Department of Energy
Washington, DC 20585

May 1, 2012

The Honorable Peter S. Winokur
Chairman
Defense Nuclear Facilities Safety Board
625 Indiana Avenue, NW, Suite 700
Washington, DC 20004

Dear Mr. Chairman:

This letter is to inform you that the Department of Energy (DOE) has completed the first deliverable associated with Action 1-8 of the Department's Implementation Plan (IP) for Defense Nuclear Facilities Safety Board (Board) Recommendation 2011-1, *Safety Culture at the Waste Treatment and Immobilization Plant* (WTP). The first deliverable for Action 1-8 is a letter to the Board transmitting the DOE Office of River Protection (ORP) action plan for safety culture improvements. Enclosed with this letter is the ORP action plan.

This plan was created to initiate needed improvements in the ORP safety culture. ORP senior management chartered a Safety Culture Integrated Project Team, staffed with employees from a cross section of the organization, to analyze the "Independent Oversight Assessment of Nuclear Safety Culture at the Waste Treatment and Immobilization Plant, January 2012," performed by the DOE Office of Health, Safety and Security. The team's efforts produced 9 near-term improvement actions that can be accomplished and measured within 1 year, and 15 continuing improvement actions – many of which will start in 2012. This plan will be updated as improvement actions are completed and as employee feedback drives refinement and/or development of additional actions.

The WTP contractor has also developed and submitted to DOE an action plan, as directed by DOE in correspondence previously provided to the Board as the deliverable for Action 1-4 of the IP. DOE is currently reviewing the contractor's action plan, and will provide it to the Board after approval by DOE, as stated in our letter to you dated February 24, 2012.

If you have any questions, please feel free to contact me or Mr. James Hutton, Acting Associate Deputy Assistant Secretary for Safety, Security, and Quality Programs, at (202) 586-5151.

Sincerely,

David Huizenga
Senior Advisor
for Environmental Management

Enclosure

cc: M. Campagnone, HS-1.1
S. Samuelson, ORP
T. Mustin, EM-2
A. Williams, EM-2.1
M. Moury, EM-40
J. Hutton, EM-40

RL-675 (03/99)

United States Government **Department of Energy**

memorandum

Office of River Protection

DATE: APR 2 6 2012

REPLY TO ATTN OF: ORP:SHP 12-ORP-0022

SUBJECT: THE U.S. DEPARTMENT OF ENERGY (DOE), OFFICE OF RIVER PROTECTION (ORP) SAFETY CULTURE IMPROVEMENT PLAN, ACTION 1-8, DELIVERABLE 1 FOR DOE IMPLEMENTATION PLAN FOR DEFENSE NUCLEAR FACILITIES SAFETY BOARD (DNFSB) RECOMMENDATION 2011-1

TO: David Huizenga, Assistant Secretary
for Environmental Management, EM-1

This letter provides the ORP Safety Culture Improvement Plan for your review and transmittal to the DNFSB. Action 1-8 of the DOE Implementation Plan for DNFSB Recommendation 2011-1, *Safety Culture at the Waste Treatment and Immobilization*, specifies:

> "Action 1-8: Develop an action plan and complete ORP actions for safety culture improvements including responses to HSS recommendations made to ORP and changes to management and employee performance plans that include specific measures for meeting safety culture expectations."
>
> "Deliverable 1: Letter to DNFSB transmitting action plan.
> Expected Completion Date: April 2012."

This Safety Culture Improvement Plan was created to initiate needed improvements in the ORP safety culture. This plan will be updated as improvement actions are completed and as employee feedback drives refinement and/or development of additional actions.

If you have any questions, please contact me on (509) 372-2315.

Scott L. Samuelson, Manager
Office of River Protection

Attachment

cc w/attach:
J. A. Hutton, EM-40
M. B. Moury, EM-40

bcc:
S. Charboneau, ORP
D. E. Knutson, WTP
B. J. Harp, WTP
T. W. Fletcher, AMTF
P. G. Harrington, TRS
T. E. Olds, OCS
S. H. Pfaff, AMTF

Attachment
12-ORP-0022

THE U.S. DEPARTMENT OF ENERGY (DOE), OFFICE OF RIVER PROTECTION (ORP) SAFETY CULTURE IMPROVEMENT PLAN, ACTION 1-8, DELIVERABLE 1 FOR DOE IMPLEMENTATION PLAN FOR DEFENSE NUCLEAR FACILITIES SAFETY BOARD (DNFSB) RECOMMENDATION 2011-1

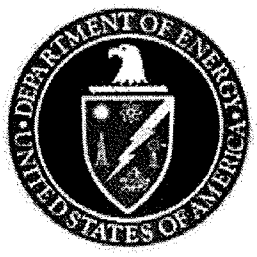
138 pages (including coversheet)

Office of River Protection

MGT-ISS-PL-01 R0

Safety Culture Improvement Plan

Issued: April 2012



U.S. Department of Energy

Office of River Protection

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River Protection Project
Safety Culture Improvement Plan

U.S. Department of Energy, Office of River Protection

Revision 0

Stacy Charboneau for

Scott L. Samuelson, Manager
Office of River Protection

4/26/12
Date

HISTORY SHEET

Revision	Date	Reason for Revision
0	April 2012	Initial issue.

U.S. Department of Energy
Office of River Protection
Safety Culture Improvement Plan

Executive Summary

This plan was created to initiate needed improvements in the U.S. Department of Energy (DOE), Office of River Protection (ORP) safety culture. ORP senior management chartered a Safety Culture Integrated Project Team, staffed with employees from a cross-section of the organization, to provide in-depth analysis of the "Independent Oversight Assessment of Nuclear Safety Culture at the Waste Treatment and Immobilization Plant, January 2012," performed by the DOE Office of Health, Safety and Security. The team's efforts produced nine near-term improvement actions that can be accomplished and measured within one year, and fifteen continuing improvement actions – many of which will start in 2012. This plan will be updated as improvement actions are completed and as employee feedback drives refinement and/or development of additional actions.

The safety culture improvement actions directly address the priorities provided by the DOE Office of Environmental Management (EM) leadership, as summarized below:

- **Instilling and holding managers accountable for leadership behaviors that foster a strong safety culture** and driving these behaviors all the way down through the EM headquarters and field organizations.
- **Ensuring line managers encourage a vigorous questioning attitude** towards safety and fostering constructive dialogues and discussions on safety matters.
- **Establishing a high level of trust** in which individuals feel safe from reprisal when raising safety concerns. Differing points of view are solicited and encouraged, management provides relevant and timely information to the workforce, and **vigorous corrective action programs are effectively implemented.**

The Secretary of Energy has stated:

> "DOE is committed to a strong and sustained safety culture, where all employees – from workers with shovels in the ground to their managers all the way up to the Secretary and everyone in between – are energetically pursuing the safe performance of work, encouraging a questioning work environment, and making sure that executing the mission safely is not just a policy statement but a value shared by all."

ORP management is committed to the long term improvement and sustainment of a healthy safety culture. In addition to the improvement actions provided in this plan, ORP will continue to collaborate with EM in our corporate efforts to promote appropriate behaviors and project excellence. ORP intends to obtain organizational development expertise to assist in communicating our team values, enabling a safety-conscious work environment, and building trust.

Table of Contents

Acronyms

BARS	Behavioral Anchored Rating Scale
BNI	Bechtel National, Inc.
CLIN	Contract Line Item Number
DNFSB	Defense Nuclear Facility Safety Board
DOE	U.S. Department of Energy
DPO	Differing Professional Opinion
DSA	Documented Safety Analysis
E&NS	Environmental and Nuclear Safety
ECP	Employee Concerns Program
EM	Office of Environmental Management
FPD	Federal Project Director
FRA	Functions, Responsibilities and Authorities
HLW	High-Level Waste
HQ	Headquarters
HSS	Office of Health, Safety and Security
IPP	Individual Performance Plan
IPT	Integrated Project Team
ISM	Integrated Safety Management
NRC	Nuclear Regulatory Commission
NSD	Nuclear Safety Division
NSQC	Nuclear Safety and Quality Culture
ORP	Office of River Protection
PDSA	Preliminary Documented Safety Analysis
PEP	Project Execution Plan
PER	Problem Evaluation Report
PIER	Project Issues Evaluation Reporting
PT	Pretreatment
PTF	Pretreatment Facility
QA	Quality Assurance
RL	Richland Operations Office
SCWE	Safety Conscious Work Environment
SSC	Structures, Systems, and Components
WED	WTP Engineering Division
WRPS	Washington River Protection Solutions LLC
WTP	Waste Treatment and Immobilization Plant

Introduction and Purpose

This plan was created to initiate needed improvements in the U.S. Department of Energy (DOE), Office of River Protection (ORP) safety culture, defined by the Integrated Safety Management System Guide, DOE G 450.4-1C as follows:

> "Safety culture is an organization's values and behaviors modeled by its leaders and internalized by its members, which serve to make safe performance of work the overriding priority to protect the workers, public, and the environment."

Safety culture encompasses all aspects of nuclear, environmental and industrial safety. ORP embraces this definition of safety culture and recognizes that lasting positive cultural change in an organization only results from the purposeful, sustained efforts of all the members of the organization. While this plan focuses on the essential improvement actions that can be accomplished and measured by April 30, 2013, additional improvement actions are also provided to aid in the ongoing and future refinement of ORP's safety culture improvement efforts.

Key Messages from Recent Assessment Activities

The "Independent Oversight Assessment of Nuclear Safety Culture and Management of Nuclear Safety Concerns at the Hanford Site Waste Treatment and Immobilization Plant," performed by the DOE Office of Health, Safety and Security (HSS), January 2012, provided the most comprehensive assessment to date of the ORP safety culture.

In his testimony to the Defense Nuclear Facility Safety Board (DNFSB) on March 22, 2012, William Miller, Team Leader for the HSS Independent Oversight Team, provided the following three statements to summarize the issues at the Waste Treatment and Immobilization Plant (WTP) project:

> "Overall, there is a reluctance to raise safety concerns at ORP and BNI. And within certain groups at BNI there is a fear of retaliation."
>
> "The approach to safety and safety culture is highly proceduralized across WTP and not yet internalized at all levels of the organization."
>
> "WTP managers do not have a full appreciation for the current culture or the level of effort needed to foster a healthy safety culture."

The conclusion statement expressed in the HSS Independent Oversight Assessment elaborated on these three main points:

> "Overall, the HSS Independent Oversight team determined that most personnel at WTP believed that safety was a high priority. However, during the safety culture evaluation, a significant number of staff within ORP, DOE-WTP, and BNI expressed reluctance to raise safety or quality concerns for various reasons. Fear of retaliation was identified in some BNI groups as inhibiting the identification of problems. Employees' willingness to

raise safety concerns without fear of retaliation is an essential element of a health safety culture, and therefore significant management attention is needed to improve the safety culture at WTP. While EM, ORP, DOE-WTP, and BNI managers espoused support for a healthy nuclear safety culture, they do not have a full appreciation of the current culture or the nature and level of effort needed to foster a healthy safety culture, including a mature and effective SCWE, and the WTP community has not been sufficiently engaged in creating a mutually shared and desired culture. In addition to the concerns about the current safety culture, the Independent Oversight team identified significant concerns about ORP, DOE-WTP, and BNI processes for nuclear design and safety basis and for managing safety issues."

Leadership Statement in Response to the Recent Assessment Activities

In his testimony to the DNFSB on March 22, 2012, David Huizenga, Senior Advisor for the DOE Office of Environmental Management (EM), provided the following statement to highlight the most important safety culture improvement efforts across the EM complex:

> "The organizational safety culture is the environment in which the integrated safety management system is implemented and work takes place. I want to make it clear that safe performance of work is the overriding priority in the Office of Environmental Management, and it is a reflection of leadership starting with me. It's not a priority, it's not an overriding priority, but the overriding priority. I take these concepts seriously. In this venue, I am focused on three things:
>
> - **Instilling and holding managers accountable for leadership behaviors that foster a strong safety culture** and driving these behaviors all the way down through the EM headquarters and field organizations.
> - **Ensuring line managers encourage a vigorous questioning attitude** towards safety and fostering constructive dialogues and discussions on safety matters.
> - **Establishing a high level of trust** in which individuals feel safe from reprisal when raising safety concerns. Differing points of view are solicited and encouraged, management provides relevant and timely information to the workforce, and **vigorous corrective action programs are effectively implemented.**"
>
> "I would note that the actions within the Department's implementation plan for Board Recommendation 2011-1 develop and deliver training to senior contractor and DOE managers that will assist leaders in creating an open and collaborative work environment."

Background

Assessment documents for the Tank Farms cleanup project from as far back as 1998 have periodically identified safety culture and its implementation as needing improvement. More recently in 2010, the reassignment of a URS manager at the WTP and the associated whistleblower allegations initiated a string of events, letters, and reports. The DNFSB released

Recommendation 2011-1, "Safety Culture at the Waste Treatment and Immobilization Plant," in June 2011. DOE transmitted its "Implementation Plan for DNFSB Recommendation 2011-1" (Implementation Plan 2011-1), in December 2011.

One of the earliest actions accomplished as part of the Implementation Plan 2011-1 was the "Independent Oversight Assessment of Nuclear Safety Culture and Management of Nuclear Safety Concerns at the Hanford Site Waste Treatment and Immobilization Plant," performed by the DOE HSS, with the report issued in January 2012. This report represents DOE's most comprehensive safety culture assessment of a major construction project to date.

This ORP Safety Culture Improvement Plan was developed to complete another action in the DOE Implementation Plan 2011-1:

> "Action 1-8: Develop an action plan and complete ORP actions for safety culture improvements including responses to HSS recommendations made to ORP and changes to management and employee performance plans that include specific measures for meeting safety culture expectations."

The above action statement further specifies delivering the action plan to the DNFSB by April 2012, and requires completing the actions in the action plan by April 30, 2013.

The Implementation Plan 2011-1 provided a discussion of underlying causes that DOE believes led to the findings and concerns stated in DNFSB Recommendation 2011-1. A summary of those causal statements is provided below:

1. Departmental expectations for implementation of the safety culture concept at nuclear facilities were not developed.
2. DOE and contractor management did not adequately mitigate the unintended impact on Safety Conscious Work Environment (SCWE) that occurred as the WTP Project shifted from the research and design phase to a phase more focused on construction and commissioning.
3. DOE and contractor management require more knowledge and awareness of safety culture.
4. Technical issue resolution and communication of results at WTP are sometimes inefficient or ineffective.

Actions to Date

In response to DNFSB Recommendation 2011-1 and in advance of this Safety Culture Improvement Plan, several initiating actions were completed in the time period from June 2011 to April 2012 including:

- DOE letter accepted DNFSB Recommendation 2011-1 – June 2011
- DOE reiterated acceptance of DNFSB Recommendation 2011-1 in September 2011
- Deputy Secretary visited WTP, held meeting with WTP employees – July 2011
- Secretary directed HSS to accelerate follow-on review – August 2011
- Deputy Secretary chartered Headquarters (HQ) Response Team for DNFSB Recommendation 2011-1 – Sept 2011

- DOE revised Integrated Safety Management (ISM) System Guide (DOE G 450.4-1C) to include safety culture focus areas and associated attributes – Sept 2011
- DOE-directed/Bechtel National, Inc. (BNI)-sponsored Independent Safety and Quality Culture Assessment completed – November 2011
- Secretary issued memorandum on "Nuclear Safety at the Department of Energy" – December 2011 (IP Action 2-1)
- Nuclear Executive Leadership Training included safety culture emphasis; ORP Manager and two senior ORP management personnel attended – December 2011
- DOE issued Implementation Plan for DNFSB Recommendation 2011-1 – December 2011
- HSS Independent Oversight Assessment of Nuclear Safety Culture and Management of Nuclear Safety Concerns at the Hanford Site WTP completed – January 2012 (IP Action 1-2)
- DOE directed BNI to amend their Nuclear Safety and Quality Culture (NSQC) Plan to include the HSS recommendations – February 2012 (IP Action 1-4)
- ORP Manager conducted safety culture sounding board for employees – February 2012
- ORP management team conducted Hanford Advisory Board safety culture sounding board, open to the public with video provided to ORP employees – February 2012
- ORP Manager issued announcement clarifying the ORP organization and reporting structure – Feb 2012
- ORP Safety Culture Integrated Project Team established to develop safety culture improvement actions – March 2012
- ORP created safety culture website for employees with a process to solicit employee input and provide feedback – March 2012
- DOE completed WTP Project Execution Plan revision – March 2012 (IP Action 1-7)
- ORP conducted All Hands meeting/safety culture sounding board with EM Senior Advisor – March 2012
- ORP reorganization implemented; enabled improved resource allocation – April 2012
- BNI amended their NSQC plan in response to the HSS Independent Oversight Assessment and other recent safety culture assessment results – April 2012

The following safety culture improvement actions are planned as part of DOE Implementation Plan 2011-1:

- DOE Richland Operations Office/ORP and Hanford Site contractor SCWE surveys – Spring 2012
- SCWE training for ORP – Spring 2012
- DOE National Training Center development of safety culture training with pilot course for senior managers in July 2012, followed by training throughout the DOE complex and development of courses for mid-level managers and staff.

Improvement Plan Development Methodology

The ORP Manager chartered a Safety Culture Integrated Project Team (IPT) to support the management team's efforts to strengthen safety culture attributes and oversight at ORP. The IPT is an essential factor in improving the ORP's safety culture. The IPT consists of professionals representing diverse disciplines with the specific knowledge, skills and abilities to support the

ORP Manager in successfully implementing, managing and modeling positive safety culture attributes. The overall team composition will change as the project progresses to ensure that necessary and appropriate skills are represented to meet project needs. For example, once initial safety culture improvements are implemented at ORP, the IPT will continue to monitor trends and support follow-on effectiveness reviews. The ORP Manager will closely monitor the IPT's efforts through regular briefings from the IPT Lead as well as frequent interactions with ORP leadership and staff. The Safety Culture IPT Charter is provided in Appendix A.

The Safety Culture IPT, comprised of managers and staff representing a cross-section of ORP, began with team building exercises to establish good working relationships among team members and ground rules for conduct during the improvement plan development activities. These initial efforts provided a sound foundation for developing trust and facilitated the thought-provoking interaction between team members useful to produce high quality products. The team building included the preparation of a list of behavioral commitments (Appendix B) signed by each Safety Culture IPT member. The intent was to create a positive, constructive environment which would use individual differences to enhance rather than detract from the process. Although the specific list of behavioral commitments applied primarily to the Safety Culture IPT, they will be considered by ORP in its entirety, in conjunction with its contractors, as it develops and communicates organizational and safety culture values.

The HSS Independent Oversight Assessment used nine traits – recently agreed upon by the Nuclear Regulatory Commission (NRC) and its stakeholders – to structure their assessment. In the commercial nuclear industry, the following nine traits are viewed to be necessary in the creation and maintenance of a positive safety culture:

- Leadership Safety Values and Actions
- Problem Identification and Resolution
- Personal Accountability
- Work Processes
- Continuous Learning
- Environment for Raising Concerns
- Effective Safety Communication
- Respectful Work Environment
- Questioning Attitude

In their report, the HSS team summarized their results in the following areas:

- Safety Culture
- ORP Management of Safety Concerns
- BNI Management of Safety Concerns
- Nuclear Safety Design and Safety Basis Personnel
- Factors Impacting Safety Culture for Construction Activities

DOE revised its Integrated Safety Management System Guide, DOE G 450.4-1C in September 2011, after planning had begun for the HSS Independent Oversight Assessment. This guide defined safety culture as:

> "Safety culture is an organization's values and behaviors modeled by its leaders and internalized by its members, which serve to make safe performance of work the overriding priority to protect the workers, public, and the environment."

DOE G 450.4-1C further provided a safety culture structure with three focus areas and their associated attributes as follows:

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

A "crosswalk" between the NRC Safety Culture Traits and the DOE ISM Safety Culture Focus Areas and Associated Attributes is provided in Appendix C.

To promote long term, sustainable safety culture improvement within a consistent structure, the Safety Culture IPT analyzed the HSS Independent Oversight Assessment against the DOE safety culture focus areas and associated attributes, and then developed the improvement actions with the same structure in mind. The team reviewed the HSS report line-by-line to identify issues with relevance to ORP. The Safety Culture IPT evaluated each ORP-related issue statement in context and then assigned each issue statement to its applicable DOE safety culture attribute(s).

Following the evaluation of ORP issues from the HSS assessment, the IPT developed problem statements that reflected the issues as a whole under each safety culture attribute. The Safety Culture IPT then developed improvement actions to address the problem statements, frequently reviewing the original issues to maintain a traceable logic from HSS assessment issues through the detailed analysis to improvement actions. Team members combined the draft action statements from among the safety culture attributes into a smaller set of substantial improvement actions. The improvement action worksheets are provided in Appendix D.

The Safety Culture IPT evaluated the improvement actions both for significance in promoting change and for the feasibility of demonstrating measurable completions within the one year period specified in the DOE Implementation Plan 2011-1, Action 1-8, Deliverable 2. The IPT was mindful that all of the improvement actions developed from the HSS Independent Oversight

Assessment analysis would ultimately require implementation, but that ORP could not reasonably pursue all of them simultaneously. This plan describes the safety culture improvement actions that ORP has determined must be completed by April 30, 2013 to make substantial positive change in ORP's safety culture, but the plan also provides the remainder of improvement actions, derived from analysis of the HSS assessment, to aid in regular revisions of this ORP Safety Culture Improvement Plan as actions are completed and new improvement actions are identified and pursued. Implementation of most of these additional improvement actions will be pursued in the near term but were not prioritized for completion by April 30, 2013. ORP management is mindful that positive culture change will require years of steady effort to embed the safety culture attributes deep into the organization. The near-term actions provide a strong foundation, and the improvement plan will be updated periodically to add new initiatives developed through employee feedback and follow-on assessments and surveys. A representation of the HSS Independent Oversight Assessment recommendations and how they are addressed by the improvement actions in this Safety Culture Improvement Plan is provided in Appendix E.

The Safety Culture IPT presented the draft improvement plan to the ORP Union Representation and ORP management. While the plan was being reviewed and commented on by the Union Representation and ORP management, the Safety Culture IPT met with the ORP staff in small groups (8-20) over the course of 11 meetings to share the draft plan and solicit comments and recommendations for improvements. Staff comments and suggestions were incorporated into the improvement actions where possible. Where requested, the Safety Culture IPT followed up with individual staff members to provide feedback on how their comments and suggestions were considered and addressed. This responsiveness to staff and accountability for dispositioning staff feedback was deemed by the Safety Culture IPT to be a crucial component of the process for rebuilding and sustaining organizational trust.

Safety Culture Improvement Actions

The ORP Safety Culture IPT determined that the improvement actions specified in the "Near-Term Improvement Actions" list represent those high-priority, measurable actions that can be accomplished by April 30, 2013, and that are expected to produce substantial improvement in the ORP safety culture. The additional actions provided in the "Continuing Improvement Actions" list constitute those actions that, although largely planned to commence in the near term, are not prioritized for completion within the first year of action implementation.

This Safety Culture Improvement Plan will be updated and monitored by the Safety Culture IPT as actions are completed. Feedback from assessments, surveys, and employees will define course corrections and additional actions that are needed to promote sustained safety culture improvement at ORP.

Each improvement action is identified by a string of codes that refer to the safety culture focus areas and associated attributes that are impacted. Refer to the table below. For example, the first part of the code "**L1**-IA3" indicates that the action pertains to the Leadership safety culture focus area, and the first attribute, "Demonstrated safety leadership." The second part of the code "L1-**IA3**" indicates that this action was assembled with "Improvement Action 3" from the original list of draft improvement actions, before actions were consolidated.

For convenience, the safety culture focus areas and associated attributes are provided here with the applicable coding:

- **Leadership**
  - L1 – Demonstrated safety leadership
  - L2 – Risk-informed, conservative decision making
  - L3 – Management engagement and time in field
  - L4 – Staff recruitment, selection, retention, and development
  - L5 – Open communication and fostering an environment free from retribution
  - L6 – Clear expectations and accountability

- **Employee/Worker Engagement**
  - E1 – Personal commitment to everyone's safety
  - E2 – Teamwork and mutual respect
  - E3 – Participation in work planning and improvement
  - E4 – Mindful of hazards and controls

- **Organization Learning**
  - O1 – Credibility, trust and reporting errors and problems
  - O2 – Effective resolution of reported problems
  - O3 – Performance monitoring through multiple means
  - O4 – Use of operational experience
  - O5 – Questioning attitude

Near-Term Improvement Actions

The following improvement actions clearly address the priorities provided by EM leadership, as summarized below:

- **Instilling and holding managers accountable for leadership behaviors that foster a strong safety culture** and driving these behaviors all the way down through the EM headquarters and field organizations. (Addressed by Near-Term Actions 1 – 5)
- **Ensuring line managers encourage a vigorous questioning attitude** towards safety and fostering constructive dialogues and discussions on safety matters. (Actions 7, 8)
- **Establishing a high level of trust** in which individuals feel safe from reprisal when raising safety concerns. Differing points of view are solicited and encouraged, management provides relevant and timely information to the workforce, and **vigorous corrective action programs are effectively implemented.** (Actions 6, 7, 9)

1. Develop an ORP management development program which focuses on improving management's modeling of safety culture attributes.
   - Identify and implement a safety culture focused training program.
   - Establish and implement a supervisory and management Individual Performance Plan (IPP) element to encourage a vigorous questioning attitude towards safety, and foster constructive dialogues and discussions on safety matters.
   - Develop a management presence program:
     - Establish a goal and track participation for management presence with employees observing work in person, asking questions, coaching, mentoring, and reinforcing standards and positive behaviors.
     - Establish quantifiable, auditable methods to track performance and compliance.
     - Develop formal training for management

   (L3-IA1, L3-IA2, L4-IA4, L4-IA5, L5-IA5, L4-IA5, E1-IA3, E2-IA4, O1-IA3, O1-IA4, O5-IA4)

   Responsible Manager: Tom Fletcher, Assistant Manager, Tank Farms Project

   Target Completion Date: March 31, 2013

2. Develop and implement an employee development program containing elements that underpin safety culture attributes.
   - Communication tools and training opportunities may include but are not limited to:
     - Illustrate issue resolution programs and processes available to employees.
     - Provide training on the lessons learned program including divisional points of contact and how the program can be beneficial during the course of daily work.
     - Provide training on how to engage in active listening.
   - Adopt "Ladder of Accountability" as an organizational value and training tool.

