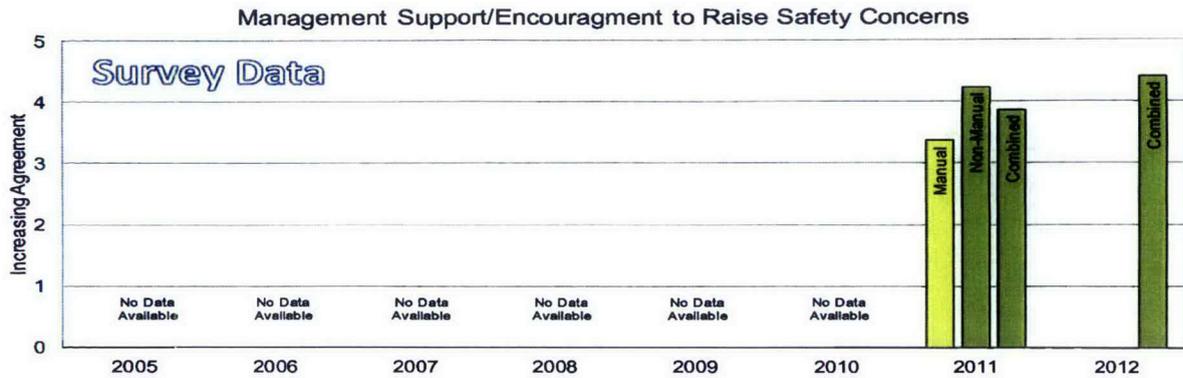
Management has been successful in communicating its commitment and reinforcing its expectations about the SCWE at the WTP Project. Employees understand their responsibility to report safety issues and appear comfortable and willing to do so.

Discussion

Employee perceptions, as reflected in responses presented in the 2012 *Hanford Organizational Climate and SCWE Survey*, indicate there is favorable opinion within the workforce that management encourages and welcomes the raising of safety concerns and that employees feel free to raise safety concerns without fear of retaliation.

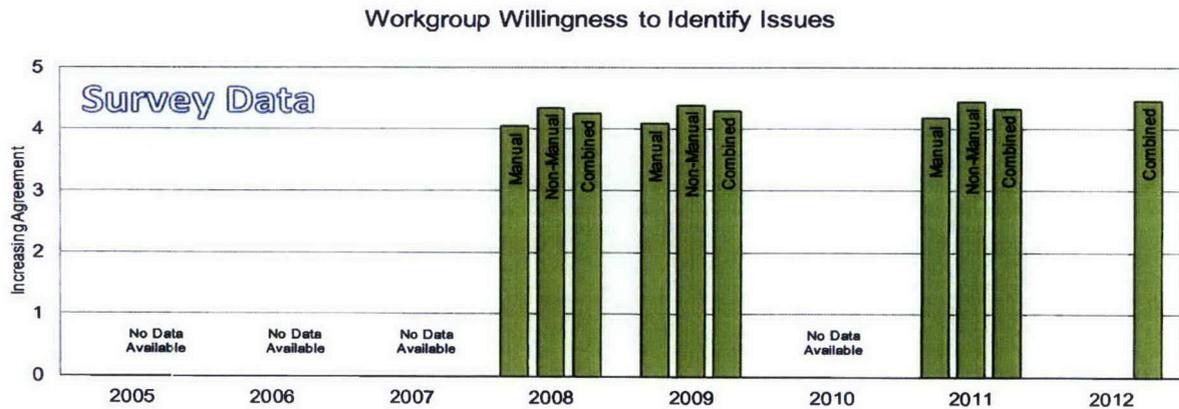
A comparison of survey information from 2011 and the 2012 *Hanford Organizational Climate and SCWE Survey* suggests there is a positive trend in agreement across the workforce that the reporting of errors is encouraged and valued.

Figure 3



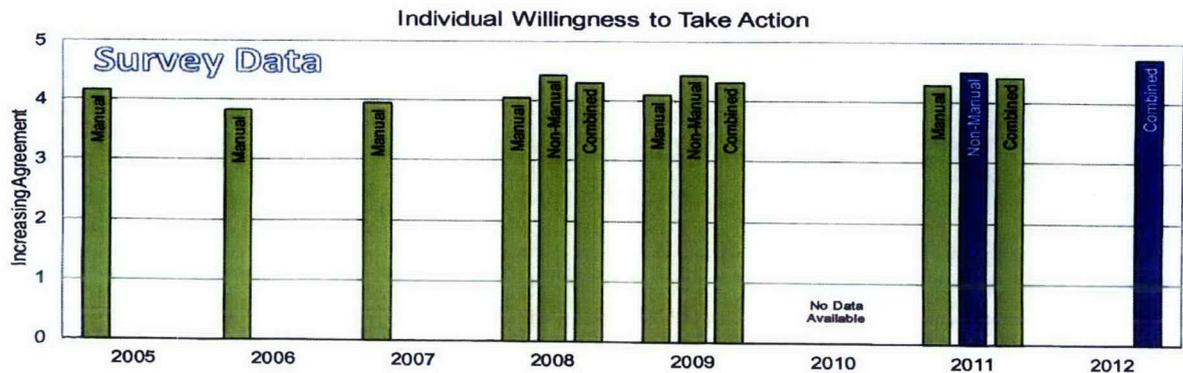
Employees also believe that commitment and willingness to identify errors, deficiencies, or potentially unsafe or poor quality conditions exists within their workgroup. Survey data available back through 2008 indicates this belief has been favorable and steady over the past 4 years.

Figure 4



On an individual basis, there is very strong agreement across the workforce that employees will take action whenever they are faced with a potentially unsafe condition.

Figure 5



The following table captures additional data which supports the conclusion that employees at WTP understand and accept their role and responsibility in supporting a healthy SCWE at WTP.⁷

Table 3

Personal commitment to everyone's safety	Score
I understand my responsibility for safety.	4.82
My company has clearly defined and written:	
a) Roles related to safety	4.43
b) Responsibilities related to safety	4.42
c) Authorities related to safety	4.34
Members of my immediate workgroup are willing to identify errors, deficiencies, or potentially unsafe or poor quality conditions.	4.46
I am responsible for taking action (i.e., stop work, report it, caution others) when I see a potentially unsafe condition.	4.74

LOI 1.2: Training – Management provides training to ensure all employees possess the necessary knowledge and skills to carry out their individual and collective responsibilities for maintaining a SCWE.

Conclusion

Recent efforts to develop and deliver SCWE training to Project personnel demonstrate a strength at the WTP Project in providing employees the necessary knowledge and skills to carry out their individual and collective responsibilities for maintaining a SCWE.

Discussion

As discussed in the CCAP, initiatives to strengthen the NSQC include efforts to improve behaviors through development and implementation of SCWE training for all WTP employees. To this end, a three-hour SCWE training program was developed specifically for the WTP Project to enhance awareness and improve behaviors necessary to sustain continued improvement. The WTP training was based on and incorporated materials developed and used extensively at commercial nuclear sites by an industry-recognized training resource.

The course curriculum includes material customized for the WTP Project through a workshop process with a group of managers and employees, including the NSQC Change Agents identified to lead and facilitate implementation of the improvement actions under the CCAP. Course materials include two short videos and a set of case studies, which are analyzed in small groups. Both the videos and case studies were based on real-world experiences. A core group of 18 instructors was selected from across the Project based on their demonstrated leadership behaviors and their ability to influence others. Classes were structured to use a team training model (two instructors per class). Classes were introduced by a senior manager who provided his/her personal message about SCWE.

⁷ 'Personal Commitment to Everyone's Safety' was one of four climate factors identified as an area of strength in the 2012 Hanford Organizational Climate and SCWE Survey.

Training was scheduled and structured to include work groups of 20 to 30 people, such that managers, supervisors, and employees co-participated. The purpose of this structure was to improve transparency and alignment of expectations by ensuring that management heard the messages communicated to employees and that the employees heard the messages being communicated to management.

