Department of Energy
Washington, DC 20585

JUL 31 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 Actions 1-5, 2-2, and 2-4 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 deliverable for Action 1-5 is a letter to the Board communicating completion that includes the contract performance evaluation plan changes and performance measure changes. The enclosures to this letter include the revised WTP contract Performance Evaluation and Measurement Plans (PEMPs) for the period January 1, 2012, to June 30, 2012, and the period July 1, 2012, to December 31, 2012. The revised PEMPs seek to achieve balanced priorities between safety, cost and schedule performance. DOE expects to make improvements and changes to the WTP PEMPs for future periods to achieve balanced priorities as a result of information from federal oversight and based on experience, project performance, and other factors.

The deliverable for Action 2-2 is a letter to the Board transmitting safety culture training information. The enclosures to this letter contain the SAF-200 *Safety Conscious Work Environment Student Guide* for the pilot training course on June, 26, 2012, and a video recording of the Secretary's message to the DOE and contractor key senior leadership, which is part of the course. A senior member of the Board staff attended the pilot training course. The Department is using feedback from all participants in the pilot course to improve the course materials and presentation. DOE will provide the updated course materials to the Board when they are developed.

The deliverable for Action 2-4 is a letter transmitting the guidance for self-assessment of a Safety Conscious Work Environment (SCWE). The enclosures to this letter include the SCWE self-assessment guidance. DOE plans to conduct a workshop on use of the self assessment guidance prior to beginning the assessments. DOE also expects that this guidance will be improved based on experience with its use.

The Department is steadfast in its commitment to continue to improve the safety culture at its defense nuclear facilities and projects.

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,

FOR:

Matthew Moury
Deputy Assistant Secretary for
Safety, Security, and Quality Assurance
Environmental Management

Enclosures

PERFORMANCE EVALUATION AND MEASUREMENT PLAN (PEMP)

Volume I – Incentive B - Award Fee

DESIGN, CONSTRUCTION, AND COMMISSIONING OF THE HANFORD TANK WASTE TREATMENT & IMMOBILIZATION PLANT

CONTRACT NO. DE-AC27-01RV14136

Evaluation Period 2012-A

January 1, 2012 to June 30, 2012

Bechtel National, Inc.
Richland WA

Rev. 2 -- Effective April 15, 2012

Issued By:

Dale E. Knutson
Federal Project Director, WTP
Fee Determination Official

Accepted By:

Frank Russo
Bechtel National, Inc.

WTP PERFORMANCE EVALUATION & MEASUREMENT PLAN - PERIOD 2012-A
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PEMP General Information

A. Introduction

Contract No. DE-AC27-01RV14136 utilizes multiple, performance-based incentive fee components to drive Contractor performance excellence in completing the design, construction, and commissioning of the Hanford Waste Treatment and Immobilization Contract (WTP).

The Contract has five incentive fee elements:

- Incentive Fee A – Final Fee Determination for Work Prior to Modification No. A143
- Incentive Fee B – Award Fee
- Incentive Fee C – Milestone and Schedule Incentive Fee
- Incentive Fee D – Operational Incentive Fee
- Incentive Fee E – Enhancement Incentive Fee

WTP Incentive Fee Structure

Title	Fee Type	Performance Measure(s)	Fee Administration Terms and Conditions Reference
Final Fee Determination for Work Prior to Mod. No. A143	Fixed	Determined by Contracting Officer	Clause B.6, Attachment B-2-A
Award Fee			
Award Fee - Project Mgmt Incentive	Award	Performance Measures in PEMP	Clause B.7, Atch B-2-B & PEMP
Award Fee - Cost Incentive	Award	Performance Measures in PEMP	Clause B.7, Atch B-2-B & PEMP
REA Settlement		Negotiated	Atch B-3
Schedule Incentive Fee			
Activity Milestone Completion	PBI	Completion of Specified Milestones	Clause B.6, Atchs B-2-C, C.1, & Section J, Atch P
Facility Milestone Completion	PBI	Completion of Specified Milestones	Clause B.6 Atch B-2-C
Operational Incentive Fee			
Cold Commissioning	PBI	Capacity	Clause B.6; Atch B-2-D; Section C, Standard 5, Table C.6-5.1
Hot Commissioning	PBI	Capacity	Clause B.6, Atch B-2-D; Section C, Standard 5 Table C.6-5.2
Enhancement Incentive Fee			
Enhanced Plant Capacity	PBI	Plant Capacity Exceeding Treatment Capacity	Clause B.6, Atch B-2-E
Sodium Reduction	PBI	Metric Tons Sodium Reduced	Clause B.6, Atch B-2-E
Enhanced Plant Turnover	PBI	Reduced Plant Turnover Period	Clause B.6, Atch B-2-E
Sustained Production Achievement	PBI	Post-Turnover Operations Capacity	Clause B.6 Atch B-2-E

This PEMP Volume I covers Incentive B – Award Fee, which is updated semiannually. The fee administration terms and conditions of A, C, D, and E performance incentives are self-contained within the Contract Section B, and thus, are not addressed in either PEMP volume. See the reference Table above.

PEMP General Information

The following performance incentive fees are covered by this PEMP:

Performance Incentive Number	Performance Incentive Description	Performance Measures Stated In:	Modified:
Incentive Fee B.1	Award Fee – Project Management Incentive	PEMP – Attachment A	Each Award Fee Evaluation Period (Six-Month Intervals)
Incentive Fee B.2	Award Fee – Cost Management Incentive	PEMP – Attachment B	Each Award Fee Evaluation Period (Six-Month Intervals)

The Award Fee provides a performance incentive for the Contractor and gives the Government a tool to identify and reward superior performance. The amount of award fee the Contractor earns is based on both an objective and subjective evaluation by the Government of the Contractor's performance as measured against the criteria contained in this Plan.

B. Roles and Responsibilities

The Award Fee process utilizes a three-level system to ensure full and fair performance evaluation.

Level 1.0 – Fee Determination Official (FDO)

Level 1.1 – WTP Contracting Officer (CO)

Level 2.0 – Performance Evaluation Board (PEB)

Level 3.0 – Performance Evaluation Monitors (PEMs)

Level 1.0 – Fee Determination Official: Federal Project Director, WTP

The FDO will: 1) appoint the PEB Chair; 2) review the recommendation of the PEB, consider all pertinent data, and determine the amount of Award Fee earned during each evaluation period; 3) notify the Contractor via the CO of performance strengths, areas for improvement, and future expectations; 4) approve the PEMP and any significant changes thereto; and 5) authorize the Contracting Officer to make the Award Fee Payment.

Level 1.0 ensures independent, executive-level review of the work of the Performance Evaluation Board and Performance Evaluation Monitors.

Level 1.1 – WTP Contracting Officer

The CO will: 1) serve as a voting member of the PEB; 2) issue the PEMP on a semi-annual basis in accordance with Section B.7 *Award Fee Administration* of the Contract; 3) ensure that the Award Fee and Contract Incentives process is managed consistent with applicable acquisition regulations; 4) ensure that the Award Fee process meets the overall WTP business objectives; and 5) issue the award fee amount earned determination as authorized by the FDO in accordance with B.7 *Award Fee Administration*.

Level 2.0 – Performance Evaluation Board:

- WTP Deputy Federal Project Director, Chair
- WTP Contracting Officer
- WTP Performance Evaluation Program Manager

The PEB reviews the PEM evaluations of Contractor performance, considers the Contractor's self-assessment if submitted, considers all information from pertinent sources, prepares draft and final performance reports, and arrives at an earned award fee recommendation to be presented to the FDO. The PEB may also recommend changes to the PEMP.

Performance Evaluation Board Chair:

The PEB Chair will be identified and appointed by the FDO. The Chair may assign or reassign Performance Evaluation Monitors at any time without advance notice to the Contractor. The Chair will: 1) review the performance monitors' evaluations and consider the Contractor's self-assessment; 2) analyze the Contractor's performance against the criteria set forth in the PEMP; 3) provide periodic interim performance feedback to the Contractor via the CO; 4) provide a recommendation on the Award Fee scoring and the amount earned by the Contractor; and 5) recommend any changes to the PEMP.

WTP Contracting Officer:

(See description above.)

WTP Performance Evaluation Program Manager:

The Performance Evaluation Program Manager is responsible for coordinating the administrative actions required by the PEMs, the PEB and the FDO, including: 1) receipt, processing, and distribution of evaluation reports from all required sources; 2) scheduling and assisting with internal evaluation milestones, such as briefings; and 3) accomplishing other actions required to ensure the smooth operation of the award fee process.

Performance Evaluation Monitors:

PEMs may be drawn as needed from the following positions, or others as deemed necessary by the PEB Chair:

- WTP Federal Project Manager, HLW
- WTP Federal Project Manager, PT
- WTP Federal Project Manager, LBL
- WTP Federal Project Manager, Shared Services
- WTP Regulatory Official
- Director, WTP Programs and Projects Division
- Director, WTP Engineering Division
- Director, WTP Construction Oversight and Assurance Division
- ESQ Quality Assurance Team Leader
- Director, Project Administration
- Director, Acquisition Management Division
- WTP Contracting Officer/Contract Specialist
- ORP Organizational Property Management Officer

The PEMs will: 1) monitor, evaluate, and assess Contractor performance in their assigned areas; 2) periodically prepare a Contractor Performance Monitor Report (CPMR) for the PEB and provide verbal performance input as well; 3) recommend any

needed changes to the PEMP for consideration by the PEB and FDO; and 4) maintain a performance dialogue with BNI Performance Measure owners throughout the evaluation period.

C. Process & Schedule

			Days from Beginning of Evaluation Period		Dates - Evaluation Period 2012-A	
Activity No.	Activity	Footnote	From	To	Start	Finish
1	Performance Evaluation Board (PEB) Appointed		-90	-90	10/03/11	10/03/11
2	DOE Generates Draft PEMP		-70	-55	10/23/11	11/07/11
3	PEMP Board Finalizes PEMP		-55	-45	11/07/11	11/17/11
4	HQ Approval - Business Clearance		-45	-30	11/17/11	12/02/11
5	Contractor Review Comments on PEMP	1	-30	-23	12/02/11	12/09/11
6	Final PEMP Execution	2	-23	-14	12/09/11	12/18/11
7	FDO, PEB, and PEM Evaluate Performance		0	181	01/01/12	06/30/12
8	Contractor Self-Assessment (S/A)		182	191	07/01/12	07/10/12
9	PEM Submit Final Reports to PEB	3	192	206	07/10/12	07/25/12
10	PEB Completes Report		207	227	07/26/12	08/15/12
11	PEB Briefs FDO		228	235	08/16/12	08/23/12
12	HQ EM HCA Review/Concurrence		236	245	08/24/12	09/02/12
13	FDO Determines Award Fee Amount		246	251	09/03/12	09/08/12
	Performance Period Begins					01/01/12
	Performance Period Ends					06/30/12

Footnotes:

1	Contractor is provided opportunity to review and comment
2	PEMP is executed unilaterally if parties cannot agree by beginning of evaluation period
3	PEM Reports are updated (if necessary) based on consideration of Contractor Self-Assessment

The Contractor will receive two separate Award Fee evaluation ratings – one rating for Incentive B.1 *Project Management Incentive* and one rating for Incentive B.2 *Cost Incentive*. Each rating is independently applied to the available Award Fee pool for that incentive element. The total available award fee for this Evaluation Period 2012-A is:

Incentive B.1 Award Fee – Project Management Incentive	$3,150,000
Incentive B.2 Award Fee – Cost Incentive	$3,150,000

In accordance with Federal Acquisition Regulation, Subpart 16.401(e)(3)(v), the contractor is prohibited from earning any award fee when the contractor's overall cost, schedule, and technical performance is below satisfactory.

DOE's expectation is that the Contractor will complete assigned Hanford Federal Facility Agreement and Consent Order and Consent Decree Milestone deliverables at least 30 days before they are due. DOE reserves the right to reduce the PEMP award fee determination if the Contractor fails to meet DOE's expectation.

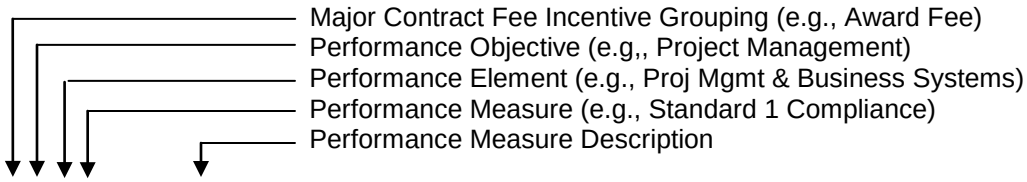
D. Contractor Self-Assessment

See Section B Clause B.7 *Award Fee Administration*, which states:

> "Following each evaluation period, the Contractor may submit a self-assessment, provided such assessment is submitted within ten (10) calendar days after the end of the period. This self-assessment shall address both the strengths and weaknesses of the Contractor's performance during the evaluation period. Where deficiencies in performance are noted, the Contractor shall describe the actions planned or taken to correct such deficiencies and avoid their recurrence. The Contracting Officer will review the Contractor's self-assessment, if submitted, as part of its independent evaluation of the Contractor's management during the period."

E. PEMP Numbering System and Definitions

This PEMP utilizes a numbering system shown in the example below:



B.1.1.1 Contract Changes Resolution

"Major Incentive Grouping" – The type of Contractor incentive employed on the Contract (refer to Section B of the Contract).

"Performance Objective" – The highest level Award Fee incentive areas – B.1 Project Management and B.2 Cost, and a statement of the Contractor performance necessary to safely and successfully complete the project with respect to specified outcomes (i.e., cost, schedule, scope, etc.).

"Performance Element" – Targeted performance areas necessary to achieve the Performance Objective.

"Performance Measure" – Specific criteria to objectively or subjectively measure Contractor performance in Performance Elements that will lead to achieving the Performance Objective.

Where possible, objective Performance Measures are used to determine award fee earnings. However, in both the Project Management Incentive and Cost Incentive areas, subjective (qualitative-based judgment) measures are used where appropriate.

F. Performance Periods

For all Performance Measures under Performance Objective B.1 Project Management, the performance period will cover January 1, 2012 through June 30, 2012.

For all Performance Measures under Performance Objective B.2 Cost, the EVMS performance period will cover November 14, 2011 through May 13, 2012. For Schedule Activities listed in B.2.1.1, the performance period will cover January 1, 2012 through June 30, 2012.

Attachment A – Incentive B.1 Award Fee – Project Management Incentive

B.1 Award Fee – Project Management Incentive.

Performance Objective:
The *Award Fee - Project Management Incentive* is a performance measurement tool to assess the Contractor's project management performance and provides impetus for continuous improvement in important project management areas not covered by other incentives. The Performance Objective of the *Award Fee – Project Management Incentive* is to ensure that important project systems contribute favorably to safe, high quality work performance that supports the cost, schedule, and quality goals of the project.

Performance Elements:

B.1.1	Contract & Business System Management, Construction, Procurement
B.1.2	Safety and Health Performance
B.1.3	Quality Management
B.1.4	Engineering Technical Performance
B.1.5	Startup and Commissioning Technical Performance
B.1.6	Nuclear Safety Technical Performance
B.1.7	Nuclear Safety and Quality Culture

Evaluation Process – Award Fee-Project Management Incentive:
DOE will evaluate and measure performance in each of the Performance Elements B.1.1 through B.1.7, using the Performance Measure(s) for each Element. The Performance Elements are considered necessary to achieve the Performance Objective stated above. The evaluation will assign a Numerical Rating of 0 to 100, and corresponding Adjectival Rating, to each Performance Element. The Percent of Available Fee Earned awarded to that Performance Element will match the Numerical Rating (e.g., a Numerical Rating of 71 is awarded 71% for that Element). See Table B.1.A - *Award Fee – Project Management Incentive Ratings and Definitions Chart*. The Numerical and Adjectival Ratings will be based upon DOE's evaluation of the extent to which Contractor performance on that Element favorably contributed toward achieving the Performance Objective.

Each Performance Measure has indicators and guidelines that are important performance considerations; however, DOE may consider any pertinent performance information related to that Element.

Each Performance Element will be evaluated using the Performance Measures, and a Numerical Rating and Adjectival Rating will be assigned to each Performance Element. The Performance Element ratings are then weighted to yield a composite evaluation for the Performance Objective. See Table B.1.A - *Award Fee – Project Management Incentive Ratings & Definitions Chart* and Table B.1.B – *Award Fee – Project Management Incentive Fee Earnings Calculation*.

Attachment A – Incentive B.1 Award Fee – Project Management Incentive

Table B.1.A - Award Fee – Project Management Incentive Ratings and Definitions Chart

Assigned Numerical Rating	Adjectival Rating *(corresponding to Numerical Rating)*	Definition	Percentage of Award Fee Earned*
91 to 100	Excellent	Contractor has exceeded almost all of the significant award-fee criteria and has met overall cost, schedule, and technical performance requirements of the contract as defined and measured against the criteria in the award-fee plan for the award-fee evaluation period. Contractor's work is highly professional. Contractor solves problems with very little, if any, Government involvement. Contractor is proactive and takes an aggressive approach in identifying problems and their resolution, including those identified in the risk management process, with a substantial emphasis on performing quality work in a safe manner within cost/schedule objectives. No significant re-work.	91% to 100%
76 to 90	Very Good	Contractor has exceeded many of the significant award-fee criteria and has met overall cost, schedule, and technical performance requirements of the contract as defined and measured against the criteria in the award-fee plan for the award-fee evaluation period. Contractor solves problems with minimal Government involvement. Contractor is usually proactive and demonstrates an aggressive approach in identifying problems and their resolution, including those identified in the risk management process, with an emphasis on performing quality work in a safe manner within cost/schedule objectives. Problems are usually self-identified and resolution is self-initiated. Some limited, low-impact rework within normal expectations.	76% to 90%
51 to 75	Good	Contractor has exceeded some of the significant award-fee criteria and has met overall cost, schedule, and technical performance requirements of the contract as defined and measured against the criteria in the award-fee plan for the award-fee evaluation period. Contractor is able to solve basic problems with adequate emphasis on performing quality work in a safe manner within cost/schedule objectives. The rating within this range will be determined by level of necessary Government involvement in problem resolution, including those problems identified in the risk management process, and extent to which the performance problem is self-identified vs. Government-identified. Some re-work required that unfavorably impacted cost and/or schedule.	51% to 75%
≤ 50	Satisfactory	Contractor has met overall cost, schedule, and technical performance requirements of the contract as defined and measured against the criteria in the award-fee plan for the award-fee evaluation period. Contractor has some difficulty solving basic problems, and cost, schedule, safety, and technical performance needs improvement to avoid further performance risk to the project. Government involvement in problem resolution, including those problems identified in the risk management process, is necessary. Excessive rework required that unfavorably impacted cost and/or schedule.	≤ 50%
0	Unsatisfactory	Contractor has failed to meet overall cost, schedule, and technical performance requirements of the contract as defined and measured against the criteria in the award-fee plan for the award-fee evaluation period. Contractor does not demonstrate an emphasis on performing quality work in a safe manner within cost/schedule objectives. Contractor is unable to solve problems and Government involvement in problem resolution, including those problems identified in the risk management process, is necessary. Excessive rework required that had significant unfavorable impact	0%

		on cost and/or schedule.	