   (E1-IA4, E2-IA1, E2-IA5, E2-IA7, O1-IA7, O2-IA5, O4-IA)

   Responsible Manager: Erik Olds, ORP Chief of Staff

   Target Completion Date: December 31, 2012

3. Establish and implement a set of management and staff expectations for safety culture attributes as defined in DOE G 450.4-1C.
   - Develop and communicate organizational values that include safety culture values (e.g. coaching, mentoring, IPP).
   - Provide training for management and staff.
   - Define a process to recognize and reinforce desired safety cultural behaviors.

   (L1-IA 4, L2-IA2, L4-IA3, L4-IA7, E1-IA1, O5-IA2, O5-IA3)

   Responsible Manager: Stacy Charboneau, ORP Deputy Manager

   Target Completion Date: September 30, 2012

4. Incorporate industry best practices in the development of ORP policy, procedures, and staff and management training documents that emphasize the unique and special nature of nuclear technology and operations. Resources to be evaluated include:
   - Institute of Nuclear Power Operations Principles for a Strong Nuclear Safety Culture (November 2004 and Addendum 1, October 2009)
   - Nuclear Regulatory Commission (NRC) traits for a positive safety culture
   - Nuclear Energy Institute 09-07, Fostering a Strong Nuclear Safety Culture

   (Developed from employee feedback during improvement action development)

   Responsible Manager: Paul Harrington, Assistant Manager, Technical and Regulatory Support

   Target Completion Date: March 31, 2013

5. Clearly define roles, responsibilities, authorities, and accountabilities including but not limiting to the following actions:
   - Update the ORP functions, responsibilities, and authorities manual
   - Publish a roles and responsibilities document for ORP staff on the ORP webpage
   - Make the organization chart on the ORP website link to the "bio" page and keep the "bio" page current
   - Define the roles and responsibilities for federal staff performing oversight activities
   - Identify roles and responsibilities by division/group and ensure resources are matched in quantity and type to assigned workloads

   (L1-IA 2, L4-IA1, L6-IA1, E3-IA1, E3-IA2)

   Responsible Manager: Paul Harrington, Assistant Manager, Technical and Regulatory Support

   Target Completion Date: November 30, 2012

6. Implement an ORP change management process that:
   - Defines expectations
   - Defines ownership of the change

- Sets expectations for ORP staff on implementation (roles and responsibilities)
- Trains ORP staff
- Provides feedback on ORP staff performance on implementation of change
- Establishes a contract mechanism for ORP oversight of the contractor's implementation of intended change

(L1-IA1, L4-IA6, L5-IA4, O1-IA5)

Responsible Manager: Ben Harp, WTP Start-Up and Commissioning Integration Manager

Target Completion Date: February 28, 2013

7. Establish and implement a program for ORP to effectively handle issues and establish an ORP issues manager. Program elements must include feedback mechanisms, transparency, traceability, benchmarking, performance monitoring, trending, and metrics that communicate issue resolution to employees. In addition, this program will trend issues for safety conscious work environment attributes. ORP will incorporate issues management into a formal prioritized activity within senior managerial duties.
(L5-IA7, E3-IA7, O1-IA2, O2-IA2, O2-IA4, O2-IA7)

Responsible Manager: Stacy Charboneau, ORP Deputy Manager

Target Completion Date: September 30, 2012

8. Evaluate the Employee Concerns Program (ECP) and develop improvement plans to address at a minimum the items below:
   - Flowchart the existing ECP and Differing Professional Opinion (DPO) processes with an integrated project team including recommendations for improvements.
   - Develop and communicate the following performance indicators:
     - Validation of factual accuracy
     - Resolution of items referred to the contractor's ECP program
     - Review of investigation results with concerned individual before closure
     - ECP customer satisfaction
   - Revise the ECP and DPO processes to incorporate specific steps to ensure respect for the concerned individual, validation of their issues, timely feedback, and to involve the individual in issue closure and communicate the results of the process improvement activity.
   - Perform a test of the DPO process to evaluate the processes and provide feedback for improvement.

(L1-IA3, L5-IA1, L5-IA2, L5-IA3, O2-IA1, O2-IA3, O3-IA4, O3-IA5)

Responsible Manager: Stacy Charboneau, ORP Deputy Manager

Target Completion Date: December 31, 2012

9. Maintain the Safety Culture IPT as an integral part of ORP with its primary mission to continuously improve ORP safety culture. Implement periodic "road shows" with Safety Culture IPT members visiting each division to hold discussions (focus groups) about safety culture. The IPT will serve as an important, ongoing management tool to reinforce values and identify areas for improvement.
(L6-IA5, O1-IA1)

   Responsible Manager: Scott Samuelson, ORP Manager

   Target Completion Date: March 31, 2013

Continuing Improvement Actions

The following safety culture improvement actions were also developed through the analysis of the HSS Independent Oversight Assessment. While many of these actions may commence in the near term, they are not prioritized as necessary for completion and effectiveness evaluation within the first year.

1. Perform periodic self-assessments on safety culture attributes.
(L6-IA6, O3-IA1)

2. Undertake proactive communications to prevent misunderstandings on decisions made. Communicate time sensitive or controversial project information and the basis for making decisions impacting safety to the staff prior to communicating to external bodies if possible.
(L2-IA1, L5-IA6, E2-IA2, O1-IA6)

3. Implement monthly team-building activities within the entire office to provide relationship-building opportunities.
(E2-IA6)

4. Establish an ORP Management goal to conduct one-on-one meetings on a monthly basis with ORP staff members (each manager with one employee on a rotating basis) to set individual expectations, relate scope and expertise, increase communication, and enhance management/staff interaction.
(L3-IA4, O1-IA3)

5. Align the Human Capital Management Plan to organization needs in order to fulfill ORP's mission:
   - Define the needs
   - Communicate the needs to HQ
   - Staff the needs
   - Update Human Capital Management Plan

- Establish succession planning and personnel development

(L4-IA2, L6-IA3, E3-IA5, O2-IA8)

6. Assess ORP's safety culture attributes in the annual ISM Declaration process.
(O2-IA6)

7. Recognize/incentivize the ORP employee who most effectively uses the Hanford Integrated Lessons Learned System on a periodic basis.
(O4-IA2)

8. Periodically hold an All Hands meeting at which an invited speaker presents on a real accident with root causes that include safety culture failure.
(E1-IA2)

9. Include safety culture attributes during assessment of prime contractors' issue management processes.
(O2-IA9)

10. Encourage Management to have employees accompany ORP Managers when the opportunity arises (Site visits, briefings, etc.)
(L3-IA3)

11. Perform a gap analysis to identify instances where teaming has not been effective, identify opportunities for improved teamwork and plan teambuilding activities. Hold a teambuilding session between facility representatives and safety subject matter specialists.
(E2-IA3, E3-IA3, E3-IA4)

12. Establish a link on the ORP webpage for employees to obtain access to BNI Project Issues Evaluation Reporting database (and other applicable contractor corrective action databases) to improve oversight of contractor issue management processes.
(O3-IA2)

13. Provide training to employees on the contractor corrective action software systems.
(O3-IA3)

14. Revise and update the River Protection Project Execution Plan.
(L6-IA2, E3-IA6)

15. Train ORP staff on DOE-STD-3009 and the strategic plan to reach the goal of an approved document safety analysis for the WTP.

Implementation Strategy

This section adapts the steps provided in DOE G 450.4-1C, Attachment 12, *Changing Values and Behaviors*, to develop a change management plan for safety culture improvement.

Problem: A DNFSB investigation "found significant failures by both DOE and contractor management to implement their roles as advocates for a strong safety culture (DNFSB Recommendation 2011-1)."

Current Condition: The HSS Independent Oversight Assessment elaborated on three main points:

1. A significant number of staff within ORP expressed reluctance to raise safety or quality concerns for various reasons.
2. ORP managers do not have a full appreciation of the current culture or the nature and level of effort needed to foster a healthy safety culture, including a mature and effective Safety Conscious Work Environment, and have not been sufficiently engaged in creating a mutually shared and desired culture.
3. The Independent Oversight team identified significant concerns about ORP processes for nuclear design and safety basis and for managing safety issues.

Through further analysis and outreach to the organization the Safety Culture IPT found that ORP lacked three things essential for implementing a safety culture:

1. A common understanding of the safety culture attributes as defined in DOE G 405.4-1C
2. Trust
3. Unified focus and personal ownership for ORP mission success

Final Desired Condition: ORP's values and behaviors as modeled by its leaders and internalized by its members are the safety culture attributes as defined in DOE G 405.4-1C.

Process for Achieving the Change: Changes in values cannot be dictated to an organization. Changes in values that lead to behaviors reflecting those values can only be brought about by a concerted effort directed toward changing behaviors. Drawing from DOE G 450.4-1C, Attachment 12, ORP intends to use the following steps when implementing the improvements identified by the Safety Culture IPT:

Step 1: Clearly define the desired behaviors in terms that the target audience can fully understand and appreciate.

Owner: Safety Culture IPT

Schedule: **Complete**. The Safety Culture IPT determined the safety culture attributes as defined in DOE G 450.4-1C has adequately defined the desired behaviors for ORP managers and staff.

Step 2: Establish consensus among the senior leadership regarding the desired behaviors, and obtain their commitment to support the desired changes.

Owner: Scott Samuelson, ORP Manager

Schedule: **Complete.** The ORP Manager consulted with the management team, obtained feedback on the draft improvement actions, and established the "Responsible Manager" for each of the near-term improvement actions.

Step 3: Identify any actions or changes on the part of senior leadership to achieve the desired behaviors, and obtain their buy-in to these actions.

Owner: Scott Samuelson, ORP Manager

Schedule: **Complete.** The ORP Manager consulted with the management team, obtained feedback on the draft improvement actions, and established the "Responsible Manager" for each of the near-term improvement actions.

Step 4: Identify existing organizational processes and behaviors that may be counter to the desired behaviors, and develop actions to align existing processes and behaviors with new desired behaviors; take actions to eliminate or minimize the influence of forces that may be restraining achievement of the desired behaviors.

Owner: Scott Samuelson, ORP Manager

Schedule: **Complete.** The ORP Manager directed the Safety Culture IPT to analyze the January 2012 HSS Independent Oversight Assessment report to identify those practices and conditions that were contrary to the desired behaviors, and to develop this improvement action plan.

Step 5: Clearly communicate the desired behaviors to the target audience, and provide training as needed for the audience to master the desired behaviors.

Owner: Stacy Charboneau, Deputy ORP Manager; Tom Fletcher, Assistant Manager, Tank Farms Project; Erik Olds, ORP Chief of Staff

Schedule: Interim completion by March 31, 2013. Efforts are underway to procure management training for ORP and Richland Operations Office. The DOE 2011-1 Response Team is working with the National Training Center to roll out safety culture training by the end of 2012 for management, with follow-on sessions for all staff after acting on management feedback. See also Near-Term Improvement Actions 1, 2, and 3.

Step 6: Encourage employees to ask questions to clarify intentions, and provide feedback and suggestions on achieving the desired behaviors. Be open to potential adjustments in expectations as a result of employee involvement and feedback.

Owner: Scott Samuelson, ORP Manager

Schedule: March 31, 2013 for effectiveness measurement purposes with the understanding that this activity must continue indefinitely to promote a healthy safety culture. See also Near-Term Improvement Action 9.

Step 7: Working with members of the target audience, develop the necessary tools and supporting structures and processes so that the desired behaviors can be consistently performed.

Owner: Stacy Charboneau, Deputy ORP Manager; Tom Fletcher, Assistant Manager, Tank Farms Project; Paul Harrington, Assistant Manager, Technical and Regulatory Support; Erik Olds, ORP Chief of Staff

Schedule: March 31, 2013 for effectiveness measurement purposes. See Near-Term Improvement Actions 1, 2, 3, and 4.

Step 8: Provide consistent, visible senior leadership attention and focus on new desired behaviors.

Owner: ORP management team

Schedule: March 31, 2013 for effectiveness measurement purposes with the understanding that this activity must continue indefinitely to promote a healthy safety culture.

Step 9: Align rewards and incentives programs with desired behaviors. Note: with the current restrictions on monetary awards, the Safety Culture IPT will look for non-monetary awards and incentives.

Owner: ORP management team and Safety Culture IPT

Schedule: April 30, 2013.

Step 10: Provide positive reinforcement to employees performing desired behaviors, and not to employees who are not performing the desired behaviors.

Owner: ORP management team

Schedule: April 30, 2013.

ORP recognizes the need to perform in process verifications to ensure that changes are successfully implemented. ORP will need to reiterate and repeat the steps above, as needed, for at least five to seven years until the newly desired behaviors are well ingrained and institutionalized. The steps below outline the process verifications that will be performed to ensure the successful implementation of safety culture attributes.

Action 1: Monitor performance and continue to provide direct, timely, and specific feedback to employees regarding their behaviors.

Action 2: Periodically evaluate progress toward institutionalizing the desired behaviors, and take actions necessary to continue progress.

Action 3: Communicate and train all new members, especially new leaders, on the desired behaviors, their objectives, and bases.

Appendix A

Safety Culture Integrated Project Team (IPT) Charter

1.0 INTRODUCTION

1.1 Purpose of the IPT Charter

Nuclear safety is a core value of the U. S. Department of Energy (DOE). Over the past three years, recommendations received from external sources, queries from our stakeholders, operational events, and input from internal oversight organizations have prompted DOE to embark on a broad assessment of nuclear safety and safety culture within the Department to better understand where improvements are needed.

DOE's vision of nuclear safety is to design, construct, operate, deactivate, decommission and oversee nuclear facilities and operations within a robust culture that uses a demanding set of standards, rigorous peer reviews and the management of risks. DOE will conduct its challenging mission within an environment that promotes and respects questioning attitudes, actively manages issue identification and resolution, and works to build credibility and trust inside and outside the government.

The Safety Culture IPT was formed in March 2012 to support the Office of River Protection (ORP) Manager who is leading the effort to strengthen safety culture attributes and oversight at ORP. The IPT is an essential factor in improving the ORP's safety culture. The IPT consists of qualified professionals representing diverse disciplines with the specific knowledge, skills and abilities to support the ORP Manager in successfully managing and modeling positive safety culture attributes. The overall team composition will change as the project progresses to ensure that necessary skills are represented to meet project needs. For example, once initial safety culture improvements are implemented at ORP, the IPT will continue to monitor trends and support follow-on effectiveness reviews. The proposed period of initial performance is from March 2012 through September 2013.

2.0 OBJECTIVE

ORP views a healthy safety culture as essential to successfully completing its mission. The IPT objectives include supporting the line management in corrective action development, performance, and closure activities for recent safety culture assessments and correspondence such as:

- Independent Reviews of Nuclear Safety Culture at the Waste Treatment and Immobilization Plant (WTP) (reports released by DOE Health, Safety, and Security in October 2010 and January 2012)
- Assessment and Recommendations for Improving the Safety and Quality Culture at the Hanford WTP (report released by the Independent Safety And Quality Culture Assessment Team in November 2011)
- DOE Implementation Plan for Defense Nuclear Facilities Safety Board (DNFSB) Recommendation 2011-1, Safety Culture at the WTP (transmitted to DNFSB in December 2011)

Responsibility for contractor direction and approval of contractor deliverables remains with the specific project line management organizations and the Acquisition Management Division in accordance with ORP procedures.

The IPT will also rely on information gleaned from planned safety culture self-assessments and safety conscious work environment (SCWE) surveys to monitor effectiveness of safety culture improvement strategies and activities, and to recommend approaches for continuous improvement in this vital aspect of the River Protection Project mission.

3.0 PROJECT PURPOSE, MISSION AND SCOPE

Purpose
The DOE Integrated Safety Management System (ISMS) Guide, DOE G 450.4-1C, defines safety culture as an organization's values and behaviors modeled by its leaders and internalized by its members, which serve to make safe performance of work the overriding priority to protect the workers, public, and the environment. This Safety Culture IPT seeks to enhance this safe work priority at every level of the federal and contractor workforce on the River Protection Project.

Mission
The U.S. Department of Energy, Office of River Protection manages the River Protection Project. The RPP manages the radioactive mixed waste stored in Hanford's underground storage tanks by designing and building systems to retrieve, transfer, treat, immobilize, and dispose of these wastes.

The River Protection Project is divided into two projects, the Radioactive Liquid Tank Waste Stabilization and Disposition Project, ORP-0014 (commonly referred to as the Tank Farms Project or TFP), and the Waste Treatment and Immobilization Plant Project, ORP-0060. The TFP is responsible for the management, storage, transfer, treatment and disposal of the tank waste. The WTP Project is responsible for the design and construction of facilities to treat and immobilize the Hanford tank wastes.

Scope
This IPT seeks to advance the ORP safety culture. A number of assessments generally indicated that improvements are needed at ORP regarding raising technical and safety concerns and communicating the resolution of issues, the need for staff to internalize and exhibit positive safety and safety culture characteristics, and ensuring that managers fully appreciate and sponsor the level of effort that will be needed to foster a continuously healthy safety culture.

4.0 COMMUNICATIONS

The IPT will initially focus on specific areas where communications could be improved as identified through past assessments. Those areas include organizational changes, management expectations, roles and responsibilities, interpretation of requirements and standards, impacts of cost and schedule pressures on safety and quality, risk-informed decision making, modeling a robust safety culture, and the importance of questioning attitudes and raising concerns.

The IPT established a safety culture link on the ORP intranet. This website will provide convenient access to all recent safety culture-related assessment reports, corrective action plans and deliverables, safety culture questions and answers, and selected ORP presentations.

5.0 SAFETY CULTURE ROLES AND RESPONSIBILITIES

Safety and the promotion of a healthy safety culture are everyone's responsibility. This section briefly describes the responsibilities of the personnel assigned to focus on these efforts.

5.1 ORP Manager and Leadership Team

The Manager of ORP serves as the role model for Federal and contractor staff, constantly reinforcing the priority of safety through the execution of the River Protection Project.

Consistent with the Safety Culture Focus Areas and Associated Attributes in Attachment 10 of DOE G 450.4-1C, *Integrated Safety Management System Guide*, the ORP Manager and the ORP leadership team promote a continuously improving safety culture through:

- Demonstrated safety leadership
- Risk-informed, conservative decision making
- Management engagement and time in field
- Staff recruitment, selection, retention, and development
- Open communication and fostering an environment free from retribution
- Clear expectations and accountability

The ORP Manager will review and approve safety culture improvement plans developed by this IPT. The ORP Manager will closely monitor the IPT's efforts through regular briefings from the IPT Lead and through frequent interaction with ORP leadership and staff.

5.2 Safety Culture IPT Lead

The Safety Culture IPT Lead aids the ORP leadership team in their efforts to promote a healthy safety culture. In addition to the Leadership focus area described above, the IPT Lead will guide the efforts of the IPT to enhance two other focus areas in the ISMS Guide – Employee/Worker Engagement and Organization Learning.

The Safety Culture IPT Lead is responsible for the following:

- Preparation, maintenance and management of the IPT Charter
- Defining expectations for team member performance and tracking assignments in an action tracking system
- Coordinating team resources, meetings, and activities
- Communicating IPT progress and safety culture improvement efforts to the ORP leadership team and to the entire ORP organization
- Establishing and monitoring safety culture performance measures and defining oversight activities
- Development and improvement of IPT members' capabilities and performance

5.3 Safety Culture IPT Members

Team members play a crucial role in supporting ORP's efforts to promote a healthy safety culture. The IPT has been assembled to provide a broad representation of the ORP, and members bring their insights and group cultures together to best develop safety culture improvement initiatives and feedback for the ORP leadership team. Participation requires an individual commitment to work to improve safety culture understanding and application, to communicate safety culture efforts within their assigned work groups, and to provide feedback from their work groups to the IPT for the benefit of the ongoing monitoring of safety culture health.

The Safety Culture IPT team members are responsible for the following:

- Concurrence on the content of and assignments in the IPT Charter
- Completing IPT assignments and updating status in the action tracking system
- Participating in IPT meetings and providing constructive input
- Communicating IPT progress and safety culture improvement efforts to their work groups
- Developing and monitoring ORP safety culture performance measures and defining oversight of ORP safety culture improvement activities
- Assisting in causal analysis of ORP safety culture oversight results and developing corrective actions
- Assisting in the development of issue identification, tracking, and resolution system improvements
- Self-improvement in the areas of safety culture knowledge and application

5.4 Support to the Safety Culture IPT

These outside agencies/organizations are not members of the IPT; however they may participate in ORP's safety culture improvement activities as part of their efforts to provide oversight and to promote safety culture improvements in other DOE organizations.

- DOE-HQ Recommendation 2011-1 Response Team
- Chief of Nuclear Safety
- DOE Office of Health, Safety and Security
- Richland Operations Office
- Defense Nuclear Facilities Safety Board
- Regulators
- Tribal Nations
- Stakeholders

6.0 SAFETY CULTURE IPT MEMBERSHIP

Safety Culture IPT Lead

Steve Pfaff
Ed Parsons – RL Advisor

Tank Farms Project (TFP)

Tank Farm Programs Division

Dan Knight

DaBrisha Smith

Billie Mauss

Kitty Bryan (MSA) -- Advisor

Waste Treatment and Immobilization Plant Project (WTP)

WTP Engineering Division

Garth Reed

WTP Construction Oversight and Assurance Division

Brad Eccleston

WTP Start-Up and Commissioning Integration

Pam Logan

Support Organizations

Nuclear Safety Division

Tom Nirider

Environmental Compliance Division

Jim Lynch

Office of the Chief of Staff

Pamela McCann

Contracts and Property Management

David Gallegos

Safety and Health Division

Brian Harkins

Appendix B

Safety Culture Integrated Project Team Behaviorial Commitments

1. I will focus on issues being raised and not on the person raising them
2. I will actively listen to others - I will be attentive, look others eye-to-eye, focus on the issue(s) and be present in the moment (no distractions)
3. I will ask - I will verify the intent of the communication. I will give others the benefit of the doubt. I will ask before reaching a conclusion. I will ask for clarity.
4. I will actively participate - I will represent ORP to the best of my abilities. I will openly share information. I will provide and solicit feedback.
5. I will treat everyone with the same intent regardless of position or status - I will check my ego at the door. I will be constructive. I will be non-judgemental. I will be empathetic.
6. I will create a learning environment - I will find ways to learn from mistakes, make adjustments if necessary. I will learn from and use historical trends and information to make decisions. I will promote innovation among IPT members.
7. I will admit when I am wrong
8. I will lead change to improve ORP safety culture
9. I will be courteous and respectful - I will respect the opinions of each team member. I will acknowledge emotions that surface. I will not be defensive.
10. I will be respectful of the team's time - I will be on time, be prepared for discussions, and meet commitments.
11. I will support team efforts and decisions to reach consensus
12. I will be open and honest - I will act based on the facts. I will consider all positions and avoid making assumptions to come together for the greater good.
13. I will keep focused on the goals
14. I will share team status and actively seek input from ORP staff that will help the team be successful
15. I will celebrate our successes

Appendix C

Crosswalk Between NRC Safety Culture Traits and DOE Safety Culture Focus Areas and Associated Attributes

NRC Safety Culture Traits	DOE Safety Culture Focus Area	DOE Safety Culture Associated Attributes
(1) Leaders demonstrate a commitment to safety in their decisions and behaviors	• Leadership	• Risk-informed, conservative decision making. • Demonstrated safety leadership • Staff recruitment, selection, retention & development • Management engagement & time in the field
(2) Issues potentially impacting safety are promptly identified, fully evaluated, and promptly addressed and corrected commensurate with their significance.	• Organizational Learning	• Reporting errors and problems • Effective resolution of reported problems
(3) All individuals take personal responsibility for safety.	• Employee/Worker Engagement	• Personal commitment to everyone's safety • Mindful of hazards and controls
(4) The processes for planning and controlling work activities are implemented so that safety is maintained	• Employee/Worker Engagement	• Participation in work planning & improvement
	• Organizational Learning	• Performance monitoring through multiple means
(5) Opportunities to learn about ways to ensure safety are sought out and implemented.	• Organizational Learning	• Training • Use of industry experience
(6) A safety conscious work environment is maintained where personnel feel free to raise safety concerns without fear of retaliation, intimidation, harassment or discrimination.	• Leadership	• Open communication & fostering a SCWE
	• Organizational Learning	• Trust
(7) Communications maintain a focus on safety.	• Leadership	• Clear expectations & accountability • Open communication & fostering a SCWE • Demonstrated safety leadership
(8) Trust and respect permeate the organization.	• Employee/Worker Engagement	• Teamwork & mutual respect
	• Organizational Learning	• Trust
(9) Individuals avoid complacency and continually challenge existing conditions and activities in order to identify discrepancies that might result in error or inappropriate action.	• Organizational Learning	• Questioning attitude • Reporting errors and problems

ORP Safety Culture Improvement Plan
Problem Statements / Improvement Actions Worksheets
Appendix D

The Safety Culture Integrated Project Team (IPT) reviewed the Office of Health, Safety and Security (HSS) report and identified issues that were associated with U.S. Department of Energy (DOE), Office of River Protection (ORP) Federal functions. Those issues were binned into the safety culture attributes listed in DOE G 450.4-1C Attachment 10. The IPT then reviewed the identified issues and developed problem statements that summarized the issue identified. The problem statement was expanded or additional problem statements added as additional issues were reviewed. Once the problem statements were developed for all of the issues in a safety culture attribute bin, the problem statement was copied to the top of the safety culture attributes bin and improvement actions were developed to address the problems identified.

Below are the safety culture attribute bins, the HSS report issues, and the improvement Items identified. The numbering identified safety culture attribute bin and then the problem or improvement item number. Thus L1-PS 1 identifies the item as the first problem statement in the Leadership - Demonstrated safety leadership bin.

Safety Culture Focus Area: Leadership
Associated Attribute: Demonstrated safety leadership

Problem Statement(s)

L1-PS 1: DOE ORP management has not clearly implemented a change management process that:

- **Defines expectations;**
- **Defines ownership of the change;**
- **Sets expectations for ORP staff on implementation (roles and responsibilities);**
- **Trains ORP staff;**
- **Provides feedback on ORP staff performance on implementation of change; and**
- **Establishes a contract mechanism for ORP oversight of the contractor's implementation of intended change.**

L1-PS 2: ORP management failed to define performance objectives (goals for functions) for staff and managers for implementing oversight responsibilities.