Training was delivered on an ambitious schedule that included 48 sessions beginning on August 8, 2012 and concluding with the final session on November 29, 2012. All WTP employees completed the training as of November 7, 2012, with additional sessions held for a set of subcontractor employees who are assigned to work groups of full time personnel. In all, 2,362 employees attended the SCWE training (655 manual and 1,707 non-manual) with 2,066, or 87 %, providing feedback about the course, its contents, the quality of instruction, and the relevance of the course materials in helping to improve awareness of the importance of the SCWE and NSQC at the WTP Project.

Overwhelmingly, employee feedback was positive and many who participated reported that the training had helped them develop better appreciation of the SCWE and improved their understanding of the behaviors necessary to promote an environment at the WTP Project where employees feel free to raise issues and concerns without fear of retaliation. Co-participation by workers and management provided for a constructive exchange about leadership behaviors that, in a number of instances, was openly received by management as constructive feedback on how they personally can improve. Some isolated feedback provided commentary that (1) management does not always walk the talk, (2) concern that schedule and cost, in some instances, may take priority over safety, and (3) resolution of reported issues and concerns is not always timely.

A number of employees recommended that the Project consider ways in which the positive energy created through the SCWE training could be carried forward.

Other feedback from the ECP program suggests that the SCWE training has helped reinforce the expectation that everyone at WTP has a responsibility to raise issues whenever they believe something is not right and to do so through any of the alternate avenues at their disposal. The ECP manager reported that ECP has seen improvement in the detail and description of anonymous concerns coming into the program that, in his judgment, are a result of the SCWE training that was provided to WTP employees. Consequently, with more complete information and detail about the concern at hand, ECP is better able to investigate and review these concerns. The ECP manager also stated that a number of employees bringing issues and concerns to the program reported they had done so because of what they learned about the ECP in SCWE training.

It should be noted that 12 of the 2,066 anonymous feedback forms contained concerns that alleged retaliation was present at the WTP Project. Though the feedback forms lacked specific information that would support a focused investigation of these allegations, management is responding to evaluate these comments. Management considers this important and is working to address this issue⁸.

⁸ The confidential nature of these issues precludes additional information from being discussed further in this assessment report.

LOI 1.3: *Communication – Management establishes and maintains good communication about safety issues, recognizing that face-to-face communication, with high visibility of managers and supervisors in the field, is essential.*

Conclusion

Management communications associated with SCWE have been thoughtfully orchestrated to include face-to-face interaction with the workforce and have resulted in an open dialogue about the health of the SCWE at WTP. Workforce feedback resulting from this interaction should serve to reinforce the benefit of such communication in helping to leverage continued growth with the SCWE at WTP.

Discussion

As part of the rollout of the results of the 2012 Hanford Site Organizational Climate Survey, the WTP Project prepared a comparison of the 2012 data and other surveys conducted at WTP beginning as early as 2005. The comparison was restricted to substantially similar information and data that were available across the surveys conducted between 2005 and 2012. Information was provided to the leadership team along with the expectation that the results of the comparative review be communicated in a face-to-face manner with all members of the WTP team.

Feedback from the workforce following the communication of the survey results was comprehensive and insightful. Comments and questions from the workforce centered on a number of themes including the following:

- Whether the manner of earlier surveys conducted at WTP which split responses between manual and non-manual employees obscured in any way the comparisons compiled with the 2012 data
- Whether the participation rate (80% for BNI/URS) in the 2012 *Hanford Organizational Climate and SCWE Survey* was sufficient to support a high confidence that the data substantially reflects the opinions and perceptions of the entire workforce.
- Whether the perceptions reflected in the 2012 data about the Corrective Action Program comported with other indicators about program effectiveness. Many employees believed the survey data overstated improvements in this area and cautioned that performance improvements have yet to be fully realized.

These and other comments and observations were collected and discussed with leadership who in turn, developed responses which were communicated across the organization.

With respect to employees raising issues to their immediate supervisor, the 2012 *Hanford Organizational Climate and SCWE Survey* indicates generally favorable agreement among employees that their issues will be listened to and resolved in an open and transparent manner; however, there is only moderate agreement among employees that their issues will be resolved promptly or that they will be provided feedback in a timely manner.

Table 4

<i>If I raise a safety issue to my immediate supervisor</i>	Score
a) The issue/opinion is listened to	4.33
b) The issue/opinion is resolved in an open/transparent manner	4.06
c) The issue/opinion is resolved promptly	3.84
d) Feedback is provided to me in a timely manner	3.86

Concerns regarding timeliness in resolving problems and issues and feedback about outcomes has been a recurring theme identified across many prior assessments, both internal and external, conducted at the WTP Project. Additional discussion about this theme will be provided later in this report in the section supporting LOI 2.1: Project Issues Evaluation Reporting.

Figure 6

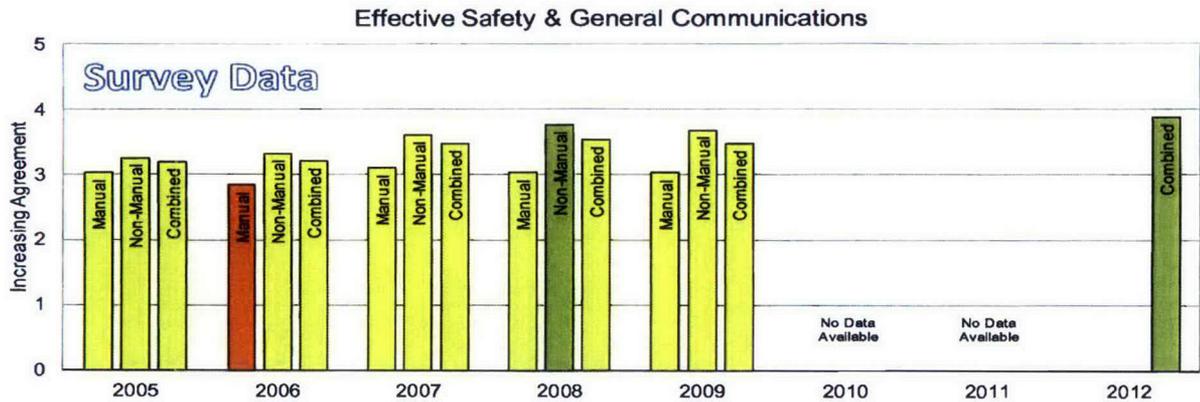
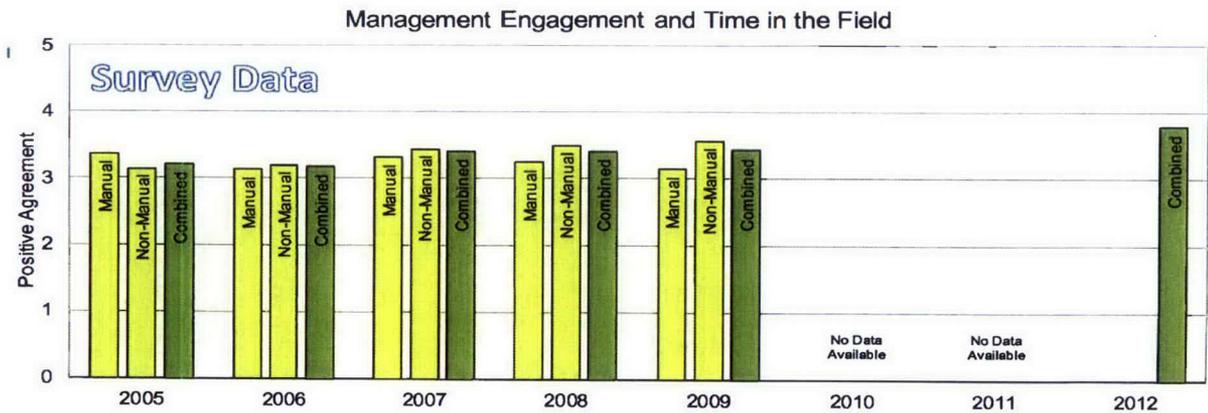


Figure 7



LOI 1.4: *Trust and Accountability – There is a high level of trust within the WTP and people at all levels of the organization treat each other with respect. Everyone is accountable to fulfill their safety responsibilities and meet management expectations for behaviors.*

Conclusion

Efforts to establish a climate of trust at the WTP Project, where employees perceive teamwork and mutual respect are valued, have been successful.