* Percent Fee Earned corresponds with Numerical Rating (e.g., a Numerical Rating of 71 percent earns 71 percent of available fee for that Performance Measure).

Table B.1.B - Award Fee - Project Management Incentive Fee Earnings Calculation

		(a)	(b)	(c)	(d)
Performance Elements:		**Weighting**	**Adjectival Rating**	**Num. Rating & % Fee Earned**	**Weighted Totals (a) x (c)**
B.1.1	Business, Construction, Procurement	10%			
B.1.2	Safety and Health Performance	5%			
B.1.3	Quality Management	5%			
B.1.4	Engineering Technical Performance	20%			
B.1.5	Startup & Commissioning Technical Perf	15%			
B.1.6	Nuclear Safety Technical Performance	20%			
B.1.7	Nuclear Safety & Quality Culture	25%			
	Total	100%	**Composite**	**% Earned (e)**	
Total Available Award Fee - Project Management Incentive (Period 2012-A)					**$ 3,150,000**

B.1 Award Fee – Project Management Incentive

The following are the Performance Elements (B.1.X) and Performance Measures (B.1.X.X) that support the Performance Objective. DOE will assign a Numerical Rating and Adjectival Rating (per Table B.1.A) for each Performance Element based on the Performance Measure(s) for that particular Element.

B.1.1 Contract and Business System Management, Construction, Procurement – Weighting: 10%

B.1.1.1 Contract and Business System Management The Contractor will be evaluated for performance on a wide range of contract management and business system management areas. This Performance Measure includes consideration of:

- Compliance with Federal and Departmental acquisition regulations, procedures, guidance, and the contract.
- Effectiveness of Subcontract and Procurement management (including compliance with internal procedures and the Contractor's approved purchasing system). Submittal of timely and thoroughly documented subcontract and procurement consent packages that are in accordance with the contractor's approved procedures. DOE will also evaluate the contractor's ability to work cooperatively with DOE to support subcontract consent decisions.

- Adequacy of documentation of the prime contractor's subcontract/procurement files, including, but not limited to, technical evaluations of subcontractor/vendor proposals and sole source justifications. DOE's evaluation will include the degree to which the contractor complies with its approved procedures.
- Effectiveness of the contractor's management of Government property, including:

  -subcontract property administration and subcontractor oversight;
  -records and reports of Government property (Government-furnished and contractor-acquired);
  -inventory of Government property;
  -care, maintenance, and use of Government property;
  -reutilization and disposition of Government property; and
  -revise property management system and property records to include real property management/records requirements of FAR 45.5 and FAR 52.245-5.

- Assess integration and cooperative behavior (to include timely identification and resolution of issues and controversy) and customer satisfaction.
- Ability to work with DOE in a spirit of cooperation, including timely submission of requests for additional data, and conveying a positive and professional attitude.
- Timely submission of Contract Change Proposals (CCPs).
- Submission of current, accurate, and complete CCPs that meet all Federal Acquisition Regulation (FAR) requirements, including but not limited to compliance with FAR Part 15.
- Ability to provide to DOE fully compliant CCPs with BNI's initial submittal, without the need for significant fact-finding or re-submittal to meet FAR requirements.
- Inclusion of a comprehensive, fully-supported technical proposal with each CCP (when applicable) which addresses, at a minimum, the appropriateness of the proposed skill mix and labor hours, types and quantities of proposed materials, traceability, and any other data pertinent to the CCP.
- If excessive Requests for Equitable Adjustments are submitted with no reasonable basis, the performance evaluation under this performance measure will be negatively affected.

B.1.1.2 <u>Construction Technical Performance</u>. - Contract Section C, *Statement of Work*, Standard 4 *Construction, Procurement, and Acceptance Testing* describes construction requirements for WTP. This Performance Measure evaluates technical aspects of construction performance under the overall goal of improving the Project Management in the Construction Phase until facility turnover to Commissioning. DOE reserves the right to consider any available information in making this evaluation.

Performance considerations include:

- Overcome Engineering/Procurement/Construction challenges, including effective management of emergent trends with proactive and early communication to DOE from initial identification of an issue through final closure;
- Maximize performance efficiency, including complete work control modifications and Corrective Action Plans;
- Focus on completion:

  Meet installation rates:

  - Planned vs. actual commodity and major equipment installation rates measured against the baseline as well as development and performance against any identified recovery plans;
  - Subcontractor performance on all installation work performed on the WTP jobsite by BNI subcontractors, including the efficient coordination of BNI engineering-supplied documentation and scheduling of work interfaces with BNI direct hire craft and other BNI subcontractors and timely resolution of NCRs and interferences with a minimum amount of rework. Included in this metric is reporting of correct EVMS data and performance indices by the subcontractors;
  - Demonstrate priorities and decision making aligned with critical path, as well as metrics identifying performance against secondary metrics of Early Starts and Early Finishes against baseline activities;
  - Manage resources (direct-hire labor, subcontractor, and equipment and materials) available to support construction;
  - Demonstrate that efficient direct-hire and subcontractor management performance is achieved with an effective mixture of indirect labor, support services, and construction equipment; and
  - Timely and consistent communication and reporting of data and metrics against the baseline to identify and facilitate accurate evaluation of the quantitative reporting for Construction Technical Performance.

- Maintenance of the management tools, such as P6, and the Bechtel Procurement System, so that accurate and complete information is flowing between Engineering, Procurement, and Construction related to the construction need date and the supporting procurement process.

B.1.1.3 <u>Procurement Technical Performance-</u> This Performance Measure evaluates equipment and material acquisition and management including, but not limited to: purchasing, expediting, supplier inspection, transportation, receipt, receiving inspection, and storage from receipt until custody transfer to Construction.

This Performance Measure includes consideration of:

- Proactive identification, resolution, management and closure of issues that may affect the procurement objectives of the project, i.e., functionality, cost, schedule, quality, safety, etc.;
- Execution of the procurement cycle for both bulk material and tagged equipment items consistent with, or ahead of, the schedule;
- Effective and efficient management of the Material Handling Facility and Marshalling Yard;
- Market analysis, specification, negotiation, procurement, and expediting and inspection of components such that equipment is delivered on schedule and within budget; and
- Maintenance of the management tools, such as Teamworks, P6, and the Bechtel Procurement System, such that accurate and complete information is flowing between Engineering, Procurement, and Construction related to the construction need date and the supporting procurement process.

B.1.2 Safety and Health Performance - (Weighting: 5%)

B.1.2.1 <u>Integrated Safety Management Systems (ISMS)</u>. Contract Clause 1.105 DEAR 952.223-71 *Integration of Environment, Safety, And Health Into Work Planning and Execution (Jun 1997)* requires the Contractor, at a minimum, to manage and perform work in accordance with a documented Safety Management System (System) that fulfills all conditions in paragraph (b) thereof, and to demonstrate continuous improvement of its ISMS program. Accordingly, DOE will evaluate the Contractor's continuous improvement of the ISMS Programs, which include: 1) implementation of work hazard analysis and controls that result in, a) improving work injury/illness performance as defined in the Annual Performance Objectives, Measures and Commitments (POMCs) as agreed to between BNI and ORP as part of the ISMS POMC process, and b) no employee exposures to work place hazards above the applicable exposure limits [e.g., permissible exposure level (PEL) or TLV]; 2) implementation of event investigation (review, cause analysis and action implementation) that results in effective organizational learning with the goal of eliminating recurring events; and 3) documented periodic management analysis of work site conditions and implementing strategies that result in improving WTP Project safety .

B.1.3 Quality Management – (Weighting: 5%)

B.1.3.1 Quality Management System Compliance. Contract Section C, *Statement of Work*, Standard 7, *Environment, Safety, Quality, and Health*, Paragraph (e)(3) requires the Contractor to develop and implement a quality assurance program based upon the requirements of 10 CFR 830.120, Subpart A ("the QA Rule") and DOE O 414.1C. The program is documented in the Contractor's Quality Assurance Manual (QAM) (Contract Deliverable 7.2 *Quality Assurance*). DOE will evaluate the Contractor's Quality Management System (QMS) that implements the QA Rule requirements/criteria described in the Contractor's Quality Assurance Manual (QAM). Implementation of these requirements will be measured on a semi-annual basis and reported to DOE using an integrated performance metric. This semi-annual review will use data that was originated in the Quality Management System. The Contractor will evaluate each of the ten elements of the Contractor's Quality Management System, evaluate Contractor performance, provide a rating (Excellent, Very Good, Good, Satisfactory, or Unsatisfactory), along with a numerical rating (based on the average of sub-element ratings), and, where applicable, discuss opportunities for improvement. The semi-annual QMS Compliance Matrix and the ratings will be mutually agreed-to by DOE and the Contractor and will provide the basis for the ratings provided. A formal Corrective Action Plan will be submitted to DOE for any Contractor Quality Management System area (from the ten QA Rules with consolidated ratings) that is evaluated as less than effective (≤ 50%). The Corrective Action Plan will be reviewed by DOE within 15 working days of submittal to DOE, and approved upon resolution of any DOE comments. The semi-annual report will then provide the primary basis for the annual declaration that the QMS is fully integrated with the Contractor's Integrated Safety Management System. The award fee evaluation will be based upon the numerical rating average for the ten QA Rule requirements in the QMS matrix. For purposes of the evaluation, the ten QA Rule requirements are considered to be of equal importance. The numerical ratings shall be identified consistent with Table B.1.A – Award Fee – Project Management Incentive Ratings and Definitions Chart.

B.1.4 Engineering Technical Performance- (Weighting: 20%)

B.1.4.1 Engineering Technical Performance. Contract Section C, Statement of Work, Standard 3 Design describes engineering requirements for WTP. Accordingly, DOE will evaluate engineering performance during this PEMP evaluation period. This Performance Measure will focus on aspects of Engineering Performance that are not duplicative of other Performance Measures under Performance Objective B.2 Cost. Emphasis is on the identification, resolution, management, and closure of technical issues that may adversely affect the cost, schedule, safety, quality, functionality, and other important objectives of the project. The process described in BNI Engineering Technical Issues Identification Management Guide 24590-WTP-GPG-ENG-0125 (latest version) will form a significant metric for performance measurement.

Attachment A – Incentive B.1 Award Fee – Project Management Incentive

DOE reserves the right to consider any available information that bears on engineering performance in making this evaluation.

Performance considerations include:

- Implementation of all design changes required as a result of the Technical Issue Management process (24590-WTP-GPG-ENG-0125):
  - Scheduled dates are met with acceptable resolution of technical issues
  - Results are efficiently incorporated into design with respect to cost and schedule

- Overcome inherent technical problems:
  - Technical issues are closed within schedule dates established in the Technical Issue Evaluation Forms;
  - Emerging issues are managed to closure within established schedule dates;
  - Identifying, disclosing and managing supplier/vendor technical performance issues; and
  - Engineering Risk mitigation actions, as published in January 2011, under the Contract Deliverable 1.6 WTP Risk Management Plan (based on the November 20, 2010 update), and Risk Assessment Sheets added or modified subsequent to the November 2010 update, per requirements of the Project Risk Assessment and Management procedure, are completed by the plan dates or any schedule extensions are properly justified in the Notes section of the current Risk Assessment Sheets.

- Efficient Performance:
  - Work process improvements / implementation of Lessons Learned;
  - Utilization of engineering resources; and
  - Satisfactory customer comment resolution.

- Focus on completion:
  - Assess schedule performance with regard to engineering alignment with project completion schedule; and
  - Engineering documents are issued and services provided to support procurement and construction needs.

- Progress managing the identification and effective closure of technical issues to provide the technical basis for integration of nuclear safety into facility design and developing a documented safety analysis that will support commissioning and operations. Initially established in, “Plan and Schedule to Systematically Evaluate the Hazards of Known Technical Issues, M3 Vessel Assessment Summary Reports, LOAM Benchmark Data and LSIT – Response to DNFSB Recommendation 2010-2 Implementation Plan Commitment 5.7.3.1.”

B.1.5 Startup and Commissioning Technical Performance- (Weighting: 15%)

B.1.5.1 <u>Startup and Commissioning Technical Performance</u>. Contract Section C, Statement of Work, Standard 5 describes the Commissioning process to include simple component tests and progresses through system level tests. Initial component tests and systems tests will be performed in a planned sequence at each facility. Accordingly, DOE will evaluate technical performance related to the Startup and Commissioning phase performance during this PEMP evaluation period. Emphasis is on the identification, resolution, management, and closure of technical issues that may adversely affect the readiness, cost, schedule, safety, quality, functionality, and other important objectives of the project Startup and Commissioning phase. The processes described in BNI Construction To Startup Turnover procedure 24590-WTP-GPP-MGT-042 (latest version) and BNI Design Completion For Turnover To Startup procedure 24590-WTP-3DP-G04T-00916 (latest version), as well as preparations for turnovers and testing to be completed in calendar year 2012 will have high consideration in this performance evaluation.

DOE reserves the right to consider any available information that bears on startup and commissioning performance in making this evaluation.

Performance considerations include:

- Completion and maintenance of a Startup schedule (Level 5) with a rolling nine (9) month window. The schedule will include sufficient detail and logic to allow planning of activities necessary for turnover and testing of scoped systems based on the Level 4 baseline schedule. Used in conjunction with work lists, sufficient detail will exist to support component and system testing in support of system turnover to Commissioning;

- Development of a certification and qualification program for Levels I, II, and III Startup Testing Personnel Certification;

- Preparation and approval of appropriate component and/or system test procedures to support upcoming testing in accordance with 24590-WTP-GPP-MGT-042 and the baseline schedule. This will include subjective consideration of procedure quality and review timeliness;

- Completion of a Startup Plan Document;

- Completion of a Teamworks coding process to allow cross-walk and tracking of required tests against specified components; and

- Turnover Planning and Preparation.

Integration Technical Performance: Contract Section C, Statement of Work, Section C.3 describes the partnering approach used by the Contractor, the Tank Operations Contractor, and DOE. Emphasis is on active collaboration between the parties and proactive identification and resolution of technical and administrative integration issues. DOE reserves the right to consider any

available information that bears on Integration performance in making this evaluation. Such information may include closure documents for open items /issues listed in Interface Control Documents and Data Quality Objectives for WTP feed acceptance criteria, test plans and reports, operations research assessments, requirements documents for infrastructure and services, and evaluations of the RPP mission waste feed vector.

B.1.6 Nuclear Safety Technical Performance - (Weighting: 20%)

B.1.6.1 Nuclear Safety Technical Performance. Contract Section C, Statement of Work, Standard 9 describes contractor requirements to ensure Radiological, Nuclear, and Process Safety. This workscope includes implementation of a standards-based safety management program in compliance with the rules provided in 10 CFR 830 on nuclear safety to ensure that WTP safety requirements are defined, implemented, and maintained.

Before WTP operations can commence, the contractor must resolve all technical issues affecting the safety of workers, the public, and the environment. Of particular importance is to proactively identify potential safety concerns and respond to them with appropriate modifications of the plant design and/or control strategy. This performance evaluation will weigh heavily on the contractor's effectiveness in self-identifying safety concerns early and responding to concerns raised both internally and by external stakeholders and review teams.

DOE reserves the right to consider any available information that bears on Nuclear Safety performance in making this evaluation. Documents to be considered include:

- Plans, procedures, issue descriptions and other documents used in management of technical issues that may impact design and/or safety basis;

- Closure documents for recommendations by the August 2011 Construction Project Review team that are related to integration of nuclear safety into plant design;

- Updates to the WTP *Integrated Licensing Strategy*;

- Reports documenting ongoing development of nuclear safety parameters and requirements for incorporation into *Initial Data Quality Objectives for WTP Feed Acceptance Criteria* (24590-WTP-RPT-MGT-11.014) and *Interface Control Document 19* (24590-WTP-ICD-MG-01-019).

- Progress managing the identification and effective closure of technical issues to provide the technical basis for integration of nuclear safety into facility design and developing a documented safety analysis that will support commissioning and operations. Initially established in, "Plan and Schedule

To Systematically Evaluate the Hazards of Known Technical Issues, M3 Vessel Assessment Summary Reports, LOAM Benchmark Data and LSIT – Response to DNFSB Recommendation 2010-2 Implementation Plan Commitment 5.7.3.1."

B.1.7 Nuclear Safety and Quality Culture - (Weighting: 25%)

B.1.7.1 Nuclear Safety and Quality Culture. The contractor must ensure programs are in place and emphasize expectations which will promote a robust Nuclear Safety Culture and Quality Culture (NSQC) including a Safety Conscious Work Environment.

Criteria evaluated to promote a robust NSQC include:

Action Plan to Strengthen the NSQC
The contractor must develop and proactively implement a plan that comprehensively addresses the cumulative significance of all the findings, recommendations, and information in the various NSQC reports and assessments, with full recognition of the current WTP environment. This plan shall include, at a minimum, the 2012 HSS report, the HSS supplemental report, the DOE IP for 2011-1, the ISQCA report, DNFSB 2011-1, and the employee feedback from the survey administered in the fall of 2011. The plan shall consider and implement proven tools to improve safety culture across the project. Further, the plan should provide traceability of each issue addressed, the evaluations conducted, and the actions to be taken, providing a means to track and communicate the status of actions completed or in process. Actions by DOE needed to approve the plan; timely implementation of the associated actions; and responsiveness to feedback during the implementation of the plan will be included in the basis of evaluation of this element.

Develop tools to assess progress in improving NSQC and determining the need for adjustments
Safety culture improvement takes years. It's important to have methods in place to ensure worker involvement, communicate results, and follow-up assessments conducted to ensure continued workforce support and involvement. Evidence of this objective includes: development and implementation of an active set of metrics to monitor the NSQC; conduct of internal and external assessment of the NSQC including comprehensive annual assessments; implementation of employee surveys, and senior management engagement with the feedback and monitoring actions and evaluations. NSQC metrics developed during this period will be used in assessing and monitoring performance during subsequent PEMP intervals.