L1-PS 3: ORP Management failed to manage the Differing Professional Opinions (DPO) to successful completion in a timely manner.

L1-PS 4: ORP Management has failed to convey a consistent safety message with its actions (i.e., walking the talk).

Improvement Action(s)

L1-IA1: Implemented a change management process that:

- **Defines expectations;**
- **Defines ownership of the change;**
- **Sets expectations for ORP staff on implementation (roles and responsibilities);**
- **Trains ORP staff;**
- **Provides feedback on ORP staff performance on implementation of change; and**
- **Establishes a contract mechanism for ORP oversight of the contractor's implementation of intended change.**

L1-IA 2: Communicate performance objectives (goals for functions) for ORP staff and managers for implementing and defining oversight responsibilities.

L1-IA 3: ORP needs to ensure the DPO process is adequately functioning to resolve DPO in a timely manner.

L1-IA 4: Establish and implement (e.g. coaching, mentoring, Individual Performance Plan (IPP) set of management and staff expectations for safety culture attributes (including demonstrated safety leadership).

Issues extracted from Office of HSS Report

1. The results of this Independent Oversight assessment confirm the need for better definition and communication of expectations for actions needed to ensure a healthy safety culture for both DOE organizations and contractors. (HSS Report Page 2)

   PS1: There is a need for better definition and communication of safety culture expectations for ORP staff from ORP management.

2. However, the lack of consideration of organizational and cultural considerations will not facilitate the project's forward movement or make ORP's and Bechtel National, Inc.'s (BNI) efforts as successful as they could be. (HSS Report Page 11)

   PS1: There is a need for better definition and communication of safety culture expectations for ORP staff from ORP management.

3. Oversight team concluded that there is a lack of full engagement on the part of ORP senior management in the area of safety culture. (HSS Report Page 11)

   PS1: There is a need for better definition and communication of safety culture expectations for ORP staff from ORP management.

4. BNI has taken a number of actions to strengthen its safety culture, but most of these actions appear to have been prompted by the Defense Nuclear Facility Safety Board (DNFSB) comments and HSS reviews and enforcement actions, rather than by proactive efforts on the part of ORP or DOE-Waste Treatment and Immobilization Plant (WTP). At the time of this Independent Oversight review Enforcement and Oversight management expectations regarding safety culture had not been formally communicated to the Federal staff through a policy statement or programmatic requirements, and safety culture training had not been provided to the staff. DOE-WTP had not established a program for periodically monitoring safety culture and providing feedback to management. (HSS Report Pages 16, 17)

   PS1: ORP management has not clearly defined and communicated safety culture expectations for ORP staff implementation and for use in oversight of the contractor. ORP Management has not;
   - **Defined culture expectations;**
   - **Set expectations for ORP staff on implementation of culture attributes;**
   - **Trained ORP staff on culture attributes;**
   - **Provided feedback on ORP staff performance on implementation of culture attributes; and**
   - **Established a contract mechanism for ORP oversight of the contractor's implementation of culture attributes.**

5. According to interviews and later correspondence, there was much disagreement, both within BNI and DOE and between BNI and DOE, about whether DOE-STD-3009 fully applied. Some individuals, both within BNI and DOE, believed that the change notice constituted approval from DOE to use the Nuclear Regulatory Commission (NRC) methodology specified in the Safety Requirements Document while using the DOE-STD-3009 format, but others within both BNI and DOE believed that the methodologies in DOE-STD-3009 fully applied because DOE never issued a formal approval letter for the alternate approach. This language further complicated BNI's and ORP's understanding of the applicability of DOE-STD-3009 in that the meaning and intent of the statements "attempted to remain consistent with this guidance" and "with a view to its eventual use for the Documented Safety Analysis" were never formally communicated to BNI. (HSS Report Page 28)

PS1: ORP management has not clearly implemented a change management process; a change management process should:

- **Define expectations;**
- **Set expectations for ORP staff on implementation;**
- **Train ORP staff;**
- **Provide feedback on ORP staff performance on implementation of change; and**
- **Establish a contract mechanism for ORP oversight of the contractor's implementation of intended change.**

6. Although most of the symptoms are evident within the Environmental and Nuclear Safety (E&NS) and Engineering departments, most of the contributing factors listed above result from actions or inactions at higher levels of ORP, DOE-WTP, and BNI management. While the Independent Oversight team determined that senior managers are supportive of safety in general, ORP, DOE-WTP, and BNI management has not achieved timely resolution of important issues, including those discussed above, in some cases for about ten years. Further, typically ORP, DOE-WTP, and BNI senior managers are highly experienced but do not have specific experience in applying DOE-STD-3009 nuclear safety design and safety basis processes. (HSS Report Pages 31, 32)

PS1: ORP management has not clearly implemented a change management process that:

- **Defines expectations;**
- **Sets expectations for ORP staff on implementation;**
- **Trains ORP staff;**
- **Provides feedback on ORP staff performance on implementation of change; and**
- **Establishes a contract mechanism for ORP oversight of the contractor's implementation of intended change.**

7. ORP and DOE-WTP oversight of functional areas, such as industrial safety, industrial hygiene, and radiation protection, warrants attention. Some ORP personnel indicated that the only Federal presence performing oversight of worker safety at WTP facilities is the Facility Representatives, and that ORP safety subject matter specialists did not regularly communicate with the DOE-WTP Facility Representatives. Several ORP safety subject matter specialists indicated that they had not been to the WTP site for months because they were not welcome by the DOE-WTP team; were not involved in safety functions they had previously performed (e.g., review of the worker safety and health plan); and were not involved in reviewing, and sometimes were not formally made aware of, significant safety events at WTP (e.g., the steel girder drop). Conversely, a DOE-WTP

manager with responsibility for oversight of construction has indicated that attempts have been made to engage ORP subject matter specialists and that the amount of oversight by subject matter specialists at WTP had been low for some time and was not impacted by the de facto separation of DOE-WTP from the rest of ORP. The apparently limited involvement of subject matter specialists in Federal oversight of worker safety at a major construction site warrants timely management evaluation and attention. (HSS Report Pages 33, 34)

PS1: ORP management has not clearly implemented a change management process that:

- **Defines expectations;**
- **Defines ownership of the change;**
- **Sets expectations for ORP staff on implementation (roles and responsibilities);**
- **Trains ORP staff;**
- **Provides feedback on ORP staff performance on implementation of change; and**
- **Establishes a contract mechanism for ORP oversight of the contractor's implementation of intended change.**

8. Some interviewees also described concerns that the day to day oversight of the Project was not sufficient. ORP oversight tasked individuals believe that they need to be empowered to ensure the appropriate oversight is conducted. They cite perceptions that their supervisors are sometimes aligned more with the contractor than with them. Perception that the erosion in the communication and relationships between ORP, DOE-WTP, and BNI has impacted the effectiveness of oversight. (HSS Supplemental Report Page 11)

PS1: ORP management has not clearly implemented a change management process that:

- **Defines expectations;**
- **Defines ownership of the change;**
- **Sets expectations for ORP staff on implementation (roles and responsibilities);**
- **Trains ORP staff;**
- **Provides feedback on ORP staff performance on implementation of change; and**
- **Establishes a contract mechanism for ORP oversight of the contractor's implementation of intended change.**

PS2: ORP management failed to define performance objectives for staff and managers for implementing oversight responsibilities.

9. There is the perception described by some individuals that ORP Management is presently ineffective against DOE-WTP Management, e.g., perception that in the safety area there is no accountability and ORP organizations not in DOE-WTP have been stifled in assessing the safety and quality of the WTP Project. (HSS Supplemental Report Page 13)

   PS1: ORP management has not clearly implemented a change management process that:

   - **Defines expectations;**
   - **Defines ownership of the change;**
   - **Sets expectations for ORP staff on implementation (roles and responsibilities);**
   - **Trains ORP staff;**
   - **Provides feedback on ORP staff performance on implementation of change; and**
   - **Establishes a contract mechanism for ORP oversight of the contractor's implementation of intended change.**

   PS2: ORP management failed to define performance objectives (goals for functions) for staff and managers for implementing oversight responsibilities.

10. Several interviewees indicated that stakeholders with personal agendas were influencing DOE and that it was sometimes compromising their oversight activities. (HSS Supplemental Report Page 26)

    PS1: ORP management has not clearly implemented a change management process that:

    - **Defines expectations;**
    - **Defines ownership of the change;**
    - **Sets expectations for ORP staff on implementation (roles and responsibilities);**
    - **Trains ORP staff;**
    - **Provides feedback on ORP staff performance on implementation of change; and**
    - **Establishes a contract mechanism for ORP oversight of the contractor's implementation of intended change.**

    PS2: ORP management failed to define performance objectives (goals for functions) for staff and managers for implementing oversight responsibilities.

    PS3: ORP management failed to build an oversight system that deals with external influences effectively. (Based on information provided, this issue is not quantifiable in this problem statement)

11. One DPO was filed during the past year. This DPO, which involved concerns regarding the mixing of non-Newtonian fluid waste in the Pretreatment Facility (PTF), was filed in April 2011, and was processed in accordance with the DOE Richland Operations Office (RL) procedure. The RL DPO procedure does not include timeliness limits or guidelines, and this DPO was not processed in a timely manner, in part because of the time required to procure a DPO panel and chairperson. DOE management had not made a final decision on this DPO at the time of this HSS review (November 2011). (HSS Supplemental Report Page 33)

    PS1: ORP management has not clearly implemented a change management process that:

    - **Defines expectations;**
    - **Defines ownership of the change;**
    - **Sets expectations for ORP staff on implementation (roles and responsibilities);**
    - **Trains ORP staff;**
    - **Provides feedback on ORP staff performance on implementation of change; and**
    - **Establishes a contract mechanism for ORP oversight of the contractor's implementation of intended change.**

    PS2: ORP management failed to define performance objectives (goals for functions) for staff and managers for implementing oversight responsibilities.

    PS3: ORP Management failed to manage the DPO to successful completion in a timely manner.

12. Some aspects of Federal leadership have not promoted an effective safety culture within ORP and BNI. At the time of this HSS review, management expectations regarding safety culture had not been formally communicated to the Federal staff through a policy statement or programmatic requirements, safety culture training had not been provided to the staff, and no program had been established to periodically monitor safety culture and provide feedback to management. (HSS Supplemental Report Page 37)

    PS1: ORP management has not clearly implemented a change management process that:

    - **Defines expectations;**
    - **Defines ownership of the change;**
    - **Sets expectations for ORP staff on implementation (roles and responsibilities);**
    - **Trains ORP staff;**

- **Provides feedback on ORP staff performance on implementation of change; and**
- **Establishes a contract mechanism for ORP oversight of the contractor's implementation of intended change.**

PS2: ORP management failed to define performance objectives (goals for functions) for staff and managers for implementing oversight responsibilities.

PS3: ORP Management failed to manage the DPO to successful completion in a timely manner.

13. BNI has taken a number of actions to strengthen its safety culture, and DOE-WTP management has maintained an awareness of these actions. However, there is no clear evidence that DOE-WTP, as the site-level Federal organization with line management responsibility for WTP, or DOE Headquarters line management has asserted control to direct, tracks, or validate these actions. (HSS Supplemental Report Page 41)

PS1: ORP management has not clearly implemented a change management process that:

- **Defines expectations;**
- **Defines ownership of the change;**
- **Sets expectations for ORP staff on implementation (roles and responsibilities);**
- **Trains ORP staff;**
- **Provides feedback on ORP staff performance on implementation of change; and**
- **Establishes a contract mechanism for ORP oversight of the contractor's implementation of intended change.**

PS2: ORP management failed to define performance objectives (goals for functions) for staff and managers for implementing oversight responsibilities.

PS3: ORP Management failed to manage the DPO to successful completion in a timely manner.

14. Senior managers consistently said that safety was their overriding priority and that they had taken steps to convey this message to their staffs. They require that each ORP meeting begins with a safety message, and they emphasize the importance of safety during all-hands meetings. The WTP Federal Project Director (FPD) issued medallions to his managers with inscriptions emphasizing the importance of safety. Nonetheless, some middle managers and staff members said that senior management placed a higher priority on cost and schedule than on safety, and some management actions have contributed to this view. (HSS Supplemental Report Page 38)

PS1: ORP management has not clearly implemented a change management process that:

- **Defines expectations;**
- **Defines ownership of the change;**
- **Sets expectations for ORP staff on implementation (roles and responsibilities);**
- **Trains ORP staff;**
- **Provides feedback on ORP staff performance on implementation of change; and**
- **Establishes a contract mechanism for ORP oversight of the contractor's implementation of intended change.**

PS2: ORP management failed to define performance objectives (goals for functions) for staff and managers for implementing oversight responsibilities.

PS 3: ORP Management failed to manage the DPO to successful completion in a timely manner.

PS 4: ORP Management has failed to convey a consistent safety message with its actions.

ORP Safety Culture Improvement Plan
Problem Statements / Improvement Actions Worksheets
Appendix D

Safety Culture Focus Area: Leadership
Associated Attribute: Risk-informed, conservative decision making

Problem Statement(s)

L2-PS1: There is a perception that management places a priority on total project cost and schedule over safety, based upon both management decisions and indecision. Management communication of decision logic failed to inform ORP staff on basis of decisions.

Improvement Action(s)

L2-IA1: Undertake proactive communications to prevent misunderstandings on decisions made. Communicate time sensitive or controversial project information and the basis for making decisions to the staff prior to communicating to external bodies.

L2-IA2: Establish and implement (e.g. coaching, mentoring, IPP) set of management and staff expectations for safety culture attributes (including risk informed conservative decision making).

Issues extracted HSS Report

1. DOE-WTP and BNI recently decided to proceed with certain activities, such as welding heads on vessels. Some staff and external organizations have cited this decision as an indicator that management places priority on schedule over safety. (HSS Report Page 4)

   L2-PS1: There is a perception that management places a priority on schedule over safety.

2. Although DOE has very recently clarified its position and indicated that BNI must fully comply with DOE-STD-3009, some safety basis analyses and design reviews over the past ten years were performed against procedures that do not fully meet all DOE-STD-3009 requirements. As a result, the existing safety basis documents and some aspects of the design may later be found to not comply with DOE-STD-3009 and 10 CFR 830, impacting the ability to gain approval of the safety basis for hot operation (the final Documented Safety Analysis [DSA]). The impacts of this issue on design, cost, and budget have not been fully analyzed, but some ORP, DOE-WTP, and BNI personnel indicated a potentially large impact that may require redesign of some systems, further stressing the Engineering and E&NS organizations. (HSS Report Page 30)

   L2-PS1: Did not convey clear expectation and did not develop a change management plan.

3. According to a BNI presentation for an August 2011 construction project review, the current budget calls for funding for completion of all five DSAs at a level of less than $4 million, which appears to be less than 10 percent of the amount needed (based on historical experience with development of safety basis documents). Some personnel at WTP indicated that the gap occurred because DOE never fully budgeted or provided the appropriate funds for a DOE approved safety basis, and others indicated that BNI significantly underestimated the cost of developing DSAs. In addition, as discussed previously, DOE has not provided a concise and unambiguous set of requirements and expectations for the safety basis effort, and BNI has not provided adequate resources and organizational leadership to ensure that the expectations for the WTP safety basis are fully defined and supported by all organizations. Some senior DOE and BNI managers have begun to recognize the likelihood of a large budget gap for the DSA effort, but the magnitude of the gap seems not to have been evaluated and widely understood within WTP. Also, during interviews with the Independent Oversight team, some ORP and BNI personnel indicated that DOE had been reluctant to ask Congress for additional funding because of previous budget cap commitments to keep the cost of the WTP below the current cap (about $12 billion). Some personnel at WTP indicate that reluctance to request funding has contributed to delays in approving the contract modification discussed above, since the contract modification would involve a cost adjustment. Subsequently, other BNI personnel indicated that funding the safety basis effort was within the contingency funds and would not cause costs to exceed the cap. At this time, the safety basis effort is significantly underfunded, and no plan for resolving the issue has been finalized. (HSS Report Page 30)

L2-PS1: There is a perception that management places a priority on total project cost and schedule over safety, based upon both of management decisions and indecision.

4. Categorization of findings is prioritized from 1 to 3, with the highest safety significance being a 3. Staff related instances of where they wanted findings changed from a 2 to a 3 but their management decided that the findings were not that significant; however, no basis for their decisions was communicated. Use of garnet to cut a tank in the Tank Farm was perceived as a schedule over safety decision to meet a commitment to the State without a formal evaluation of the impact of the effects of garnet on erosion. There is a perception among some staff that there is less concern with risk now among the current ORP managers, and more concern with project, cost, and schedule. Some interviewees indicated that they had heard that colleagues working on the Pretreatment (PT) and High-Level Waste (HLW) facilities have been asked to leave things out of their reports, e.g. pipe erosion and criticality issues. Management is described by staff as considering

an issue closed unless testing shows otherwise. Staff indicated that they do not necessarily share that perspective. (HSS Supplemental Report Page 6)

L2-PS1: There is a perception that management places a priority on total project cost and schedule over safety, based upon both management decisions and indecision. Management communication of decision logic failed to inform ORP staff on basis of decisions.

5. Some interviewees described struggling with concerns that there is the perception that the schedule takes priority over safety and that it is misunderstood. Some in ORP hold the view that the entire project is safety driven because meeting the schedule is safety from an environmental risk perspective. (HSS Supplemental Report Page 7)

L2-PS1: There is a perception that management places a priority on total project cost and schedule over safety, based upon both management decisions and indecision. Management communication of decision logic failed to inform ORP staff on basis of decisions.

ORP Safety Culture Improvement Plan
Problem Statements / Improvement Actions Worksheets
Appendix D

Safety Culture Focus Area: Leadership
Associated Attribute: Management engagement and time in field

Problem Statement(s)

L3-PS1: ORP Management has not spent adequate time with ORP staff to evaluate the ORP safety culture with respect to:

- **Timely resolution of safety culture issues;**
- **Project oversight;**
- **Evaluation of project oversight effectiveness; and**
- **Monitoring or ensuring the implementation of necessary corrective actions.**

Improvement Action(s)

L3-IA1: Develop a management presence program to:

- **Establish a goal and track participation for management presence with employees placing eyes on the work, asking questions, coaching, mentoring, and reinforcing standards and positive behaviors;**
- **Establish quantifiable, auditable methods to track performance and compliance; and**
- **Develop formal training for management.**

L3-IA2: Develop a management presence program process that establishes a quantifiable performance metrics which ensures timely feedback.

L3-IA3: Encourage Management to have employees accompany ORP staff when the opportunity arises (Site visits, briefings, etc.).

L3-IA4: ORP Management establish a goal to perform / conduct one-on-one meeting on a monthly basis with ORP staff members, talking points (set individual expectations, relate scope and expertise, increase communication, enhance management / staff interaction relationship.

Issues extracted HSS Report

1) ORP senior management has not addressed delays in the implementation of the corrective actions from the previous HSS assessment as well as from the DNFSB Recommendation. (HSS Report Page 11)

L3-PS1: ORP Management has not spent adequate time with ORP staff to evaluate the ORP safety culture with respect to:

- **Timely resolution of safety culture issues;**
- **Project oversight;**
- **Evaluation of project oversight effectiveness; and**
- **Monitoring or ensuring the implementation of necessary corrective actions.**

2) ORP management has not provided clear direction to ORP staff on the importance and implementation of safety culture into their oversight activities. (HSS Report Page 11)

L3-PS1: ORP Management has not spent adequate time with ORP staff to evaluate the ORP safety culture with respect to:

- **Timely resolution of safety culture issues;**
- **Project oversight;**
- **Evaluation of project oversight effectiveness; and**
- **Monitoring or ensuring the implementation of necessary corrective actions.**

3) ORP and DOE-WTP oversight of functional areas, such as industrial safety, industrial hygiene, and radiation protection, warrants attention. The apparently limited involvement of subject matter specialists in Federal oversight of worker safety at a major construction site warrants timely management evaluation and attention. (HSS Report Page 33, 34)

L3-PS1: ORP Management has not spent adequate time with ORP staff to evaluate the ORP safety culture with respect to:

- **Timely resolution of safety culture issues;**
- **Project oversight;**
- **Evaluation of project oversight effectiveness; and**
- **Monitoring or ensuring the implementation of necessary corrective actions.**

4) Along similar lines, other interviewees indicated that while DOE-WTP currently makes decisions for WTP, when the plant is operational ORP will have responsibility and they will not have been involved in the decision making process up to that point. Some interviewees indicated concerns about effectively covering oversight at startup of WTP. (HSS Supplemental Report Page 13)

L3-PS1: ORP Management has not spent adequate time with ORP staff to evaluate the ORP safety culture with respect to:

- **Timely resolution of safety culture issues;**
- **Project oversight;**
- **Evaluation of project oversight effectiveness; and**
- **Monitoring or ensuring the implementation of necessary corrective actions.**

5) Many interviewees did not perceive support from upper level management for their identification of problems or challenging of conditions and activities. ORP procedure ESQ-QSH-GU-01, Guide to Facilitate Sessions for the Collection of Worker Feedback regarding Safety at the Hanford Site, was established in January 2009 to provide an additional mechanism for contractor employees to raise safety concerns but the procedure had not been implemented at the time of this HSS review. When HSS identified the failure to implement, ORP promptly developed a corrective action report and will evaluate the extent of condition and determine needed actions. (HSS Supplemental Report Page 33)

L3-PS1: ORP Management has not spent adequate time with ORP staff to evaluate the ORP safety culture with respect to:

- **Timely resolution of safety culture issues;**
- **Project oversight;**
- **Evaluation of project oversight effectiveness; and**
- **Monitoring or ensuring the implementation of necessary corrective actions.**

Safety Culture Focus Area: Leadership
Associated Attribute: Staff recruitment, selection, retention, and development

Problem Statement(s)

L4-PS1: ORP Management failed to ensure managers and supervisors consistently exhibit the desired behaviors to foster a healthy safety culture.

L4-PS2: ORP management has not clearly implemented a change management process that:

- **Defines expectations;**
- **Defines ownership of the change;**
- **Sets expectations for ORP staff on implementation (roles and responsibilities);**
- **Trains ORP staff;**
- **Provides feedback on ORP staff performance on implementation of change; and**
- **Establishes a contract mechanism for ORP oversight of the contractor's implementation of intended change.**

PS3: Allocation of resources within ORP is perceived as negative and resources are not allocated proportional to workload with responsibilities clearly defined.

PS4: ORP does not have a defined process for prioritizing award resources to reinforce desired behaviors.

Improvement Action(s)

L4-IA1: Identify roles and responsibilities by division/group and ensure human resources are matched in quantity and type to assigned workloads.

L4-IA2: Align the human capital management plan to organization needs in order to fulfill ORP's oversight responsibilities (e.g. what are the needs? do you have the people? are the people in the right places? succession planning by function, personnel development).

L4-IA3: Establish and implement (e.g. coaching, mentoring, IPP) set of management and staff expectations for safety culture attributes (including questioning attitude).

L4-IA4: Bring the Institute of Nuclear Power Operation Nuclear Executive Leadership Training to ORP.

L4-IA5: Develop an ORP management development program that contains communication, organizational trust, and behavioral elements (e.g. seven (7) Habits

of Highly Effective People, Change Management, and Conflict Resolution, Managing interpersonal relationships).

L4-IA6: Implemented a change management process that:

- **Defines expectations;**
- **Defines ownership of the change;**
- **Sets expectations for ORP staff on implementation (roles and responsibilities);**
- **Trains ORP staff;**
- **Provides feedback on ORP staff performance on implementation of change; and**
- **Establishes a contract mechanism for ORP oversight of the contractor's implementation of intended change.**

L4-IA7: ORP shall define a process to recognize and reinforce desired safety cultural behaviors.

Issues extracted HSS Report

1. Many individuals in management and supervision do not consistently exhibit desired behaviors and are not challenged by their managers or peers. Inconsistent implementation of standards and expectations in work activities is common and may be influenced by ineffective communication and an ineffective change management process. (HSS Report Page xiii)

   L4-PS1: ORP Management failed to ensure managers and supervisors consistently exhibit the desired behaviors to foster a healthy safety culture.

   L4-PS2: ORP management has not clearly implemented a change management process that:

   - **Defines expectations;**
   - **Defines ownership of the change;**
   - **Sets expectations for ORP staff on implementation (roles and responsibilities);**
   - **Trains ORP staff;**
   - **Provides feedback on ORP staff performance on implementation of change; and**
   - **Establishes a contract mechanism for ORP oversight of the contractor's implementation of intended change.**

2. BNI has taken a number of actions to strengthen its safety culture, but most of these actions appear to have been prompted by DNFSB comments and HSS reviews and enforcement actions, rather than by proactive efforts on the part of ORP or DOE-WTP.

At the time of this Independent Oversight review, management expectations regarding safety culture had not been formally communicated to the Federal staff through a policy statement or programmatic requirements, and safety culture training had not been provided to the staff. DOE-WTP had not established a program for periodically monitoring safety culture and providing feedback to management. (HSS Report Pages 16, 17)

L4-PS1: ORP Management failed to ensure managers and supervisors consistently exhibit the desired behaviors to foster a healthy safety culture.

L4-PS2: ORP management has not clearly implemented a change management process that:

- **Defines expectations;**
- **Defines ownership of the change;**
- **Sets expectations for ORP staff on implementation (roles and responsibilities);**
- **Trains ORP staff;**
- **Provides feedback on ORP staff performance on implementation of change; and**
- **Establishes a contract mechanism for ORP oversight of the contractor's implementation of intended change.**

3. While these actions are positive signs, some of them are not finalized and/or are contingent on funding and the ability to attract additional personnel with the requisite skills and experience in nuclear design and safety basis. In addition, although the above actions have the potential to address the underlying problems, significant and sustained ORP, DOE-WTP, and BNI management attention will be needed to ensure that the safety culture concerns are also addressed for personnel who are involved in design and engineering functions and the nuclear safety basis analysis and approval functions. (HSS Report Page 32)

L4-PS1: ORP Management failed to ensure managers and supervisors consistently exhibit the desired behaviors to foster a healthy safety culture.