Discussion

Building trust within an organization takes time and, once established, requires continuous attention to ensure that the organization’s values and behaviors are properly reinforced and sustained. Data from the

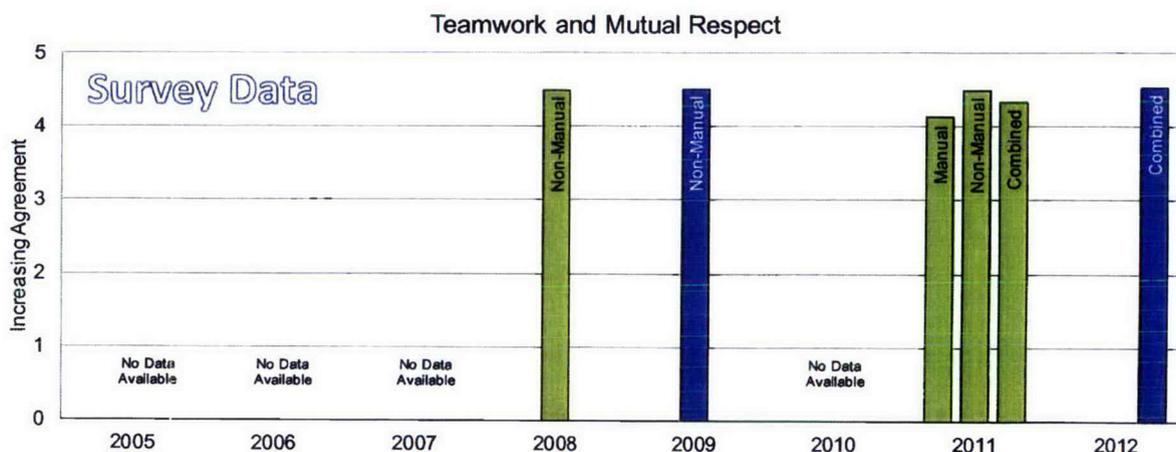
2012 Hanford Organizational Climate and SCWE Survey, reflected in Table 5, suggest that WTP has been successful in establishing a climate of trust at WTP.⁹

Table 5

Credibility, Trust and Reporting Errors and Problems	Score
In my company, people are willing to report safety issues.	4.19
There is a feeling of trust and respect in my immediate workgroup.	4.12
My immediate supervisor is trustworthy.	4.31

Trending of data from 2008 through 2012 indicates there has been consistently favorable agreement regarding teamwork and mutual respect at the WTP Project.

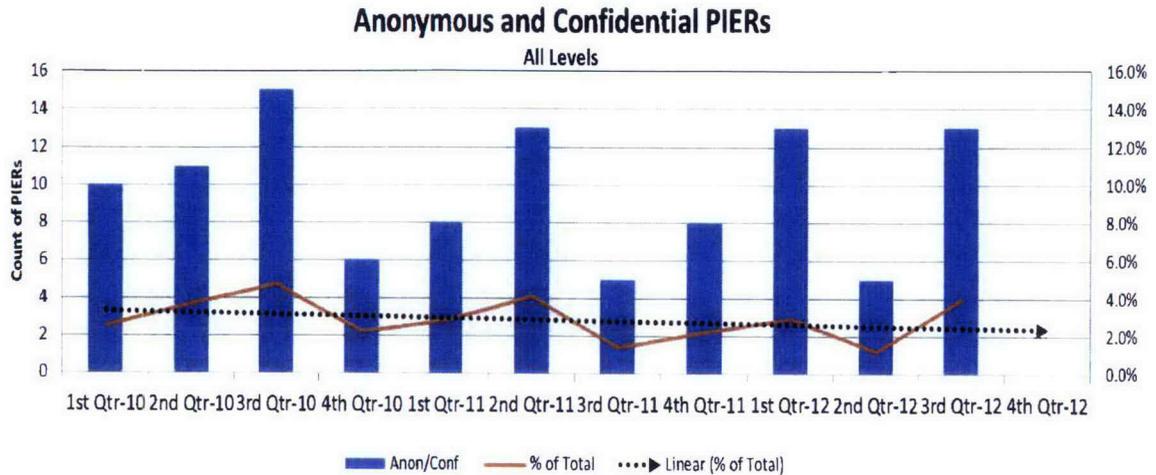
Figure 8



Issues anonymously submitted into the corrective action program may also provide an indirect measure of trust within the organization. Though it is not always clear what may be motivating an employee to anonymously identify an issue, trust may be a consideration with the employee's decision to do so. The following graph trends the percentage of PIERs submitted as confidential or anonymous out of the total number of PIERs generated by the Project. The percentage of confidential or anonymous PIERs remains low. This data is monitored for negative (i.e., increasing) trends that may warrant review and exploration.

⁹ "Credibility, Trust and Reporting Errors and Problems" was identified in the 2012 Hanford Organizational Climate and SCWE Survey as an area of strength.

Figure 9



In addition to anonymous PIERs, employees may also submit anonymous concerns to the ECP. In 2012 a total of 131 concerns came to the ECP. Of the 131 concerns, 19 (15%) were submitted anonymously and, in the opinion of the ECP manager, reflect a percentage typically experienced by ECP programs at similar construction projects. ECP monitors the trend in the ration of concerns received to those received anonymously as part of its ongoing evaluation of factors that are indicative of changes that may be occurring in the SCWE.

LOI 1.5: *Free Flow of Information – All employees including contractors, feel free to raise safety concerns without fear of retaliation. Management encourages employees to raise safety concerns through their avenue of choice, which includes avenues such as the chain of command, the ECP, and the DOE.*

Conclusion

Efforts to encourage employees, which include the SCWE training conducted in 2012, to raise safety issues through their avenue of choice have been effective. Employees perceive that their supervisors, who are the preferred avenue for raising safety issues and concerns, wish to hear about safety issues and concerns from their direct reports. Favorable perceptions exist across the workforce that employees feel free to raise safety concerns without fear of retaliation.

Discussion

An examination of the responses provided by employees in the 2012 *Hanford Organizational Climate and SCWE Survey* suggest there is favorable agreement across the WTP Project that management encourages employees to raise safety concerns through their avenue of choice, that their immediate supervisor wants to hear their concerns, and that they feel free to raise safety concerns without fear of retribution. contains the scores associated with these statements.

Table 6

Management support/encouragement to raise safety concerns	Score
Management at all levels encourages me to raise safety concerns through my avenue of choice.	4.40
I believe my immediate supervisor wants me to report any concerns I might have.	4.42
I am free to raise safety concerns without fear of retaliation.	4.04

Reinforcement of alternate avenues available to employees was provided in the recent SCWE training, further discussed in LOI 2.1.

➤ **Internal Avenues of Redress**

LOI 2.1: Project Issues Evaluation Reporting – The organization maintains an effective and efficient corrective action program and ensures that safety issues are reported, are resolved in a timely manner commensurate with their significance, and communicated to interested employees.

Conclusion

Opportunities exist to improve performance with the effectiveness and efficiency of the corrective action program. Extensive efforts have been directed at improving performance in this area, yet it appears continued attention and monitoring is necessary to ensure that improvements in efficiency and effectiveness are achieved.