Programmatic elements evaluated:

Corrective Action Management
The contractor shall improve and maintain a fully effective corrective action management process consistent with the DOE standards

Attachment A – Incentive B.1 Award Fee – Project Management Incentive

Employee Concerns Program
The Contractor shall improve and maintain a fully effective Employee Concerns Program consistent with DOE standards and expectations. The Contractor and subcontractor(s) shall cooperate with DOE investigations and/or requests for additional information from DOE to assist in the resolution of concerns or allegations.

Differing Professional Opinion (DPO)
The Contractor shall improve and maintain a fully effective DPO process (for technical issues) consistent with DOE standards.

Safety Conscious Work Environment (SCWE)
The Contractor shall establish and maintain a fully effective SCWE. The Contractor shall ensure that all employees are afforded a workplace free from harassment, intimidation, retaliation and/or discrimination. The Contractor shall take prompt action to adequately and effectively mitigate issues that may prevent the Contractor and subcontractor employees from raising concerns to the Contractor or DOE.

Attachment B – Incentive B.2 Award Fee – Cost Incentive

B.2 Award Fee – Cost Incentive

Performance Objective:

The primary objective of the Award Fee – Cost Incentive is to encourage the Contractor to achieve a final actual cost that is equal to or less than the Total Estimated Contract Cost (TECC), as adjusted. The TECC for the purposes of this incentive is defined as the Contractor's Performance Management Baseline plus Management Reserve. TECC is also referred to under the Contractor's Earned Value Management System as the Total Allocated Budget.

Performance Elements:

B.2.1 Cost

Performance Measures:

B.2.1.1 Engineering, Construction, Plant Material & Plant Equipment Cost & Schedule Performance
B.2.1.2 Management Reserve, Variances, and Estimate at Completion (EAC)
B.2.1.3 Risk Management

Evaluation Process – Award Fee-Cost Incentive:

DOE will evaluate each of the B.2 Performance Measures to assess the Contractor's performance toward completing the project at a final actual cost that is equal to or less than the TECC. The evaluation will assign an overall Percent of Total Available Fee Earned and Cost Performance Rating commensurate with cost performance in the evaluation period. Cost Performance will be rated on an adjectival scale using the Performance Indicators below. The rating may include other similar, but not necessarily stated considerations that clearly influence the achievement of the Performance Objective. The Percent of Total Available Fee Earned for each Cost Performance Rating is as follows:

Cost Performance Rating	% of Total Available Fee Earned
Excellent	91% to 100%
Very Good	76% to 90%
Good	51% to 75%
Satisfactory	≤50%
Unsatisfactory	0%

Performance Element B.2.1 *Cost* incentive will be evaluated using the three B.2.1.X Performance Measures. The general considerations for each Performance level are shown in Table B.2.A – Award Fee – Cost Incentive Ratings and Definitions Chart. In establishing a rating, cost management efficiency and effectiveness will be considered.

Table B.2.A - Award Fee – Cost Incentive Ratings and Definitions Chart

Attachment B – Incentive B.2 Award Fee – Cost Incentive

Assigned Numerical Rating	Cost Performance Level	Performance Indicators	Percentage of Award Fee Earned*
91 to 100	Excellent	Contractor has exceeded almost all of the significant award-fee criteria and has met overall cost and schedule performance requirements of the contract as defined and measured against the criteria in the award-fee plan for the award-fee evaluation period. • CPI > 1.00 and SPI ≥ 1.00 • MR remaining is sufficient to meet remaining contractor risks • EAC has high realism based on variances, performance trends, known cost and schedule impacts, etc. and is at or below the TECC • No significant re-work • Risk Management Program: • Implement Risk Response Plan > 90% on Schedule • Forecast potential cost/schedule impacts – Risk Performance > 1.0	91% to 100%
76 to 90	Very Good	Contractor has exceeded many of the significant award-fee criteria and has met overall cost and schedule performance requirements of the contract as defined and measured against the criteria in the award-fee plan for the award-fee evaluation period. • CPI ≥ 1.00 and SPI ≥ 1.00 • MR remaining is sufficient to meet remaining contractor risks • EAC is realistic based on variances, performance trends, known cost and schedule impacts, etc. and the EAC does not exceed the TECC • Some limited, low-impact rework within normal expectations. • Risk Management Program: • Implement Risk Response Plan > 80%, < 90% on Schedule • Forecast potential cost/schedule impacts – Risk Performance > .95, ≤ 1.0	76% to 90%
51 to 75	Good	Contractor has exceeded some of the significant award-fee criteria and has met overall cost and schedule performance requirements of the contract as defined and measured against the criteria in the award-fee plan for the award-fee evaluation period. • CPI ≤ 1.00 and/or SPI ≤ 1.00 for the period but the variance is not expected to continue and reasonable opportunities exist to recover the variance. • MR identification for the period exceeds the MR profile, but completing project within MR limit is reasonably poss ble • EAC is generally realistic based on variances, performance trends, known cost & schedule impacts, etc. The EAC may exceed the TECC, or risk that the TECC will be exceeded. • Some rework required that unfavorably impacted cost and/or schedule • Risk Management Program: • Implement Risk Response Plan > 70%, ≤ 80% on Schedule • Forecast potential cost/schedule impacts – Risk Performance > .85, ≤ .95	51% to 75%
≤ 50	Satisfactory	Contractor has met overall cost and schedule performance requirements of the contract as defined and measured against the criteria in the award-fee plan for the award-fee evaluation period. • CPI < 1.00 and/or SPI < 1.00 for the period and the variance may continue and/or may be difficult to recover. • MR identification for the period exceeds the MR profile. Doubt exists that the project will be completed within the remaining Management Reserve. • The EAC exceeds the TECC, or risk that the TECC will be exceeded is too high. • Excessive rework required that unfavorably impacted cost and/or schedule • Risk Management Program: • Implement Risk Response Plan > 70% on Schedule • Forecast potential cost/schedule impacts – Risk Performance ≤ .85	≤50%
0	Unsatisfactory	Contractor has failed to meet overall cost and schedule performance requirements of the contract as defined and measured against the criteria in the award-fee plan for the award-fee evaluation period.	0%

		• CPI < 1.00 and SPI < 1.00 for the period and the variance is expected to continue and/or will be very difficult to recover. • Completing the project within the MR profile will be very challenging • Management of MR identification is at a level where project completion within MR limit will be very difficult. • Few favorable variances present. • Unfavorable variances are significant and have dramatic impact of increasing the EAC. • EAC significantly exceeds the TECC • Excessive rework required that had significant unfavorable impact on cost and/or schedule	

Table B.2.B - Award Fee - Cost Incentive Fee Earnings Calculation

		(a)	(b)	(c)	(d)
Performance Elements:		**Weighting**	**Adjectival Rating**	**Num. Rating & % Fee Earned**	**Weighted Totals (a) x (c)**
B.2.1.1	Eng., Const., Plt.Mtl. Plt.Eqp. C&S Perf	60%			
B.2.1.2	Management Reserve., Variances, EAC	20%			
B.2.1.3	Risk Management	20%			
	Total	100%	**Composite**	**% Earned (e)**	
Total Available Award Fee - Cost Incentive (Period 2012-A)					**$ 3,150,000**

B.2.1 Cost Performance Element

Performance Measures:

B.2.1.1 Engineering, Construction, Plant Material & Plant Equipment Cost & Schedule Performance. - **(Weighting: 60%)** DOE will evaluate reported performance indices in the Monthly Performance Report, the EVMS, and any other known source of performance information (regardless of whether or not such information is reported by the Contractor). The evaluated indices will include: (i) cumulative data from June 2006 to present using the current baseline; (ii) the rolling six-month average; and (iii) the monthly data. The schedule activities listed below will be used in addition to the above mentioned items to rate schedule performance for completion of activities based on the forecasted dates.

Pretreatment Facility (PT)

Schedule Activity ID	Activity Description	Forecast Completion
3EPTACSUM9	PT – EB Issue Sys. Des. Part II With Re-committed Information	15 Mar 12
2BPR1LJ240	PT- R&T DNFSB – 5.1.3.14 Vessel Configurations for Testing	30 Apr 12
9FP36110AF (HLP-27A)	Complete Fabrication of Vessels HLP-27A & 27B	21 May 12

9FP361109F (HLP-27B)		
7KPE479715 7KPE479765 7KPE479790	PT – Complete HAZOPs for FEP, PWD, and PVP	1 Jun 12

High-Level Waste Facility (HLW)

Schedule Activity ID	Activity Description	Forecast Completion
3EHEC5006C	HLW-CSA-Annex Roofing & Siding S/C – Elevations & Sections – BCP 5006	22 Feb 12
4HH123108	HLW FREP Conc Wall 3108 (El to 37 to 44.5)	27 Feb 12
9FH487901R	HLW-DMY-Custom Fab Plinths & Brackets	10 May 12
4HH123156	HLW FREP Wall 3108A (El 44.5 to 58)	29 May 12
4HH133026	HLW Erect Stl Steel – Multi-Disc-Rack & Decking Slab 3026	14 Jun 12

Low-Activity Waste Facility (LAW)

Schedule Activity ID	Activity Description	Forecast Completion
9ZG46LOR01	GEN – Melter Refractory Installation – Negotiate & Award S/C – C-SA-NNP0-01	2 Feb 12
3EL10M2LVP	LAW – Confirmed for LVP System Completion	28 Feb 12
7KLEFLD014	LAW – Prepare Draft ABAR – Flooding (09-0015)	30 Mar 12
4LL4601C07	LAW – Install WESP Internals PA01C EL+03 (Activity Start)	23 May 12
9FL36426L3	LAW – MS DMY: MBT0-07 (Thermal Catalytic Oxidizer)	12 Jun 12

Analytical Laboratory (LAB)

Schedule Activity ID	Activity Description	Forecast Completion
4TT482162	LAB – Hot Cell Import/Export N&S Motors (LIH-MTR-00001/2/3)	19 Jan 12
4TT1772WP	LAB – Install Inline Instrumentation	30 Apr 12
4TT2814	LAB – Install Electrical Equipment PA24	29 May 12

Balance of Facilities (BOF)

Schedule Activity ID	Activity Description	Forecast Completion
3EB15PDPS	BOF – PD – Confirmed Stress/Support FINAL Calcs PSA	20 Jan 12
3EB15TB091	BOF-ETG-PD GA Elev 0 Drawing	2 Apr 12
3EB10TB030	BOF-ETG – EN – Lube Oil P&ID Committed	9 Apr 12
4BB165NSYS	BOF – 5N Electrical Punchlist & System Completions (NLD)	15 May 12

Shared Services

Schedule Activity ID	Activity Description	Forecast Completion

9ZB117M502	BOF – Melter Assembly Building – Negotiate & Award Subcontract	20 Jan 12
9FT472390R	LAB – MS – DMY Q-MA-MKHO-08 MULTI (HEPA Filters)	24 Apr 12
9FG21467B5	Gen (PT) – Award – Hot Cell Pumps – Sealless Centrifugal QL-MRA-MPC0-00013	21 May 12
9FP361101A	PT – MS Fab HLP-VSL-28 Feed Blendg Vsl	23 May 12
9FH17MRV9A	HLW-DMY-Rel 3-Valve Actuated On/Off-Non ITS	28 Jun 12

Startup

Schedule Activity ID	Activity Description	Forecast Completion
5HBC1A5RCA 5HBC1A5VCA 5HBC1A5NCA 5HBC1A5MCA 5HBC1A5CCA 5HBC1A5JCA 5HBC1A5ECA	BOF SU Final System Scoping, SDG, BSG, NLD, WTB, CTF, CCB, FOF (Verification of milestone – P6 Activities Completed, Scoped P&IDs Issued and available in DocSearch. Completion of scoping documents requires the issuance of the scoping documents, for the above systems, that provides a complete description of each scoped system in accordance with 24590-WTP-SU-ADM-001, System Scoping. It is recognized that inputs from Engineering, Construction , or other entities outside of Startup and Commissioning may necessitate revisions to be issued to the scoping documents and shall have no impact on determination of issuance of these scoping documents. This recognition does not relieve the contractor from the requirement of providing issued scoping documents as defined above, but allows for subsequent changes as required due to influences external to Startup.)	25 May 12
TBD	BOF Award Relay Subcontract SG	30 Jun 12

Other

Schedule Activity ID	Activity Description	Forecast Completion
N/A	Section C, Table C.5-1.1, Deliverables: 2.5 Operations Research Assessment	29 Feb 12
N/A	Section C, Table C.5-1.1, Deliverables: 2.6 WTP Tank Utilization Assessment	29 Feb 12

B.2.1.2 **Management Reserve, Variances, and Estimate-At-Completion**. – (**Weighting: 20%)** DOE will evaluate Management Reserve (MR) use and identification during the rating period. DOE will evaluate whether or not the MR position has increased the potential to meet project needs within the TECC. The contractor is expected to take effective corrective actions to mitigate unfavorable cost and schedule variances and, where appropriate, factor them into the Project Manager's Estimate-At-Completion (EAC) assessment in the Monthly Status Report. DOE will review the Project Manager's EAC to determine its realism, and evaluate the likelihood that the final actual cost will be equal to or less than the TECC, as adjusted.

B.2.1.3 **Risk Management**. - **(Weighting: 20%)** DOE will evaluate the overall ability of the contractor's Risk Management Program to identify risks (and opportunities), forecast potential schedule and cost impacts, and implement Risk Response Plans. DOE will evaluate actions taken by the contractor during the rating period to eliminate or mitigate specific risks (or implement opportunities). DOE will

evaluate the results of the Risk Management Program on the likelihood that the final actual cost will be equal to or less than the TECC, as adjusted.

Attachment C – Schedule of Performance Measures and Assigned Performance Evaluation Monitors

Number	Perf. Objectives, Elements, & Measures	DOE PEM
B.1 Project Management Incentive		
B.1.1	Contract & Business Sys; Construction; Procurement	
B.1.1.1	Contract & Business System Management	Morris
B.1.1.2	Construction Technical Performance	Taylor
B.1.1.3	Procurement Technical Performance	Sands
B.1.2	Safety and Health Performance	
B.1.2.1	Integrated Safety Management Systems	Wade
B.1.3	Quality Management	
B.1.3.1	Quality Management System Compliance	May
B.1.4	Engineering Technical Performance	
B.1.4.1	Engineering Technical Performance	Brunson
B.1.5	Startup & Commissioning Technical Performance	
B.1.5.1	Startup & Commissioning Technical Performance	Logan
B.1.6	Nuclear Safety Technical Performance	
B.1.6.1	Nuclear Safety Technical Performance	Vogel
B.1.7	Nuclear Safety & Quality Culture	
B.1.7.1	Nuclear Safety & Quality Culture	Vogel
B.2 Cost Incentive		
B.2.1	Cost Incentive	
B.2.1.1	Eng., Construct., Plt Mtl. & Plt. Eqp Cost/Schedule	Till
B.2.1.2	Management Reserve, Variances, EAC	Till
B.2.1.3	Risk Management	Grubb

B.1 Project Management Incentive						
Calendar Year	Award Fee Period	Total Available	Overall Adjectival Rating	Overall Numerical Rating	Total Earned	Total Unearned
Column		(a)	(b)	(c)	(d)	(e)
Calculation		(a)	(b)	(c)	(a) X (c)	(a) - (d)
2009	2009-A	$ 2,188,838	Meets Standards	72.40	$ 1,584,719	$ 604,119
	2009-B	$ 2,188,837	Meets Stds - Low	61.65	$ 1,349,418	$ 839,419
2010	2010-A	$ 2,000,000	Level 3	68.95	$ 1,379,000	$ 621,000
	2010-B	$ 2,000,000	Very Good	76.08	$ 1,521,600	$ 478,400
2011	2011-A	$ 2,000,000	Good	67.40	$ 1,348,000	$ 652,000
	2011-B	$ 2,000,000	Good	71.30	$ 1,426,000	$ 574,000
2012	2012-A	$ 2,000,000	TBD	TBD	TBD	TBD
	2012-B	$ 2,000,000	TBD	TBD	TBD	TBD
2013	2013-A	$ 2,000,000	TBD	TBD	TBD	TBD
	2013-B	$ 2,000,000	TBD	TBD	TBD	TBD
2014	2014-A	$ 2,000,000	TBD	TBD	TBD	TBD
	2014-B	$ 2,000,000	TBD	TBD	TBD	TBD
2015	2015-A	$ 2,000,000	TBD	TBD	TBD	TBD
	2015-B	$ 2,000,000	TBD	TBD	TBD	TBD
2016	2016-A	$ 2,000,000	TBD	TBD	TBD	TBD
	2016-B	$ 2,000,000	TBD	TBD	TBD	TBD
2017	2017-A	$ 2,000,000	TBD	TBD	TBD	TBD
	2017-B	$ 2,000,000	TBD	TBD	TBD	TBD
2018	2018-A	$ 2,000,000	TBD	TBD	TBD	TBD
	2018-B	$ 2,000,000	TBD	TBD	TBD	TBD
2019	2019-A	$ 2,000,000	TBD	TBD	TBD	TBD
	2019-B	$ 2,000,000	TBD	TBD	TBD	TBD
	Totals	**$ 44,377,675**			**$ 8,608,737**	**$ 3,768,938**

B.2 Cost Incentive						
Calendar Year	Award Fee Period	Total Available	Overall Adjectival Rating	Overall Numerical Rating	Total Earned	Total Unearned
Column		(a)	(b)	(c)	(d)	(e)
Calculation		(a)	(b)	(c)	(a) X (c)	(a) - (d)
2009	2009-A	$ 4,500,000	Medium Confidence	65.00	$ 2,925,000	$ 1,575,000
	2009-B	$ 4,500,000	Low Confidence	50.00	$ 2,250,000	$ 2,250,000
2010	2010-A	$ 4,300,000	Level 3	60.00	$ 2,580,000	$ 1,720,000
	2010-B	$ 4,300,000	Good	61.00	$ 2,623,000	$ 1,677,000
2011	2011-A	$ 4,300,000	Good	65.00	$ 2,795,000	$ 1,505,000
	2011-B	$ 4,300,000	Good	57.00	$ 2,451,000	$ 1,849,000
2012	2012-A	$ 4,300,000	TBD	TBD	TBD	TBD
	2012-B	$ 4,300,000	TBD	TBD	TBD	TBD
2013	2013-A	$ 4,300,000	TBD	TBD	TBD	TBD
	2013-B	$ 4,300,000	TBD	TBD	TBD	TBD
2014	2014-A	$ 4,300,000	TBD	TBD	TBD	TBD
	2014-B	$ 4,300,000	TBD	TBD	TBD	TBD
2015	2015-A	$ 4,300,000	TBD	TBD	TBD	TBD
	2015-B	$ 4,300,000	TBD	TBD	TBD	TBD
2016	2016-A	$ 4,300,000	TBD	TBD	TBD	TBD
	2016-B	$ 4,300,000	TBD	TBD	TBD	TBD
2017	2017-A	$ 4,300,000	TBD	TBD	TBD	TBD
	2017-B	$ 4,300,000	TBD	TBD	TBD	TBD
2018	2018-A	$ 4,300,000	TBD	TBD	TBD	TBD
	2018-B	$ 4,300,000	TBD	TBD	TBD	TBD
2019	2019-A	$ 4,300,000	TBD	TBD	TBD	TBD
	2019-B	$ 4,300,000	TBD	TBD	TBD	TBD
	Totals	**$ 95,000,000**			**$ 15,624,000**	**$ 10,576,000**

PERFORMANCE EVALUATION AND MEASUREMENT PLAN (PEMP)

Incentive B - Award Fee

DESIGN, CONSTRUCTION, AND COMMISSIONING OF THE HANFORD TANK WASTE TREATMENT & IMMOBILIZATION PLANT

CONTRACT NO. DE-AC27-01RV14136

Evaluation Period 2012-B

July 1, 2012 to December 31, 2012

Bechtel National, Inc.
Richland WA

Rev. 0 -- Effective July 1, 2012

Issued By:

Scott L. Samuelson
Manager, DOE Office of River Protection
Fee Determination Official

Accepted By:

Frank Russo
Bechtel National, Inc.