L4-PS2: ORP management has not clearly implemented a change management process that:

- **Defines expectations;**
- **Defines ownership of the change;**
- **Sets expectations for ORP staff on implementation (roles and responsibilities);**
- **Trains ORP staff;**
- **Provides feedback on ORP staff performance on implementation of change; and**

- **Establishes a contract mechanism for ORP oversight of the contractor's implementation of intended change.**

4. Perceptions around the allocation of resources are generally negative within ORP. In particular, results on the Behavioral Anchored Rating Scale (BARS) for Resource Allocation were overwhelmingly negative for the General Engineering and Safety System Oversight/Facility Representative groups. (HSS Supplemental Report Page 7)

   L4-PS1: ORP Management failed to ensure managers and supervisors consistently exhibit the desired behaviors to foster a healthy safety culture.

   L4-PS2: ORP management has not clearly implemented a change management process that:

   - **Defines expectations;**
   - **Defines ownership of the change;**
   - **Sets expectations for ORP staff on implementation (roles and responsibilities);**
   - **Trains ORP staff;**
   - **Provides feedback on ORP staff performance on implementation of change; and**
   - **Establishes a contract mechanism for ORP oversight of the contractor's implementation of intended change.**

   L4-PS3: Allocation of resources within ORP is perceived as negative and resources are not allocated proportional to workload.

5. Cut backs in ORP personnel present a challenge for conducting the appropriate oversight both in the field and for system reviews. (HSS Supplemental Report Page 11)

   L4-PS1: ORP Management failed to ensure managers and supervisors consistently exhibit the desired behaviors to foster a healthy safety culture.

   L4-PS2: ORP management has not clearly implemented a change management process that:

   - **Defines expectations;**
   - **Defines ownership of the change;**
   - **Sets expectations for ORP staff on implementation (roles and responsibilities);**
   - **Trains ORP staff;**
   - **Provides feedback on ORP staff performance on implementation of change; and**
   - **Establishes a contract mechanism for ORP oversight of the contractor's implementation of intended change.**

L4-PS3: Allocation of resources within ORP is perceived as negative and resources are not allocated proportional to workload.

6. Some aspects of Federal leadership have not promoted an effective safety culture within ORP and BNI. At the time of this HSS review, management expectations regarding safety culture had not been formally communicated to the Federal staff through a policy statement or programmatic requirements, safety culture training had not been provided to the staff, and no program had been established to periodically monitor safety culture and provide feedback to management. (HSS Supplemental Report Page 37)

   L4-PS1: ORP Management failed to ensure managers and supervisors consistently exhibit the desired behaviors to foster a healthy safety culture.

   L4-PS2: ORP management has not clearly implemented a change management process that:

   - **Defines expectations;**
   - **Defines ownership of the change;**
   - **Sets expectations for ORP staff on implementation (roles and responsibilities);**
   - **Trains ORP staff;**
   - **Provides feedback on ORP staff performance on implementation of change; and**
   - **Establishes a contract mechanism for ORP oversight of the contractor's implementation of intended change.**

   L4-PS3: Allocation of resources within ORP is perceived as negative and resources are not allocated proportional to workload.

7. There does not appear to be a process that allows ORP line managers to participate in prioritizing award resources to reinforce desired behaviors. (HSS Supplemental Report Page 39)

   L4-PS1: ORP Management failed to ensure managers and supervisors consistently exhibit the desired behaviors to foster a healthy safety culture.

   L4-PS2: ORP management has not clearly implemented a change management process that:

   - **Defines expectations;**
   - **Defines ownership of the change;**
   - **Sets expectations for ORP staff on implementation (roles and responsibilities);**
   - **Trains ORP staff;**

- **Provides feedback on ORP staff performance on implementation of change; and**
- **Establishes a contract mechanism for ORP oversight of the contractor's implementation of intended change.**

L4-PS3: Allocation of resources within ORP is perceived as negative and resources are not allocated proportional to workload.

L4-PS4: ORP does not have a defined process for prioritizing award resources to reinforce desired behaviors.

8. The Safety Management Functions, Responsibilities & Authorities (FRA) does not fully comply with DOE O 450.2, Integrated Safety Management (ISM), in that it does not describe the organization and management structure as required by Section 4.g (1); does not consistently identify who within the organization has responsibility to perform the functions as required by Section 4.g (4); and does not specify the authorities delegated to responsible organizational elements as required by Section 4.g (4). For example, the FRA identifies the ORP Nuclear Safety Division (NSD) as the position responsible for safety and hazards analyses, but does not specify whether NSD has the authority to approve or disapprove DSAs. Formal agreements, such as memoranda of understanding or interface agreements, have not been established to clarify shared responsibilities. (HSS Supplemental Report Pages 39, 40)

L4-PS1: ORP Management failed to ensure managers and supervisors consistently exhibit the desired behaviors to foster a healthy safety culture.

L4-PS2: ORP management has not clearly implemented a change management process that:

- **Defines expectations;**
- **Defines ownership of the change;**
- **Sets expectations for ORP staff on implementation (roles and responsibilities);**
- **Trains ORP staff;**
- **Provides feedback on ORP staff performance on implementation of change; and**
- **Establishes a contract mechanism for ORP oversight of the contractor's implementation of intended change.**

L4-PS3: Allocation of resources within ORP is perceived as negative and resources are not allocated proportional to workload.

L4-PS4: ORP does not have a defined process for prioritizing award resources to reinforce desired behaviors.

ORP Safety Culture Improvement Plan
Problem Statements / Improvement Actions Worksheets
Appendix D

Safety Culture Focus Area: Leadership
Associated Attribute: Open communication and fostering an environment free from retribution

Problem Statement(s)

L5-PS1: ORP Management was not effective in communicating risk based decisions in the presence of schedule and cost pressures.

L5-PS2: ORP Management has failed to foster a high level of trust within the organization where reporting issues / concerns are encouraged and valued.

L5-PS3: ORP Management decisions do not always effectively communicate a prioritization of organizational values.

L5-PS4: ORP management has not clearly implemented a change management process that:

- **Defines expectations;**
- **Defines ownership of the change;**
- **Sets expectations for ORP staff on implementation (roles and responsibilities);**
- **Trains ORP staff;**
- **Provides feedback on ORP staff performance on implementation of change; and**
- **Establishes a contract mechanism for ORP oversight of the contractor's implementation of intended change.**

L5-PS5: ORP Management has not developed processes that respect the concerned individual, validates issues, and works with the concerned individual to ensure their issues have been adequately addressed in a timely manner. (e.g., Employee Concerns Program [ECP])

Improvement Action(s)

L5-IA1: Flowchart the existing ECP and DPO processes with an integrated project team including recommendations for improvements.

L5-IA2: Revise the ECP and DPO processes to incorporate specific steps to ensure respect for the concerned individual, validation of their issues, timely feedback, and involve the individual in closure of the issue.

L5-IA3: Communicate the results of the process improvement activity for the ECP and DPO processes.

L5-IA4: Implemented a change management process that:

- **Defines expectations;**
- **Defines ownership of the change;**
- **Sets expectations for ORP staff on implementation (roles and responsibilities);**
- **Trains ORP staff;**
- **Provides feedback on ORP staff performance on implementation of change; and**
- **Establishes a contract mechanism for ORP oversight of the contractor's implementation of intended change.**

L5-IA5: Develop an ORP management development program that contains communication, organizational trust, and behavioral elements (e.g. 7 Habits of Highly Effective People, Change Management, and Conflict Resolution, Managing interpersonal relationships).

L5-IA6: Communicate time sensitive or controversial project information to the staff prior to communicating to external bodies.

L5-IA7: Establish a program for ORP to use to effectively handle issues. Program elements must include feedback mechanisms, transparency, traceability, benchmarking, performance monitoring, trending, and a set of metrics that communicate issue resolution to employees.

Issues extracted HSS Report

1. However, DOE-WTP and BNI management did not effectively communicate to stakeholders the rationale for this decision, nor did management communicate the fact that the action was reversible if ongoing analysis concluded that the design needed to be modified. (HSS Report Page 4)

   L5-PS1: ORP Management was not effective in communicating risk based decisions.

   L5-PS2: ORP Management failed to develop a high level of trust within the organization.

2. There is a perception that the value of safety is sometimes degraded in the presence of schedule and cost pressures. (HSS Report Page 11)

   L5-PS1: ORP Management was not effective in communicating risk based decisions in the presence of schedule and cost pressures.

L5-PS2: ORP Management failed to develop a high level of trust within the organization.

L5-PS3: ORP Management decisions do not always effectively communicate a prioritization of organizational values.

3. There is a strong indication of an unwillingness and uncertainty among ORP staff about the ability to openly challenge management decisions. There are definite perceptions that the ORP work environment is not conducive to raising concerns or whether management wants to or willingly listens to concerns. Most ORP staff members also strongly believe that constructive criticism is not encouraged. (HSS Report Page 11)

   L5-PS1: ORP Management was not effective in communicating risk based decisions in the presence of schedule and cost pressures.

   L5-PS2: ORP Management has failed to foster a high level of trust within the organization where reporting issues / concerns are encouraged and valued.

   L5-PS3: ORP Management decisions do not always effectively communicate a prioritization of organizational values.

4. The behaviors and traits important for a healthy safety culture will not be effective until they are internalized by the members of the organization. More effort is needed in behavioral change to ensure that these traits become the accepted way of doing business. (HSS Report Page 13)

   L5-PS1: ORP Management was not effective in communicating risk based decisions in the presence of schedule and cost pressures.

   L5-PS2: ORP Management has failed to foster a high level of trust within the organization where reporting issues / concerns are encouraged and valued.

   L5-PS3: ORP Management decisions do not always effectively communicate a prioritization of organizational values.

5. RL and ORP have established appropriate mechanisms for the Federal staff to raise safety concerns, but these mechanisms have seldom been used. Most Federal staff members said that they would have no reservations about raising concerns to their supervisors and no reservations about using those mechanisms. However, a significant number of ORP staff indicated a reluctance to raise safety concerns. (HSS Report Page 16)

   L5-PS1: ORP Management was not effective in communicating risk based decisions in the presence of schedule and cost pressures.

L5-PS2: ORP Management has failed to foster a high level of trust within the organization where reporting issues / concerns are encouraged and valued.

L5-PS3: ORP Management decisions do not always effectively communicate a prioritization of organizational values.

6. Senior ORP and DOE-WTP managers consistently said that safety was their overriding priority and that they had taken steps to convey this message to their staffs. They require that each ORP meeting begins with a safety message, and they emphasize the importance of safety during all-hands meetings. However, some middle managers and staff members said that senior management placed a higher priority on cost and schedule than on safety, and some management actions have contributed to this view. Certain management actions and communication weakness suggest the priority of schedule and cost or raise questions about management priorities among the staff members. For example, the basis for a decision approving the welding of heads on certain vessels was not effectively communicated to Federal or BNI staffs, causing some staff members to conclude that project management had compromised safety in order to meet cost and schedule objectives. The decision to weld the heads was opposed by a DPO, a union grievance, and a stop-work order. (HSS Report Page 16)

L5-PS1: ORP Management was not effective in communicating risk based decisions in the presence of schedule and cost pressures.

L5-PS2: ORP Management has failed to foster a high level of trust within the organization where reporting issues / concerns are encouraged and valued.

L5-PS3: ORP Management decisions do not always effectively communicate a prioritization of organizational values.

7. Although it appears clear in this letter that DOE's intent is to have WTP fully comply with DOE-STD-3009, it was apparent from several interviews during the week of November 28, 2011, that this information has not been well communicated within either organization (neither DOE nor BNI), and misunderstandings of the applicability of DOE-STD-3009 persist within both organizations. (HSS Report Page 28)

L5-PS1: ORP Management was not effective in communicating risk based decisions in the presence of schedule and cost pressures.

L5-PS2: ORP Management has failed to foster a high level of trust within the organization where reporting issues / concerns are encouraged and valued.

L5-PS3: ORP Management decisions do not always effectively communicate a prioritization of organizational values.

8. While the Independent Review Team is perceived as a valuable tool, several individuals indicated that communication, integration and consistency across the teams need to be improved. (HSS Supplemental Report Page 7)

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   L5-PS3: ORP Management decisions do not always effectively communicate a prioritization of organizational values.

9. Some interviewees also described concerns that the day to day oversight of the Project was not sufficient. No good mechanism for DOE Facility Representatives to report more subjective information, e.g., impact of certain personal protection equipment. Non-compliance based items are not solicited. ORP oversight tasked individuals believe that they need to be empowered to ensure the appropriate oversight is conducted. They cite perceptions that their supervisors are sometimes aligned more with the contractor than with them. Clarification of the oversight model for the Project is needed; perception that not everyone is concerned about a nuclear safety culture at a construction site. Cut backs in ORP personnel present a challenge for conducting the appropriate oversight both in the field and for system reviews. Perception that the erosion in the communication and relationships between ORP, DOE-WTP, and BNI has impacted the effectiveness of oversight. (HSS Supplemental Report Page 11)

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   L5-PS3: ORP Management decisions do not always effectively communicate a prioritization of organizational values.

10. Some management interviewees indicated that they perceived the co-location of ORP staff with BNI Staff in different locations, while difficult, to be a success. ORP staff viewed it more negatively and the union had issues with the idea. Lessons learned from

that experience is to provide the union more information when these types of ideas and issues arise. (HSS Supplemental Report Page 18)

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L5-PS2: ORP Management has failed to foster a high level of trust within the organization where reporting issues / concerns are encouraged and valued.

L5-PS3: ORP Management decisions do not always effectively communicate a prioritization of organizational values.

L5-PS4: ORP management has not clearly implemented a change management process that:

- **Defines expectations;**
- **Defines ownership of the change;**
- **Sets expectations for ORP staff on implementation (roles and responsibilities);**
- **Trains ORP staff;**
- **Provides feedback on ORP staff performance on implementation of change; and**
- **Establishes a contract mechanism for ORP oversight of the contractor's implementation of intended change.**

11. Data on the BARS for Organizational Learning indicated that approximately 45% of ORP interviewee respondents believed that while the organization usually holds review sessions to discuss operating problems and attempts to uncover solutions to past difficulties, the information is generally only communicated to the population when it concerns significant activities. This perception was held by 100% of the General Engineering interviewee respondents. (HSS Supplemental Report Page 19)

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12. Overall, only 30% of all survey respondents feel that they can openly challenge decisions made by management. Respondents in the Contract Specialist/Budget and Finance, Project Control Specialist, General Engineering and Administrative Work Groups feel most negatively about being able to challenge decisions. Non-Supervisory Personnel and Contractors either do not believe or are uncertain about openly challenging management decisions. Among Supervisory 21 Personnel slightly more than 70% agreed with the statement related to the ability to openly challenge management decisions. (HSS Supplemental Report Pages 20, 21)

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13. Approximately 50% of survey respondents agreed with the statement that they feel that they can approach the management team with concerns. Respondents in the Nuclear Safety and Physical Scientist, Contract Specialist/Budget and Finance, and Project Control Specialist Groups believed this to a lesser degree than respondents in the other work groups. Among Supervisory Personnel slightly more than 70% believed that management could be approached with concerns. (HSS Supplemental Report Page 21)

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    L5-PS2: ORP Management has failed to foster a high level of trust within the organization where reporting issues / concerns are encouraged and valued.

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    - **Trains ORP staff;**
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    - **Establishes a contract mechanism for ORP oversight of the contractor's implementation of intended change.**

14. Only slightly more than 50% of survey respondents agreed with the statement related to management wants concerns reported, and approximately 58% believe that constructive criticism is encouraged. Work group differences were largely in the same direction described for the other responses. (HSS Supplemental Report Page 21)

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15. Several interviewees identified examples in communication that may impact safety performance. Some manager behaviors are so confident that they may be overpowering less assertive individuals in the scientist and engineering groups inhibiting their bringing problems forward. Better communication is needed around the how and why of management decisions. Communication from BNI is inadequate, e.g., BNI process changes were not communicated directly; BNI is not perceived to be forthcoming with their information. Perception exists that DOE-WTP Project Management has become BNI advocate even in light of recurring mistakes. ORP still needs to provide a broader perspective of the project to some of its groups. (HSS Supplemental Report Page 23)

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16. Data from the BARS on Communication indicated that approximately 60% of the ORP interviewee respondents who completed that scale had positive perceptions about the exchange of information, both formal and informal, between the different departments or units in the project, including the top-down and bottom-up communication networks. Respondents in the General Engineering Group had the poorest perception of communication. (HSS Supplemental Report Page 23)

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    L5-PS1: ORP Management has failed to foster a high level of trust within the organization where reporting issues / concerns are encouraged and valued.

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17. Many interviewees did not perceive support from upper level management for their identification of problems or challenging of conditions and activities. (HSS Supplemental Report Page 26)

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- **Trains ORP staff;**
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18. Results from the electronic survey administered at ORP indicated a fairly negative perception among most survey respondents about management's interest in having concerns reported and in the ability to openly challenge management's decisions. (HSS Supplemental Report Page 26)

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19. The ECP procedure does not provide for a first-step factual accuracy validation with the originator to ensure that concerns are appropriately addressed, particularly for referrals. Some cases had been validated, and some had not. The RL ECP retains responsibility for final closeout in all cases. (HSS Supplemental Report Page 33)

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L5-PS5: ORP Management has not developed processes that respect the concerned individual, validates issues, and works with the concerned individual to ensure their issues have been adequately addressed in a timely manner. (e.g., ECP)

20. However, some Federal staff members indicated that some ORP staff would be reluctant to raise safety concerns and that this is not an isolated problem. The following comments from five different Federal staff members provide insight into why those mechanisms have not been used more frequently: "Harassment and intimidation of the ORP staff has occurred and has happened to me." This individual cited an example in which he/she was intimidated and harassed by a previous ORP Site Office Manager for raising concerns. "The current ORP staff is still affected by their experience with the previous ORP Manager who did not welcome negative feedback from the staff." "Over at ORP, they don't want to listen to you unless they agree. The people at the top don't want to admit that this project is on the wrong track because they would lose their jobs if they did." One person said that "raising a concern to my management makes me feel like a whistleblower," implying that this was an unpleasant experience. A manager said that "use of the DPO process is an indication that the normal management systems are not functional." (HSS Supplemental Report Page 34)

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21. DOE-WTP and ORP support organizations are working together as members of integrated project teams to provide oversight of the WTP project and are working together to develop and maintain the integrated assessment schedule. Interviews and performance observations during this HSS review indicate the need to continue efforts to improve communications. During interviews, some individuals conveyed that they were not engaged in the WTP project since their support was not welcomed by the DOE-WTP Project Team and that there was little communication with the WTP Facility Representatives. (HSS Supplemental Report Page 37)

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22. The basis for a decision approving the welding of heads on certain vessels was not effectively communicated to Federal or BNI staffs, causing some staff members to conclude that project management had compromised safety in order to meet cost and schedule objectives. The decision to weld the heads had been opposed by a DPO, a union grievance, and a stop-work order. Many Federal and contractor staff members were aware of the issue. DOE-WTP management indicated that they approved the welding based on their assessment that the associated risks were to cost and schedule and that the welding would not adversely impact safety, but the basis for this decision was not effectively communicated to the many staff members who were aware of the issue. When WTP Engineering Division (WED) engineers learned that Washington River Protection Solutions LLC (WRPS) planned to use a garnet abrasive to cut a hole in the top of a waste tank, they expressed concern about the effect that the garnet might have on components in the WTP. ORP management told the engineers that the effect had been evaluated and there was no cause for concern. The engineers asked for a copy of the evaluation report but were told that the evaluation was not formal and there was no report. When ORP allowed the use of garnet, the engineers perceived that management had given schedule a higher priority than safety. (HSS Supplemental Report Page 38)

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- **Establishes a contract mechanism for ORP oversight of the contractor's implementation of intended change.**

L5-PS5: ORP Management has not developed processes that respect the concerned individual, validates issues, and works with the concerned individual to ensure their issues have been adequately addressed in a timely manner. (e.g., ECP)

23. Most ORP staff members who were interviewed by the Independent Oversight team said that communications between the DOE-WTP organization and supporting ORP organizations had improved but were not yet fully effective. ORP managers said that the new liaison positions have been helpful in facilitating communications between these organizations, but a few ORP staff members commented that they had never met the DOE-WTP liaison individual assigned to their organization and that they had not noticed improvement in communication. Some interviewees commented that an attitude of "us versus them" existed between WTP project and support organizations and that these organizations were not yet working together effectively as a team. (HSS Supplemental Report Pages 39, 40)

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L5-PS2: ORP Management has failed to foster a high level of trust within the organization where reporting issues / concerns are encouraged and valued.

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ORP Safety Culture Improvement Plan
Problem Statements / Improvement Actions Worksheets
Appendix D

Safety Culture Focus Area: Leadership
Associated Attribute: Clear expectations and accountability

Problem Statement(s)

L6-PS1: ORP Management has not effectively defined roles, responsibilities, authorities, and accountabilities.

L6-PS2: ORP Management has failed to set expectations, implement actions, and assess the effectiveness of safety culture attributes. (ISM & Nuclear)

L6-PS3: ORP Management failed to implement and enforce applicable orders and requirements related to nuclear safety.

Improvement Action(s)

L6-IA1: Clearly define roles, responsibilities, authorities, and accountabilities and update the Functions, Responsibilities, and Authorities manual as necessary.

L6-IA2: Revise and update the River Protection Project execution plan.

L6-IA3: Align the human capital management plan to organization needs in order to fulfill ORP's oversight responsibilities (e.g. what are the needs? do you have the people? are the people in the right places? succession planning by function, personnel development).

L6-IA4: Obtain approval of the draft ORP organizational chart.

L6-IA5: Charter a Nuclear Safety Culture IPT.

L6-IA6: Perform periodic self-assessments on safety culture attributes.

Issues extracted HSS Report

1. FPD and DOE-WTP responsibilities and interfaces are defined in a revision to the Project Execution Plan (PEP), but the revision has not yet been formally approved. In practice, the FPD has been implementing the draft revised PEP, which has the project functionally reporting directly to EM-1 as the Program Secretarial Office, with a direct line of communication to the Deputy Secretary of Energy as the Acquisition Executive. With this arrangement, DOE-WTP currently functions largely autonomously within ORP at the direction of FPD. (HSS Report Page 2)

   L6-PS1: ORP Management has not clearly defined roles and responsibilities or implemented them as defined.

2. ORP management has not provided clear direction to ORP staff on the importance and implementation of safety culture into their oversight activities. (HSS Report Page 11)

   L6-PS1: ORP Management has not clearly defined roles and responsibilities or implemented them as defined.

   L6-PS2: ORP has failed to set expectations to implement the safety culture attributes.

3. The organizational separation of the DOE-WTP organization from the rest of the ORP organization has created difficulties in the communication, coordination, and cohesiveness of the implementation of DOE standards and oversight of BNI. Questions concerning how DOE-WTP is managing the project, what impact their decisions are having on the project, which is in control of the project, and ultimately who will deliver the project remain unanswered for many of ORP's employees and stakeholders. (HSS Report Page 11)

   L6-PS1: ORP Management has not clearly defined roles and responsibilities or implemented them as defined.

   L6-PS2: ORP has failed to set expectations to implement the safety culture attributes.

4. The external independent safety culture experts believe that a potential conflict for WTP is the different perceptions of the role of safety in a research/design project as compared to a construction project as compared to a production project. These perceptions set up the priorities of schedule, cost, and safety differently and may be contributing to some of the organizational issues. WTP needs to establish, implement, and expect the same standards and behaviors for safety, regardless of the phase of the project. (HSS Report Page 12)

   L6-PS1: ORP Management has not clearly defined roles and responsibilities or implemented them as defined.

   L6-PS2: ORP has failed to set expectations to implement the safety culture attributes. (ISM & Nuclear)

5. The behaviors and traits important for a healthy safety culture will not be effective until they are internalized by the members of the organization. More effort is needed in behavioral change to ensure that these traits become the accepted way of doing business. (HSS Report Page 13)

L6-PS1: ORP Management has not clearly defined roles and responsibilities or implemented them as defined.

L6-PS2: ORP Management has failed to set expectations, implement actions, and assess the effectiveness of safety culture attributes. (ISM & Nuclear)

6. The FRA does not fully comply with DOE O 450.2, ISM, in that it does not describe the organization and management structure, does not consistently identify who within the organization has responsibility to perform the functions, and does not specify the authorities delegated to responsible organizational elements. For example, the FRA identifies the ORP NSD as the position responsible for safety and hazards analyses, but it does not specify whether NSD has authority to approve or disapprove DSAs. Formal agreements, such as memoranda of understanding or interface agreements, have not been established to clarify shared responsibilities. (HSS Report Pages 16, 17)

   L6-PS1: ORP Management has not effectively defined roles, responsibilities, authorities, and accountabilities.

   L6-PS 2: ORP Management has failed to set expectations, implement actions, and assess the effectiveness of safety culture attributes. (ISM & Nuclear)

7. The Independent Oversight team was provided no evidence of systematic or formal Federal actions to track or validate corrective actions taken to strengthen safety culture at the site level, limiting the ability of Office of Environmental Management (EM) or senior DOE management to ensure timely and effective tracking and validation of corrective actions. (HSS Report Page 16)

   L6-PS1: ORP Management has not effectively defined roles, responsibilities, authorities, and accountabilities.

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8. BNI has taken a number of actions to strengthen its safety culture, but most of these actions appear to have been prompted by DNFSB comments and HSS reviews and enforcement actions, rather than by proactive efforts on the part of ORP or DOE-WTP. At the time of this Independent Oversight review Enforcement and Oversight management expectations regarding safety culture had not been formally communicated to the Federal staff through a policy statement or programmatic requirements, and safety culture training had not been provided to the staff. DOE-WTP had not established a

program for periodically monitoring safety culture and providing feedback to management. (HSS Report Pages 16, 17)

PS 1: ORP Management has not effectively defined roles, responsibilities, authorities, and accountabilities.

PS 2: ORP Management has failed to set expectations, implement actions, and assess the effectiveness of safety culture attributes. (ISM & Nuclear)

9. While there are some concerns about management style and performance problems (e.g., delays in approvals) within the current E&NS organization, this Independent Oversight review indicates that the more fundamental problems affecting E&NS performance result from ineffective communications, inaction, and ineffective direction in a number of areas (e.g., lack of timely decisions on and communication of applicable requirements) by more senior BNI and ORP/DOE-WTP management over the past years. (HSS Report Page 25)

   L6-PS1: ORP Management has not effectively defined roles, responsibilities, authorities, and accountabilities.