Discussion

As shown in Table 7, Employee confidence in the Project’s ability to resolve safety issues in a timely manner commensurate with their significance received weak scores in the 2012 *Hanford Organizational Climate and SCWE Survey*.

Table 7

I am confident my company’s corrective action system:	Score
a) Effectively prioritizes issues	3.48
b) Provides both traceability and transparency in how issues are resolved	3.65
c) Enables rapid response to imminent problems while closing minor issues in a timely manner	3.32
d) Is supported by my company senior management	3.92

Additionally, trends regarding the workforce’s perception that there is effective resolution of, or timely response to, reported problems reinforce the conclusion that additional work remains in improving performance.

Figure 10

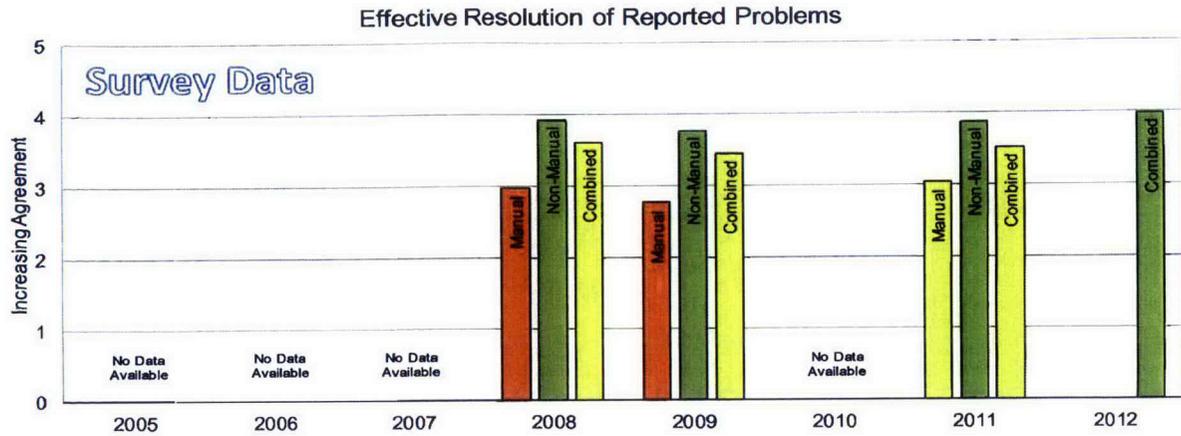
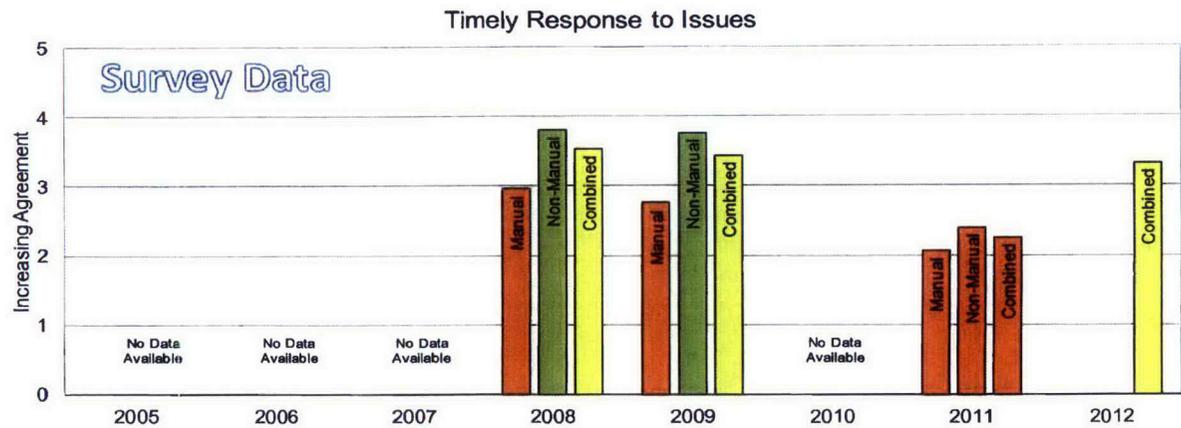


Figure 11

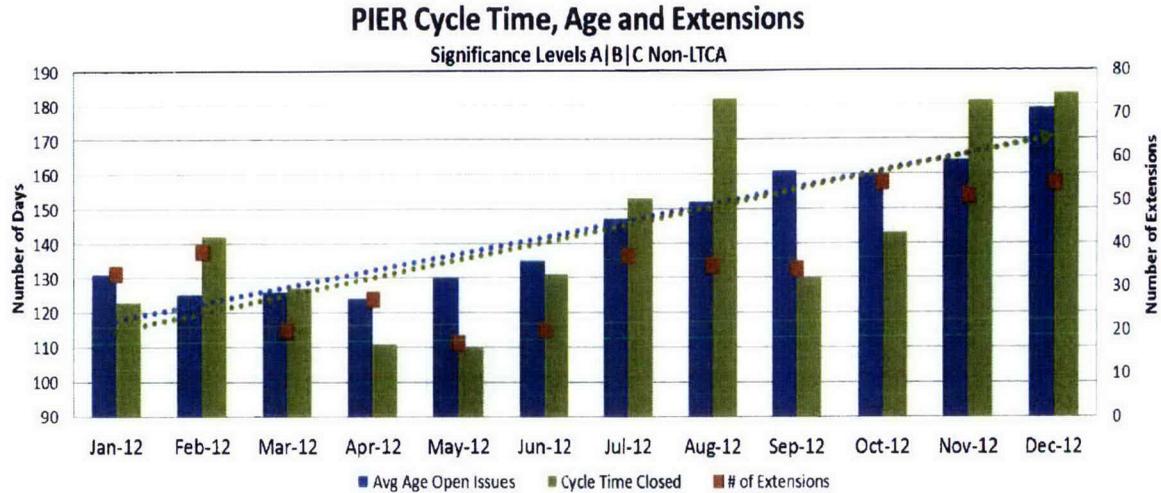


Corrective actions have been established in the CCAP to address improvements to better integrate, simplify, and communicate the processes to be used by the WTP Project to identify and resolve issues.

Appropriate metrics are in place to monitor program effectiveness.

In Figure 12, timeliness of issue resolution is evaluated by monitoring the average cycle time of closed PIERs, the average age of open PIERs, and the number of extensions processed on a monthly basis.

Figure 12



As illustrated in the above data, PIER cycle time and age of open PIERs continue to increase. The overall cumulative trend indicates declining performance.

LOI 2.2: *Self Assessment – The organization embraces critical self assessment for learning, growth and improvement, using operational events as a source of experience from which lessons learned can be derived.*

Conclusion

Weaknesses in the Project’s self assessment program, recently identified by program management, if not corrected, will likely result in missed opportunities for learning, growth, and improvement. The primary contributor to this weakness rests with a lack of experienced personnel performing self assessments coupled with insufficient use of outside expertise.

Discussion

Close inspection of the Project’s self assessment activities shows a substantial decline in the number of assessments conducted between 2010 and 2012. The Project experienced a 45 % reduction in the number of assessments from 2010 to 2011 and a 17 % reduction in the number of assessments from 2011 to 2012. A similar decline is noted in the number of issues identified during this period as well as the number of PIERs generated as a result of assessment activities. This decline in the identification of issues presents a potential that, in time, events of a self revealing nature may be on the rise. Table 8 summarizes this three-year trend.

Table 8

	FY 2010	FY 2011	FY 2012
Total Assessments	446	291	242
Issues Identified	411	207	200
PIERs from WTP Assessments	336	175	151

The Project acknowledges the importance of identifying weaknesses and performance gaps and the benefit that assessments provide in presenting opportunities to take action before an event or negative outcome occurs. Such was the discussion that occurred during the Same Page meeting on November 15, 2012, where it was concluded that measures must be taken to improve the proactive use of the self assessment process to find and fix issues. Upon further review of this matter, management determined that the primary contributor to this weakness rests with a lack of appropriately trained personnel and insufficient use of outside experience to perform self assessments and not with the declining number performed between 2010 and 2012. An issue was documented in the WTP corrective action system, reference Section 9 of this assessment report.