WTP PERFORMANCE EVALUATION & MEASUREMENT PLAN - PERIOD 2012-B
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PEMP General Information

A. Introduction

Contract No. DE-AC27-01RV14136 utilizes multiple, performance-based incentive fee components to drive Contractor performance excellence in completing the design, construction, and commissioning of the Hanford Waste Treatment and Immobilization Contract (WTP).

The Contract has five incentive fee elements:

- Incentive Fee A – Final Fee Determination for Work Prior to Modification No. A143
- Incentive Fee B – Award Fee
- Incentive Fee C – Milestone and Schedule Incentive Fee
- Incentive Fee D – Operational Incentive Fee
- Incentive Fee E – Enhancement Incentive Fee

WTP Incentive Fee Structure

Title	Fee Type	Performance Measure(s)	Fee Administration Terms and Conditions Reference
Final Fee Determination for Work Prior to Mod. No. A143	Fixed	Determined by Contracting Officer	Clause B.6, Attachment B-2-A
Award Fee			
Award Fee - Project Mgmt Incentive	Award	Performance Measures in PEMP	Clause B.7, Atch B-2-B & PEMP
Award Fee - Cost Incentive	Award	Performance Measures in PEMP	Clause B.7, Atch B-2-B & PEMP
REA Settlement		Negotiated	Atch B-3
Schedule Incentive Fee			
Activity Milestone Completion	PBI	Completion of Specified Milestones	Clause B.6, Atchs B-2-C, C.1, & Section J, Atch P
Facility Milestone Completion	PBI	Completion of Specified Milestones	Clause B.6, Atch B-2-C
Operational Incentive Fee			
Cold Commissioning	PBI	Capacity	Clause B.6; Atch B-2-D; Section C, Standard 5, Table C.6-5.1
Hot Commissioning	PBI	Capacity	Clause B.6, Atch B-2-D; Section C, Standard 5 Table C.6-5.2
Enhancement Incentive Fee			
Enhanced Plant Capacity	PBI	Plant Capacity Exceeding Treatment Capacity	Clause B.6, Atch B-2-E
Sodium Reduction	PBI	Metric Tons Sodium Reduced	Clause B.6, Atch B-2-E
Enhanced Plant Turnover	PBI	Reduced Plant Turnover Period	Clause B.6, Atch B-2-E
Sustained Production Achievement	PBI	Post-Turnover Operations Capacity	Clause B.6, Atch B-2-E

This PEMP covers Incentive B – Award Fee, which is updated semiannually. The fee administration terms and conditions of A, C, D, and E performance incentives are self-contained within the Contract Section B, and thus, are not addressed in the PEMP. See the reference Table above.

PEMP General Information

The following performance incentive fees are covered by this PEMP:

Performance Incentive Number	Performance Incentive Description	Performance Measures Stated In:	Modified:
Incentive Fee B.1	Award Fee – Project Management Incentive	PEMP – Attachment A	Each Award Fee Evaluation Period (Six-Month Intervals)
Incentive Fee B.2	Award Fee – Cost Management Incentive	PEMP – Attachment B	Each Award Fee Evaluation Period (Six-Month Intervals)

The Award Fee provides a performance incentive for the Contractor and gives the Government a tool to identify and reward superior performance. The amount of award fee the Contractor earns is based on both an objective and subjective evaluation by the Government of the Contractor's performance as measured against the criteria contained in this Plan.

B. Roles and Responsibilities

The Award Fee process utilizes a three-level system to ensure full and fair performance evaluation.

Level 1.0 – Fee Determination Official (FDO)

Level 1.1 – WTP Contracting Officer (CO)

Level 2.0 – Performance Evaluation Board (PEB)

Level 3.0 – Performance Evaluation Monitors (PEMs)

Level 1.0 – Fee Determination Official: Manager, ORP

The FDO will: 1) appoint the PEB Chair; 2) review the recommendation of the PEB, consider all pertinent data, and determine the amount of Award Fee earned during each evaluation period; 3) notify the Contractor via the CO of performance strengths, areas for improvement, and future expectations; 4) approve the PEMP and any significant changes thereto; and 5) authorize the Contracting Officer to make the Award Fee Payment.

Level 1.0 ensures independent, executive-level review of the work of the Performance Evaluation Board and Performance Evaluation Monitors.

Level 1.1 – Contracting Officer

The CO will: 1) serve as a voting member of the PEB; 2) issue the PEMP on a semi-annual basis in accordance with Section B.7 *Award Fee Administration* of the Contract; 3) ensure that the Award Fee and Contract Incentives process is managed consistent with applicable acquisition regulations; 4) ensure that the Award Fee process meets the overall WTP business objectives; and 5) issue the award fee amount earned determination as authorized by the FDO in accordance with B.7 *Award Fee Administration*.

Level 2.0 – Performance Evaluation Board:

- WTP Federal Project Director, Chair

- WTP Contracting Officer
- WTP Performance Evaluation Program Manager

The PEB reviews the PEM evaluations of Contractor performance, considers the Contractor's self-assessment if submitted, considers all information from pertinent sources, prepares draft and final performance reports, and arrives at an earned award fee recommendation to be presented to the FDO. The PEB may also recommend changes to the PEMP.

Performance Evaluation Board Chair:
The PEB Chair will be identified and appointed by the FDO. The Chair may assign or reassign Performance Evaluation Monitors at any time without advance notice to the Contractor. The Chair will: 1) review the performance monitors' evaluations and consider the Contractor's self-assessment; 2) analyze the Contractor's performance against the criteria set forth in the PEMP; 3) provide periodic interim performance feedback to the Contractor via the CO; 4) provide a recommendation on the Award Fee scoring and the amount earned by the Contractor; and 5) recommend any changes to the PEMP.

WTP Contracting Officer:
(See description above.)

WTP Performance Evaluation Program Manager:
The Performance Evaluation Program Manager is responsible for coordinating the administrative actions required by the PEMs, the PEB and the FDO, including: 1) receipt, processing, and distribution of evaluation reports from all required sources; 2) scheduling and assisting with internal evaluation milestones, such as briefings; and 3) accomplishing other actions required to ensure the smooth operation of the award fee process.

Performance Evaluation Monitors:
PEMs may be drawn as needed from the following positions, or others as deemed necessary by the PEB Chair:

- WTP Federal Project Manager, HLW
- WTP Federal Project Manager, PT
- WTP Federal Project Manager, LBL
- WTP Federal Project Manager, Shared Services
- WTP Regulatory Official
- Director, WTP Project Controls Division
- Director, WTP Engineering Division
- Director, WTP Construction Oversight and Assurance Division
- Quality Assurance Team Leader
- Director, Contracts and Property Management Division
- WTP Contracting Officer/Contract Specialist
- ORP Organizational Property Management Officer

The PEMs will: 1) monitor, evaluate, and assess Contractor performance in their assigned areas; 2) periodically prepare a Contractor Performance Monitor Report (CPMR) for the PEB and provide verbal performance input as well; 3) recommend any needed changes to the PEMP for consideration by the PEB and FDO; and 4) maintain a performance dialogue with BNI Performance Measure owners throughout the evaluation period.

C. Process & Schedule

			Days from Beginning of Evaluation Period		Dates - Evaluation Period 2012-B	
Activity No.	Activity	Footnote	From	To	Start	Finish
1	Performance Evaluation Board (PEB) Appointed		-90	-90	04/02/12	04/02/12
2	DOE Generates Draft PEMP		-70	-55	04/22/12	05/07/12
3	PEMP Board Finalizes PEMP		-55	-45	05/07/12	05/17/12
4	HQ Approval - Business Clearance		-45	-30	05/17/12	06/01/12
5	Contractor Review Comments on PEMP	1	-30	-23	06/01/12	06/08/12
6	Final PEMP Execution	2	-23	-14	06/08/12	06/17/12
7	FDO, PEB, and PEM Evaluate Performance		0	183	07/01/12	12/31/12
8	Contractor Self-Assessment (S/A)		184	193	01/01/13	01/10/13
9	PEM Submit Final Reports to PEB	3	194	225	01/10/13	02/11/13
10	PEB Completes Report		226	235	02/12/13	02/21/13
11	PEB Briefs FDO		236	236	02/22/13	02/22/13
12	HQ EM HCA Review/Concurrence		237	246	02/23/13	03/04/13
13	FDO Determines Award Fee Amount		247	253	03/05/13	03/11/13
	Performance Period Begins					07/01/12
	Performance Period Ends					12/31/12

Footnotes:

1	Contractor is provided opportunity to review and comment
2	PEMP is executed unilaterally if parties cannot agree by beginning of evaluation period
3	PEM Reports are updated (if necessary) based on consideration of Contractor Self-Assessment

The Contractor will receive two separate Award Fee evaluation ratings – one rating for Incentive B.1 *Project Management Incentive* and one rating for Incentive B.2 *Cost Incentive*. Each rating is independently applied to the available Award Fee pool for that incentive element. The total available award fee for this Evaluation Period 2012-B is:

Incentive B.1 Award Fee – Project Management Incentive	$3,150,000
Incentive B.2 Award Fee – Cost Incentive	$3,150,000

In accordance with Federal Acquisition Regulation, Subpart 16.401(e)(3)(v), the contractor is prohibited from earning any award fee when the contractor's overall cost, schedule, and technical performance is below satisfactory.

DOE's expectation is that the Contractor will complete assigned Hanford Federal Facility Agreement and Consent Order and Consent Decree Milestone deliverables at least 30 days before they are due. DOE reserves the right to reduce the PEMP award fee determination if the Contractor fails to meet DOE's expectation.

D. Contractor Self-Assessment

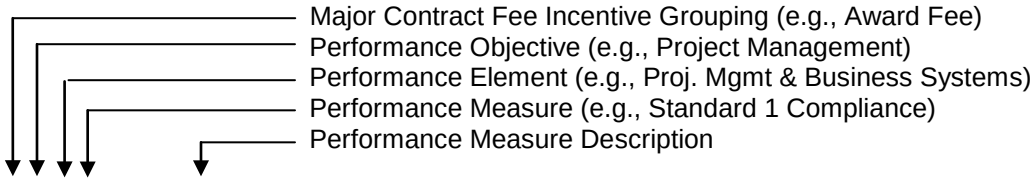
See Section B Clause B.7 *Award Fee Administration*, which states:

> "Following each evaluation period, the Contractor may submit a self-assessment, provided such assessment is submitted within ten (10) calendar days after the end of the period. This self-assessment shall address both the strengths and weaknesses of the Contractor's performance during the evaluation period. Where deficiencies in performance are noted, the Contractor shall describe the actions planned or taken to

correct such deficiencies and avoid their recurrence. The Contracting Officer will review the Contractor's self-assessment, if submitted, as part of its independent evaluation of the Contractor's management during the period."

E. PEMP Numbering System and Definitions

This PEMP utilizes a numbering system shown in the example below:



B.1.1.1 Contract Changes Resolution

"Major Incentive Grouping" – The type of Contractor incentive employed on the Contract (refer to Section B of the Contract).

"Performance Objective" – The highest level Award Fee incentive areas – B.1 Project Management and B.2 Cost, and a statement of the Contractor performance necessary to safely and successfully complete the project with respect to specified outcomes (i.e., cost, schedule, scope, etc.).

"Performance Element" – Targeted performance areas necessary to achieve the Performance Objective.

"Performance Measure" – Specific criteria to objectively or subjectively measure Contractor performance in Performance Elements that will lead to achieving the Performance Objective.

Where possible, objective Performance Measures are used to determine award fee earnings. However, in both the Project Management Incentive and Cost Incentive areas, subjective (qualitative-based judgment) measures are used where appropriate.

F. Performance Periods

For all Performance Measures under Performance Objective B.1 Project Management, the performance period will cover July 1, 2012 through December 31, 2012.

For all Performance Measures under Performance Objective B.2 Cost, the EVMS performance period will cover May 2012 through November 2012. For Schedule Activities listed in B.2.1.1, the performance period will cover July 1, 2012 through December 31, 2012.

G. Incentive Ratings and Definitions

DOE will utilize the following ratings and definitions table to rate performance in both B.1 Project Management and B.2 Cost.

Table 1 - Award Fee – Incentive Ratings and Definitions

Assigned Numerical Rating	Adjectival Rating *(corresponding to Numerical Rating)*	Definition	Percentage of Award Fee Earned
91 to 100	Excellent	Contractor has exceeded almost all of the significant award-fee criteria and has met overall cost, schedule, and technical performance requirements of the contract in the aggregate as defined and measured against the criteria in the award-fee plan for the award-fee evaluation period.	91% to 100%
76 to 90	Very Good	Contractor has exceeded many of the significant award-fee criteria and has met overall cost, schedule, and technical performance requirements of the contract in the aggregate as defined and measured against the criteria in the award-fee plan for the award-fee evaluation period.	76% to 90%
51 to 75	Good	Contractor has exceeded some of the significant award-fee criteria and has met overall cost, schedule, and technical performance requirements of the contract in the aggregate as defined and measured against the criteria in the award-fee plan for the award-fee evaluation period.	51% to 75%
≤ 50	Satisfactory	Contractor has met overall cost, schedule, and technical performance requirements of the contract in the aggregate as defined and measured against the criteria in the award-fee plan for the award-fee evaluation period.	≤ 50%
0	Unsatisfactory	Contractor has failed to meet overall cost, schedule, and technical performance requirements of the contract in the aggregate as defined and measured against the criteria in the award-fee plan for the award-fee evaluation period.	0%

Attachment A – Incentive B.1 Award Fee – Project Management Incentive

B.1 Award Fee – Project Management Incentive.

Performance Objective:
The *Award Fee - Project Management Incentive* is a performance measurement tool to assess the Contractor's project management performance and provides impetus for continuous improvement in important project management areas not covered by other incentives. The Performance Objective of the *Award Fee – Project Management Incentive* is to ensure that important project systems contribute favorably to safe, high quality work performance that supports the cost, schedule, and quality goals of the project.

Performance Elements:

B.1.1	Contract & Business System Management and Construction
B.1.2	Quality Management
B.1.3	Engineering Technical Performance
B.1.4	Startup and Commissioning Technical Performance
B.1.5	Nuclear Safety Technical Performance
B.1.6	Safety and Quality Culture

Evaluation Process – Award Fee-Project Management Incentive:
DOE will evaluate and measure performance in each of the Performance Elements B.1.1 through B.1.6, using the Performance Measure(s) for each Element. The Performance Elements are considered necessary to achieve the Performance Objective stated above. The evaluation will assign a Numerical Rating of 0 to 100, and corresponding Adjectival Rating, to each Performance Element. The Percent of Available Fee Earned awarded to that Performance Element will match the Numerical Rating (e.g., a Numerical Rating of 71 is awarded 71% for that Element). See Table 1 - *Award Fee –Incentive Ratings and Definitions*. The Numerical and Adjectival Ratings will be based upon DOE's evaluation of the extent to which Contractor performance on that Element favorably contributed toward achieving the Performance Objective.

Each Performance Measure has indicators and guidelines that are important performance considerations; however, DOE may consider any pertinent performance information related to that Element.

Each Performance Element will be evaluated using the Performance Measures, and a Numerical Rating and Adjectival Rating will be assigned to each Performance Element. The Performance Element ratings are then weighted to yield a composite evaluation for the Performance Objective. See Table 1 - *Award Fee – Incentive Ratings & Definitions* and Table B.1. – *Award Fee – Project Management Incentive Fee Earnings Calculation*.

Attachment A – Incentive B.1 Award Fee – Project Management Incentive

Table B.1 - Award Fee - Project Management Incentive Fee Earnings Calculation					
		(a)	(b)	(c)	(d)
Performance Elements:		Weighting	Adjectival Rating	Num. Rating & % Fee Earned	Weighted Totals (a) x (c)
B.1.1	Contract/Bus. System & Construction	10%			
B.1.2	Quality Management	5%			
B.1.3	Engineering Technical Performance	20%			
B.1.4	Startup & Commissioning Technical Perf	15%			
B.1.5	Nuclear Safety Technical Performance	20%			
B.1.6	Safety & Quality Culture	30%			
	Total	100%	**Composite**	**% Earned (e)**	
Total Available Award Fee - Project Management Incentive (Period 2012-B)					**$ 3,150,000**

B.1 Award Fee – Project Management Incentive

The following are the Performance Elements (B.1.X) and Performance Measures (B.1.X.X) that support the Performance Objective. DOE will assign a Numerical Rating and Adjectival Rating (per Table 1) for each Performance Element based on the Performance Measure(s) for that particular Element.