   L6-PS2: ORP Management has failed to set expectations, implement actions, and assess the effectiveness of safety culture attributes. (ISM & Nuclear)

10. Currently, there are some important inconsistencies and deficiencies in the Safety Requirements Document, which is a part of the contract that defines the safety requirements applicable to WTP that complement the applicable regulatory requirements (e.g., 10 CFR 830). Specifically, the Safety Requirements Document identifies certain safety basis procedures that include requirements that are inconsistent with regulatory requirements, as described below. Additionally, because certain procedures (e.g., safety basis review procedures) are included in the Safety Requirements Document, they cannot be changed without a DOE safety evaluation review and approval (a process that typically takes six months). (HSS Report Page 27)

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    L6-PS2: ORP Management has failed to set expectations, implement actions, and assess the effectiveness of safety culture attributes. (ISM & Nuclear)

11. As of the time of this report, DOE had not approved the contract change. Interviews indicated that the reasons for delaying approval were influenced by budget constraints. Further, the proposed change does not resolve the discrepancies in the safety basis

requirements in other standards of the contract, namely Standard 7 and Standard 10. Although actions to resolve this concern are now under way, the inconsistent requirements have been a source of conflict between the Engineering and E&NS organizations, and within the E&NS organization, particularly in the past two years. E&NS management has attempted to meet the more stringent standards of DOE-STD-3009 in order to achieve eventual approval of the safety basis, even though they cannot change the procedures until the contract modification is approved. (HSS Report Page 28)

L6-PS1: ORP Management has not effectively defined roles, responsibilities, authorities, and accountabilities.

L6-PS2: ORP Management has failed to set expectations, implement actions, and assess the effectiveness of safety culture attributes. (ISM & Nuclear)

12. Ineffective DOE and BNI communications about DOE-STD-3009 resulted in conflicting views about applicability, exacerbating the above concern. (HSS Report Page 28)

L6-PS1: ORP Management has not effectively defined roles, responsibilities, authorities, and accountabilities.

L6-PS2: ORP Management has failed to set expectations, implement actions, and assess the effectiveness of safety culture attributes. (ISM & Nuclear)

13. According to interviews and later correspondence, there was much disagreement, both within BNI and DOE and between BNI and DOE, about whether DOE-STD-3009 fully applied. Some individuals, both within BNI and DOE, believed that the change notice constituted approval from DOE to use the NRC methodology specified in the Safety Requirements Document while using the DOE-STD-3009 format, but others within both BNI and DOE believed that the methodologies in DOE-STD-3009 fully applied because "DOE never issued a formal approval letter for the alternate approach facility." This language further complicated BNI's and ORP's understanding of the applicability of DOE-STD-3009 in that the meaning and intent of the statements "attempted remain consistent with this guidance" and "with a view to its eventual use for the Documented Safety Analysis" were never formally communicated to BNI. (HSS Report Page 28)

L6-PS1: ORP Management has not effectively defined roles, responsibilities, authorities, and accountabilities.

L6-PS2: ORP Management has failed to set expectations, implement actions, and assess the effectiveness of safety culture attributes. (ISM & Nuclear)

14. Although DOE has very recently clarified its position and indicated that BNI must fully comply with DOE-STD-3009, some safety basis analyses and design reviews over the past ten years were performed against procedures that do not fully meet all DOE-STD-3009 requirements. As a result, the existing safety basis documents and some aspects of the design may later be found to not comply with DOE STD-3009 and 10 CFR 830, impacting the ability to gain approval of the safety basis for hot operation (the final DSAs). The impacts of this issue on design, cost, and budget have not been fully analyzed, but some ORP, DOE-WTP, and BNI personnel indicated a potentially large impact that may require redesign of some systems, further stressing the Engineering and E&NS organizations. (HSS Report Page 30)

    L6-PS1: ORP Management has not effectively defined roles, responsibilities, authorities, and accountabilities.

    L6-PS2: ORP Management has failed to set expectations, implement actions, and assess the effectiveness of safety culture attributes. (ISM & Nuclear)

15. Over the years, processes to keep the Preliminary Documented Safety Analysis (PDSA) current have not been effective, and the PDSA is out-of-date, a situation that is getting worse.

    L6-PS1: ORP Management has not effectively defined roles, responsibilities, authorities, and accountabilities.

    L6-PS2: ORP Management has failed to set expectations, implement actions, and assess the effectiveness of safety culture attributes. (ISM & Nuclear)

    L6-PS3: ORP Management failed to enforce applicable orders and requirements related to nuclear safety.

16. According to a BNI presentation for an August 2011 construction project review, the current budget calls for funding for completion of all five DSAs at a level of less than $4 million, which appears to be less than 10 percent of the amount needed (based on historical experience with development of safety basis documents). Some personnel at WTP indicated that the gap occurred because DOE never fully budgeted or provided the appropriate funds for a DOE approved safety basis, and others indicated that BNI significantly underestimated the cost of developing DSAs. In addition, as discussed previously, DOE has not provided a concise and unambiguous set of requirements and expectations for the safety basis effort, and BNI has not provided adequate resources and organizational leadership to ensure that the expectations for the WTP safety basis are fully defined and supported by all organizations. Some senior DOE and BNI managers

have begun to recognize the likelihood of a large budget gap for the DSA effort, but the magnitude of the gap seems not to have been evaluated and widely understood within WTP. Also, during interviews with the Independent Oversight team, some ORP and BNI personnel indicated that DOE had been reluctant to ask Congress for additional funding because of previous budget cap commitments to keep the cost of the WTP below the current cap (about $12 billion). Some personnel at WTP indicate that reluctance to request funding has contributed to delays in approving the contract modification discussed above, since the contract modification would involve a cost adjustment. Subsequently, other BNI personnel indicated that funding the safety basis effort was within the contingency funds and would not cause costs to exceed the cap. At this time, the safety basis effort is significantly underfunded, and no plan for resolving the issue has been finalized. (HSS Report Page 30)

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17. Before this manager was assigned, it appears that safety basis documents were reviewed and approved by the E&NS organization and ORP based on contract requirements that did not meet requirements of DOE-STD-3009. (HSS Report Page 30)

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18. However, formalizing the DOE-STD-3009 expectations in E&NS implementing procedures was hindered by the complex and restrictive Safety Requirements Document that was not consistent with DOE-STD-3009, and the time consuming requirement for DOE approval of changes to the Safety Requirements Document and revision of the E&NS procedures that must reflect the revised requirements of the Safety Requirements Document. Consequently, these expectations were communicated through less-formal channels, such as verbal or e-mail instructions to the staff. These expectations

significantly increased the workload of the E&NS staff and delayed E&NS safety review and approval of documents from other organizations. Because these delays could not be attributed to requirements in the BNI procedures (which do not meet DOE-STD-3009) and caused Engineering milestones to be missed (sometimes impacting performance appraisals), hard feelings ensued. Engineering organizations felt that the new approach, along with the resulting delays, was unwarranted and placed blame directly on the E&NS department. Additionally, some E&NS staff felt pressure from E&NS management and design and engineering organizations, and they resented the lack of a procedural basis for the additional safety review requirements and workload. Over the last two years, WTP design has progressed, but the PDSA has become further out-of-date, and delays in safety reviews of design and engineering documents have worsened. The animosity between some groups (e.g., Engineering) and managers and the entire E&NS group has become severe. A contributing factor is that much of the existing E&NS safety review staff and engineering staff have limited experience with the DOE-STD-3009 safety analysis format. (HSS Report Page 31)

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19. A significant number of crafts personnel indicated that schedule pressures and other factors (e.g., inadequate planning, frequently shifting priorities, poor communications, and inadequate work packages) have resulted in instances where safety rules, procedures, and practices were not followed. The crafts recognize that procedures and work packages must be followed verbatim, but believe that supervisors do not always support that requirement in work judged to have a high priority. For example, following procedures verbatim could take too long and cause delays for other crafts. Due to production pressures, some foremen make compromises or ask the crafts to decide for themselves (and take the risk of violating procedures). BNI, DOE-WTP, and ORP management should evaluate these concerns to determine their validity and extent. In addition to the safety risks to workers, compromising procedures and rules could impact the quality of construction and installation of safety grade Structures, Systems, and Components (SSC). Crafts personnel described a few instances where safety grade structures or components (e.g., electrical cable trays) may not have been installed correctly because of schedule pressures, poor planning, or inadequate work packages (e.g., needed parts not available). BNI, DOE-WTP, and ORP management should evaluate work practices, Quality

Assurance (QA) processes, and communication and understanding of expectations to ensure that safety and quality are not compromised by schedule pressures or insufficient management expectations, controls, and oversight. (HSS Report Page 33)

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20. ORP and DOE-WTP oversight of functional areas, such as industrial safety, industrial hygiene, and radiation protection, warrants attention. Some ORP personnel indicated that the only Federal presence performing oversight of worker safety at WTP facilities is the Facility Representatives, and that ORP safety subject matter specialists did not regularly communicate with the DOE-WTP Facility Representatives. Several ORP safety subject matter specialists indicated that they had not been to the WTP site for months because they were not welcome by the DOE-WTP team; were not involved in safety functions they had previously performed (e.g., review of the worker safety and health plan); and were not involved in reviewing, and sometimes were not formally made aware of, significant safety events at WTP (e.g., the steel girder drop). Conversely, a DOE-WTP manager with responsibility for oversight of construction has indicated that attempts have been made to engage ORP subject matter specialists and that the amount of oversight by subject matter specialists at WTP had been low for some time and was not impacted by the de facto separation of DOE-WTP from the rest of ORP. The apparently limited involvement of subject matter specialists in Federal oversight of worker safety at a major construction site warrants timely management evaluation and attention. (HSS Report Pages 33, 34)

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21. Results on the Attention to Safety Scale on the electronic survey were on the low end of scores compared to a database of other organizations' responses to the same questions.

This indicates that survey respondents did not have a high perception of the importance that safety has to success in their organization as measured by the value placed on various safety promoting behaviors. (HSS Supplemental Report Page 7)

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L6-PS3: ORP Management failed to enforce applicable orders and requirements related to nuclear safety.

22. Several interviewees indicated that the reporting structure for DOE-WTP has yet to be clarified. Although organizational charts exist, it is not clear who the DOE-WTP Federal Project Director reports to, how the various lines fit together, and who is responsible for what issues. Some individuals asked the question, "Who is responsible for delivering the WTP Project?" (HSS Supplemental Report Page 7)

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23. Some interviewees indicated that with the reorganization, ORP Federal employees outside of DOE-WTP have lost communication and cognizance of WTP issues and feel more distant even though they are supposed to support the Project, e.g., Industrial Safety. (HSS Supplemental Report Page 13)

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    L6-PS3: ORP Management failed to enforce applicable orders and requirements related to nuclear safety.

24. There is the perception described by some individuals that ORP Management is presently ineffective against DOE-WTP Management, e.g., perception that in the safety area there is no accountability and ORP organizations not in DOE-WTP have been stifled in assessing the safety and quality of the WTP Project. (HSS Supplemental Report Page 13)

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25. Among survey respondents Coordination of Work is perceived to be somewhat varied across ORP but generally not positive. In particular, respondents in the Administrative Work Group were the most positive about the Coordination of Work scoring significantly higher than most of the other Organizational Groups. The General Engineering Group had the lowest scores on this scale. (HSS Supplemental Report Page 16)

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26. Data from the BARS for Coordination of Work indicated a lot of uncertainty across ORP with regard to this behavior, validating the survey data. Approximately 55% of the BARS respondents on this measure believe that when work plans are implemented most departments and individuals know their roles and responsibilities. However, they also believe that departments work individually and usually do not have the acceptance or support of other departments, nor are all the involved parties included in the planning. (HSS Supplemental Report Page 16)

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27. Data from the BARS for Formalization indicated that about 65% of ORP interviewees who completed this scale believe that rules and procedures governing plant activities are readily available and that personnel are aware of the importance of procedural adherence. General Engineering had the most negative perception about formalization with only a little over 30% of the respondents having a positive response. (HSS Supplemental Report Page 17)

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28. Interviewees could not identify a formal Nuclear Safety Culture Policy or Program for ORP. (HSS Supplemental Report Page 21)

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    L6-PS3: ORP Management failed to enforce applicable orders and requirements related to nuclear safety.

29. Interviewees indicated that training on Safety Conscious Work Environment (SCWE) had not yet been provided throughout the ORP organizations. (HSS Supplemental Report Page 21)

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30. The DPO process has been incorporated into the RL Employee Concerns procedure, DOE-RL-RIMS-HRECP, ECP, and is referenced in recently revised ORP procedures. The process meets the requirements of DOE O 442.2, Differing Professional Opinions on Technical Issues Related to Environment Safety and Health Technical Concerns, except that it does not provide for appeal of ORP decisions to DOE Headquarters. The requirement for an appeal process became effective in July 2011, when DOE O 442.2 replaced previous directives (DOE Policy 442.1A and DOE Manual 442.1- 1) that did not include this requirement. (HSS Supplemental Report Page 33)

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31. However, some Federal staff members indicated that some ORP staff would be reluctant to raise safety concerns and that this is not an isolated problem. The following comments from five different Federal staff members provide insight into why those mechanisms have not been used more frequently: "Harassment and intimidation of the ORP staff has occurred and has happened to me." This individual cited an example in which he/she was intimidated and harassed by a previous ORP Site Office Manager for raising concerns. "The current ORP staff is still affected by their experience with the previous ORP Manager who did not welcome negative feedback from the staff." "Over at ORP, they don't want to listen to you unless they agree. The people at the top don't want to admit that this project is on the wrong track because they would lose their jobs if they did." One person said that "raising a concern to my management makes me feel like a whistleblower," implying that this was an unpleasant experience. A manager said that "use of the DPO process is an indication that the normal management systems are not functional." (HSS Supplemental Report Page 34)

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32. Neither ORP nor BNI has addressed potential vulnerabilities in waste treatment facility operational readiness identified by WRPS (which performed a review under contract to ORP) in a timely manner. ORP included Contract Line Item (CLIN) 3.2 in the WRPS contract to require WRPS to perform semiannual operational readiness reviews of WTP. WRPS performed these reviews in 2010 and provided an annual report to ORP in September of that year. At the request of DOE-WTP, BNI reviewed the 2010 report for factual accuracy; WRPS revised the report based on BNI's factual accuracy comments and returned it to DOE-WTP in October 2010. A construction Project Review performed by DOE in August 2011 found that "DOE has not directed BNI to address issues from external reviews (e.g., CLIN 3.2) that address WTP operability" and recommended that by December 2011, "ORP should address issues raised by external operability reviews of the WTP facility (e.g., WRPS CLIN 3.2)." (HSS Supplemental Report Page 34)

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33. These vulnerabilities were not transmitted to BNI for action but instead were given to WED to be incorporated into future surveillances. WED addressed the first and fourth vulnerabilities in formal surveillance reports in accordance with procedure ESQ-QA-IP-01 and desk instruction MGT-PM-DI-03, Conduct of Engineering Oversight. WED evaluated the third vulnerability and determined that no surveillance was needed, since it was already being addressed by BNI. However, as of December 1, 2011, this evaluation was not documented and the remaining 2010 vulnerabilities had not been transmitted to BNI for action or included in the ORP integrated assessment schedule. Five additional vulnerabilities identified by WRPS pursuant to CLIN 3.2 are described in a report that was transmitted to ORP in October 2011. These vulnerabilities were under review by DOE-WTP at the time of this HSS review (November 2011). ORP procedures do not clearly address how to manage issues identified by one contractor (e.g., WRPS) that need to be resolved by another contractor (e.g., BNI). As of December 1, 2011, the ORP Tank Farm and DOE-WTP project organizations were developing a strategy for transmitting the 2010 and 2011 reports to BNI for action, but neither report had been transmitted. (HSS Supplemental Report Page 36)

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34. ORP Procedure ESQ-QSH-IP-06, Corrective Action Management, and desk instruction MGT-PM-DI-08, Action Tracking for the WTP Project, assign responsibilities and provide adequate instructions for documenting and tracking corrective actions associated with the WTP. Internal assessments performed by ORP QA and WTP line organizations over the past two years have identified continuing weaknesses in ORP action item tracking and the management of corrective actions. Actions have not been consistently documented or tracked as required by ORP procedures, and individuals have not been held accountable for completing corrective actions in a timely manner. A recent self-assessment, led by the DOE-WTP Deputy Project Director for Field Operations, identified a continuing need for improvement. Continuing weakness in these areas indicates a culture in which management is willing to accept or tolerate conditions that do not meet established performance standards. DOE-WTP management has acknowledged the need for improvement in this area and, at the time of this HSS review, was developing corrective actions to improve performance. (HSS Supplemental Report Page 36)

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35. DOE-WTP and ORP support organizations are working together as members of integrated project teams to provide oversight of the WTP project and are working together to develop and maintain the integrated assessment schedule. Interviews and performance observations during this HSS review indicate the need to continue efforts to improve communications. During interviews, some individuals conveyed that they were not engaged in the WTP project since their support was not welcomed by the ORP WTP Project Team and that there was little communication with the WTP Facility Representatives. (HSS Supplemental Report Page 37)

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36. Some aspects of Federal leadership have not promoted an effective safety culture within ORP and BNI. At the time of this HSS review, management expectations regarding safety culture had not been formally communicated to the Federal staff through a policy statement or programmatic requirements, safety culture training had not been provided to the staff, and no program had been established to periodically monitor safety culture and provide feedback to management. (HSS Supplemental Report Page 37)

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37. Senior managers consistently said that safety was their overriding priority and that they had taken steps to convey this message to their staffs. They require that each ORP meeting begins with a safety message, and they emphasize the importance of safety during all-hands meetings. The WTP FPD issued medallions to his managers with inscriptions emphasizing the importance of safety. Nonetheless, some middle managers and staff members said that senior management placed a higher priority on cost and schedule than on safety, and some management actions have contributed to this view. (HSS Supplemental Report Page 38)

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38. The basis for a decision approving the welding of heads on certain vessels was not effectively communicated to Federal or BNI staffs, causing some staff members to conclude that project management had compromised safety in order to meet cost and schedule objectives. The decision to weld the heads had been opposed by a DPO, a union grievance, and a stop-work order. Many Federal and contractor staff members were aware of the issue. DOE-WTP management indicated that they approved the welding based on their assessment that the associated risks were to cost and schedule and that the welding would not adversely impact safety, but the basis for this decision was not effectively communicated to the many staff members who were aware of the issue. When WED engineers learned that WRPS planned to use a garnet abrasive to cut a hole in the top of a waste tank, they expressed concern about the effect that the garnet might have on components in the WTP. ORP management told the engineers that the effect had been evaluated and there was no cause for concern. The engineers asked for a copy of the evaluation report but were told that the evaluation was not formal and there was no report. When ORP allowed the use of garnet, the engineers perceived that management had given schedule a higher priority than safety. (HSS Supplemental Report Page 38)

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39. Most ORP staff members who were interviewed by the Independent Oversight team said that communications between the DOE-WTP organization and supporting ORP organizations had improved but were not yet fully effective. ORP managers said that the new liaison positions have been helpful in facilitating communications between these organizations, but a few ORP staff members commented that they had never met the DOE-WTP liaison individual assigned to their organization and that they had not noticed improvement in communication. Some interviewees commented that an attitude of "us versus them" existed between WTP project and support organizations and that these organizations were not yet working together effectively as a team. (HSS Supplemental Report Pages 39, 40)

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40. The FRA does not fully comply with DOE O 450.2, ISM, in that it does not describe the organization and management structure as required by Section 4.g (1); does not consistently identify who within the organization has responsibility to perform the functions as required by Section 4.g (4); and does not specify the authorities delegated to responsible organizational elements as required by Section 4.g (4). For example, the FRA identifies the ORP NSD as the position responsible for safety and hazards analyses, but does not specify whether NSD has the authority to approve or disapprove DSAs. Formal agreements, such as memoranda of understanding or interface agreements, have not been established to clarify shared responsibilities. (HSS Supplemental Report Pages 39, 40)

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41. Continued management attention is needed to better define roles and responsibilities and strengthen interfaces. Arrangements are being made to train the Federal staff on maintaining a SCWE, and a "Federal Employee View Point Survey" is being planned to assess the safety culture of both RL and ORP Federal employees. (HSS Supplemental Report Page 41)

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Safety Culture Focus Area: Employee Worker Engagement
Associated Attribute: Personal Commitment to everyone's safety

Problem Statement(s)

E1-PS1: Personnel do not understand and consistently exhibit behaviors that are necessary for a strong safety culture.

Improvement Action(s)

E1-IA1: Develop and communicate organizational values that include nuclear safety culture values.

E1-IA2: Periodically hold an All Hands at which an invited speaker presents on a real accident with root causes that include safety culture failure.

E1-IA3: Develop a management presence program.

- **Establish a goal and track participation for management presence with employees placing eyes on the work, asking questions, coaching, mentoring, and reinforcing standards and positive behaviors.**

E1-IA4: Develop and implement an employee development program that contains communication, organizational trust, and behavioral elements that underpin a nuclear safety conscious work environment.

Issues extracted HSS Report

1. The behaviors and traits important for a healthy safety culture will not be effective until they are internalized by the members of the organization. More effort is needed in behavioral change to ensure that these traits become the accepted way of doing business. (HSS Report Page 12)

   PS 1: Personnel do not understand and consistently exhibit behaviors that are necessary for a strong safety culture.

2. Results on the Attention to Safety Scale on the electronic survey were on the low end of scores compared to a database of other organizations' responses to the same questions. This indicates that survey respondents did not have a high perception of the importance that safety has to success in their organization as measured by the value placed on various safety promoting behaviors. (HSS Supplemental Report Page 7)

   PS 1: Personnel do not understand and consistently exhibit behaviors that are necessary for a strong safety culture.

3. ORP Non-Supervisory personnel had statistically significantly lower scores on Commitment than did ORP Supervisory or Contractor personnel. Additionally, statistically significant differences between ORP organizational work groups were obtained on the Commitment Scale with the Nuclear Safety and Physical Scientist and General Engineering Groups scoring lower than others. (HSS Supplemental Report Pages 13, 14)

   PS 1: Personnel do not understand and consistently exhibit behaviors that are necessary for a strong safety culture.

4. Among survey respondents, only about 70% agreed with the statement that everyone in the organization is responsible for identifying problems. While overall this represents a higher percentage of people agreeing than disagreeing, it is lower than is typically seen in other organizations and still indicates that approximately 30% of the population did not agree with this statement. Respondents in the Program Manager, Nuclear Safety and Physical Scientist and General Engineering Work Groups believed this to a greater extent than respondents in the other work groups. Survey respondents in the Supervisory Group believed that everyone is responsible for identifying problems to a greater extent than respondents in the Non-Supervisory and Contractors Groups did. (HSS Supplemental Report Page 20)

   PS 1: Personnel do not understand and consistently exhibit behaviors that are necessary for a strong safety culture.

5. Some organizational work groups had consistently more disagreements with several survey statements related to SCWE than other groups. In particular, the Nuclear Safety and Physical Scientist and Contract Specialist/Budget and Finance Work Groups tended to either disagree or score lower than other work groups on the majority of the statements related to SCWE. (HSS Supplemental Report Page 21)

   PS 1: Personnel do not understand and consistently exhibit behaviors that are necessary for a strong safety culture.

Safety Culture Focus Area: Employee Worker Engagement
Associated Attribute: Teamwork and mutual respect

Problem Statement(s)

PS 1: Sometimes personnel fail to listen and effectively engage in proactive conversations to ensure meaning, intent and viewpoints are understood.

PS 2: Open and proactive communications and coordination on controversial technical issues are not typical personnel behaviors. (Geographical dispersion, organizational issues)

PS 3: Employees do not always trust decisions made by ORP Management.

PS 4: ORP has not fostered teamwork between the WTP project team and other ORP organizations.

Improvement Action(s)

E2-IA1: Provide training on how to engage in active listening. (e.g. crucial conversation)

E2-IA2: Communicate time sensitive or controversial project information to the staff.

E2-IA3: Perform a gap analysis of where teaming has not been effective, identify opportunities for improved teamwork and plan teambuilding activities.

E2-IA4: Develop and implement an ORP management development program that contains communication, organizational trust, and behavioral elements (e.g. 7 Habits of Highly Effective People, Change Management, and Conflict Resolution)

E2-IA5: Develop and implement an employee development program that contains communication, organizational trust, and behavioral elements.

E2-IA6: Implement monthly potluck luncheon with the entire office to provide relationship building opportunities (each division will rotate responsibility for food items).

E2-IA7: Implement the "ladder of accountability" training across ORP.

Issues extracted HSS Report

1. DOE-WTP and BNI recently decided to proceed with certain activities, such as welding heads on vessels. Some staff and external organizations have cited this decision as an indicator that management places priority on schedule over safety. (HSS Report Page 4)

   PS 1: Sometimes employees fail to listen and effectively engage in crucial conversations to ensure meaning, intent, and viewpoints are understood.

2. However, DOE-WTP and BNI management did not effectively communicate to stakeholders the rationale for this decision, nor did management communicate the fact that the action was reversible if ongoing analysis concluded that the design needed to be modified. (HSS Report Page 4)

   PS 1: Sometimes personnel fail to listen and effectively engage in crucial conversations to ensure meaning, intent and viewpoints are understood.

   PS 2: Open communications on controversial technical issues are not the norm.

   PS 3: Employees do not always trust decisions made by ORP Management.

3. The organizational separation of the DOE-WTP organization from the rest of the ORP organization has created difficulties in the communication, coordination, and cohesiveness of the implementation of DOE standards and oversight of BNI. Questions concerning how DOE-WTP is managing the project, what impact their decisions are having on the project, which is in control of the project, and ultimately who will deliver the project remain unanswered for many of ORP's employees and stakeholders. (HSS Report Page 11)

   PS 1: Sometimes personnel fail to listen and effectively engage in crucial conversations to ensure meaning, intent, and viewpoints are understood.

   PS 2: Open communications and coordination on controversial technical issues are not the norm.

   PS 3: Employees do not always trust decisions made by ORP Management.

4. There is a strong indication of an unwillingness and uncertainty among ORP staff about the ability to openly challenge management decisions. There are definite perceptions that the ORP work environment is not conducive to raising concerns or whether management wants to or willingly listens to concerns. Most ORP staff members also strongly believe that constructive criticism is not encouraged. (HSS Report Page 11)

PS 1: Sometimes personnel fail to listen and effectively engage in crucial conversations to ensure meaning, intent, and viewpoints are understood.