➤ **Alternate Problem Identification Processes**

LOI 3.1: *Alternate Avenues – Management recognizes that there are instances in which some concerns may not be addressed through line management and has established effective alternative avenues for handling employee concerns.*

Conclusion

Employees are aware of alternate avenues available to them to raise safety issues and concerns. Perceptions about access to, and willingness to use, alternate avenues vary across programs, which presents an opportunity for leadership to further reinforce and communicate the important role that alternate avenues provide in the SCWE in helping to ensure all safety issues and concerns are raised and receive attention.

Discussion

There are a number of alternate processes, reference Appendix D, that are available to WTP Project employees through which they may raise issues or concerns. Various communication tools are employed across the Project reminding employees about the availability of these options. The recent SCWE training took the opportunity to reinforce the availability of these options, offering attention and discussion to the list of alternate avenues and processes at the WTP Project.

The recent 2012 *Hanford Organizational Climate and SCWE Survey* concluded that “Alternate Problem and Identification Processes” is an area of weakness at the WTP Project. An inspection of employee responses that support the survey’s conclusion reveals there is separation in the data with how WTP employees perceive DOE alternate processes as opposed to how they perceive their own company’s alternate processes. As can be seen in the following table, there is moderate agreement with WTP employees regarding awareness of, and access to, the DOE DPO process and the DOE ECP. By contrast, as presented in Table 9, there is favorable agreement with WTP employees regarding access to, familiarity with, and willingness to use, their internal ECP.

Table 9

<i>Differing of Professional Opinions Process</i>	Score
I am aware of the DOE Differing of Professional Opinion process.	3.80
<i>Contractor Employee Concerns Programs</i>	Score

24590-WTP-SAA-MGT-12-0003, Rev 0
Hanford Tank Waste Treatment and Immobilization
Plant ISMS Safety Conscious Work Environment Self
Assessment

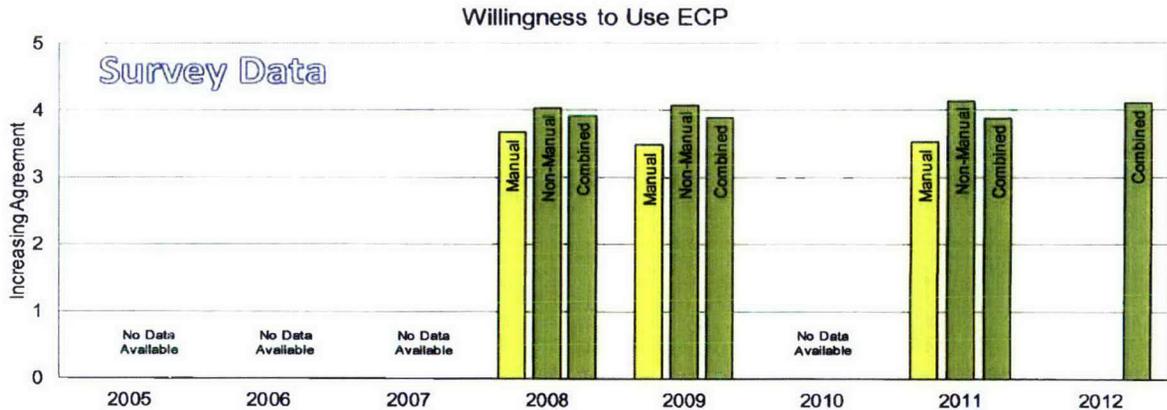
I know how, or who to contact, to submit a concern with my company's Employee Concern Program.	4.39
I believe senior management supports my company's Employee Concerns Program.	4.14
If I were uncomfortable raising a concern through other means, I would raise the concern with my company's Employee Concerns Program.	4.10

Table 10 *continued*

DOE Employee Concerns Programs	Score
I know how, or who to contact, to submit a concern with the DOE Employee Concern Program.	3.82
I believe senior management supports the DOE Employee Concerns Program.	4.04
If I were uncomfortable raising a concern through other means, I would raise the concern with the DOE Employee Concerns Program.	3.92

Trend data suggests that willingness to use ECP has been steady over time yet there appears to be opportunity for WTP to strengthen employee willingness to use ECP.

Figure 13



The WTP Project has taken actions to increase workforce awareness and understanding of the ECP. The ECP website has been revised and updated to better provide information about the program's function, services and what employees should expect when they bring an issue or concern to ECP. In a recent message to employees, the ECP manager described the improvements implemented on the ECP webpage and reinforced the importance of ECP as an alternate avenue for employees to raise safety issues and concerns.

With respect to the WTP DPO program, improvements of significance were recently realized when during the fourth quarter of 2012 a fire safety issue was documented on October 11 and closed within six weeks. Previous DPO actions were taking over six months to come to resolution. Continued attention is needed in this area; however, the success is recognized as a positive change in process management and organizational practices.

➤ **Detection and Prevention of Retaliation**

LOI 4.1: *Prevention of Retaliation – Management takes effective action to prevent retaliation for raising safety concerns. When events occur, managers take prompt and effective corrective action and mitigate any chilling effect on the organization.*

Conclusion

The WTP Project’s “zero tolerance” policy for retaliation is well understood by the workforce, reference Appendix E. With respect to SCWE, data from the 2012 *Hanford Organizational Climate and SCWE Survey* suggest there is favorable agreement across the workforce that retaliation is not tolerated.

Discussion

Employee responses to the 2012 *Hanford Organizational Climate and SCWE Survey* indicate that strong agreement exists with the statement that employees have not experienced retaliation for raising safety issues or concerns. Table 11 provides the statement presented in the survey, along with the accompanying scores associated with different levels within the organization.

Table 11

Detection & Prevention of Retaliation	Score
Within the past year I have <u>NOT</u> experienced retaliation for raising a safety issue/concern from:	
a) My immediate supervisor	4.62
b) Any of my company managers	4.52
c) My peers	4.63
d) DOE	4.61
A chilling effect does <u>NOT</u> exist in my immediate workgroup.	4.09
If I were aware of a chilling effect, I would report it.	4.06

A review of 2012 ECP case data revealed there were no substantiated concerns involving harassment, intimidation, retaliation, and discrimination and one substantiated concern involving chilling effect. In the case involving substantiated chilling effect, management has taken actions to correct and resolve this matter.

LOI 4.2: *People Management – Human resource and labor relations policies, procedures and practices provide an infrastructure that support the WTP Project’s commitment to safety and management’s expectation for behaviors.*

Conclusion

Resources are in place that support the WTP Project’s commitment to safety and the SCWE, and include ECP, HR, NSQC and Legal. Exploration of ways to improve integration of these resources may benefit the WTP Project in its pursuit to improve the SCWE and more broadly, the NSQC by instituting measures that leverage and coordinate these resources in a manner that best responds to opportunities and challenges.

Discussion

Recognizing that the maintenance and continued growth of the SCWE is dependent, in part, upon the organization's ability to respond to events and lessons learned that may impact the SCWE, a number of the personnel contacted during the course of this self assessment questioned what additional measures could be established to better respond to events or issues, organizational learning, or other discoveries that require coordinated review and attention. Properly instituted, these measures would enhance the WTP Project's ability to sustain growth of the SCWE and help reduce circumstances where missed opportunities may occur. Accordingly, it is recommended that the NSQC Manager evaluate, through benchmarking and other means, measures that can be instituted that will improve integration and coordination of Project resources in a durable and sustained manner and that best serve the WTP Project's commitment to continuous improvement in the SCWE.