B.1.1 Contract and Business System Management and Construction – (Weighting: 10%)

B.1.1.1 Contract and Business System Management - The Contractor will be evaluated for performance on a wide range of contract management and business system management areas. This Performance Measure includes consideration of:

- Compliance with Federal and Departmental acquisition regulations, procedures, guidance, and the contract.
- Effectiveness of Subcontract and Procurement management (including compliance with internal procedures and the Contractor's approved purchasing system). Submittal of timely and thoroughly documented subcontract and procurement consent packages that are in accordance with the contractor's approved procedures. DOE will also evaluate the contractor's ability to work cooperatively with DOE to support subcontract consent decisions.
- Adequacy of documentation of the prime contractor's subcontract/procurement files, including, but not limited to, technical evaluations of subcontractor/vendor proposals and sole source justifications. DOE's evaluation will include the degree to which the contractor complies with its approved procedures.

- Effectiveness of the contractor's management of Government property, including:

  -subcontract property administration and subcontractor oversight;
  -records and reports of Government property (Government-furnished and contractor-acquired);
  -inventory of Government property;
  -care, maintenance, and use of Government property;
  -reutilization and disposition of Government property; and
  -revise property management system and property records to include real property management/records requirements of FAR 45.5 and FAR 52.245-5.

- Assessment of integration and cooperative behavior (to include timely identification and resolution of issues and controversy) and customer satisfaction.
- Ability to work with DOE in a spirit of cooperation, including timely submission of requests for additional data, and conveying a positive and professional attitude.
- Timely submission of Contract Change Proposals (CCPs), with an emphasis on the re-plan/re-baseline proposal.
- Submission of current, accurate, and complete CCPs that meet all Federal Acquisition Regulation (FAR) requirements, including but not limited to compliance with FAR Part 15, with an emphasis on the re-plan/re-baseline proposal.
- Ability to provide to DOE fully compliant CCPs with BNI's initial submittal, without the need for significant fact-finding or re-submittal to meet FAR requirements, with an emphasis on the re-plan/re-baseline proposal.
- Inclusion of a comprehensive, fully-supported technical proposal with each CCP (when applicable) which addresses, at a minimum, the appropriateness of the proposed skill mix and labor hours, types and quantities of proposed materials, traceability, and any other data pertinent to the CCP. Emphasis will be placed on the re-plan/re-baseline proposal.

B.1.1.2 <u>Construction Technical Performance</u>. - Contract Section C, *Statement of Work*, Standard 4 *Construction, Procurement, and Acceptance Testing* describes construction requirements for WTP. This Performance Measure evaluates technical aspects of construction performance under the overall goal of improving the Project Management in the Construction Phase until facility turnover to Commissioning. DOE reserves the right to consider any available information in making this evaluation.

Performance considerations include:

- Overcome Engineering/Procurement/Construction challenges, including effective management of emergent trends with proactive and early communication to DOE from initial identification of an issue through final closure;

- Maximize performance efficiency, including complete work control modifications and Corrective Action Plans;
- Focus on completion:

  Meet installation rates:

  - Planned vs. actual commodity and major equipment installation rates measured against the baseline as well as development of and performance against any identified recovery plans;
  - Subcontractor performance on all installation work performed on the WTP jobsite by BNI subcontractors, including the efficient coordination of BNI engineering-supplied documentation and scheduling of work interfaces with BNI direct hire craft and other BNI subcontractors and timely resolution of nonconformance reports and interferences with a minimum amount of rework. Included in this metric is reporting of correct EVMS data and performance indices by the subcontractors;
  - Demonstrate priorities and decision making aligned with critical path, as well as metrics identifying performance against secondary metrics of Early Starts and Early Finishes against baseline activities;
  - Manage resources (direct-hire labor, subcontractor, and equipment and materials) available to support construction;
  - Demonstrate that efficient direct-hire and subcontractor management performance is achieved with an effective mixture of indirect labor, support services, and construction equipment; and
  - Timely and consistent communication and reporting of data and metrics against the baseline to identify and facilitate accurate evaluation of the quantitative reporting for Construction Technical Performance.

- Maintenance of the management tools, such as P6, and the Bechtel Procurement System, so that accurate and complete information is flowing between Engineering, Procurement, and Construction related to the construction need date and the supporting procurement process.

B.1.2 Quality Management – (Weighting: 5%)

B.1.2.1 Quality Management System Compliance - Contract Section C, *Statement of Work*, Standard 7, *Environment, Safety, Quality, and Health*, Paragraph (e)(3) requires the Contractor to develop and implement a quality assurance program based upon the requirements of 10 CFR 830.120, Subpart A ("the QA Rule") and DOE O 414.1C. The program is documented in the Contractor's Quality Assurance Manual (QAM) (Contract Deliverable 7.2 *Quality Assurance*). DOE will evaluate the Contractor's Quality Management System (QMS) that implements the QA Rule requirements/criteria described in the Contractor's Quality Assurance Manual (QAM). Implementation of these requirements will be measured on a semi-annual basis and reported to DOE using an integrated performance metric. This semi-annual review will use data that was originated in the Quality Management System. The Contractor will evaluate each of the ten elements of the Contractor's Quality Management System, evaluate Contractor performance, provide a rating (Excellent, Very Good, Good, Satisfactory, or Unsatisfactory), along with a numerical rating (based on the average of sub-element ratings), and, where applicable, discuss opportunities for improvement. The semi-annual QMS Compliance Matrix and the ratings will be mutually agreed-to by DOE and the Contractor and will provide the basis for the ratings provided. A formal Corrective Action Plan will be submitted to DOE for any Contractor Quality Management System area (from the ten QA Rules with consolidated ratings) that is evaluated as less than effective (≤ 50%). The Corrective Action Plan will be reviewed by DOE within 15 working days of submittal to DOE, and approved upon resolution of any DOE comments. The semi-annual report will then provide the primary basis for the annual declaration that the QMS is fully integrated with the Contractor's Integrated Safety Management System. The award fee evaluation will be based upon the numerical rating average for the ten QA Rule requirements in the QMS matrix and any additional relevant information obtained from other sources (e.g. DOE FPMs, Facility Representatives, IPTs, DOE-ORP QA audits). For purposes of the evaluation, the ten QA Rule requirements are considered to be of equal importance. The numerical ratings shall be identified consistent with Table 1 – Award Fee – Incentive Ratings and Definitions.

B.1.3 Engineering Technical Performance - (Weighting: 20%)

B.1.3.1 Engineering Technical Performance - Contract Section C, Statement of Work, Standard 3 Design describes engineering requirements for WTP. Accordingly, DOE will evaluate engineering performance during this PEMP evaluation period. This Performance Measure will focus on aspects of Engineering Performance that are not duplicative of other Performance Measures under Performance Objective B.2 Cost. Emphasis is on the identification, resolution, management, and closure of technical issues that may adversely affect the safety, quality, functionality, and other important objectives of the project.

DOE reserves the right to consider any available information that bears on engineering performance in making this evaluation.

Attachment A – Incentive B.1 Award Fee – Project Management Incentive

Performance considerations include:

- DNFSB Recommendation 2010-2 Implementation Plan:
  - DNFSB Recommendation 2010-2 Implementation Plan deliverables are submitted to DOE-WTP within the timeline established in the Plan for Preparation, Review, and Transmittal of Deliverables for the DNFSB Recommendation 2010-2 Implementation Plan (CCN:211779, dated January 3, 2012). Per the plan, the latest acceptable submission date for DOE-WTP review is 14 days prior to the Deliverable commitment date to DNFSB.
  - DNFSB Recommendation 2010-2 Implementation Plan deliverables submitted to DOE-WTP are technically adequate to meet the stated commitment.
  - Any potential delays or issues with DNFSB Recommendation 2010-2 Implementation Plan deliverables are communicated to DOE-WTP as early as possible.

- Implementation of all design changes required as a result of the Technical Issue Management process (24590-WTP-GPG-ENG-0125):
  - Scheduled dates are met with acceptable resolution of technical issues.
  - Results are efficiently incorporated into design with respect to cost and schedule.

- Overcome technical problems:
  - Technical issues are identified and communicated to DOE-WTP prior to identification by DOE-WTP or other stakeholders.
  - Causal analysis is performed on technical issues to understand the underlying causes.
  - Extent of condition is performed and communicated to determine if other similar issues are present.
  - Corrective actions address the causes of the technical issue and other similar issues.
  - Technical issues, causes, extent of condition and corrective actions are communicated to DOE-WTP in a manner that does not require additional requests for information.

- Efficient Performance:
  - Work process improvements / implementation of Lessons Learned;
  - Utilization of engineering resources; and
  - Satisfactory customer comment resolution.

- Focus on completion:
  - Assess schedule performance with regard to engineering alignment with the project completion schedule; and
  - Engineering documents are issued and services provided to support procurement and construction needs.

- Progress managing the identification and effective closure of technical issues to provide the technical basis for integration of nuclear safety into facility design and developing a documented safety analysis that will support commissioning and operations. Initially established in, "Plan and Schedule to Systematically Evaluate the Hazards of Known Technical Issues, M3 Vessel Assessment Summary Reports, LOAM Benchmark Data and LSIT – Response to DNFSB Recommendation 2010-2 Implementation Plan Commitment 5.7.3.1."

B.1.4 Startup and Commissioning Technical Performance - (Weighting: 15%)

B.1.4.1 <u>Startup and Commissioning Technical Performance</u> - Contract Section C, Statement of Work, Standard 5 describes startup testing beginning with a planned turnover of systems and construction, including component and system level tests that will be performed in a planned sequence at each facility. The Commissioning process begins with testing during Cold Commissioning making production runs using agreed upon stimulant waste Accordingly, DOE will evaluate technical performance related to the Startup and Commissioning phase performance during this PEMP evaluation period. Emphasis is on the identification, resolution, management, and closure of technical issues that may adversely affect the readiness, cost, schedule, safety, quality, functionality, and other important objectives of the project Startup and Commissioning phase. The processes described in BNI Construction To Startup Turnover procedure 24590-WTP-GPP-MGT-042 (latest version), BNI Design Completion For Turnover To Startup procedure 24590-WTP-3DP-G04T-00916 (latest version), Conduct of Testing procedure 24590-WTP-SU-ADM-0006 (latest version), Test Procedure Development 24590-WTP-SU-ADM-0005, as well as preparations for turnovers and testing to be completed in calendar year 2012 will have high consideration in this performance evaluation.

DOE reserves the right to consider any available information that bears on startup and commissioning performance in making this evaluation.

Performance considerations include:

- Completion and maintenance of a Startup schedule (Level 5) with a rolling nine (9) month window. The schedule will include sufficient detail and logic to allow planning of activities necessary for turnover and testing of scoped systems based on the Level 4 baseline schedule. Used in conjunction with work lists, sufficient detail will exist to support component and system testing in support of system turnover to Commissioning;

- Certification and qualification of Levels I thru III Startup Testing Personnel, as well as Test Leads and a Facility Test Lead to support testing of Building 87;

- Successful turnover planning, preparation, and acceptance of scoped systems MVE-B-01, LVE-B-01, and FDE-B-01 turned over in Building 87;

- Successful performance of component and initial system testing, to include review and approval of Component Test Results Package (TRP) for scoped systems MVE-B-01, LVE-B-01, and FDE-B-01 in Building 87 (Schedule Activities BC2A5PGA01, BC2A5PGA04, and BC2A5PA08);

- Preparation and approval of appropriate component and/or system test procedures to support upcoming testing in accordance with 24590-WTP-GPP-MGT-042 and the baseline schedule. This will include subjective consideration of procedure quality and review timeliness;

- Completion of a Startup Plan Document; and

- Completion of a Teamworks coding process to allow cross-walk and tracking of required tests against specified components.

Integration Technical Performance: Contract Section C, Statement of Work, Section C.3 describes the partnering approach used by the Contractor, the Tank Operations Contractor, and DOE. Emphasis is on active collaboration between the parties and proactive identification and resolution of technical and administrative integration issues. DOE reserves the right to consider any available information that bears on Integration performance in making its evaluation. Such information may include closure documents for open items /issues listed in Interface Control Documents and Data Quality Objectives for WTP feed acceptance criteria, test plans and reports, operations research assessments, and evaluations of the RPP mission waste feed vector.

B.1.5 Nuclear Safety Technical Performance - (Weighting: 20%)

B.1.5.1 <u>Nuclear Safety Technical Performance</u> - Contract Section C, Statement of Work, Standard 9 describes contractor requirements to ensure Radiological, Nuclear, and Process Safety. This workscope includes implementation of a standards-based safety management program in compliance with the rules provided in 10 CFR 830 on nuclear safety to ensure that WTP safety requirements are defined, implemented, and maintained.

Before WTP operations can commence, the contractor must resolve all technical issues affecting the safety of workers, the public, and the environment. Of particular importance is to proactively identify potential safety concerns and respond to them with appropriate modifications of the plant design and/or control strategy. This performance evaluation will weigh heavily on the contractor's effectiveness in self-identifying safety concerns early and responding to concerns raised both internally and by external stakeholders and review teams.

DOE reserves the right to consider any available information that bears on Nuclear Safety performance in making this evaluation. Documents to be considered include:

- Plans, procedures, issue descriptions and other documents used in management of technical issues that may impact design and/or safety basis;

- Closure documents for recommendations by the August 2011 Construction Project Review team that are related to integration of nuclear safety into plant design;

- Updates to the WTP *Integrated Licensing Strategy*;

- Reports documenting ongoing development of nuclear safety parameters and requirements for incorporation into *Initial Data Quality Objectives for WTP Feed Acceptance Criteria* (24590-WTP-RPT-MGT-11.014) and *Interface Control Document 19* (24590-WTP-ICD-MG-01-019);

- Progress managing the identification and effective closure of technical issues to provide the technical basis for integration of nuclear safety into facility design and developing a documented safety analysis that will support commissioning and operations; initially established in, "Plan and Schedule To Systematically Evaluate the Hazards of Known Technical Issues, M3 Vessel Assessment Summary Reports, LOAM Benchmark Data and LSIT – Response to DNFSB Recommendation 2010-2 Implementation Plan Commitment 5.7.3.1."; and

- Progress in managing closure of issues identified in the WTP LAW Management Self-Assessment and Safety Basis Review Team.

B.1.6 Safety and Quality Culture - (Weighting: 30%)

B.1.6.1 <u>Nuclear Safety and Quality Culture – (Weighting: 25%)</u> - The contractor must ensure programs are in place and emphasize expectations which will promote a robust Nuclear Safety Culture and Quality Culture (NSQC), including a Safety Conscious Work Environment.

Criteria evaluated to promote a robust NSQC include:

Action Plan to Strengthen the NSQC
The contractor must maintain and proactively implement the approved plan of action to comprehensively address the cumulative significance of all the findings, recommendations, and information in the various NSQC reports and assessments. The plan and associated corrective and preventative actions shall be updated based on lessons learned and feedback during implementation to maximize the effectiveness of actions and to implement tools to improve safety culture across the project. Consistent with the approved plan, progress will be monitored in the six Strategic Improvement Areas which are:

- Realignment and Maintenance of the Design and Safety Bases;
- Management Process of the WTP NSQC;

- Timeliness of Issues Identification and Resolution;
- Roles, Responsibilities, Authorities and Accountabilities;
- Management and Supervisory Behaviors; and
- WTP Construction Site-Unique Issues.

Evaluation will be based, in part, on timely and effective implementation of the associated actions, responsiveness to feedback during the implementation of the plan to strengthen the NSQC, coordination of the NSQC actions with other related Level 1 and 2 findings, and coordination with the DOE Safety Culture Improvement Plan.

Develop tools to assess progress in improving NSQC and determining the need for adjustments
Safety culture improvement takes years. It's important to have methods in place to ensure worker involvement, communicate results, and follow-up assessments conducted to ensure continued workforce support and involvement. Evidence of this objective includes: development and implementation of an active set of metrics to monitor the NSQC; conduct of internal and external assessment of the NSQC including comprehensive annual assessments; implementation of employee surveys, and senior management engagement with the feedback and monitoring actions and evaluations.

Evaluation will be based, in part, on the creation and documentation of an overall contractor approach to assess the status of the NSQC, and impacts of the correctives. The metrics and assessment activities will be evaluated based on proven tools to improve safety culture, including those documented in DOE Orders and guides, Energy Facility Contractors Group recommendations, and applicable commercial nuclear experience.

Programmatic elements evaluated:

Corrective Action Management
The contractor shall improve and maintain a fully effective corrective action management process consistent with the DOE standards.

Employee Concerns Program
The Contractor shall improve and maintain a fully effective Employee Concerns Program consistent with DOE standards and expectations. The Contractor and subcontractor(s) shall cooperate with DOE investigations and/or requests for additional information from DOE to assist in the resolution of concerns or allegations.

Differing Professional Opinion (DPO)
The Contractor shall improve and maintain a fully effective DPO process (for technical issues) consistent with DOE standards.

Safety Conscious Work Environment (SCWE)
The Contractor shall establish and maintain a fully effective SCWE. The Contractor shall ensure that all employees are afforded a workplace free from harassment, intimidation, retaliation and/or discrimination. The Contractor shall take prompt action to adequately and effectively mitigate issues that may prevent

the Contractor and subcontractor employees from raising concerns to the Contractor or DOE.

B.1.6.2 Integrated Safety Management Systems (ISMS) – (Weighting: 5%)
Contract Clause 1.105 DEAR 952.223-71 *Integration of Environment, Safety, And Health Into Work Planning and Execution (Jun 1997)* requires the Contractor, at a minimum, to manage and perform work in accordance with a documented Safety Management System (System) that fulfills all conditions in paragraph (b) thereof, and to demonstrate continuous improvement of its ISMS program. Accordingly, DOE will evaluate the Contractor's continuous improvement of the ISMS Programs, which include: 1) implementation of work hazard analysis and controls that result in, a) improving work injury/illness performance as defined in the Annual Performance Objectives, Measures and Commitments (POMCs) as agreed to between BNI and ORP as part of the ISMS POMC process, and b) no employee exposures to work place hazards above the applicable exposure limits [e.g., permissible exposure level (PEL) or TLV]; 2) implementation of event investigation (review, cause analysis and action implementation) that results in effective organizational learning with the goal of eliminating recurring events; and 3) documented periodic management analysis of work site conditions and implementing strategies that result in improving WTP Project safety .

Attachment B – Incentive B.2 Award Fee – Cost Incentive

B.2 Award Fee – Cost Incentive

Performance Objective:
The primary objective of the Award Fee – Cost Incentive is to encourage the Contractor to achieve a final actual cost that is equal to or less than the Total Estimated Contract Cost (TECC), as adjusted. The TECC for the purposes of this incentive is defined as the Contractor's Performance Management Baseline plus Management Reserve. TECC is also referred to under the Contractor's Earned Value Management System (EVMS) as the Total Allocated Budget.