PS 2: Open communications and coordination on controversial technical issues are not the norm.

PS 3: Employees do not always trust decisions made by ORP Management.

5. The external independent safety culture experts believe that a potential conflict for WTP is the different perceptions of the role of safety in a research/design project as compared to a construction project as compared to a production project. These perceptions set up the priorities of schedule, cost, and safety differently and may be contributing to some of the organizational issues. WTP needs to establish, implement, and expect the same standards and behaviors for safety, regardless of the phase of the project. (HSS Report Page 12)

   PS 1: Sometimes personnel fail to listen and effectively engage in crucial conversations to ensure meaning, intent, and viewpoints are understood.

   PS 2: Open communications and coordination on controversial technical issues are not the norm.

   PS 3: Employees do not always trust decisions made by ORP Management.

6. Most ORP staff members who were interviewed by the Independent Oversight team said that communications between the DOE-WTP organization and supporting ORP organizations had improved but were not yet fully effective. (HSS Report Page 15)

   PS 1: Sometimes personnel fail to listen and effectively engage in crucial conversations to ensure meaning, intent, and viewpoints are understood.

   PS 2: Open communications and coordination on controversial technical issues are not the norm.

   PS 3: Employees do not always trust decisions made by ORP Management.

7. Senior ORP and DOE-WTP managers consistently said that safety was their overriding priority and that they had taken steps to convey this message to their staffs. They require that each ORP meeting begins with a safety message, and they emphasize the importance of safety during all-hands meetings. However, some middle managers and staff members said that senior management placed a higher priority on cost and schedule than on safety, and some management actions have contributed to this view. Certain management

actions and communication weakness suggest the priority of schedule and cost or raise questions about management priorities among the staff members. For example, the basis for a decision approving the welding of heads on certain vessels was not effectively communicated to Federal or BNI staffs, causing some staff members to conclude that project management had compromised safety in order to meet cost and schedule objectives. The decision to weld the heads was opposed by a DPO, a union grievance, and a stop-work order. (HSS Report Page 16)

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PS 2: Open communications and coordination on controversial technical issues are not the norm.

PS 3: Employees do not always trust decisions made by ORP Management.

8. The resolution of these issues involves bringing the design and safety basis into alignment. (HSS Report Page 30)

PS 1: Sometimes personnel fail to listen and effectively engage in crucial conversations to ensure meaning, intent, and viewpoints are understood.

PS 2: Open communications and coordination on controversial technical issues are not typical personnel behaviors.

PS 3: Employees do not always trust decisions made by ORP Management.

9. However, formalizing the DOE-STD-3009 expectations in E&NS implementing procedures was hindered by the complex and restrictive Safety Requirements Document that was not consistent with DOE-STD-3009, and the time consuming requirement for DOE approval of changes to the Safety Requirements Document and revision of the E&NS procedures that must reflect the revised requirements of the Safety Requirements Document. Consequently, these expectations were communicated through less-formal channels, such as verbal or e-mail instructions to the staff. These expectations significantly increased the workload of the E&NS staff and delayed E&NS safety review and approval of documents from other organizations. Because these delays could not be attributed to requirements in the BNI procedures (which do not meet DOE-STD-3009) and caused Engineering milestones to be missed (sometimes impacting performance appraisals), hard feelings ensued. Engineering organizations felt that the new approach, along with the resulting delays, was unwarranted and placed blame directly on the E&NS department. Additionally, some E&NS staff felt pressure from E&NS management and design and engineering organizations, and they resented the lack of a procedural basis for

the additional safety review requirements and workload. Over the last two years, WTP design has progressed, but the PDSA has become further out of date, and delays in safety reviews of design and engineering documents have worsened. The animosity between some groups (e.g., Engineering) and managers and the entire E&NS group has become severe. A contributing factor is that much of the existing E&NS safety review staff and engineering staff have limited experience with the DOE-STD-3009 safety analysis format. (HSS Report Page 31)

PS 1: Sometimes personnel fail to listen and effectively engage in crucial proactive conversations to ensure meaning, intent, and viewpoints are understood.

PS 2: Open and proactive communications and coordination on controversial technical issues are not typical personnel behaviors.

PS 3: Employees do not always trust decisions made by ORP Management.

10. While these actions are positive signs, some of them are not finalized and/or are contingent on funding and the ability to attract additional personnel with the requisite skills and experience in nuclear design and safety basis. In addition, although the above actions have the potential to address the underlying problems, significant and sustained ORP, DOE-WTP, and BNI management attention will be needed to ensure that the safety culture concerns are also addressed for personnel who are involved in design and engineering functions and the nuclear safety basis analysis and approval functions. (HSS Report Page 32)

PS 1: Sometimes personnel fail to listen and effectively engage in crucial proactive conversations to ensure meaning, intent and viewpoints are understood.

PS 2: Open and proactive communications and coordination on controversial technical issues are not typical personnel behaviors.

PS 3: Employees do not always trust decisions made by ORP Management.

11. ORP and DOE-WTP oversight of functional areas, such as industrial safety, industrial hygiene, and radiation protection, warrants attention. Some ORP personnel indicated that the only Federal presence performing oversight of worker safety at WTP facilities is the Facility Representatives, and that ORP safety subject matter specialists did not regularly communicate with the DOE-WTP Facility Representatives. Several ORP safety subject matter specialists indicated that they had not been to the WTP site for months because they were not welcome by the DOE-WTP team; were not involved in safety functions they had previously performed (e.g., review of the worker safety and health plan); and were not involved in reviewing, and sometimes were not formally made aware of,

significant safety events at WTP (e.g., the steel girder drop). Conversely, a DOE-WTP manager with responsibility for oversight of construction has indicated that attempts have been made to engage ORP subject matter specialists and that the amount of oversight by subject matter specialists at WTP had been low for some time and was not impacted by the de facto separation of DOE-WTP from the rest of ORP. The apparently limited involvement of subject matter specialists in Federal oversight of worker safety at a major construction site warrants timely management evaluation and attention. (HSS Report Pages 33, 34)

PS 1: Sometimes personnel fail to listen and effectively engage in crucial proactive conversations to ensure meaning, intent, and viewpoints are understood.

PS 2: Open and proactive communications and coordination on controversial technical issues are not typical personnel behaviors.

PS 3: Employees do not always trust decisions made by ORP Management.

12. Some interviewees also described concerns that the day to day oversight of the Project was not sufficient. No good mechanism for DOE Facility Representatives to report more subjective information, e.g., impact of certain personal protection equipment. Non-compliance based items are not solicited. ORP oversight tasked individuals believe that they need to be empowered to ensure the appropriate oversight is conducted. They cite perceptions that their supervisors are sometimes aligned more with the contractor than with them. Clarification of the oversight model for the Project is needed; perception that not everyone is concerned about a nuclear safety culture at a construction site. Cut backs in ORP personnel present a challenge for conducting the appropriate oversight both in the field and for system reviews. Perception that the erosion in the communication and relationships between ORP, DOE-WTP, and BNI has impacted the effectiveness of oversight. (HSS Supplemental Report Page 11)

PS 1: Sometimes personnel fail to listen and effectively engage in crucial proactive conversations to ensure meaning, intent, and viewpoints are understood.

PS 2: Open and proactive communications and coordination on controversial technical issues are not typical personnel behaviors.

PS 3: Employees do not always trust decisions made by ORP Management.

13. Along similar lines, other interviewees indicated that while DOE-WTP currently makes decisions for WTP, when the plant is operational ORP will have responsibility and they will not have been involved in the decision making process up to that point. Some

interviewees indicated concerns about effectively covering oversight at startup of WTP. (HSS Supplemental Report Page 13)

PS 1: Sometimes personnel fail to listen and effectively engage in crucial proactive conversations to ensure meaning, intent, and viewpoints are understood.

PS 2: Open and proactive communications and coordination on controversial technical issues are not typical personnel behaviors.

PS 3: Employees do not always trust decisions made by ORP Management.

14. There is the perception described by some individuals that ORP Management is presently ineffective against DOE-WTP Management, e.g., perception that in the safety area there is no accountability and ORP organizations not in DOE-WTP have been stifled in assessing the safety and quality of the WTP Project. (HSS Supplemental Report Page 13)

    PS 1: Sometimes personnel fail to listen and effectively engage in crucial proactive conversations to ensure meaning, intent, and viewpoints are understood.

    PS 2: Open and proactive communications and coordination on controversial technical issues are not typical personnel behaviors.

    PS 3: Employees do not always trust decisions made by ORP Management.

15. Issues with the planning and coordination of work identified by many interviewees across ORP included: DOE made the choice to do design concurrent with build and that brought a lot of risk and problems to the project. The non-alignment across the project in a lot of areas is the best insight into the safety culture of the WTP project. Coordination and communication between ORP and RL has created some difficulties, e.g., need for air monitoring supplied by a different contractor at the site that reports through RL was not easy to negotiate. Work planning and coordination is hindered by the geographical dispersion of the groups. Coordination is an identified issue across the DOE Hanford facilities and the resolution was a commitment to the DNFSB. Resources and planning in licensing on the BNI side were inadequate to determine what was needed to put into the documented safety analysis and final resolution requires a $50 million contract change that is currently under review by ORP. (HSS Supplemental Report Page 16)

    PS 1: Sometimes personnel fail to listen and effectively engage in crucial proactive conversations to ensure meaning, intent, and viewpoints are understood.

    PS 2: Open and proactive communications and coordination on controversial technical issues are not typical personnel behaviors. (Geographical dispersion)

PS 3: Employees do not always trust decisions made by ORP Management.

16. Data from the BARS for Coordination of Work indicated a lot of uncertainty across ORP with regard to this behavior, validating the survey data. Approximately 55% of the BARS respondents on this measure believe that when work plans are implemented most departments and individuals know their roles and responsibilities. However, they also believe that departments work individually and usually do not have the acceptance or support of other departments, nor are all the involved parties included in the planning. (HSS Supplemental Report Page 16)

    PS 1: Sometimes personnel fail to listen and effectively engage in crucial proactive conversations to ensure meaning, intent, and viewpoints are understood.

    PS 2: Open and proactive communications and coordination on controversial technical issues are not typical personnel behaviors. (Geographical dispersion, organizational issues)

    PS 3: Employees do not always trust decisions made by ORP Management.

17. Overall, only 30% of all survey respondents feel that they can openly challenge decisions made by management. Respondents in the Contract Specialist/Budget and Finance, Project Control Specialist, General Engineering and Administrative Work Groups feel most negatively about being able to challenge decisions. Non-Supervisory Personnel and Contractors either do not believe or are uncertain about openly challenging management decisions. Among Supervisory Personnel slightly more than 70% agreed with the statement related to the ability to openly challenge management decisions. (HSS Supplemental Report Pages 20, 21)

    PS 1: Sometimes personnel fail to listen and effectively engage in crucial proactive conversations to ensure meaning, intent, and viewpoints are understood.

    PS 2: Open and proactive communications and coordination on controversial technical issues are not typical personnel behaviors. (Geographical dispersion, organizational issues)

    PS 3: Employees do not always trust decisions made by ORP Management.

18. Approximately 50% of survey respondents agreed with the statement that they feel that they can approach the management team with concerns. Respondents in the Nuclear Safety and Physical Scientist, Contract Specialist/Budget and Finance, and Project Control Specialist Groups believed this to a lesser degree than respondents in the other

work groups. Among Supervisory Personnel slightly more than 70% believed that management could be approached with concerns. (HSS Supplemental Report Page 21)

PS 1: Sometimes personnel fail to listen and effectively engage in crucial proactive conversations to ensure meaning, intent, and viewpoints are understood.

PS 2: Open and proactive communications and coordination on controversial technical issues are not typical personnel behaviors. (Geographical dispersion, organizational issues)

PS 3: Employees do not always trust decisions made by ORP Management.

19. Only slightly more than 50% of survey respondents agreed with the statement related to management wants concerns reported, and approximately 58% believe that constructive criticism is encouraged. Work group differences were largely in the same direction described for the other responses. (HSS Supplemental Report Page 21)

PS 1: Sometimes personnel fail to listen and effectively engage in crucial proactive conversations to ensure meaning, intent, and viewpoints are understood.

PS 2: Open and proactive communications and coordination on controversial technical issues are not typical personnel behaviors. (Geographical dispersion, organizational issues)

PS 3: Employees do not always trust decisions made by ORP Management.

20. Several interviewees identified examples in communication that may impact safety performance. Some manager behaviors are so confident that they may be overpowering less assertive individuals in the scientist and engineering groups inhibiting their bringing problems forward. Better communication is needed around the how and why of management decisions. Communication from BNI is inadequate, e.g., BNI process changes were not communicated directly; BNI is not perceived to be forthcoming with their information. Perception exists that DOE-WTP Project Management has become BNI advocate even in light of recurring mistakes. ORP still needs to provide a broader perspective of the project to some of its groups. (HSS Supplemental Report Page 23)

PS 1: Sometimes personnel fail to listen and effectively engage in crucial proactive conversations to ensure meaning, intent, and viewpoints are understood.

PS 2: Open and proactive communications and coordination on controversial technical issues are not typical personnel behaviors. (Geographical dispersion, organizational issues)

PS 3: Employees do not always trust decisions made by ORP Management.

21. The Administrative, Program Manager, and Other Work Groups had the more positive organizational cultural profiles. The Nuclear Safety and Physical Scientist and Contract Specialist/Budget and Finance Work Groups had the more negative organizational cultural profiles. Contractors and Supervisory survey respondents tended to have the most positive organizational cultural profiles, while Non-Supervisory respondents had the most negative. (HSS Supplemental Report Page 25)

    PS 1: Sometimes personnel fail to listen and effectively engage in crucial proactive conversations to ensure meaning, intent, and viewpoints are understood.

    PS 2: Open and proactive communications and coordination on controversial technical issues are not typical personnel behaviors. (Geographical dispersion, organizational issues)

    PS 3: Employees do not always trust decisions made by ORP Management.

22. Results obtained on the Communication-Accuracy Scale from the electronic survey indicated that ORP survey respondents did not have very positive perceptions of the accuracy of information that they receive from other organizational levels (superiors, subordinates, and peers). (HSS Supplemental Report Page 25)

    PS 1: Sometimes personnel fail to listen and effectively engage in proactive conversations to ensure meaning, intent, and viewpoints are understood.

    PS 2: Open and proactive communications and coordination on controversial technical issues are not typical personnel behaviors. (Geographical dispersion, organizational issues)

    PS 3: Employees do not always trust decisions made by ORP Management.

23. The Administrative, Program Manager, and Other Work Groups had the more positive organizational cultural profiles. The Nuclear Safety and Physical Scientist and Contract Specialist/Budget and Finance Work Groups had the more negative organizational cultural profiles. Contractors and Supervisory survey respondents tended to have the most positive organizational cultural profiles, while Non-Supervisory respondents had the most negative. Statistically significant differences were obtained on the Communication Accuracy Scale between several of the ORP Organizational Work Groups. In particular, the Nuclear Safety and Physical Scientist, Contract Specialist/Budget and Finance and General Engineering Groups had the most negative perceptions about this behavior. (HSS Supplemental Report Page 25)

PS 1: Sometimes personnel fail to listen and effectively engage in proactive conversations to ensure meaning, intent, and viewpoints are understood.

PS 2: Open and proactive communications and coordination on controversial technical issues are not typical personnel behaviors. (Geographical dispersion, organizational issues)

PS 3: Employees do not always trust decisions made by ORP Management.

24. DOE-WTP and ORP support organizations are working together as members of integrated project teams to provide oversight of the WTP project and are working together to develop and maintain the integrated assessment schedule. Interviews and performance observations during this HSS review indicate the need to continue efforts to improve communications. During interviews, some individuals conveyed that they were not engaged in the WTP project since their support was not welcomed by the DOE-WTP Project Team and that there was little communication with the WTP Facility Representatives. (HSS Supplemental Report Page 37)

    PS 1: Sometimes personnel fail to listen and effectively engage in proactive conversations to ensure meaning, intent, and viewpoints are understood.

    PS 2: Open and proactive communications and coordination on controversial technical issues are not typical personnel behaviors. (Geographical dispersion, organizational issues)

    PS 3: Employees do not always trust decisions made by ORP Management.

25. Most ORP staff members who were interviewed by the Independent Oversight team said that communications between the DOE-WTP organization and supporting ORP organizations had improved but were not yet fully effective. ORP managers said that the new liaison positions have been helpful in facilitating communications between these organizations, but a few ORP staff members commented that they had never met the DOE-WTP liaison individual assigned to their organization and that they had not noticed improvement in communication. Some interviewees commented that an attitude of "us versus them" existed between WTP project and support organizations and that these organizations were not yet working together effectively as a team. (HSS Supplemental Report Pages 39, 40)

    PS 1: Sometimes personnel fail to listen and effectively engage in proactive conversations to ensure meaning, intent, and viewpoints are understood.

PS 2: Open and proactive communications and coordination on controversial technical issues are not typical personnel behaviors. (Geographical dispersion, organizational issues)

PS 3: Employees do not always trust decisions made by ORP Management.

PS 4: ORP has not fostered teamwork between the WTP project team and other ORP organizations.

26. Data from the Behavioral Rating Scale on Communication indicated that approximately 60% of the ORP interviewee respondents who completed that scale had positive perceptions about the exchange of information, both formal and informal, between the different departments or units in the project, including the top-down and bottom-up communication networks. Respondents in the General Engineering Group had the poorest perception of communication. (HSS Supplemental Report Page 23)

PS 1: Sometimes personnel fail to listen and effectively engage in proactive conversations to ensure meaning, intent, and viewpoints are understood.

PS 2: Open and proactive communications and coordination on controversial technical issues are not typical personnel behaviors. (Geographical dispersion, organizational issues)

PS 3: Employees do not always trust decisions made by ORP Management.

PS 4: ORP has not fostered teamwork between the WTP project team and other ORP organizations.

Safety Culture Focus Area: Employee Worker Engagement
Associated Attribute: Participation in work planning and improvement

Problem Statement(s)

PS 1: Personnel in ORP are not aware of or making full use of expertise within the organization.

PS 2: ORP has failed to foster and implement a teamwork approach to work planning and execution such that appropriate cognizant individuals are involved (e.g. facility representatives and safety subject matter specialists).

PS 3: ORP's human capital management plan is not necessarily aligned to the organizational needs and fulfillment of ORP's oversight responsibilities.

PS 4: Some ORP procedures are cumbersome, verbose, and difficult to implement.

Improvement Action(s)

E3-IA1: Publish a roles and responsibilities document for ORP staff on the ORP webpage (employee solicited, living document).

E3-IA2: Make the organization chart link to the "bio" page and keep the "bio" page current.

E3-IA3: Hold a teambuilding session between facility representatives and safety subject matter specialists.

E3-IA4: Perform a gap analysis of where teaming has not been effective, identify opportunities for improved teamwork and plan teambuilding activities.

E3-IA5: Align the human capital management plan to organization needs in order to fulfill ORP's oversight responsibilities (e.g. what are the needs? do you have the people? are the people in the right places? succession planning by function, personnel development).

E3-IA6: Revise and update the River Protection Project execution plan.

E3-IA7: Encourage employees to use the proposed issues management system (under construction) to identify areas for improvement in procedures.

Issues extracted HSS Report

1. ORP and DOE-WTP oversight of functional areas, such as industrial safety, industrial hygiene, and radiation protection, warrants attention. Some ORP personnel indicated that the only Federal presence performing oversight of worker safety at WTP facilities is the Facility Representatives, and that ORP safety subject matter specialists did not regularly communicate with the DOE-WTP Facility Representatives. Several ORP safety subject matter specialists indicated that they had not been to the WTP site for months because they were not welcome by the DOE-WTP team; were not involved in safety functions they had previously performed (e.g., review of the worker safety and health plan); and were not involved in reviewing, and sometimes were not formally made aware of, significant safety events at WTP (e.g., the steel girder drop). Conversely, a DOE-WTP manager with responsibility for oversight of construction has indicated that attempts have been made to engage ORP subject matter specialists and that the amount of oversight by subject matter specialists at WTP had been low for some time and was not impacted by the de facto separation of DOE-WTP from the rest of ORP. The apparently limited involvement of subject matter specialists in Federal oversight of worker safety at a major construction site warrants timely management evaluation and attention. (HSS Report Pages 33, 34)

   PS 1: Personnel in ORP are neither recognizing nor making full use of expertise within the organization.

   PS 2: ORP has failed to foster teamwork between facility representatives and safety subject matter specialists such that cognizant individuals are not always involved in oversight planning and execution.

2. Interviewees indicated that additional resources could be used to develop a better human capital management plan, provide additional staff for support organizations improve the action tracking system, develop a comprehensive document control system, add safety training activities and implement a safety recognition program. (HSS Supplemental Report Page 7)

   PS 1: Personnel in ORP are neither recognizing nor making full use of expertise within the organization.

   PS 2: ORP has failed to foster teamwork between facility representatives and safety subject matter specialists such that cognizant individuals are not always involved in oversight planning and execution.

   PS 3: ORP's human capital management plan is not necessarily aligned to the organizational needs.

3. Some interviewees described some procedures as not user friendly, cumbersome, and verbose and likely cannot be used effectively. They perceive that the gap with the standards is then because of the complexity of the procedure the intent of the standard is not being implemented correctly. (HSS Supplemental Report Page 11)

   PS 1: Personnel in ORP are neither recognizing nor making full use of expertise within the organization.

   PS 2: ORP has failed to foster teamwork between facility representatives and safety subject matter specialists such that cognizant individuals are not always involved in oversight planning and execution.

   PS 3: ORP's human capital management plan is not necessarily aligned to the organizational needs.

   PS 4: Some ORP procedures are cumbersome, verbose, and difficult to implement.

4. Along similar lines, other interviewees indicated that while DOE-WTP currently makes decisions for WTP, when the plant is operational ORP will have responsibility and they will not have been involved in the decision making process up to that point. Some interviewees indicated concerns about effectively covering oversight at startup of WTP. (HSS Supplemental Report Page 13)

   PS 1: Personnel in ORP are not aware of or making full use of expertise within the organization.

   PS 2: ORP has failed to foster teamwork between facility representatives and safety subject matter specialists such that cognizant individuals are not always involved in oversight planning and execution.

   PS 3: ORP's human capital management plan is not necessarily aligned to the organizational needs.

   PS 4: Some ORP procedures are cumbersome, verbose, and difficult to implement.

5. Issues with the planning and coordination of work identified by many interviewees across ORP included: DOE made the choice to do design concurrent with build and that brought a lot of risk and problems to the project. The non-alignment across the project in a lot of areas is the best insight into the safety culture of the WTP project. Coordination and communication between ORP and RL has created some difficulties, e.g., need for air monitoring supplied by a different contractor at the site that reports through RL was not easy to negotiate. Work planning and coordination is hindered by the geographical

dispersion of the groups. Coordination is an identified issue across the DOE Hanford facilities and the resolution was a commitment to the DNFSB. Resources and planning in licensing on the BNI side were inadequate to determine what was needed to put into the documented safety analysis and final resolution requires a $50 million contract change that is currently under review by ORP. (HSS Supplemental Report Page 16)

PS 1: Personnel in ORP are not aware of or making full use of expertise within the organization.

PS 2: ORP has failed to foster and implement a teamwork approach to work planning and execution such that appropriate cognizant individuals are involved (e.g. facility representatives and safety subject matter specialists).

PS 3: ORP's human capital management plan is not necessarily aligned to the organizational needs.

PS 4: Some ORP procedures are cumbersome, verbose, and difficult to implement.

6. Among survey respondents Coordination of Work is perceived to be somewhat varied across ORP but generally not positive. In particular, respondents in the Administrative Work Group were the most positive about the Coordination of Work scoring significantly higher than most of the other Organizational Groups. The General Engineering Group had the lowest scores on this scale. (HSS Supplemental Report Page 16)

   PS 1: Personnel in ORP are not aware of or making full use of expertise within the organization.

   PS 2: ORP has failed to foster and implement a teamwork approach to work planning and execution such that appropriate cognizant individuals are involved (e.g. facility representatives and safety subject matter specialists).

   PS 3: ORP's human capital management plan is not necessarily aligned to the organizational needs.

   PS 4: Some ORP procedures are cumbersome, verbose, and difficult to implement.

7. Data from the Behavioral Anchored Rating Scale for Coordination of Work indicated a lot of uncertainty across ORP with regard to this behavior, validating the survey data. Approximately 55% of the BARS respondents on this measure believe that when work plans are implemented most departments and individuals know their roles and responsibilities. However, they also believe that departments work individually and usually do not have the acceptance or support of other departments, nor are all the involved parties included in the planning. (HSS Supplemental Report Page 16)

PS 1: Personnel in ORP are not aware of or making full use of expertise within the organization.

PS 2: ORP has failed to foster and implement a teamwork approach to work planning and execution such that appropriate cognizant individuals are involved (e.g. facility representatives and safety subject matter specialists).

PS 3: ORP's human capital management plan is not necessarily aligned to the organizational needs.

PS 4: Some ORP procedures are cumbersome, verbose, and difficult to implement.

8. A significant number of crafts personnel indicated that schedule pressures and other factors (e.g., inadequate planning, frequently shifting priorities, poor communications, and inadequate work packages) have resulted in instances where safety rules, procedures, and practices were not followed. The crafts recognize that procedures and work packages must be followed verbatim, but believe that supervisors do not always support that requirement in work judged to have a high priority. For example, following procedures verbatim could take too long and cause delays for other crafts. Due to production pressures, some foremen make compromises or ask the crafts to decide for themselves (and take the risk of violating procedures). BNI, DOE-WTP, and ORP management should evaluate these concerns to determine their validity and extent. In addition to the safety risks to workers, compromising procedures and rules could impact the quality of construction and installation of safety grade SSCs. Crafts personnel described a few instances where safety grade structures or components (e.g., electrical cable trays) may not have been installed correctly because of schedule pressures, poor planning, or inadequate work packages (e.g., needed parts not available). BNI, DOE-WTP, and ORP management should evaluate work practices, QA processes, and communication and understanding of expectations to ensure that safety and quality are not compromised by schedule pressures or insufficient management expectations, controls, and oversight. (HSS Supplemental Report Page 33)

PS 1: Personnel in ORP are not aware of or making full use of expertise within the organization.