7 Conclusions and Recommendations

Improvements in the SCWE are evident at the WTP Project and are a result of considerable effort expended to address a range of cultural, organizational, and programmatic issues identified in a number of high-level internal and external assessments. Continued growth of the SCWE, however, will depend on the WTP Project's ability to fully execute and mature the initiatives in place.

This assessment resulted in the identification of one strength, one weakness and one opportunity for improvement. In addition, two recommendations are provided to assist the Project in achieving its goal of establishing and sustaining a healthy SCWE.

- Strength (LOI 1.2) – exhibited in the SCWE training developed and delivered to Project personnel with the purpose of improving the knowledge and skills necessary to carry out individual and collective responsibilities for maintain a SCWE.
- Weakness (LOI 2.2) – identified in the quality of self assessments conducted. A weakness exists in the effectiveness of the assessment and surveillance processes, lack of experienced personnel conducting assessments, and a lack of off-project expertise, if not corrected, will likely result in missed opportunities for learning, growth and improvement.
- Opportunity (LOI 4.2) – exists in evaluating, through benchmarking and other means, measures that can be instituted to improve integration and coordination of Project resources in a durable and sustained manner and that best serves WTP's in continuous improvement in its SCWE.
- Recommendation – maintain focus on deliverables outlined in the CCAP to ensure timely and effective completion of corrective actions necessary to cultivate and improve SCWE. Particular emphasis should be directed at the Strategic Improvement Areas that have experienced schedule delays or extensions to planned completion dates, to ensure that progress against goals is achieved.
- Recommendation – establish a schedule and platform for the periodic discussion and review of the newly instituted NSQC metrics, including, but not limited to, the Senior Leadership Team, Nuclear Safety & Quality Culture Monitoring Panel, NSRB, Same Page, and other venues as may be deemed necessary and appropriate by project management.

8 Project Issues Evaluation and Reporting Items (PIER)

The following PIERs currently document conclusions and recommendations described in section 7 of this assessment report.

- 24590-WTP-PIER-MGT-12-0457, *Finding S-12-WED-RPPWTP-012-F02, Priority Level 1 Finding - Surveillance Report "Review of WTP Plant Design and Safety Margin Management, and Request for Actions to Address Cumulative Management and Performance Concern,"* Action 08, Establish and communicate to the workforce the behavioral expectations that represent a rigorous disciplined approach to project execution.
- 24590-WTP-PIER-MGT-12-1314C, *Weakness in screening and processing of NSQC-related issues*
- 24590-WTP-PIER-MGT-12-1461D, *Opportunities for Improvement in WTP Assessment Program*
- 24590-WTP-PIER-MGT-13-0104 (Significance level to be assigned), *Opportunity to Improve SCWE*

9 Assessment Team Members

The following personnel participated in this management sponsored self assessment. These personnel were selected based upon their knowledge and experience in WTP matters associated with the SCWE:

- Melinda D'Ouille, NSQC Program Manager
- Debbie Clarke, Performance Assurance Senior Quality Engineer
- Virginia Cleary, Performance Assurance Senior Quality Engineer
- Mary Mills, Human Resources Manager
- Tim Staton, Human Performance Specialist
- Ron Benedict, Employee Concerns Manager
- Hal Downey, Differing Professional Opinion (DPO) Coordinator
- Neil Bergh, Independent Consultant, Nuclear Industry experience

10 Documents Reviewed

As described in 24590-WTP-PL-MGT-12-0023, *BNI ISMS Safety Conscious Work Environment Self-Assessment Plan*, there is an established comprehensive baseline of information about the NSQC and SCWE at WTP. Therefore, this assessment does not establish a baseline, but rather builds upon recent assessments. Previous assessments evaluated personnel behaviors through observation, interviews, and surveys, and included a review of WTP documented processes and procedures. Information gathered during past assessments is foundational to this 2012/13 SCWE self-assessment.

24590-WTP-SAA-MGT-12-0003, Rev 0
Hanford Tank Waste Treatment and Immobilization
Plant ISMS Safety Conscious Work Environment Self
Assessment

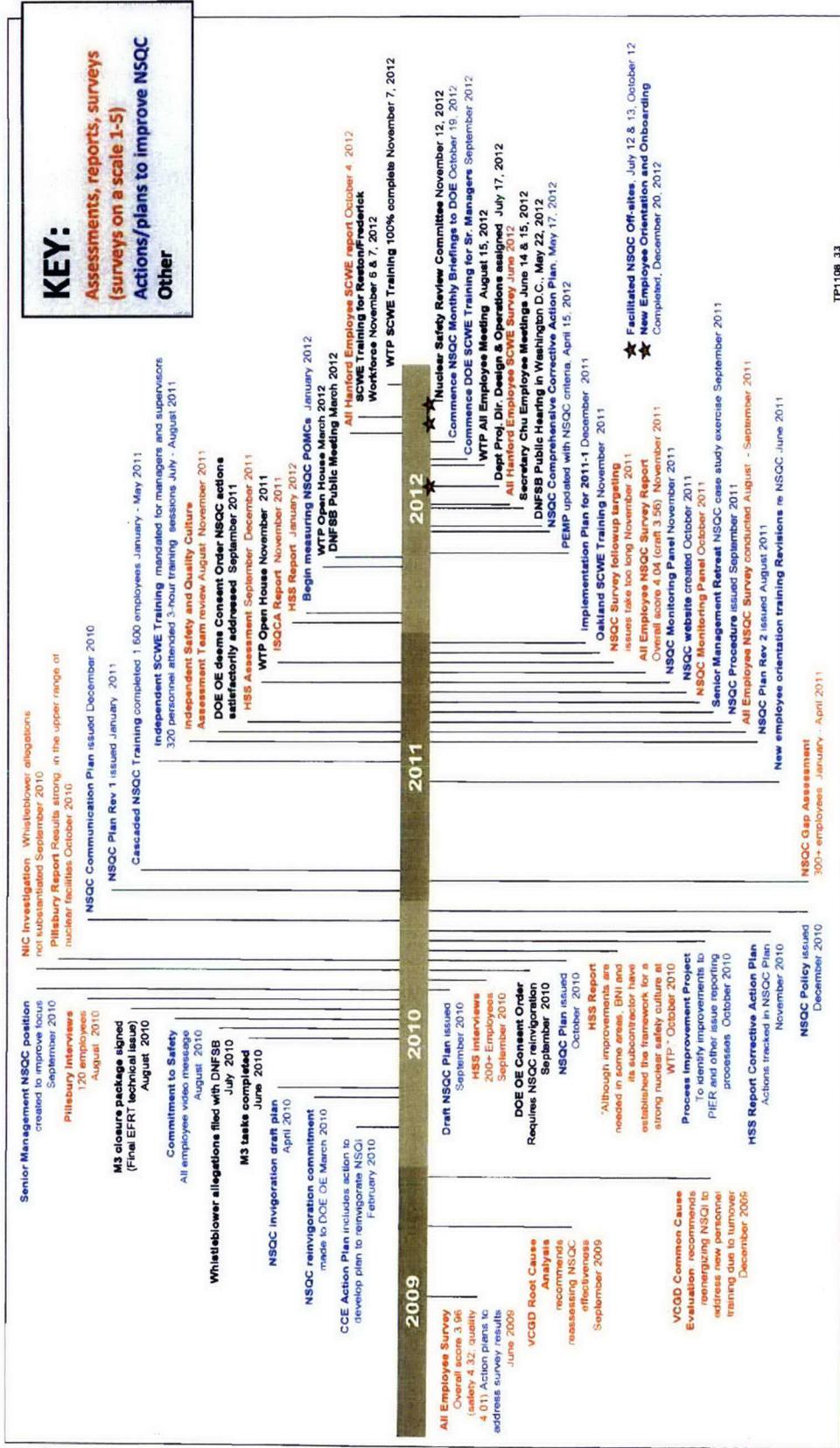
Listed in this section is a comprehensive compilation of source materials, which when reviewed in light of interviews and in particular the Hanford-wide employee survey inform the majority of this assessment.