During the 2012-B PEMP period, the WTP project will be in a re-planning/re-baselining process. DOE-WTP has directed the Contractor to suspend selected EVMS reporting requirements for the PT and HLW facilities, and applicable Shared Services control accounts. To the extent that EVMS data is not available during this PEMP period, DOE-WTP will rely on other objective and/or subjective cost performance elements to evaluate the Contractor's performance.

Performance Elements:
B.2.1 Cost

Performance Measures:
B.2.1.1 Project Cost & Schedule Performance
B.2.1.2 Risk Management

Evaluation Process – Award Fee-Cost Incentive:
DOE will evaluate each of the B.2 Performance Measures to assess the Contractor's performance toward completing the project at a final actual cost that is equal to or less than the TECC. The evaluation will assign an overall Percent of Total Available Fee Earned and Cost Performance Rating commensurate with cost performance in the evaluation period. Cost Performance will be rated on an adjectival scale using Table 1. The rating may include other similar, but not necessarily stated considerations that clearly influence the achievement of the Performance Objective.

Performance Element B.2.1 *Cost* incentive will be evaluated using the two B.2.1.X Performance Measures and a Numerical Rating and Adjectival Rating will be assigned to each Performance Element. The Performance Element ratings are then weighted to yield a composite evaluation for the Performance Objective. See Table 1 - *Award Fee – Incentive Ratings & Definitions* and Table B.2. – *Award Fee – Cost Incentive Fee Earnings Calculation*. In establishing a rating, cost management efficiency and effectiveness will be considered.

Attachment B – Incentive B.2 Award Fee – Cost Incentive

Table B.2 - Award Fee - Cost Incentive Fee Earnings Calculation					
		(a)	(b)	(c)	(d)
Performance Elements:		Weighting	Adjectival Rating	Num. Rating & % Fee Earned	Weighted Totals (a) x (c)
B.2.1.1	Project Cost & Schedule Performance	70%			
B.2.1.2	Risk Management	30%			
	Total	100%	**Composite**	**% Earned**	
Total Available Award Fee - Cost Incentive (Period 2012-B)					**$ 3,150,000**

B.2.1 Cost Performance Element

Performance Measures:

B.2.1.1 Project Cost & Schedule Performance - (Weighting: 70%) - DOE will evaluate reported performance indices in the Monthly Performance Report, the EVMS, and any other known source of performance information (regardless of whether or not such information is reported by the Contractor). The evaluated indices will include: (i) the rolling six-month average; and (ii) the monthly data. The schedule activities listed below will be used in addition to the above mentioned items to rate schedule performance for completion of activities based on the forecasted dates. DOE will evaluate the progress and quality of the re-plan/re-baseline efforts and activities, as well as the final deliverables which must meet the requirements for an external review.

Pretreatment Facility (PT)

Schedule Activity ID	Activity Description	Forecast Completion
2BPR1LD390	PT – R&T – DNFSB – DNFSB-5.1.3.13 Issue the Technical Scaling Selection Basis Document	30 Aug 12
TBD	PT – Development and Implementation of the Project Execution Plan for the Hazards Analysis Reconstitution in PT	30 Sep 12
3EP10HGRC1	PT – Complete Hydrogen Generation Rate (HGR) Calculations (12)	21 Nov 12
2BPR1EC241	Issue the Corrosion Test Scoping Document	31 Dec 12
2BPR1LT125	PT – R&T – CFD V&V – 8Ft Vessel Test 1a – Single 4" PJM – Pumpdown Tests	31 Dec 12
3EP45JP302, 3EP45JP292, 3EP45JP432	PT – Hot Cell Area 29, 30, 33 – EP Issue Jumpers Phase 2 Frame Design	31 Dec 12

High-Level Waste Facility (HLW)

Schedule Activity ID	Activity Description	Forecast Completion
9FH36464MY	DMY Acidic Waste Vessel (RLD-VSL-07)	12 Oct 12
4HH130299	Complete Structural Steel Elev. 37' (Consent Decree)	15 Oct 12

TBD	Issue Prototypical Design for HEPA Filters Proposed for Greater Than AG-1 Certification Testing	15 Dec 12

Low-Activity Waste Facility (LAW)

Schedule Activity ID	Activity Description	Forecast Completion
4LL45L0M05	Begin Melter #1 Refractory Installation	9 Aug 12
9FL370665	Ship Pre-Heaters (Heating Elements & Controllers)	31 Aug 12
7KLE576710	LAW – Chapter 2 – Facility – LAW	31 Aug 12
9FL4735191	LAW – MS – DMY Pressure Relief Valves – ITS LMP LOP	15 Nov 12
3EL17FT002	LAW – Software Development/Test Complete – LAW	27 Nov 12
3EL10MSCMP	LAW – Mechanical Systems Engineering Complete	7Dec 12

Analytical Laboratory (LAB)

Schedule Activity ID	Activity Description	Forecast Completion
4TT27263	LAB – Install HEPA Filter Housing RLD-HEPA-15 PA24	11 Jul 12
3ET10EPCMP	LAB-PD – Plant Design Engineering Complete Milestone	1 Aug 12
4TT14DH101	LAB – Installation of Partition Walls	15 Aug 12
4TT4821	LAB – Install Hot Cell Glovebox/Fumehoods PA21B	27 Aug 12
4TT14PN119	LAB – S/C Pen Seals Start Mobilization to LAB	13 Dec 12

Balance of Facilities (BOF)

Schedule Activity ID	Activity Description	Forecast Completion
3EB12CS395	CSA-Design Stand By Gen & Fuel Tank FDN	20 Jul 12
4BB28015P	BOF – Install 125V Battery in Building 87	31 Jul 12
4BB17115A	BOF – Install LAW Consoles/Panels – Simulator Facility	28 Aug 12
3EB15PDNLD	BOF – PD – Confirmed Stress/Support FINAL Calcs NLD	5 Sep 12
3EB10A5NFI	BOF – MS – Issue ENG Design Complete List DCL – Non-Dangerous Non-Rad Effluent Facility NLD	5 Sep 12
3EB10A5EFI	BOF-MS – Issue Engineering Design Complete List	18 Oct 12

Startup

Schedule Activity ID	Activity Description	Forecast Completion
5HBC1A5KCA	BOF-SU Final System Scoping SPF (Verification of milestone – Activity complete and scoped P&IDs issued and in DocSearch)	11 Jul 12
5HBC1CP3CA	BOF-SU Final System Scoping CPE-B-03 (Verification of milestone – Activity complete and scoped P&IDs issued and in DocSearch)	21 Sep 12

B.2.1.2 **Risk Management**. - **(Weighting: 30%)** - DOE will evaluate the Contractor's Risk Management Program to identify risks (threats and opportunities), forecast potential schedule and cost impacts, and implement Risk Response Plans. DOE will evaluate actions taken by the Contractor during the rating period to eliminate or mitigate specific risks (or implement opportunities). DOE will evaluate the progress and final results of the integration of the risks into the re-baseline during the re-planning/re-baselining process and once the final BCP is complete.

Attachment C – Schedule of Performance Measures and Assigned Performance Evaluation Monitors

Number	Perf. Objectives, Elements, & Measures	DOE PEM
B.1 Project Management Incentive		
B.1.1	Contract & Business Sys; Construction; Procurement	
B.1.1.1	Contract & Business System Management	Morris
B.1.1.2	Construction Technical Performance	Taylor
B.1.2	Quality Management	
B.1.2.1	Quality Management System Compliance	May
B.1.3	Engineering Technical Performance	
B.1.3.1	Engineering Technical Performance	Brunson
B.1.4	Startup & Commissioning Technical Performance	
B.1.4.1	Startup & Commissioning Technical Performance	Logan
B.1.5	Nuclear Safety Technical Performance	
B.1.5.1	Nuclear Safety Technical Performance	Vogel
B.1.6	Safety & Quality Culture	
B.1.6.1	Nuclear Safety & Quality Culture	Noyes
B.1.6.2	Integrated Safety Management Systems	Wade
B.2 Cost Incentive		
B.2.1	Cost Incentive	
B.2.1.1	Project Cost/Schedule Performance	D. Brown
B.2.1.2	Risk Management	Grubb

B.1 Project Management Incentive						
Calendar Year	Award Fee Period	Total Available	Overall Adjectival Rating	Overall Numerical Rating	Total Earned	Total Unearned
Column		(a)	(b)	(c)	(d)	(e)
Calculation		(a)	(b)	(c)	(a) X (c)	(a) - (d)
2009	2009-A	$ 2,188,838	Meets Standards	72.40	$ 1,584,719	$ 604,119
	2009-B	$ 2,188,837	Meets Stds - Low	61.65	$ 1,349,418	$ 839,419
2010	2010-A	$ 2,000,000	Level 3	68.95	$ 1,379,000	$ 621,000
	2010-B	$ 2,000,000	Very Good	76.08	$ 1,521,600	$ 478,400
2011	2011-A	$ 2,000,000	Good	67.40	$ 1,348,000	$ 652,000
	2011-B	$ 2,000,000	Good	71.30	$ 1,426,000	$ 574,000
2012	2012-A	$ 3,150,000	TBD	TBD	TBD	TBD
	2012-B	$ 3,150,000	TBD	TBD	TBD	TBD
2013	2013-A	$ 3,150,000	TBD	TBD	TBD	TBD
	2013-B	$ 3,150,000	TBD	TBD	TBD	TBD
2014	2014-A	$ 3,150,000	TBD	TBD	TBD	TBD
	2014-B	$ 3,150,000	TBD	TBD	TBD	TBD
2015	2015-A	$ 3,150,000	TBD	TBD	TBD	TBD
	2015-B	$ 3,150,000	TBD	TBD	TBD	TBD
2016	2016-A	$ 3,150,000	TBD	TBD	TBD	TBD
	2016-B	$ 3,150,000	TBD	TBD	TBD	TBD
2017	2017-A	$ 3,150,000	TBD	TBD	TBD	TBD
	2017-B	$ 3,150,000	TBD	TBD	TBD	TBD
2018	2018-A	$ 3,150,000	TBD	TBD	TBD	TBD
	2018-B	$ 3,150,000	TBD	TBD	TBD	TBD
2019	2019-A	$ 3,150,000	TBD	TBD	TBD	TBD
	2019-B	$ 3,150,000	TBD	TBD	TBD	TBD
	Totals	**$ 62,777,675**			**$ 8,608,737**	**$ 3,768,938**

B.2 Cost Incentive						
Calendar Year	Award Fee Period	Total Available	Overall Adjectival Rating	Overall Numerical Rating	Total Earned	Total Unearned
Column		(a)	(b)	(c)	(d)	(e)
Calculation		(a)	(b)	(c)	(a) X (c)	(a) - (d)
2009	2009-A	$ 4,500,000	Medium Confidence	65.00	$ 2,925,000	$ 1,575,000
	2009-B	$ 4,500,000	Low Confidence	50.00	$ 2,250,000	$ 2,250,000
2010	2010-A	$ 4,300,000	Level 3	60.00	$ 2,580,000	$ 1,720,000
	2010-B	$ 4,300,000	Good	61.00	$ 2,623,000	$ 1,677,000
2011	2011-A	$ 4,300,000	Good	65.00	$ 2,795,000	$ 1,505,000
	2011-B	$ 4,300,000	Good	57.00	$ 2,451,000	$ 1,849,000
2012	2012-A	$ 3,150,000	TBD	TBD	TBD	TBD
	2012-B	$ 3,150,000	TBD	TBD	TBD	TBD
2013	2013-A	$ 3,150,000	TBD	TBD	TBD	TBD
	2013-B	$ 3,150,000	TBD	TBD	TBD	TBD
2014	2014-A	$ 3,150,000	TBD	TBD	TBD	TBD
	2014-B	$ 3,150,000	TBD	TBD	TBD	TBD
2015	2015-A	$ 3,150,000	TBD	TBD	TBD	TBD
	2015-B	$ 3,150,000	TBD	TBD	TBD	TBD
2016	2016-A	$ 3,150,000	TBD	TBD	TBD	TBD
	2016-B	$ 3,150,000	TBD	TBD	TBD	TBD
2017	2017-A	$ 3,150,000	TBD	TBD	TBD	TBD
	2017-B	$ 3,150,000	TBD	TBD	TBD	TBD
2018	2018-A	$ 3,150,000	TBD	TBD	TBD	TBD
	2018-B	$ 3,150,000	TBD	TBD	TBD	TBD
2019	2019-A	$ 3,150,000	TBD	TBD	TBD	TBD
	2019-B	$ 3,150,000	TBD	TBD	TBD	TBD
	Totals	**$ 76,600,000**			**$ 15,624,000**	**$ 10,576,000**

DEPARTMENT OF ENERGY
NATIONAL TRAINING CENTER

SAF-200
SAFETY CONSCIOUS WORK ENVIRONMENT

NTC

June 26, 2012

Student Guide

SAF-200, Safety Conscious Work Environment

U.S. Department of Energy National Training Center

Student Guide

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Table of Contents

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Syllabus

Title

Safety Conscious Work Environment Course

Length of Course

One-day (8-hour) course

Mission and Purpose

The purpose of this course is to provide Safety Conscious Work Environment (SCWE) training for Department of Energy (DOE) Federal and contractor senior leaders on the importance of establishing and maintaining an open and collaborative work environment within the department. This course will provide knowledge that will help senior leaders create an environment where employees feel free to raise concerns without fear of retribution.

Audience

This course targets all DOE Federal and contractor senior leaders and managers with responsibility for defense nuclear facilities and/or construction projects and the Federal offices with associated oversight responsibilities.

Prerequisites

SAF-200DE, Prerequisite to SCWE

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Course Composition

Lesson		Hours
1	Preparing for the Journey That Starts With You--The Importance and the Necessity for Change	1.25
2	Warming Up Your Engine--Case Study	1.00
3	Blind Spots and Road Hazards--Sharing Lessons Learned	1.50
4	Shifting Gears, Gaining Ground, Utilizing Your Pit Crew and Toolbox--Case Study	2.00
5	Ensuring You Reach Your Destination--Defining the First Steps for Your Journey Ahead	1.00
		6.75

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Course Goals and Objectives

Lesson 1: Preparing for the Journey That Starts With You--The Importance and the Necessity for Change

Instructional Goal

1.0 The DOE Federal and/or contractor senior leader will know what a Safety Conscious Work Environment (SCWE) is, their roles and responsibilities in establishing and maintaining a SCWE, the benefits and importance of establishing and maintaining a SCWE, and the risks of not establishing and maintaining a SCWE.

Instructional Objectives

1.1 Explain the importance of implementing a Safety Conscious Work Environment.

1.2 Explain the expectations (roles and responsibilities) for DOE Federal and contractor senior leaders in establishing and maintaining a SCWE.

Lesson 2: Warming Up Your Engine--Case Study

Instructional Goal

2.0 The DOE Federal and/or contractor senior leader will be able to identify barriers to establishing and maintaining a Safety Conscious Work Environment (SCWE).

Instructional Objective

2.1 Given a case study and working in small groups, locate the SCWE issues and/or other barriers to establishing a Safety Conscious Work Environment (SCWE) within the case study.

Lesson 3: Blind Spots and Road Hazards--Sharing Lessons Learned

Instructional Goal

3.0 The DOE Federal and/or contractor senior leader will be able to identify behaviors that promote a positive SCWE, as well as contribute to a chilling effect; they will utilize tools to assist in establishing and maintaining a Safety Conscious Work Environment, and they will be able to respond to and mitigate a chilling effect.

Instructional Objective

3.1 Discuss the impact that the behaviors of leadership and employees have on the implementation and maintenance of a Safety Conscious Work Environment.

Lesson 4: Shifting Gears, Gaining Ground, Utilizing Your Pit Crew and Toolbox--Case Study

Instructional Goal

4.0 The DOE Federal and/or contractor senior leader will be able to identify barriers to establishing a Safety Conscious Work Environment (SCWE).

Instructional Objective

4.1 Given a complex case study involving a composite of a real situation encountered at DOE sites and working in small groups, locate the Safety Conscious Work Environment (SCWE) issues within the case study, develop/discuss proposed solutions to the issues and the impacts those solutions may have on the work environment (real or perceived).

Lesson 5: Ensuring You Reach Your Destination--Defining the First Steps for Your Journey Ahead

Instructional Goal

5.0 The DOE Federal and/or contractor senior leader will be able to implement a SCWE using the information provided in this course.

Instructional Objective

5.1 Using the information provided in this course, explain what behaviors the senior leader will need to demonstrate in order to establish a work environment that promotes trust, a questioning attitude, and a willingness to raise issues within the Department of Energy.

Completion Criteria

Senior leaders will be evaluated by their active participation in case studies and group discussions. No written test will be administered.

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Lesson 1: Preparing for the Journey That Starts With You--The Importance and the Necessity for Change

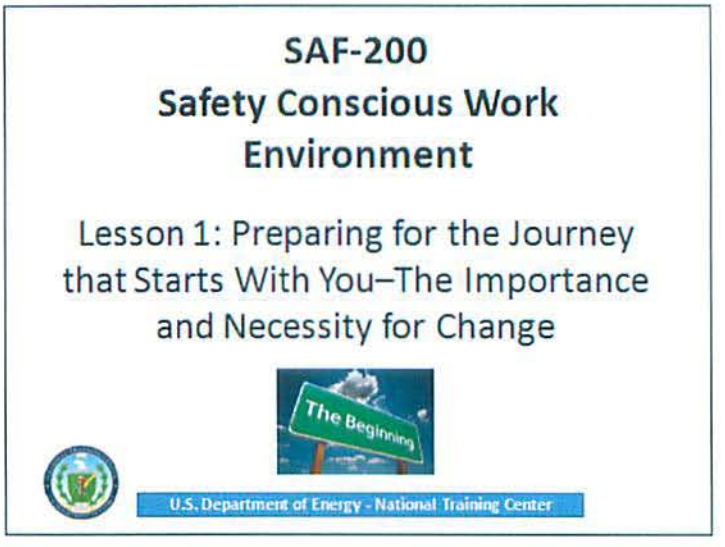

Fig. 1

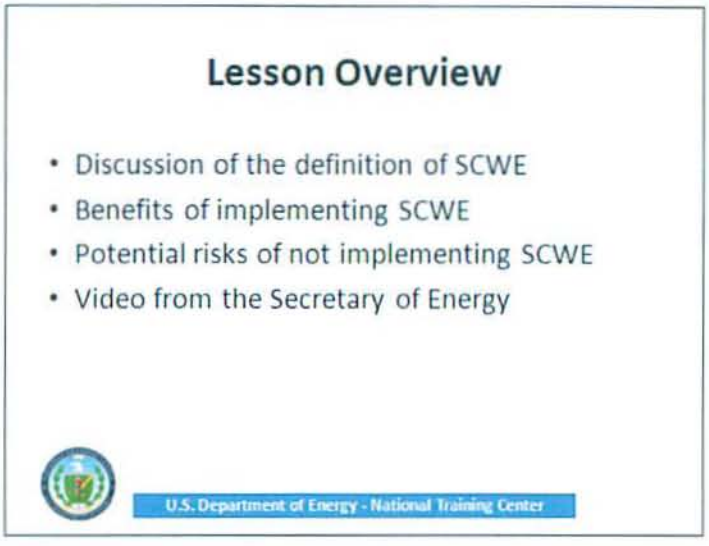

Fig. 2

Introduction

This lesson will start your journey on the implementation of a Safety Conscious Work Environment (SCWE). The lesson begins with a discussion of the definition of SCWE, the importance of and benefits of establishing and maintaining a SCWE, and the potential risks of not establishing and maintaining a SCWE. Some of this information may be new, while other information may be familiar, you may even recognize a few of the SCWE elements that may already be embedded within your systems, structures and processes.