PS 2: ORP has failed to foster and implement a teamwork approach to work planning and execution such that appropriate cognizant individuals are involved (e.g. facility representatives and safety subject matter specialists).

PS 3: ORP's human capital management plan is not necessarily aligned to the organizational needs and fulfillment of ORP's oversight responsibilities.

PS 4: Some ORP procedures are cumbersome, verbose, and difficult to implement.

Safety Culture Focus Area: Employee Worker Engagement
Associated Attribute: Mindful of hazards and controls

Problem Statement(s)

No Problem statements were identified.

Improvement Action(s)

No Improvement Actions were identified.

Issues extracted HSS Report

No HSS issues were identified.

Safety Culture Focus Area: Organizational Learning
Associated Attribute: Credibility, trust and reporting errors and problems

Problem Statement(s)

O1-PS1: Credibility and trust were not continuously nurtured such that a high level of trust was not established in the organization (e.g. ORP processes including ECP, communication, ORP interfaces).

O1-PS2: The ORP culture does not always encourage, acknowledge, or reward the raising of safety issues and error reporting.

O1-PS3: Some ORP personnel perceive that ORP management behaviors have not always fostered an environment of trust.

Improvement Action(s)

O1-IA1: Maintain the Nuclear Safety Culture IPT as an integral part of ORP with the primary mission of the IPT to continuously improve the ORP safety culture. Implement periodic "road shows" with Nuclear Safety Culture IPT members visiting each division to hold discussions (focus groups) about safety culture. The goal is to reinforce values and identify areas for improvement.

O1-IA2: Establish a program for ORP to use to effectively handle issues. Program elements must include feedback mechanisms, transparency, traceability, benchmarking, performance monitoring, trending, and a set of metrics that communicate issue resolution to employees.

O1-IA3: Establish an ORP Management performance element that requires management to spend face time with employees, both one on one and staff meetings. Provide training to managers on expectations for face to face meetings (e.g. addressing employee questions in an open and honest manner, and acknowledging employee contributions to safety).

O1-IA4: Develop an ORP management development program that contains communication, organizational trust, and behavioral elements (e.g. 7 Habits of Highly Effective People, Change Management, Conflict Resolution).

O1-IA5: Implement a Change Management Program for managing changes with the ORP organization.

O1-IA6: Communicate timely or controversial project information to the staff prior to communicating to external bodies (i.e. paper, ecology, stakeholders).

O1-IA7: Provide training to all employees on the avenues available to raise safety issues and what to expect from each avenue.

O1-IA8: Develop and implement organizational values for credibility, trust, and reporting errors and problems.

Issues extracted HSS Report

1. However, DOE-WTP and BNI management did not effectively communicate to stakeholders the rationale for this decision, nor did management communicate the fact that the action was reversible if ongoing analysis concluded that the design needed to be modified. (HSS Report Page 4)

   O1-PS1: Credibility and trust were not continuously nurtured such that a high level of trust was not established in the organization.

2. There is a strong indication of an unwillingness and uncertainty among ORP staff about the ability to openly challenge management decisions. There are definite perceptions that the ORP work environment is not conducive to raising concerns or whether management wants to or willingly listens to concerns. Most ORP staff members also strongly believe that constructive criticism is not encouraged. (HSS Report Page 11)

   O1-PS1: Credibility and trust were not continuously nurtured such that a high level of trust was not established in the organization.

   O1-PS2: ORP Management does not always encourage the raising of safety issues and error reporting.

3. RL and ORP have established appropriate mechanisms for the Federal staff to raise safety concerns, but these mechanisms have seldom been used. Most Federal staff members said that they would have no reservations about raising concerns to their supervisors and no reservations about using those mechanisms. However, a significant number of ORP staff indicated a reluctance to raise safety concerns. (HSS Report Page 16)

   O1-PS1: Credibility and trust were not continuously nurtured such that a high level of trust was not established in the organization.

   O1-PS2: The ORP culture does not always encourage and reward the raising of safety issues and error reporting.

4. Categorization of findings is prioritized from 1 to 3, with the highest safety significance being a 3. Staff related instances of where they wanted findings changed from a 2 to a 3 but their management decided that the findings were not that significant; however, no

basis for their decisions was communicated. Use of garnet to cut a tank in the Tank Farm was perceived as a schedule over safety decision to meet a commitment to the State without a formal evaluation of the impact of the effects of garnet on erosion. To categorization of findings is prioritized from 1 to 3, with the highest safety significance being a 3. Staff related instances of where they wanted findings changed from a 2 to a 3 but their management decided that the findings were not that significant; however, no basis for their decisions was communicated. There is a perception among some staff that there is less concern with risk now among the current ORP managers, and more concern with project, cost, and schedule. Some interviewees indicated that they had heard that colleagues working on the PT and HLW facilities have been asked to leave things out of their reports, e.g. pipe erosion and criticality issues. Management is described by staff as considering an issue closed unless testing shows otherwise. Staff indicated that they do not necessarily share that perspective. (HSS Supplemental Report Page 7)

O1-PS1: Credibility and trust were not continuously nurtured such that a high level of trust was not established in the organization.

O1-PS2: The ORP culture does not always encourage and reward the raising of safety issues and error reporting.

5. Overall, only 30% of all survey respondents feel that they can openly challenge decisions made by management. Respondents in the Contract Specialist/Budget and Finance, Project Control Specialist, General Engineering and Administrative Work Groups feel most negatively about being able to challenge decisions. Non-Supervisory Personnel and Contractors either do not believe or are uncertain about openly challenging management decisions. Among Supervisory Personnel slightly more than 70% agreed with the statement related to the ability to openly challenge management decisions. (HSS Supplemental Report Pages 20, 21)

   O1-PS1: Credibility and trust were not continuously nurtured such that a high level of trust was not established in the organization.

   O1-PS2: The ORP culture does not always encourage and reward the raising of safety issues and error reporting.

6. Approximately 50% of survey respondents agreed with the statement that they feel that they can approach the management team with concerns. Respondents in the Nuclear Safety and Physical Scientist, Contract Specialist/Budget and Finance, and Project Control Specialist Groups believed this to a lesser degree than respondents in the other work groups. Among Supervisory Personnel slightly more than 70% believed that management could be approached with concerns. (HSS Supplemental Report Page 21)

O1-PS1: Credibility and trust were not continuously nurtured such that a high level of trust was not established in the organization.

O1-PS2: The ORP culture does not always encourage and reward the raising of safety issues and error reporting.

7. Only slightly more than 50% of survey respondents agreed with the statement related to management wants concerns reported, and approximately 58% believe that constructive criticism is encouraged. Work group differences were largely in the same direction described for the other responses. (HSS Supplemental Report Page 21)

   O1-PS1: Credibility and trust were not continuously nurtured such that a high level of trust was not established in the organization.

   O1-PS2: The ORP culture does not always encourage and reward the raising of safety issues and error reporting.

8. Results obtained on the Communication-Accuracy Scale from the electronic survey indicated that ORP survey respondents did not have very positive perceptions of the accuracy of information that they receive from other organizational levels (superiors, subordinates, and peers). (HSS Supplemental Report Page 25)

   O1-PS1: Credibility and trust were not continuously nurtured such that a high level of trust was not established in the organization.

   O1-PS2: The ORP culture does not always encourage and reward the raising of safety issues and error reporting.

9. Results from the electronic survey administered at ORP indicated a fairly negative perception among most survey respondents about management's interest in having concerns reported and in the ability to openly challenge management's decisions. (HSS Supplemental Report Page 26)

   O1-PS1: Credibility and trust were not continuously nurtured such that a high level of trust was not established in the organization.

   O1-PS2: The ORP culture does not always encourage and reward the raising of safety issues and error reporting.

10. In some cases where issues were referred to the contractor's organization for follow-up, the basis for referral was not clear. Further, ORP concurrence for referral was routinely

obtained informally, and there are no procedural requirements for a formal concurrence. (HSS Supplemental Report Page 33)

O1-PS1: Credibility and trust were not continuously nurtured such that a high level of trust was not established in the organization (e.g. ORP processes including ECP, communication, ORP interfaces).

O1-PS2: The ORP culture does not always encourage and reward the raising of safety issues and error reporting.

11. However, some Federal staff members indicated that some ORP staff would be reluctant to raise safety concerns and that this is not an isolated problem. The following comments from five different Federal staff members provide insight into why those mechanisms have not been used more frequently: "Harassment and intimidation of the ORP staff has occurred and has happened to me." This individual cited an example in which he/she was intimidated and harassed by a previous ORP Site Office Manager for raising concerns. "The current ORP staff is still affected by their experience with the previous ORP Manager who did not welcome negative feedback from the staff." "Over at ORP, they don't want to listen to you unless they agree. The people at the top don't want to admit that this project is on the wrong track because they would lose their jobs if they did." One person said that "raising a concern to my management makes me feel like a whistleblower," implying that this was an unpleasant experience. A manager said that "use of the DPO process is an indication that the normal management systems are not functional." (HSS Supplemental Report Page 34)

O1-PS1: Credibility and trust were not continuously nurtured such that a high level of trust was not established in the organization (e.g. ORP processes including ECP, communication, ORP interfaces).

O1-PS2: The ORP culture does not always encourage and reward the raising of safety issues and error reporting.

O1-PS3: Some ORP personnel perceive that ORP management behaviors have not always fostered an environment of trust.

Safety Culture Focus Area: Organizational Learning
Associated Attribute: Effective resolution of reported problems

Problem Statement(s)

O2-PS1: The processes ORP uses to correct deficiencies are not effective at adequately addressing the issues in a timely manner (contractor and ORP deficiencies). (e.g. contractual interface, PDSA, ECP issue validation and factual accuracy, DPO, CLIN 3.2)

O2-PS2: ORP did not identify, track, or validate corrective actions to strengthen safety culture at the site level.

O2-PS3: ORP personnel did not properly document and/or transmit issues.

O2-PS4: ORP failed to perform further reviews of the safety culture implications of recent complaints about the WRPS Problem Evaluation Report (PER) process.

Improvement Action(s)

O2-IA1: Perform a test of the DPO process to evaluate the processes and provide feedback for improvement.

O2-IA2: Incorporate issue management into a formal prioritized activity within ORP senior managerial duties.

O2-IA3: ECP needs a significant effort to improve the performance of supporting the individual (Action TBD).

O2-IA4: Establish a program for ORP to use to effectively handle issues. Program elements must include feedback mechanisms, transparency, traceability, benchmarking, performance monitoring, trending, and a set of metrics that communicate issue resolution to employees.

O2-IA5: Create a communications tool illustrating issue resolution programs and processes available to employees.

O2-IA6: Assess the safety culture attributes in the annual ISM Declaration process.

O2-IA7: Establish ORP Issues Management Program Manager.

O2-IA8: Update the ORP Human Capital Management Plan to incorporate staffing necessary to implement the issues management program outlined in action O2-IA4.

O2-IA9: ORP will include safety culture attributes during the assessment of prime contractors issue management processes.

Issues extracted HSS Report

1. However, correcting these deficiencies has been problematic. Many of the corrective action plans proposed by BNI to address design deficiencies have been judged inadequate by DOE-WTP, and certain operability vulnerabilities identified by DOE-WTP sponsored reviews have not been addressed in a timely manner. Internal assessments performed by ORP QA and DOE-WTP line organizations over the past two years have identified continuing weaknesses in ORP action item tracking and the management of corrective actions. (HSS Report Page 16)

   O2-PS1: The processes ORP uses to track and correct deficiencies are not effective at adequately addressing the issues in a timely manner (contractor and ORP deficiencies).

2. The Independent Oversight team was provided no evidence of systematic or formal Federal actions to track or validate corrective actions taken to strengthen safety culture at the site level, limiting the ability of EM or senior DOE management to ensure timely and effective tracking and validation of corrective actions. (HSS Report Page 16)

   O2-PS1: The processes ORP uses to correct deficiencies are not effective at adequately addressing the issues in a timely manner (contractor and ORP deficiencies).

   O2-PS2: ORP did not identify, track, or validate corrective actions to strengthen safety culture at the site level.

3. Currently, there are some important inconsistencies and deficiencies in the Safety Requirements Document, which is a part of the contract that defines the safety requirements applicable to WTP that complement the applicable regulatory requirements (e.g., 10 CFR 830). Specifically, the Safety Requirements Document identifies certain safety basis procedures that include requirements that are inconsistent with regulatory requirements, as described below. Additionally, because certain procedures (e.g., safety basis review procedures) are included in the Safety Requirements Document, they cannot be changed without a DOE safety evaluation review and approval (a process that typically takes six months). (HSS Report Page 27)

   O2-PS1: The processes ORP uses to correct deficiencies are not effective at adequately addressing the issues in a timely manner (contractor and ORP deficiencies).

O2-PS2: ORP did not identify, track, or validate corrective actions to strengthen safety culture at the site level.

4. However, the contract Safety Requirements Documents included some requirements that were directly in conflict with DOE-STD-3009, as discussed under the next factor. During the 2002 time frame, reviews by DNFSB and others indicated problems with the requirements and safety basis procedures; however, actions at that time were not effective for long-term resolution of the problems. (HSS Report Page 28)

   O2-PS1: The processes ORP uses to correct deficiencies are not effective at adequately addressing the issues in a timely manner (contractor and ORP deficiencies). (e.g., contractual interface)

   O2-PS2: ORP did not identify, track, or validate corrective actions to strengthen safety culture at the site level.

5. Although it appears clear in this letter that DOE's intent is to have WTP fully comply with DOE-STD-3009, it was apparent from several interviews during the week of November 28, 2011, that this information has not been well communicated within either organization (neither DOE nor BNI), and misunderstandings of the applicability of DOE-STD- 3009 persist within both organizations. The resolution of the applicability of DOE-STD-3009 has had wide-ranging impacts that have not yet been fully evaluated. (HSS Report Page 28)

   O2-PS1: The processes ORP uses to correct deficiencies are not effective at adequately addressing the issues in a timely manner (contractor and ORP deficiencies). (e.g., contractual interface)

   O2-PS2: ORP did not identify, track, or validate corrective actions to strengthen safety culture at the site level.

6. Although DOE has very recently clarified its position and indicated that BNI must fully comply with DOE-STD-3009, some safety basis analyses and design reviews over the past ten years were performed against procedures that do not fully meet all DOE-STD-3009 requirements. As a result, the existing safety basis documents and some aspects of the design may later be found to not comply with DOE-STD-3009 and 10 CFR 830, impacting the ability to gain approval of the safety basis for hot operation (the final DSAs). The impacts of this issue on design, cost, and budget have not been fully analyzed, but some ORP, DOE-WTP, and BNI personnel indicated a potentially large impact that may require redesign of some systems, further stressing the Engineering and E&NS organizations. (HSS Report Page 30)

O2-PS1: The processes ORP uses to correct deficiencies are not effective at adequately addressing the issues in a timely manner (contractor and ORP deficiencies). (e.g., contractual interface)

O2-PS2: ORP did not identify, track, or validate corrective actions to strengthen safety culture at the site level.

7. Over the years, processes to keep the PDSAs current have not been effective, and the PDSA is out-of-date, a situation that is getting worse. (HSS Report Page 30)

   O2-PS1: The processes ORP uses to correct deficiencies are not effective at adequately addressing the issues in a timely manner (contractor and ORP deficiencies). (e.g., contractual interface, PDSA)

   O2-PS2: ORP did not identify, track, or validate corrective actions to strengthen safety culture at the site level.

8. Although most of the symptoms are evident within the E&NS and Engineering departments, most of the contributing factors listed above result from actions or inactions at higher levels of ORP, DOE-WTP, and BNI management. While the Independent Oversight team determined that senior managers are supportive of safety in general, ORP, DOE-WTP, and BNI management has not achieved timely resolution of important issues, including those discussed above, in some cases for about ten years. Further, typically ORP, DOE-WTP, and BNI senior managers are highly experienced but do not have specific experience in applying DOE-STD-3009 nuclear safety design and safety basis processes. (HSS Report Pages 31, 32)

   O2-PS1: The processes ORP uses to correct deficiencies are not effective at adequately addressing the issues in a timely manner (contractor and ORP deficiencies). (e.g., contractual interface, PDSA)

   O2-PS2: ORP did not identify, track, or validate corrective actions to strengthen safety culture at the site level.

9. As of the time of this report, DOE had not approved the contract change. (HSS Report Page 32)

O2-PS1: The processes ORP uses to correct deficiencies are not effective at adequately addressing the issues in a timely manner (contractor and ORP deficiencies). (e.g., contractual interface, PDSA)

O2-PS2: ORP did not identify, track, or validate corrective actions to strengthen safety culture at the site level.

10. However, the pertinent action due dates in the licensing strategy are based on DOE's approval of the contract change, which was submitted July 27, 2011, and has not yet been approved. (HSS Report Page 32)

O2-PS1: The processes ORP uses to correct deficiencies are not effective at adequately addressing the issues in a timely manner (contractor and ORP deficiencies). (e.g., contractual interface, PDSA)

O2-PS2: ORP did not identify, track, or validate corrective actions to strengthen safety culture at the site level.

9. Interviewees describe that issues raised against DOE-WTP and BNI by other ORP organizations are not formally transmitted. (HSS Supplemental Report Page 13)
11.

O2-PS1: The processes ORP uses to correct deficiencies are not effective at adequately addressing the issues in a timely manner (contractor and ORP deficiencies). (e.g. contractual interface, PDSA)

O2-PS2: ORP did not identify, track, or validate corrective actions to strengthen safety culture at the site level.

O2-PS3: ORP personnel did properly document and/or transmit issues.

12. In a few cases, the documentation did not fully address the specific concerns or provide a complete basis for closure, and some non-compliances related to employee concerns were not fully resolved in a timely manner through contractor corrective action programs. (HSS Supplemental Report Page 32)

O2-PS1: The processes ORP uses to correct deficiencies are not effective at adequately addressing the issues in a timely manner (contractor and ORP deficiencies). (e.g. contractual interface, PDSA)

O2-PS 2: ORP did not identify, track, or validate corrective actions to strengthen safety culture at the site level.

O2-PS 3: ORP personnel did properly document and/or transmit issues.

13. There is no evidence that ORP performed further reviews to ensure that corrective actions for ECP issues were thorough and effective. WRPS performance was not a part of this HSS review; however, because of the continuing nature and the safety culture implications of this PER issue, further review by ORP is warranted. (HSS Supplemental Report Pages 32, 33)

    O2-PS1: The processes ORP uses to correct deficiencies are not effective at adequately addressing the issues in a timely manner (contractor and ORP deficiencies). (e.g., contractual interface, PDSA)

    O2-PS 2: ORP did not identify, track, or validate corrective actions to strengthen safety culture at the site level.

    O2-PS3: ORP personnel did properly document and/or transmit issues.

    O2-PS 4: ORP failed to perform further reviews of the safety culture implications of recent complaints about the WRPS PER process.

14. The ECP procedure does not provide for a first-step factual accuracy validation with the originator to ensure that concerns are appropriately addressed, particularly for referrals. Some cases had been validated, and some had not. The RL ECP retains responsibility for final closeout in all cases. (HSS Supplemental Report Page 33)

    O2-PS1: The processes ORP uses to correct deficiencies are not effective at adequately addressing the issues in a timely manner (contractor and ORP deficiencies). (e.g., contractual interface, PDSA, ECP issue validation and factual accuracy)

    O2-PS2: ORP did not identify, track, or validate corrective actions to strengthen safety culture at the site level.

    O2-PS3: ORP personnel did properly document and/or transmit issues.

    O2-PS4: ORP failed to perform further reviews of the safety culture implications of recent complaints about the WRPS PER process.

15. One DPO was filed during the past year. This DPO, which involved concerns regarding the mixing of non-Newtonian fluid waste in the PTF, was filed in April 2011 and was

processed in accordance with the RL procedure. The RL DPO procedure does not include timeliness limits or guidelines, and this DPO was not processed in a timely manner, in part because of the time required to procure a DPO panel and chairperson. DOE management had not made a final decision on this DPO at the time of this HSS review (November 2011). (HSS Supplemental Report Page 33)

O2-PS1: The processes ORP uses to correct deficiencies are not effective at adequately addressing the issues in a timely manner (contractor and ORP deficiencies). (e.g., contractual interface, PDSA, ECP issue validation and factual accuracy, DPO)

O2-PS2: ORP did not identify, track, or validate corrective actions to strengthen safety culture at the site level.

O2-PS3: ORP personnel did properly document and/or transmit issues.

O2-PS4: ORP failed to perform further reviews of the safety culture implications of recent complaints about the WRPS PER process.

16. Implementation of these procedures has not been fully effective. As discussed in the following paragraphs, the ORP oversight process has been effective in identifying deficiencies in contractor performance, but resolution of these deficiencies has been problematic. (HSS Supplemental Report Page 34)

    O2-PS1: The processes ORP uses to correct deficiencies are not effective at adequately addressing the issues in a timely manner (contractor and ORP deficiencies). (e.g., contractual interface, PDSA, ECP issue validation and factual accuracy, DPO)

    O2-PS 2: ORP did not identify, track, or validate corrective actions to strengthen safety culture at the site level.

    O2-PS3: ORP personnel did properly document and/or transmit issues.

    O2-PS4: ORP failed to perform further reviews of the safety culture implications of recent complaints about the WRPS PER process.

17. Neither ORP nor BNI has addressed potential vulnerabilities in waste treatment facility operational readiness identified by WRPS (which performed a review under contract to ORP) in a timely manner. ORP included CLIN 3.2 in the WRPS contract to require WRPS to perform semiannual operational readiness reviews of WTP. WRPS performed these reviews in 2010 and provided an annual report to ORP in September of that year. At the request of DOE-WTP, BNI reviewed the 2010 report for factual accuracy; WRPS

revised the report based on BNI's factual accuracy comments and returned it to DOE-WTP in October 2010. A Construction Project Review performed by DOE in August 2011 found that "DOE has not directed BNI to address issues from external reviews (e.g., CLIN 3.2) that address WTP operability" and recommended that by December 2011, "ORP should address issues raised by external operability reviews of the WTP facility (e.g., WRPS CLIN 3.2)." (HSS Supplemental Report Page 34)

O2-PS1: The processes ORP uses to correct deficiencies are not effective at adequately addressing the issues in a timely manner (contractor and ORP deficiencies). (e.g., contractual interface, PDSA, ECP issue validation and factual accuracy, DPO, CLIN 3.2)

O2-PS2: ORP did not identify, track, or validate corrective actions to strengthen safety culture at the site level.

O2-PS3: ORP personnel did properly document and/or transmit issues.

O2-PS4: ORP failed to perform further reviews of the safety culture implications of recent complaints about the WRPS PER process.

18. These vulnerabilities were not transmitted to BNI for action but instead were given to WED to be incorporated into future surveillances. WED addressed the first and fourth vulnerabilities in formal surveillance reports in accordance with procedure ESQ-QA-IP-01 and desk instruction MGT-PM-DI-03, Conduct of Engineering Oversight. WED evaluated the third vulnerability and determined that no surveillance was needed, since it was already being addressed by BNI. However, as of December 1, 2011, this evaluation was not documented and the remaining 2010 vulnerabilities had not been transmitted to BNI for action or included in the ORP integrated assessment schedule. Five additional vulnerabilities identified by WRPS pursuant to CLIN 3.2 are described in a report that was transmitted to ORP in October 2011. These vulnerabilities were under review by DOE-WTP at the time of this HSS review (November 2011). ORP procedures do not clearly address how to manage issues identified by one contractor (e.g., WRPS) that need to be resolved by another contractor (e.g., BNI). As of December 1, 2011, the ORP Tank Farm and DOE-WTP project organizations were developing a strategy for transmitting the 2010 and 2011 reports to BNI for action, but neither report had been transmitted. (HSS Supplemental Report Page 36)

O2-PS1: The processes ORP uses to correct deficiencies are not effective at adequately addressing the issues in a timely manner (contractor and ORP deficiencies). (e.g., contractual interface, PDSA, ECP issue validation and factual accuracy, DPO, CLIN 3.2)

O2-PS2: ORP did not identify, track, or validate corrective actions to strengthen safety culture at the site level.

O2-PS 3: ORP personnel did properly document and/or transmit issues.

O2-PS4: ORP failed to perform further reviews of the safety culture implications of recent complaints about the WRPS PER process.

19. ORP Procedure ESQ-QSH-IP-06, Corrective Action Management, and desk instruction MGT-PM-DI-08, Action Tracking for the WTP Project, assign responsibilities and provide adequate instructions for documenting and tracking corrective actions associated with the WTP. Internal assessments performed by ORP QA and WTP line organizations over the past two years have identified continuing weaknesses in ORP action item tracking and the management of corrective actions. Actions have not been consistently documented or tracked as required by ORP procedures, and individuals have not been held accountable for completing corrective actions in a timely manner. A recent self-assessment, led by the DOE-WTP Deputy Project Director for Field Operations, identified a continuing need for improvement. Continuing weakness in these areas indicates a culture in which management is willing to accept or tolerate conditions that do not meet established performance standards. DOE-WTP management has acknowledged the need for improvement in this area and, at the time of this HSS review, was developing corrective actions to improve performance. (HSS Supplemental Report Page 36)

    O2-PS1: The processes ORP uses to correct deficiencies are not effective at adequately addressing the issues in a timely manner (contractor and ORP deficiencies). (e.g., contractual interface, PDSA, ECP issue validation and factual accuracy, DPO, CLIN 3.2)

    O2-PS 2: ORP did not identify, track, or validate corrective actions to strengthen safety culture at the site level.

    O2-PS3: ORP personnel did properly document and/or transmit issues.

    O2-PS 4: ORP failed to perform further reviews of the safety culture implications of recent complaints about the WRPS PER process.

20. Observations also indicate the need for improvement in the management of corrective actions. A recent DOE-WTP assessment also identified this need, and corrective actions were being formulated at the time of this HSS review. (HSS Supplemental Report Page 37)

O2-PS1: The processes ORP uses to correct deficiencies are not effective at adequately addressing the issues in a timely manner (contractor and ORP deficiencies). (e.g., contractual interface, PDSA, ECP issue validation and factual accuracy, DPO, CLIN 3.2)

O2-PS2: ORP did not identify, track, or validate corrective actions to strengthen safety culture at the site level.

O2-PS3: ORP personnel did properly document and/or transmit issues.