- Independent Oversight Assessment of Nuclear Safety Culture and Management of Nuclear Safety Concerns at the Hanford Site Waste Treatment and Immobilization Plant of January 2012
- Comprehensive Corrective Action Plan (CCAP) for strengthening the Nuclear Safety and Quality Culture (NSQC) 24590-WTP-PL-MGT-12-0005 in May 17, 2012.
- *BNI Comprehensive Corrective Action Plan for Strengthening the Nuclear Safety and Quality Culture at the Hanford Tank Waste Treatment and Immobilization Plant*, Quarterly Report of October 1, 2012
- Independent Oversight Assessment of Nuclear Safety Culture and Management of Nuclear Safety Concerns at the Hanford Site Waste Treatment and Immobilization Plant of October 2010
- Defense Nuclear Facilities Safety Board (DNFSB) Recommendation 2011-1, *Safety Culture at the Waste Treatment and Immobilization Plant*, of June 2011
- Report of the Independent Safety and Quality Culture Assessment Team (ISQCAT), *Assessment and Recommendations for Improving the Safety and Quality Culture at the Hanford Waste Treatment and Immobilization Plant*, of November 2011
- *BNI ISMS Safety Conscious Work Environment Self-Assessment Plan*, 24590-WTP-PL-MGT-12-0023 of November 2012
- Report by EurekaFacts, LLC, *The 2012 Hanford Organizational Climate and SCWE Survey*, Bechtel National, Inc. & USA Repository Services (BNI/URS), October 4, 2012
- DOE's Implementation Plan for Defense Nuclear Facilities Safety Board Recommendation 2011-1, *Safety Culture at the Waste Treatment and Immobilization Plant (WTP)*, dated December 27, 2011, and September 14, 2012 with included addendum.
- DOE G 450.4-1C, *Integrated Safety Management System Guide*, dated September 29, 2011
- *Waste Treatment and Immobilization Plan Nuclear Safety Review Board Observations*, November 12-15, 2012 Meeting
- 24590-WTP-GPP-MGT-061, *WTP Nuclear Safety and Quality Culture* procedure, dated February 8, 2012
- 24590-WTP-PL-MGT-10-0001, Rev 3, *WTP Nuclear Safety and Quality Culture Plan*, dated September 4, 2012
- Report by Pillsbury, *Assessment of a Safety Conscious Work Environment at the Hanford Waste Treatment Plant*, dated November 1, 2010
- Minutes of the WTP Performance Improvement Review Board (PIRB)
- Minutes of the PIER Review Committee (PRC)
- 24590-WTP-G63-MGT-016, *Nuclear Safety and Quality Culture*
- 24590-WTP-GPP-MGT-043, Rev 4A, *Corrective Action Management*, of November 30, 2012

24590-WTP-SAA-MGT-12-0003, Rev 0
Hanford Tank Waste Treatment and Immobilization
Plant ISMS Safety Conscious Work Environment Self
Assessment

- 24590-WTP-GPP-MGT-034, Rev 3, *Performance Improvement Review Board*, of October 12, 2012
- 24590-WTP-GPP-MGT-071, Rev 0, *Cause Analysis*, of September 10, 2012
- 24590-WTP-GPP-MGT-017, Rev 5, *WTP Lessons Learned*, of June 29, 2012
- 24590-WTP-GPP-MGT-072, Rev 0, *Cause Analyst Training, Qualification, and Certification*, of September 10, 2012
- 24590-WTP-GPP-MGT-021, Rev 5A, *Event Management and Investigation*, dated March 29, 2012
- 24590-WTP-GPP-SIND-021, Rev 4, *Critiques*, dated April 26, 2010
- NSQC Performance Indicators (being developed as part of the NSQC CCAP)
- 24590-WTP-PL-MGT-12-0011, *Project Execution Plan for the Reliability Validation Process*, of August 10, 2012
- Human Resources Department Performance Indicators
- Employee Concerns Performance Indicators
- Verbal and written feedback of students and trainers regarding the SCWE training for all Project personnel being done as an action in the NSQC CCAP

Appendix A WTP Nuclear Safety And Quality Culture (NSQC) History Timeline



TP1108_33

Appendix B NSQC CCAP Schedule Summary

WTP NSQC CCAP Schedule Summary Comparison					
Data as of 1/28/2013					
Count	CA #	CA Description	Planned Completion Date	Revised Completion Date	Complete (per schedule)
A--Realignment and Maintenance of Design and Safety Bases					
1	CA A-IP i	Develop PEP to transition PTF PDSA to STD-3009 - Pier 11-0473 #5	2QCY2012	3QCY2012	Complete Q3/12
2	CA A-IP ii	Develop PEP to transition HLW PDSA to STD-3009 - Pier 11-0473 #7	2QCY2012	3QCY2012	Complete Q3/12
3	CA A-IP iii	Develop PEP to transition LAW PDSA to STD-3009 - Pier 11-0473	1QCY2012		Complete Q1/12
4	CA A-1	Formal Six Sigma Process Mapping	4QCY2012	1QCY2013	
5	CA A-2	Safety Basis Review Team (SBRT) review of Six Sigma	4QCY2012	1QCY2013	
6	CA A-3	Revise ENG and E&NS procedures	1QCY2013	2QCY2013	
7	CA A-4	Develop and Administer new training	1QCY2013	3QCY2013	
8	CA A-5	Facilitate ENG/E&NS Meetings	3QCY2012	Start 4QCY2012	Complete Q4/12
9	CA A-6	ENG/E&NS Integrated Schedule	4QCY2012	3QCY2013	
10	CA A-LT-1	Monitor Metrics/Effectiveness assessments	4QCY2013		
B--Management Processes of the WTP NSQC					
11	CA B-1	Develop a set of Behavioral Values specific to WTP	1QCY2013	2QCY2013	
12	CA B-2	Revise the Project NSQC Communication Plan	3QCY2012		Complete Q3/12
13	CA B-3	Develop a Set of Quantitative and Qualitative Metrics	3QCY2012	4QCY2012	Complete Q4/12
14	CA B-4	Establish a Nuclear Safety Review Board (NSRB)	4QCY2012		Complete Q4/12
15	CA B-LT-1	Monitoring metrics	4QCY2013		
C--Timeliness of Issues Identification and Resolution					
16	CA C-IP- i	Publish a Management Policy regarding WTP Issues Mgmt	2QCY2012		Complete Q2/12
17	CA C-IP- ii	Streamline and clarify the corrective action management process	1QCY2012	3QCY2012	Complete Q3/12
18	CA C-IP- iii	Identify Issue Mgmt processes interfacing with the corrective action program	2QCY2013	4QCY2012	Complete Q4/12
19	CA C-IP- iv	Strengthen cause analysis program and process	3QCY2012		Complete Q3/12
20	CA C-IP- v	Upgrade presentation material in new employee indoctrination	1QCY2013	4QCY2012	Complete Q4/12
21	CA C-IP- vi	Cascade communication related to corrective action management program	3QCY2012		Complete Q2/12
22	CA C-IP- vii	Upgrade the trend program	4QCY2012	2QCY2013	
23	CA C-1	Strengthen the Differing Professional Opinion (DPO) Program	4QCY2012		Complete Q4/12
24	CA C-2	Strengthen the Corrective Action Management Program	2QCY2013		
25	CA C-3	Strengthen the ECP program	4QCY2012		Complete Q4/12
26	CA C-4	Re-institute and strengthen the BNI change authorization process	3QCY2012	1QCY2013	
27	CA C-5	Reconstitute the Issue Resolution Team (IRT)	3QCY2012	1QCY2013	
28	CA C-6	Integrate, Simplify, and Communicate the Issues Management Processes	4QCY2012		Complete Q4/12
29	CA C-7	Establish cycle time metrics for issue resolution	3QCY2012	1QCY2013	Complete Q1/13
30	CA C-8	Clarify and document the DOE review and approval process	4QCY2012	2QCY2013	
31	CA C-9	Strengthen WTP's Ability to Self identify issues in a timely manner	1QCY2013	2QCY2013	
32	CA C-LT-1	Monitoring Metrics	4QCY2013		
D-- Roles, Responsibilities, Authorities, and Accountabilities (R2A2)					
33	CA D-1	Assessment of R2A2 Assignments and Documentation	3QCY2012	4QCY2012	Complete Q4/12
34	CA D-2	Establish a common project accountability model in concert with DOE	4QCY2012	2QCY2013	
35	CA D-3	Implement, Validate, and Enforce the New Accountability Model	1QCY2013	3QCY2013	
36	CA D-4	Update and Maintain the WTP R2A2 Governance Documents	1QCY2013	4QCY2013	
37	CA D-5	Managerial Competencies In Accountability and Decision-making	1QCY2013		
38	CA D-6	Clarify, Document, and Enforce the DOE-ORP Interface R2A2s	4QCY2012	2QCY2013	
39	CA D-LT-1	Monitoring Metrics	4QCY2013		
E--Management and Supervisory Behaviors					
40	CA E-1	Managerial/Supervisory Behavioral Competencies	4QCY2012	2QCY2013	
41	CA E-2	Organizational Development Professional Position	1QCY2012		Complete Q1/12
42	CA E-3	Inclusion of Individual NSQC Performance Goals	4QCY2012	1QCY2013	
43	CA E-4	Delivery of Leadership Development Curriculum	1QCY2013		
44	CA E-5	Establish Formal Behavioral Feedback Process	4QCY2012		Complete Q4/12
45	CA E-6	New Employee Orientation (NEO) and Onboarding (OB)	1QCY2013	4QCY2012	Complete Q4/12
46	CA E-7	Safety Conscious Work Environment (SCWE) Training	4QCY2012		Complete Q4/12
47	CA E-LT-1	Monitoring Metrics	4QCY2013		
F--Construction Site-Unique Issues					
48	CA F-1	Admin of an Enhanced Craft Performance Rating System	4QCY2012		Complete Q4/12
49	CA F-2	Delivery of an Enhanced Superintendent Leadership Workshop	4QCY2012	1QCY2013	
50	CA F-LT-1	Administer assessments and surveys	4QCY2013		