We will continue with a video from the Secretary of Energy on his commitment to establish and maintain a SCWE and his expectations for DOE Federal and contractor senior leaders. Let's begin this lesson with a class discussion of a SCWE.

Instructional Goal

The DOE Federal and/or contractor senior leader will know what a Safety Conscious Work Environment (SCWE) is, their roles and responsibilities in establishing and maintaining a SCWE, the benefits and importance of establishing and maintaining a SCWE, and the risks of not establishing and maintaining a SCWE.

Lesson Objectives

1. 1 Explain the importance of implementing a Safety Conscious Work Environment.

1. 2 Explain the expectations (roles and responsibilities) for DOE Federal and contractor senior leaders in establishing and maintaining a SCWE.

Lesson Development References

1. 10 CFR Part 708, *DOE Contractor Employee Protection Program*
2. 10 CFR 851, *Worker Safety and Health Program*
3. DOE P 450.4A, *Integrated Safety Management Policy*, Apr. 25, 2011
4. 29 CFR Part 24, *Procedures for the Handling of Discrimination Complaints Under Federal Employee Protection Statutes*
5. DOE G 450.4-1C, *Integrated Safety Management System Guide*, Attachment 3, ISM Overview, Sept. 29, 2011
6. DOE G 450.4-1C, *Integrated Safety Management System Guide*, Attachment 10, Safety Culture Focus Areas and Associated Attributes, Sept. 29, 2011
7. DOE P 420.1, *Department of Energy Nuclear Safety Policy*, Feb, 8, 2011

Implementing a Safety Conscious Work Environment

- What is a Safety Conscious Work Environment (SCWE)?

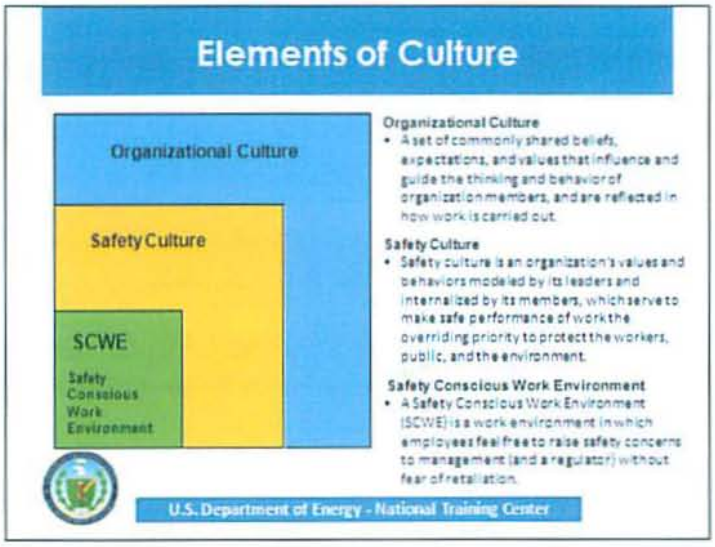

Fig. 5

Integrated Safety Management (ISM) and SCWE

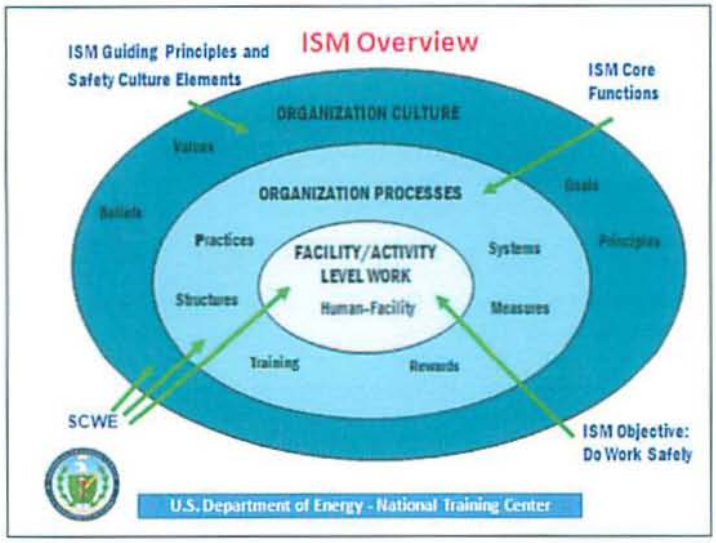

Fig. 6

- What are the attributes/behaviors of a SCWE?

- What are the potential risks of **not** establishing and maintaining a SCWE?

- What are the benefits of establishing and maintaining a SCWE?

Roles and Responsibilities

- What is your role and responsibility for establishing and maintaining a SCWE?

- Watch Secretarial Video

- What is your take away from the S-1 video? How does it change your perspective on your role and/or responsibility for establishing and maintaining a SCWE, if at all?

Note: This information will be used in Lesson 5 to develop your personal action plan.

Secretary of Energy Address to Safety Conscious Work Environment Course

"Hello, and thank you for participating in this important training course. The Energy Department's mission is critical to America's prosperity and security. To succeed, we must ensure the safety and well-being of our people, the public, and the environment.

Nuclear safety is integral to our mission and a core value of the Department. Ensuring nuclear safety requires a strong, healthy safety culture. This in turn requires a commitment to continuous improvement, effective communication, and an environment of trust.

Each one of us is responsible for safety, and we must continually review and improve our approach.

To achieve and sustain a strong safety culture, management must be attentive to interactions with, and reactions to, employees when they bring us issues. As senior leaders for the Department and its contractors, we bear a special responsibility to promote a safety culture that encourages constant vigilance and a questioning attitude.

I hold myself and all of you accountable for fostering a Safety Conscious Work Environment where workers feel free to raise safety concerns without fear of retribution.

Our work is complex and challenging, and we cannot make progress if we don't know about issues because we did not welcome reporting. I tell my managers and employees to bring me tough issues early on. I encourage you to do the same with your colleagues and employees.

I expect management to actively engage with employees. When employees raise issues, they should be involved in determining the solution, and should receive feedback on the resolution of their concerns. Workers should actively participate in the preparation and execution of corrective action plans. And employees must be a part of planning and improvement initiatives at their work locations.

This training is required for senior managers because I expect all of us to constantly learn and improve. Today is an opportunity for you to examine and reflect on how you react when employees bring safety concerns and problems to you.

Throughout the training, please share your thoughts or questions with your colleagues and instructors. The goal today is to equip you to lead a positive cultural shift in your organizations by fostering a work environment that promotes trust, a questioning attitude, and receptiveness to raising issues. This is essential to maintaining nuclear safety and achieving our mission.

Thank you, and I wish you a successful training session."

Summary

This lesson began with a discussion of the Safety Conscious Work Environment (SCWE). A Safety Conscious Work Environment was defined as "...a work environment in which employees feel free to raise safety concerns to management (and a regulator) without fear of retaliation." It continued with a discussion of the benefits of, and potential risks of not establishing and maintaining a SCWE.

The Secretary of Energy relayed his expectations for you, the DOE Federal and contractor senior leaders, for establishing and maintaining a SCWE. The class reviewed the written comments of the Secretary and discussed their roles and responsibilities in light of his comments. The bottom line is that the senior leader has the ultimate responsibility for establishing and maintaining a SCWE.

Lesson 2: Warming Up Your Engine--Case Study

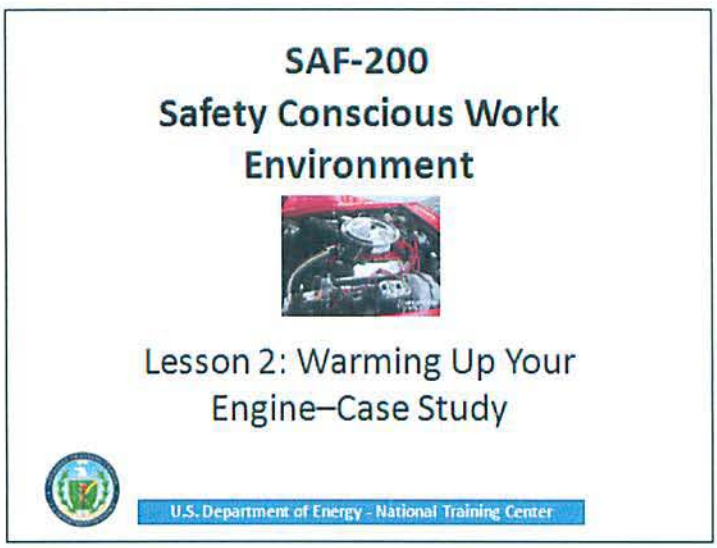

Fig. 13

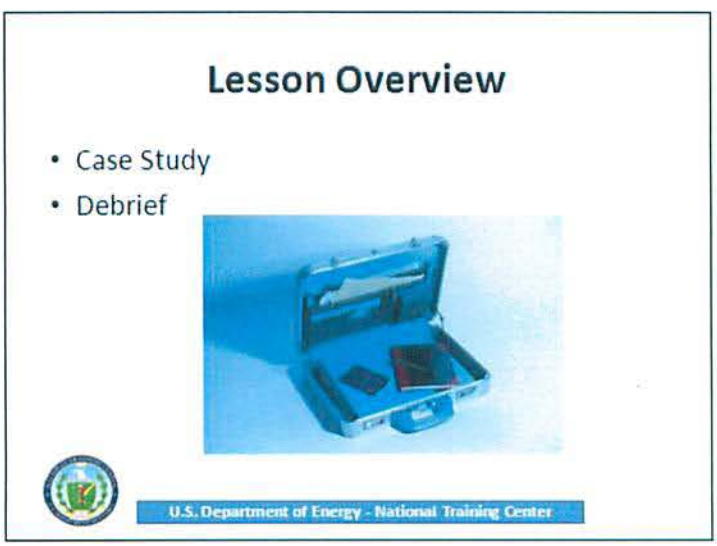

Fig. 14

Introduction

This lesson will provide an opportunity to work on a case study based on a composite of real situations encountered at DOE sites. Using DOE G 450.4-1C, *Integrated Safety Management System Guide*, DOE Federal and contractor senior leaders will use the ISM Safety Focus Areas and Associated Attributes to engage in individual analysis, small group evaluation, and large group discussions of the case study to report recommendations, conclusions, and share practices.

Instructional Goal

The DOE Federal and/or contractor senior leader will be able to identify barriers to establishing and maintaining a Safety Conscious Work Environment (SCWE).

Lesson Objective

2. 1 Given a case study and working in small groups, locate the SCWE issues and/or other barriers to establishing a Safety Conscious Work Environment (SCWE) within the case study.

Warming Up Your Engine

Instructions on the Case Study–This is a four-part exercise

Part 1: Small Group Exercise

- Break into your assigned small group
- Using the Lesson 2 case study, answer the following questions:
  - — Do you terminate Jesse?
  - — Do you need more information?
  - — If so, what information do you need?
  - — Are there any other immediate actions you need to take?
- Capture your group responses on a flip chart
- Select a spokesperson to present your responses to classroom

Part 2: Classroom Discussion

- Spokesperson presents responses to the classroom
- Respond to questions from classroom

Part 3: Individual Exercise

- Review the case study (Lesson 2 Handout)
- Review DOE G 450.4-1C, ISM Guide, Attachment 10, *Safety Focus Areas and Associated Attributes* and the case study
- In the SCWE-Related Associated Attributes (highlight/blue text), identify five elements relevant to this case
- Using a marker provided by the instructors, mark the five elements you identified on the SCWE-Related Associated Attributes Poster (on the classroom wall)

Part 4: Classroom Discussion

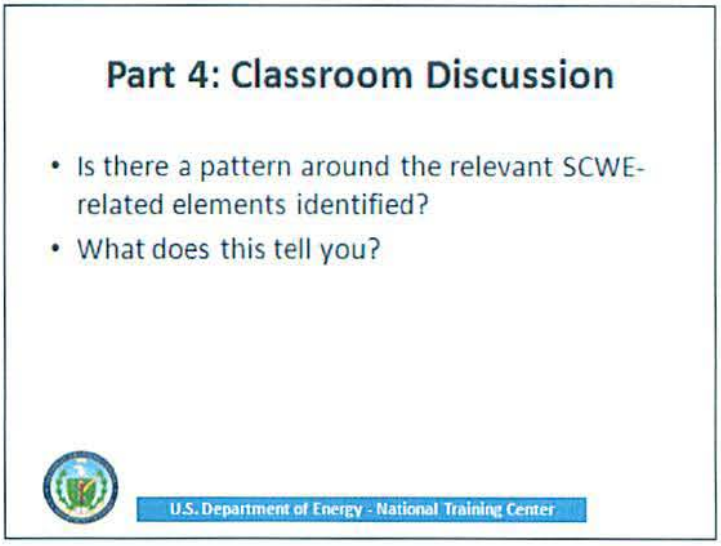

Fig. 19

- Is there a pattern around the relevant SCWE-related elements identified?
- What does this tell you?

Case Study Summary

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Lesson 3: Blind Spots and Road Hazards--Sharing Lessons Learned

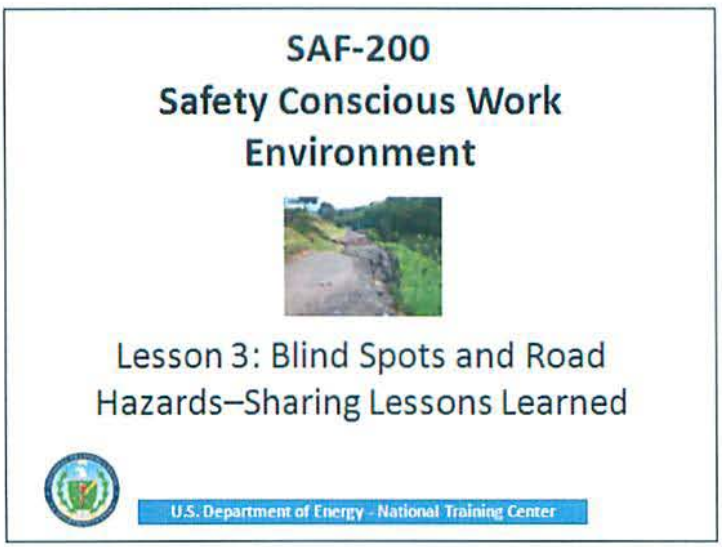


Fig. 20

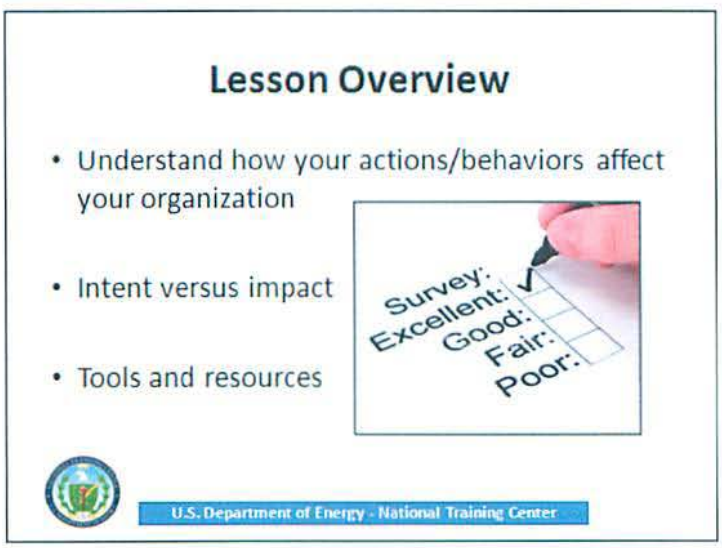


Fig. 21

Introduction

This lesson will expand on the discussion of the DOE ISM Safety Focus Areas and begin to delve into a comprehensive discussion of the associated attributes within each area. It will address behavioral elements underlying the associated attributes, while providing tools that can help the senior leader implement them. Best practices used by instructors and senior leaders in the field will be discussed during this lesson. Senior leaders will be expected to identify how these tools may be utilized in the case study referenced in Lesson 4.

Instructional Goal

The DOE Federal and/or contractor senior leader will be able to identify behaviors that promote a positive SCWE, as well as contribute to a chilling effect; they will utilize tools to assist in establishing and maintaining a Safety Conscious Work Environment, and they will be able to respond to and mitigate a chilling effect.

Lesson Objective

3. 1 Discuss the impact that the behaviors of leadership and employees have on the implementation and maintenance of a Safety Conscious Work Environment.

Lesson Development Reference

1. DOE G 450.4-1C, *Integrated Safety Management System Guide*, Sept. 29, 2011

Blind Spots and Road Hazards

Evaluating Impact to the Work Environment

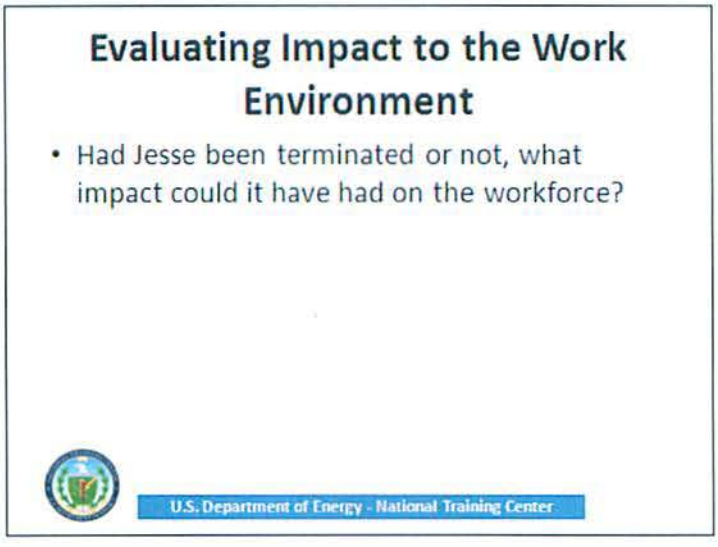


Fig. 22

- Had Jesse been terminated or not, what impact could it have had on the workforce?