O2-PS4: ORP failed to perform further reviews of the safety culture implications of recent complaints about the WRPS PER process.

21. BNI has taken a number of actions to strengthen its safety culture, but most of these actions appear to have been prompted by DNFSB comments and HSS reviews and enforcement actions, rather than by proactive efforts by ORP or DOE-WTP. There is little evidence that ORP has directed, tracked, or validated these actions. (HSS Supplemental Report Page 37)

O2-PS1: The processes ORP uses to correct deficiencies are not effective at adequately addressing the issues in a timely manner (contractor and ORP deficiencies). (e.g., contractual interface, PDSA, ECP issue validation and factual accuracy, DPO, CLIN 3.2)

O2-PS 2: ORP did not identify, track, or validate corrective actions to strengthen safety culture at the site level.

O2-PS3: ORP personnel did properly document and/or transmit issues.

O2-PS4: ORP failed to perform further reviews of the safety culture implications of recent complaints about the WRPS PER process.

22. BNI has taken a number of actions to strengthen its safety culture, and DOE-WTP management has maintained an awareness of these actions. However, there is no clear evidence that DOE-WTP, as the site-level Federal organization with line management responsibility for WTP, or DOE Headquarters line management has asserted control to direct, tracks, or validate these actions. (HSS Supplemental Report Page 41)

O2-PS1: The processes ORP uses to correct deficiencies are not effective at adequately addressing the issues in a timely manner (contractor and ORP deficiencies). (e.g., contractual interface, PDSA, ECP issue validation and factual accuracy, DPO, CLIN 3.2)

O2-PS 2: ORP did not identify, track, or validate corrective actions to strengthen safety culture at the site level.

O2-PS3: ORP personnel did properly document and/or transmit issues.

O2-PS4: ORP failed to perform further reviews of the safety culture implications of recent complaints about the WRPS PER process.

23. HSS was provided no evidence of Federal actions to track or validate corrective actions taken to strengthen safety culture at the site level, limiting the ability of the Headquarters EM or senior DOE management to ensure corrective action tracking and validation. Thus, it appears that DOE has not been fully effective in ensuring that corrective actions to strengthen safety culture are tracked and validated. (HSS Supplemental Report Page 41)

O2-PS1: The processes ORP uses to correct deficiencies are not effective at adequately addressing the issues in a timely manner (contractor and ORP deficiencies). (e.g., contractual interface, PDSA, ECP issue validation and factual accuracy, DPO, CLIN 3.2)

O2-PS2: ORP did not identify, track, or validate corrective actions to strengthen safety culture at the site level.

O2-PS3: ORP personnel did properly document and/or transmit issues.

O2-PS4: ORP failed to perform further reviews of the safety culture implications of recent complaints about the WRPS PER process.

Safety Culture Focus Area: Organizational Learning
Associated Attribute: Performance monitoring through multiple means

Problem Statement(s)

O3-PS1: ORP failed to actively and formally monitor and assess their safety culture on a periodic basis.

O3-PS2: Some ORP staff indicated that they do not have access to the BNI Project Issues Evaluation Reporting (PIER) database to support their oversight activities.

O3-PS3: The employee concerns program did not include adequate performance indicators to identify performance drift.

Improvement Action(s)

O3-IA1: Perform periodic self-assessments on safety culture attributes.

O3-IA2: Establish a link on the ORP webpage for employees to obtain BNI PIER database (and other applicable contractor databases) access.

O3-IA3: Provide training to employees on PIER software usage.

O3-IA4: Develop the following performance indicators:
- **Validation of factual accuracy;**
- **Items referred to the contractor's ECP program;**
- **Review of the investigation results with the concerned individual before closure; and**
- **Results of follow-up survey on ECP process.**

O3-IA5: Develop an ECP customer satisfaction survey process.

Issues extracted HSS Report

1. BNI has taken a number of actions to strengthen its safety culture, but most of these actions appear to have been prompted by DNFSB comments and HSS reviews and enforcement actions, rather than by proactive efforts on the part of ORP or DOE-WTP. At the time of this Enforcement and Oversight management expectations regarding safety culture had not been formally communicated to the Federal staff through a policy statement or programmatic requirements, and safety culture training had not been provided to the staff. DOE-WTP had not established a program for periodically monitoring safety culture and providing feedback to management. (HSS Report Pages 16, 17)

O3-PS1: ORP failed to actively and formally monitor and assess their safety culture on a periodic basis.

2. Several ORP staff indicated that they do not have access to the BNI PIER database to support their oversight activities. (HSS Supplemental Report Page 19)

   O3-PS1: ORP failed to actively and formally monitor and assess their safety culture on a periodic basis.

   O3-PS2: Some ORP staff indicated that they do not have access to the BNI PIER database to support their oversight activities.

3. In a few cases, the documentation did not fully address the specific concerns or provide a complete basis for closure, and some non-compliance related to employee concerns was not fully resolved in a timely manner through contractor corrective action programs. (HSS Supplemental Report Page 32)

   O3-PS1: ORP failed to actively and formally monitor and assess their safety culture on a periodic basis.

   O3-PS2: Some ORP staff indicated that they do not have access to the BNI PIER database to support their oversight activities.

   O3-PS3: The employee concerns program did not include adequate performance indicators to identify performance drift.

4. BNI has taken a number of actions to strengthen its safety culture, and DOE-WTP management has maintained an awareness of these actions. However, there is no clear evidence that DOE-WTP, as the site-level Federal organization with line management responsibility for WTP, or DOE Headquarters line management has asserted control to direct, track, or validate these actions. (HSS Supplemental Report Page 37)

   O3-PS1: ORP failed to actively and formally monitor and assess their safety culture on a periodic basis.

   O3-PS2: Some ORP staff indicated that they do not have access to the BNI PIER database to support their oversight activities.

   O3-PS3: The employee concerns program did not include adequate performance indicators to identify performance drift.

Safety Culture Focus Area: Organizational Learning
Associated Attribute: Use of operational experience

Problem Statement(s)

O4-PS1: ORP has failed to implement a lessons learned program that is highly valued and used on a regular basis.

Improvement Action(s)

O4-IA1: Provide training on the lessons learned program including divisional points of contact and how the program can be beneficial during the course of daily work.

O4-IA2: Recognize/incentivize the ORP employee who most effectively used Hanford Information and Lessons Learned Sharing (HILLS) on a periodic basis.

Issues extracted HSS Report

1. While the concept of lessons learned was identified by many ORP interviewees, the organization is missing opportunities to use this information as part of a learning process. Interviewees expressed the belief that greater collaboration between ORP and DOE-WTP would facilitate organizational learning. Interviewees described primarily technical opportunities for lessons learned, not organizational or programmatic opportunities. The lessons learned database [HILLS] was not familiar to all interviewees and to some who knew about it they indicated they didn't use it. ORP interviewees acknowledged not doing a good job following up on the corrective actions of the contractor. (HSS Supplemental Report Page 19)

   O4-PS1: ORP has failed to implement a lessons learned program that is highly valued and used on a regular basis.

2. Interviewees did not believe that ORP was interested in being a learning organization or felt a need to improve. (HSS Supplemental Report Page 26)

   O4-PS1: ORP has failed to implement a lessons learned program that is highly valued and used on a regular basis.

Safety Culture Focus Area: Organizational Learning
Associated Attribute: Questioning attitude

Problem Statement(s)

O5-PS1: ORP has not achieved an organizational attribute of questioning attitude.

O5-PS2: ORP Management failed to encourage a vigorous questioning attitude towards safety, and foster constructive dialogues and discussions on safety matters.

Improvement Action(s)

O5-IA1: Develop and implement organizational values including a questioning attitude attribute.

O5-IA2: Provide training for management and staff on questioning attitude tools and processes.

O5-IA3: Establish and implement (e.g., coaching, mentoring, Individual Performance Plan [IPP]) set of management and staff expectations for safety culture attributes (including questioning attitude).

O5-IA4: Establish and implement a supervisory and management IPP element to encourage a vigorous questioning attitude towards safety, and foster constructive dialogues and discussions on safety matters.

Issues extracted HSS Report

1. The behaviors and traits important for a healthy safety culture will not be effective until they are internalized by the members of the organization. More effort is needed in behavioral change to ensure that these traits become the accepted way of doing business. (HSS Report Page 12)

   O5-PS1: ORP has not achieved an organizational attribute of questioning attitude.

2. However, some Federal staff members indicated that some ORP staff would be reluctant to raise safety concerns and that this is not an isolated problem. The following comments from five different Federal staff members provide insight into why those mechanisms have not been used more frequently: "Harassment and intimidation of the ORP staff has occurred and has opened to me." This individual cited an example in which he/she was intimidated and harassed by a previous ORP Site Office Manager for raising concerns. "The current ORP staff is still affected by their experience with the previous ORP Manager who did not welcome negative feedback from the staff." "Over at ORP, they

don't want to listen to you unless they agree. The people at the top don't want to admit that this project is on the wrong track because they would lose their jobs if they did." One person said that "raising a concern to my management makes me feel like a whistleblower," implying that this was an unpleasant experience. A manager said that "use of the DPO process is an indication that the normal management systems are not functional." (HSS Supplemental Report Page 34)

O5-PS1: ORP has not achieved an organizational attribute of questioning attitude.

O5-PS2: ORP Management failed to encourage a vigorous questioning attitude towards safety, and foster constructive dialogues and discussions on safety matters.

Appendix E

Health, Safety and Security (HSS) Report Recommendations

This appendix indicates which of the Safety Culture Near-Term Improvement Actions and Continuing Improvement Actions apply in addressing the recommendations from the *Independent Oversight Assessment of Nuclear Safety Culture and Management of Nuclear Safety Concerns at the Hanford Site Waste Treatment and Immobilization Plant, January 2012*, conducted by the DOE Office of Health, Safety and Security.

The following text is excerpted from the HSS Independent Oversight Assessment and the applicable ORP improvement actions are listed below each HSS recommendation.

HSS Independent Oversight Team Recommendation(s)

Part 1: Recommendations for Cultivating a Healthy Safety Culture (ORP, DOE-WTP, and BNI)

DOE defines safety culture as "an organization's values and behaviors modeled by its leaders and internalized by its members, which serve to make safe performance of work the overriding priority to protect workers, the public, and the environment." A healthy safety culture is most often found within an aligned organization that has effective processes and motivated people. While WTP organizations have attempted to improve safety culture by adapting concepts and principles from external organizations, safety culture is unique in that improvement cannot be forced by discrete procedure or policy changes that are typically used for traditional technical issues. A healthy safety culture is enacted by advocating and inculcating a set of shared core values and beliefs, facilitated through continuous communication and trust building, and supported by organizational systems, with the goal of promoting collaborative human relationships that will sustain safe organizational and individual behaviors.

The overarching recommendation for improving the safety culture at WTP is:

1. **WTP needs to establish a safety culture competence commensurate in priority to science, engineering, and project management competencies.** Safety culture competence requires that organizations:

   - Have a defined set of values and principles, and demonstrate behaviors, attitudes, policies, and structures that enable them to sustainably accomplish mission goals
   - Have the capacity to (1) value diversity, (2) conduct self-assessment, (3) manage the dynamics of difference, (4) acquire and institutionalize cultural knowledge, and (5) adapt to diversity and the cultural contexts of complex and dynamic environments
   - Incorporate the above in all aspects of policy-making, administration, practice, and operations, systematically involving employees, suppliers, stakeholders, and communities
   - Recognize that development of cultural competence is a process that evolves over an extended period of time. Individuals and organizations are at various levels of awareness, knowledge, and skills all along the cultural competence continuum. Consequently, a specific set of actions cannot be prescribed; a collaborative effort is required to

understand and enact core principles that ensure that a healthy safety culture is developed and internalized. A number of steps can be taken that will initiate the basis for the development of the WTP safety culture competence.

ORP Near-Term Improvement Actions 1 through 5, and 8

ORP Continuing Improvement Actions 1, 7, 10

In support of the above overarching safety culture recommendation, the Independent Oversight team has identified the following additional recommendations as possible steps for implementing the overarching recommendation and initiating the development of cultural competence:

2. **The WTP project organizations (ORP, DOE-WTP, and BNI) need to evaluate and clearly delineate core values for moving forward. The development and definition of these values must be made with the engagement of individuals at all organizational levels across all functional groups to ensure alignment throughout the organization.** Specific actions to consider include:

   - Identifying a consensus set of values to support the safety culture the WTP community wishes to achieve. Initiate this activity with a values definition workshop engaging representatives of the collective WTP organization. The workshop should be facilitated by an external specialist with specific knowledge and experience in culture change. The output of the initial workshop should be a draft statement of values that will then be socialized with all members of the organization, leading to a formal statement of values that will be signed by senior leadership of EM, ORP, BNI, principal BNI line managers, and employee representatives to the value identification team.
   - Conducting a facilitated workshop, based on the 2020 Vision One System Strategic Plan and the Federal Project Director's 2010 report, to identify the implicit values associated with the activities outlined in those documents. The output of this workshop should be an analysis of the values implicit in those documents.
   - Conducting a comparison of the value statement and the analysis of the document values. The values in the documents need to be reconciled to ensure that the long term strategy outlined for the project is consistent with the organization's defined values. Achieving this consistency may require modification of the 2020 Vision One System Strategic Plan.

ORP Near-Term Improvement Actions 1, 2, 3, 4, 5

ORP Continuing Improvement Actions 2, 4

3. **ORP (including DOE-WTP) and BNI each need to develop, implement, and continuously monitor their own safety culture, including SCWE, using the organizationally defined values as the foundation.** BNI has initiated some efforts and needs to re-evaluate its program with the following considerations:

   - Short-term: Conduct further analyses from the recent 2011 safety culture survey of BNI personnel. Shortcomings were identified in the manner in which the 2011 survey results were analyzed. Additional statistical analyses for the various groups at WTP, as well as appropriate comparative analyses between these populations, might provide insight into some of the differences between work groups in those populations.
   - Long-term: A more comprehensive, ongoing, site wide programmatic and assessment effort focused on safety culture and SCWE that includes a more reliable and validated survey, as well as additional methods that can focus on the organizational behaviors needed to promote a healthy safety culture, would be useful. This effort can be conducted as a self-assessment or an independent assessment.
   - Follow-up: DOE-WTP and ORP need to follow up on the results of this assessment of its safety culture. Multiple resources are available within the DOE complex, such as the Energy Facility Contractors Group, to provide guidance on how to establish a program and conduct continuous monitoring of its organization.

ORP Near-Term Improvement Actions 1 through 5 and 8

ORP Continuing Improvement Actions 1, 7, 10

4. **ORP and BNI need to develop accountability models for their organizations.** Many individuals in management and supervision do not consistently exhibit desired behaviors and are not challenged by their managers or peers. Inconsistent implementation of standards and expectations in work activities is common and may be influenced by ineffective communication and an ineffective change management process. Significant management oversight and attention are needed to implement a performance management system that establishes accountable behavior as the accepted norm. A site wide accountability model that is consistently implemented against clearly defined standards and expectations, that recognizes and reinforces desired behaviors, and that uses effective coaching while minimizing punitive actions for undesirable behaviors is recommended.

ORP Near-Term Improvement Actions 1, 3, 6

ORP Continuing Improvement Actions 1

5. **ORP and BNI can both benefit from employee engagement in many of the activities that they regularly conduct.** Engagement needs to be implemented from lower levels of the organization and can be introduced by initiating activities that are staffed with all individuals from the same working level or by introducing new employees into existing committees and meetings. Engagement is also necessary across functional groups to promote and facilitate a better understanding and development of the organization's needs and priorities.

ORP Near-Term Improvement Actions 1 through 5, 7, 8

ORP Continuing Improvement Actions 2 through 5, 9, 11, 12

6. **Working with ORP and DOE-WTP, BNI should enhance capabilities in behavioral sciences to assist BNI senior management in addressing problems involving organizational behaviors and interfaces.** BNI's corrective actions for past reviews often have not addressed the underlying organizational behavior and human performance factors; these actions have tended to focus on specific technical issues or very broad safety culture fixes (e.g., "train all staff"), rather than identifying the causes of the concern and focusing on the specific organizations and groups that are impacted. BNI should consider developing and adopting a strategic approach to enhance its capabilities and competencies in organization, management, and social sciences, perhaps by obtaining external support initially and building internal staffing over the longer term. Increasingly, high-hazard organizations are including specialists with advanced degrees in organizational/industrial psychology, organizational development, human factors/human performance, and related disciplines as a necessary augmentation to a strong technical staff. Such personnel, particularly those experienced with nuclear facilities or organizations, could help BNI senior management address current issues in the nuclear safety culture and proactively identify and address changes and emerging concerns. Such personnel could apply recognized tools and techniques to identify and analyze cross-cutting issues, recurring findings, and organizational causes. These tools can also be applied to help develop and implement efforts to perform and improve risk communications, risk-informed decision making, leadership development initiatives, and self-assessments for the enhancement of the safety culture. BNI also needs to focus more on transparency with its employees and the public to enhance trust and provide confidence that issues are being addressed.

ORP Near-Term Improvement Actions Not Applicable

ORP Continuing Improvement Action 10

7. **ORP, DOE-WTP, and BNI should ensure that senior managers understand the need for and direct implementation of systematic approaches to change management in order to avoid or mitigate potential negative consequences resulting from significant changes in project plans, processes, and/or organization.** Specific actions to consider include:

   - Ensuring that managers with the authority to direct significant changes are trained to recognize the likelihood and nature of potential adverse consequences
   - Ensuring that managers are trained and able to develop and implement change management plans to avoid or appropriately mitigate the negative consequences of change
   - Ensuring that the authority and responsibility to direct development, approve, require implementation, and assess the effectiveness of change management plans is formally assigned
   - Applying recently-developed BNI change management guidance or other proven change management processes, preferably with the support of behavioral science personnel as

recommended above, to manage the changes that will occur while resolving current problems and underlying factors in such areas as transitioning to a DOE-STD-3009 compliant hazard analysis and safety basis, revamping the design and safety basis processes, and revising the rating system for craft personnel

- In the longer term, proactively applying change management principles to the design and development of the 2020 Vision One System for WTP Project Transition to Operations and in other aspects of the ongoing transition from design to commissioning and the eventual transition to an operating facility.

ORP Near-Term Improvement Actions 1, 6, 7, 9

ORP Continuing Improvement Actions 1, 2, 15, 16

Part 2: Recommendations for Enhancing Selected Integrated Safety Management Processes

In addition to evaluating the current safety culture at WTP, the Independent Oversight team was tasked to evaluate ORP, DOE-WTP, and BNI management of safety concerns. During the course of the review, the Independent Oversight team also identified concerns about nuclear design and safety basis processes and certain other aspects of integrated safety management. The Independent Oversight team identified the following recommendations for improving various WTP processes and the primary organizations to which they apply.

ORP, DOE-WTP, and BNI

1. **Evaluate and address factors that adversely impact the design and safety basis processes.** ORP and BNI have recently initiated efforts that are appropriate to address many of the current concerns about the design and safety basis processes, including the recent training for managers; the September DOE-WTP letter clarifying expectations for compliance with DOE-STD-3009-94, *Preparation Guide for U.S. Department of Energy Nonreactor Nuclear Facility Safety Analysis*; and the ongoing efforts to modify the contract. However, these actions need to be systematically analyzed and managed as a part of the BNI/ORP Risk Management Plan, required by DOE Order 413.3A, *Program and Project Management for the Acquisition of Capital Assets*, to ensure that they will be effective, complete, supported by management, communicated, and universally understood and accepted by the key managers and staff. Additional actions are needed to establish effective processes for updating the PDSA and modify various safety basis procedures to ensure that they support the intended objectives.

ORP Near-Term Improvement Actions 1, 3, 4, 6, 7

ORP Continuing Improvement Actions 2, 16

2. **Develop and implement a strategic approach to enhance management's and the professional staff's understanding of DOE expectations for the nuclear design and safety basis processes.** Some personnel at ORP, DOE-WTP, and BNI have experience working on nuclear design and construction projects, but a significant number of managers and staff with responsibilities for the safety bases have limited previous experience with design and safety basis processes using DOE-STD-3009. This situation has contributed to problems with the nuclear design and safety basis processes (e.g., inconsistent direction and understanding of the applicable hazards analysis requirements) and culture (e.g., organizational interfaces) that have persisted for many years. The recent training/workshop efforts by E&NS management and others at WTP have helped provide BNI management with a better perspective on nuclear design and safety basis process expectations, but more such efforts are needed to ensure consistent and effective understanding of the nuclear safety design and safety basis processes at all levels of management and staff. In addition, more diligence is needed to support those managers and staff with direct responsibilities for nuclear design and safety in internalizing the expectations and lessons learned for a healthy nuclear safety culture and SCWE. ORP and BNI should develop a strategic approach to enhance staff capabilities for targeted groups of ORP and BNI management and staff (especially those with design, engineering, and safety basis responsibilities), including focused training efforts, targeted mentoring programs, increased emphasis on qualification requirements for current and future open job positions, and clear performance objectives related to nuclear safety and safety culture in organizational and individual performance evaluation processes.

ORP Near-Term Improvement Actions 1, 2, 3, 4, 8

ORP Continuing Improvement Actions 2, 16

Headquarters EM

3. **Finalize the WTP Project Execution Plan.** Ensure that the proposed Revision 1 to the WTP Project Execution Plan is reviewed, modified as needed, finalized, and approved in a timely manner so that ORP and DOE-WTP personnel are operating in accordance with an approved document that clearly defines expectations for ORP and DOE-WTP, including nuclear safety responsibilities and interfaces.

ORP Near-Term Improvement Actions – completed WTP Project Execution Plan

ORP Continuing Improvement Action 15

ORP and DOE-WTP

4. **Evaluate and address factors that may adversely impact the clarity and understanding of responsibilities and expectations for ORP staff.** Specific actions to consider include:

   - Completing changes to the BNI contract to eliminate inconsistencies and clarify DOE expectations for full compliance with DOE-STD-3009. Closely monitor BNI's

implementation of this standard, and use incentive fees as appropriate to obtain the desired performance.

- Establishing a process to ensure that Federal employee performance awards are used to encourage desired behaviors. Consider the use of an awards committee, chaired by the ORP Manager and WTP Federal Project Director, for annually setting criteria and determining awards to celebrate desired behaviors. Use performance awards to recognize Federal employees who demonstrate good safety culture.
- Continuing the efforts to improve communications between DOE-WTP and ORP support organizations. Focus on team building to encourage working together to achieve common objectives.
- Providing training to managers and supervisors to enhance capabilities in behavioral sciences and aid in creating and maintaining a SCWE.
- Continuing the efforts to better define the roles and responsibilities of the Federal staff. Revise the FRA to comply with DOE Order 450.2, *Integrated Safety Management.* Consider memoranda of understanding in areas where past performance indicates the need, such as resolution of WTP operational readiness vulnerabilities identified pursuant to Washington River Protection Solutions (WRPS) Contract Line Item 3.2.
- Establishing milestone dates and responsibility assignments for completing planned initiatives, such as SCWE training and culture surveys.
- Re-evaluating the current level of involvement of ORP subject matter specialists in oversight of worker safety and health at WTP construction areas. Ensure that organizational responsibilities are clarified and implemented in a manner that provides for adequate ORP oversight of worker safety and health.
- Ensuring that expectations for Federal oversight of BNI safety culture are defined and communicated, including consideration of performance measures, a process for routinely assessing the effectiveness of BNI efforts to strengthen its safety culture, and a mechanism for tracking and validating BNI actions to improve safety culture and related processes.
- In making any changes, ensuring that the ORP group that reviews safety basis submittals maintains an appropriate degree of independence from project management priorities and schedules.

ORP Near-Term Improvement Actions 1 through 8

ORP Continuing Improvement Actions 1, 2, 3, 6, 10, 11, 12, 16

5. **Develop and implement a strategic approach to ensuring that performance incentives are aligned with nuclear safety.** In addition to considering nuclear safety requirements, the goals and performance incentives for ORP and DOE-WTP managers should explicitly consider nuclear safety, including efforts to establish a healthy nuclear safety culture. The BNI contract fee structure should also be reevaluated to ensure that nuclear safety and quality of design and construction are appropriately weighted and promote the desired objectives. As one possible measure, progress milestones might include provisions to ensure that the design and safety bases are aligned and that the safety basis demonstrates a safe design as part of the progress payments evaluation.

ORP Near-Term Improvement Actions Not Applicable **(Note – DOE Implementation Plan for DNFSB Recommendation 2011-1 Action 1-5 addresses modifications to BNI contract performance evaluation plan and performance measure to achieve balance priorities and to include safety culture elements).**

ORP Continuing Improvement Actions Not Applicable

6. **Apply additional Federal management attention to improve the timeliness and effectiveness of corrective actions.** Specific actions to consider include:

   - Tracking the status of assigned actions, monitoring performance, and holding Federal managers and contractors accountable when clearly-defined expectations are not met
   - Communicating to BNI and ensuring appropriate and timely resolution of the operational readiness vulnerabilities identified in 2010 and 2011 by WRPS pursuant to Contract Line Item 3.2
   - Assigning and tracking actions to address DOE commitments to the DNFSB and actions planned in response to recommendations from other external organizations
   - Assessing the WRPS issues management program with an emphasis on PIERs to determine whether issues are initiated as required, appropriate causal analysis is performed, corrective and preventive actions are appropriate, and closure is adequate and timely.

ORP Near-Term Improvement Actions 7, 9

ORP Continuing Improvement Actions 2, 7, 10, 13, 14

Richland Operations Office

7. **Strengthen the employee concerns program.** Ensure that RL procedural guidance is provided to adequately safeguard the confidentiality of employee concerns program participants, and also define when ORP management approval of referrals is required. Check and validate all concerns with the originator before issuing formal correspondence or referral.

ORP Near-Term Improvement Actions 8, 9

ORP Continuing Improvement Actions 1, 2

BNI

8. **Strengthen the implementation of the corrective action management program.**

9. **Strengthen the implementation of the BNI employee concerns program.**

10. **Strengthen the BNI differing professional opinion program.**

11. **Strengthen the BNI management workplace visitation program.**

12. **Evaluate and address selected aspects of safety management processes governing the work of construction craft workers.**

The five recommendations above are being addressed in an amendment to the BNI Nuclear Safety Quality Culture (NSQC) Plan as directed by ORP in accordance with Action 1-5 from the DOE Implementation Plan for DNSFB Recommendation 2011-1.