Complete 1QCY2013 2QCY2013

Appendix C WTP Departmental Management Meeting Schedule

The departmental meetings serve the same purpose as all-employee meetings, but are held in a smaller venue. The purpose is to provide employees the opportunity to interact with the WTP Project Director and other senior leadership in a small group setting. The format is a 20-minute update on the status of the project and where it is heading, followed by a 40-minute question-and-answer period.

WTP Management Departmental Meetings			
2013 Management Departmental Meeting Schedule			
Date	Speaker	Group	Time
In-Town			
23-Jan	F. Russo	Procurement & Subcontracts	12:30-1:30 pm
25-Jan	W. Sproat	Operations	9:30-10:30 am
28-Jan	F. Russo	Human Resources, IS&T, Safeguards & Security, Safety Assurance, Six Sigma, Controller, Contracts, Employee Concerns	1:00-2:00 pm
28-Jan	F. Russo	Office & Administrative Services	2:30-3:30 pm
2012 Management Departmental Meeting Schedule			
Date	Speaker	Group	Time
Site			
3-Jan	F. Russo	Construction Supervision, Safety Assurance, Commissioning & Training Maintenance, Startup, Plant	8:00-9:00 am
11-Jan	R. Bradford	Field Engineering	9:30-10:30 am
12-Jan	F. Russo	Field Engineering, Quality & Performance Assurance, Quality Control	1:00-2:00 pm
30-Jan	R. Bradford	Resident Engineering, Administrative Services with Document Control, Human Resources/Liason Representatives, Controller, IS&T	8:00-9:00 am
In-Town			
5-Mar	F. Russo	Line Management	3:00-4:00 pm
7-Mar	F. Russo	Line Management	3:00-4:00 pm
7-May	F. Russo	PT Engineering	1:00-2:00 pm
29-May	R. Bradford	HLW Engineering	8:00-9:00 am
4-Jun	F. Russo	PT Engineering	1:00-2:00 pm
18-Jun	F. Russo	Human Resources, IS&T, Safeguards & Security, Safety Assurance, Six Sigma, Controller, Contracts, Employee Concerns	1:00-2:00 pm
2-Jul	F. Russo	Environmental & Nuclear Safety	1:00-2:00 pm
16-Jul	R. Bradford	Plant Operations, Commissioning & Training	1:00-2:00 pm
24-Jul	R. Bradford	Office & Administrative Services	8:00-9:00 am
30-Jul	F. Russo	Project Controls	10:30-11:30 am
5-Nov	F. Russo	Engineering – 1/2 of organization	2:30-3:30 pm
19-Nov	W. Sproat	Engineering – 1/2 of organization	1:00-2:00 pm
19-Nov	R. Bradford	Construction Support, Project Controls, Quality & Performance Assurance	8:00-9:00 am
30-Nov	F. Russo	Mgrs/Supervisors #1	1:00-2:00 pm
30-Nov	F. Russo	Mgrs/Supervisors #2	2:30-3:30 pm

*Appendix D WTP Safety Conscious Work Environment
Training – Slide 17, “Multiple Options for Raising Issues”*



Multiple Options for Raising Issues

- Immediate Supervisor
- Any Supervisor or Manager
- PIER Process
- Commenting Processes
- Engineering Technical Issues Processes
- Differing Professional Opinions
- Human Resources
- Employee Concerns Program
- Labor Relations
- Non-conformance Reports
- Construction Deficiency Reports
- Craft Safety Representative
- Safety Log Books
- DOE
- Ethics Hotline:
1-800-Bechtel

Appendix E WTP Nuclear Safety and Quality Culture Policy

	24590-WTP-G63-MGT-016, Rev 1 Nuclear Safety and Quality Culture Effective Date: 28 August 2011	
Prepared By: Mark Platt/Mike Coyle	Approved By:  Frank M. Russo, WTP Project Director	Date: 8/23/11

Policy:

Nuclear Safety and Quality Culture

The Hanford Tank Waste Treatment and Immobilization Plant (WTP) is a Department of Energy (DOE) nuclear facility. Top-level directives require that the facility be designed, built, and operated with the protection of facility workers, the public, and the environment as the overriding priorities.

It is the policy of WTP management that a strong nuclear safety and quality culture (NSQC) be established and maintained for the life of the WTP Project. A strong and enduring NSQC is essential for all work conducted at the WTP. The attitudes, activities, and accountabilities demonstrated by all Project employees and subcontractors represent and perpetuate the fundamental principles, attributes, and behaviors necessary to ensure the WTP will meet or exceed nuclear safety and quality requirements.

For purposes of this policy, NSQC is defined as:

An organization's values and behaviors modeled by its leaders and internalized by its members, which serve to make nuclear safety and quality the overriding priorities on the Project.

The WTP NSQC focuses on three central themes:

- Leadership
- Employee/Worker Engagement
- Organizational Learning

Management sets clear expectations and accountabilities, is actively engaged, and demonstrates active leadership in the field through interactions with workers. Workers are personally committed to safety and quality, and participate in raising concerns and opportunities for improvement. Collectively, WTP promotes trust and team building through open communication and information sharing. The development and systematic Project-wide implementation and improvement of behavior related to these key attributes ensure a robust and continuously improving NSQC at the WTP.

An effective NSQC can only be achieved within a safety conscious work environment (SCWE). Employees are encouraged to maintain a questioning attitude and raise safety or quality concerns without fear of harassment or intimidation. SCWE is a vital component of NSQC.