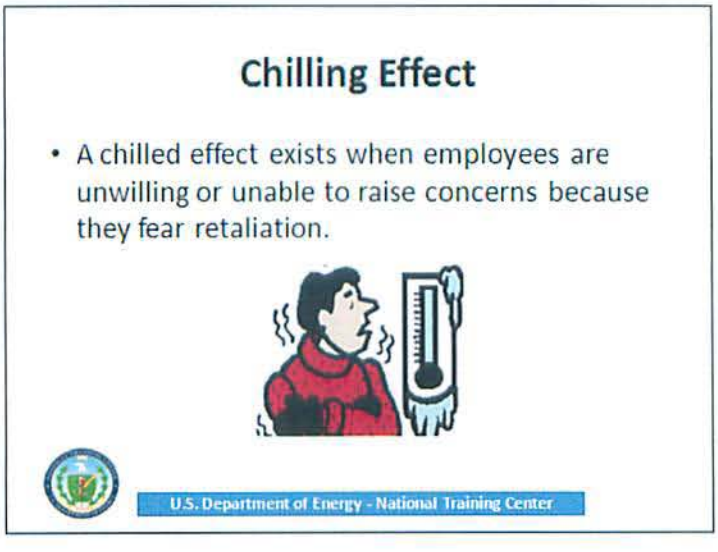


Fig. 23

Rate Your Organization

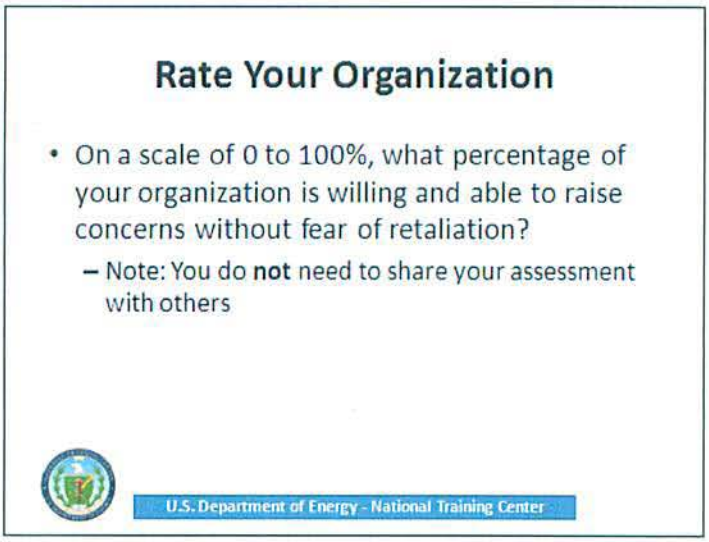
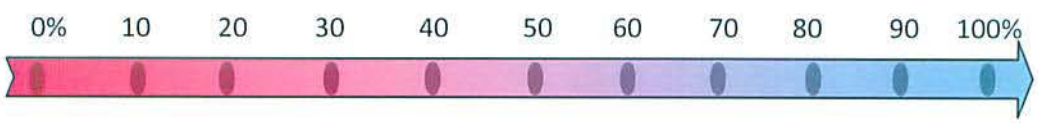


Fig. 24

On a scale of 0 to 100%, what percentage of your organization is willing and able to raise concerns without fear of retaliation? [You do not need to share this with others.]



Unwilling/Unable Willing/Able to raise concerns to raise concerns

Instructions: Classroom Exercise–This is a two-part exercise

Part 1: Individual Exercise

- Rate your organization on the scale listed above
- Also identify your rating in your book and on the slip handed out by the instructors
- Submit your completed slip to the instructors

Part 2: Classroom Discussion

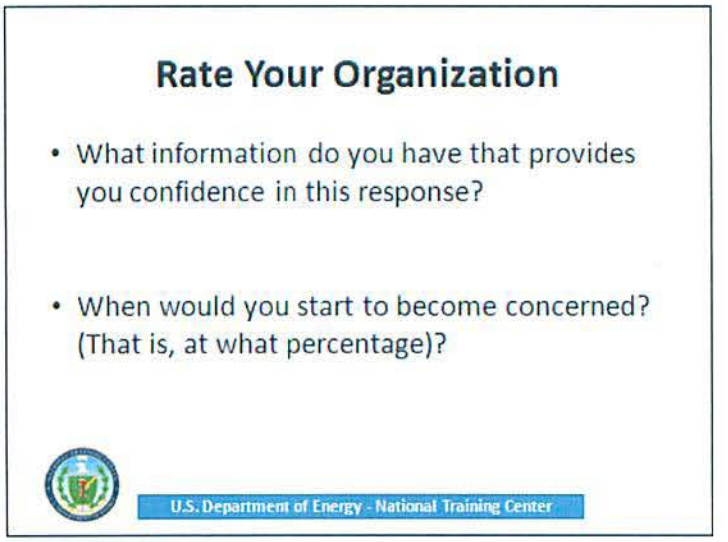


Fig. 25

- What information do you have that provides you confidence in this response?
- When would you start to become concerned?

Federal Employee Viewpoint Survey (FEVS)

The Federal Employee Viewpoint Survey is a survey issued by the Office of Personnel Management (OPM). The FEVS was initially issued in 2002, and repeated in 2004, 2006, 2008, 2010, and 2011, and 2012. Results from 2012 are pending.

FEVS:

- Is a critical tool for driving change within the Federal government
- Measures employees' perceptions, specifically whether, and to what extent, conditions that characterize successful organizations are present within their agencies
- Responses aid leadership in assessing the human capital climate and work environment
- General indicators provide Federal leaders information on:
  - Effectiveness/Efficiency of Federal Government HR management systems
  - What they can do (on an individual level) to make their agency work better

Participation included:

- 25 Large Federal Agencies
- 54 Small Federal and Independent Agencies
- 97% of participants came from executive branches

- Data was weighted to ensure unbiased statistically unbiased results due to differing response rates among the various demographic groups
- Adjusted for over- and under-represented groups within sample
- **49.3% Participation Rate (266,376 of 540,727 Returned)**

One question/statement on the FEVS is:

17. I can disclose a suspected violation of any law, rule or regulation without fear of reprisal.

Exercise Instruction: Classroom Discussion

- What do you believe the responses were to this question for DOE in 2011?

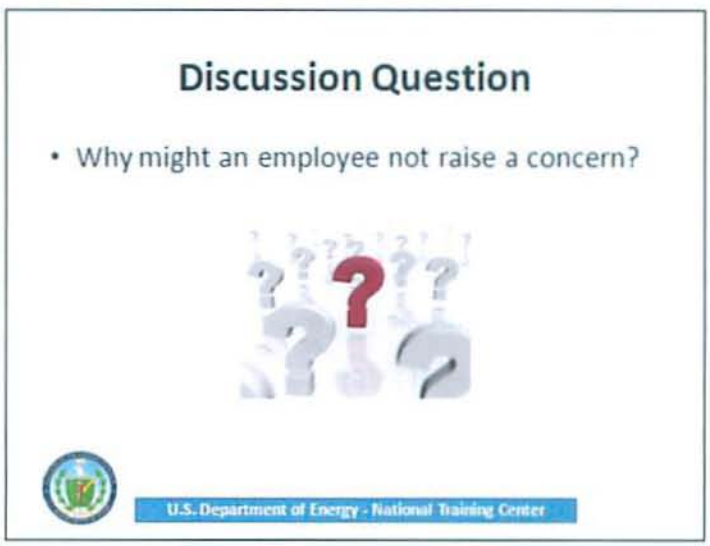


Fig. 26

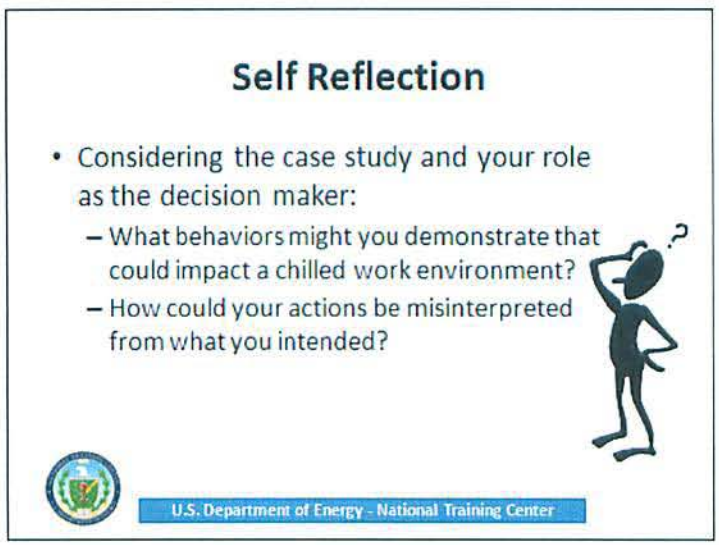


Fig. 27

Intent versus Impact–What About Communication?

Video excerpts

Exercise: Small Groups

Objective: Understand and identify behaviors that contribute to perceptions. Understand intentions and impact are not always the same and can result in a chilled environment.

Instructions

- Break into four pre-assigned small groups.
- The instructor will identify a specific number of video vignettes that will be shown and identify a video vignette "number" to be assigned to your group (for example, Video Vignette #1).
- Each small group will have 10 minutes to prepare responses to the following questions:
  - What was the intent of individual?
  - What were the behaviors of the individual?

- What was the impact on the individual receiving the communication?

- What kind of environment did this communication create?

- How likely is it that there is a chilling effect in this environment?

- Select a spokesperson to present responses
- We bring our "whole self" to work
  - Influenced by:

Values	***Assumptions***	***Beliefs***
Experiences	***Education***	***Culture***
Family	***Ethnicity***	

  - Creates "filters" and limitations
  - What is clear to one of us–may not be clear to the other
- Communication occurs in many ways–not just verbal

  - Words ____ % What we say
  - Tone of Voice ____ % (Pitch/Sound/Volume)
  - Body Language ____ % (Eye contact/Competence/Charisma)

The Dirty Dozen

Fig. 30

- The left-hand column describes blatant behaviors
  - Behaving in any of these ways will stop the conversation with anyone bringing an issue
  - The right-hand column describes more subtle behaviors
  - If an individual "senses" you demonstrate these behaviors (intentional or unintentional) before they believe you understand their issue, they may interpret you have not listened, you do not care, or that you have no intent to address the issue identified

Getting on the Road to a Healthy Work Environment

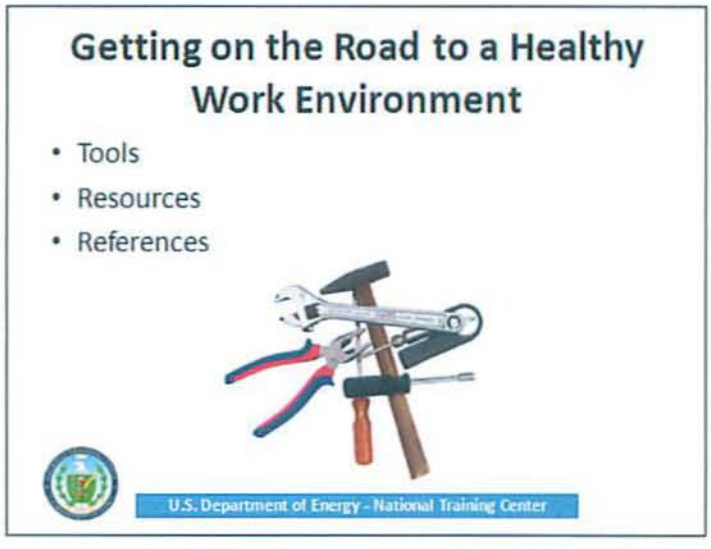


Fig. 31

Tools

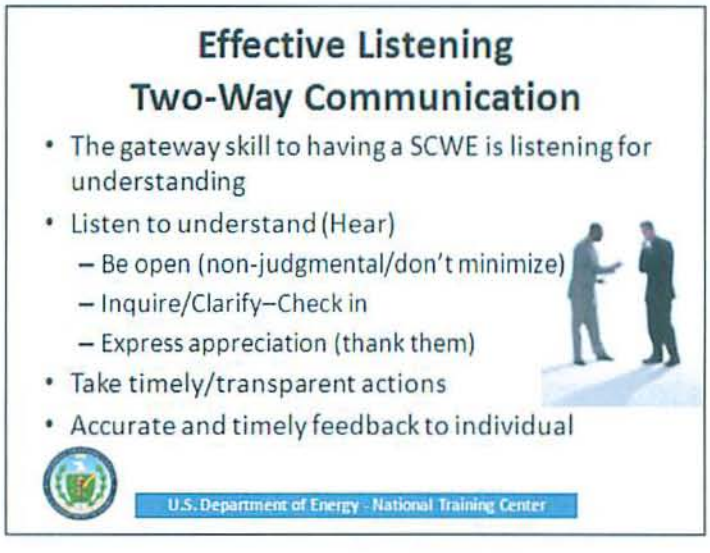


Fig. 32

- Effective listening (Two-way communication)
  - The gateway skill to having a SCWE is listening for understanding
  - Listen to understand (hear)
  - Be open (that is, not judgmental/don't minimize)
  - Inquire/Ask what they need

- Express appreciation (thank them)
- Ensure timely/transparent actions are taken (provide action/dates/times, if possible)

- Listen to understand (Hear)
  - Be open (non-judgmental/don't minimize)
  - Inquire/Clarify–Check in
  - Express appreciation (thank them)
  - Take timely/transparent actions
  - Accurate and timely feedback to individual

Pinch-Crunch Model

- Questions to ask when recognizing a pinch or crunch
  - What expectations of mine weren't met? What expectations of theirs weren't met?
  - Were these expectations clear, specific, and stated? Am I sure they were understood? How do I know?
  - What needs to happen now to resolve it? Does that need to happen within me or with someone else?

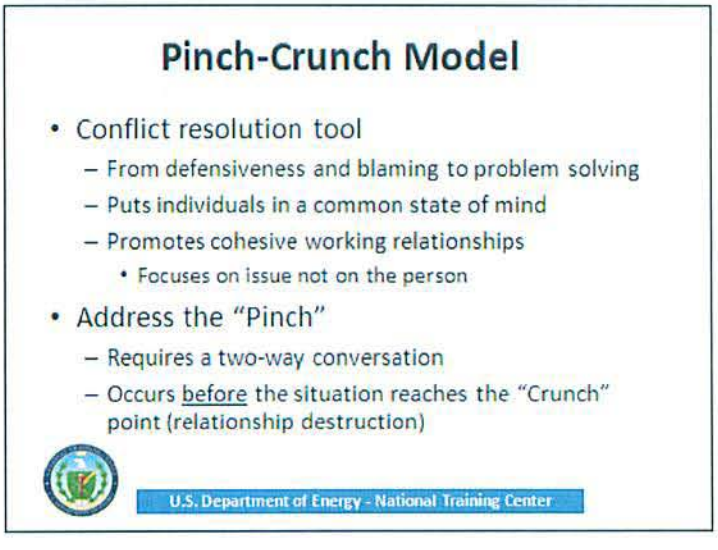


Fig. 33

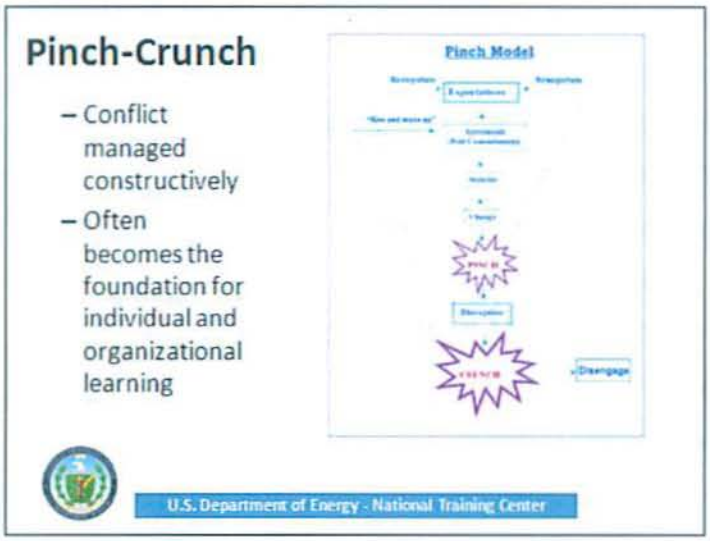

Pinch-Crunch
– Conflict managed constructively
– Often becomes the foundation for individual and organizational learning
Pinch Model
U.S. Department of Energy - National Training Center

Fig. 34

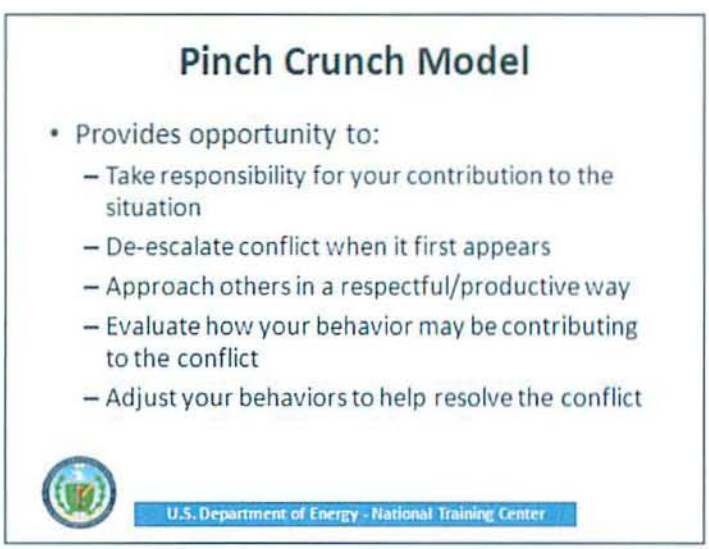

Pinch Crunch Model
• Provides opportunity to:
– Take responsibility for your contribution to the situation
– De-escalate conflict when it first appears
– Approach others in a respectful/productive way
– Evaluate how your behavior may be contributing to the conflict
– Adjust your behaviors to help resolve the conflict
U.S. Department of Energy - National Training Center

Fig. 35

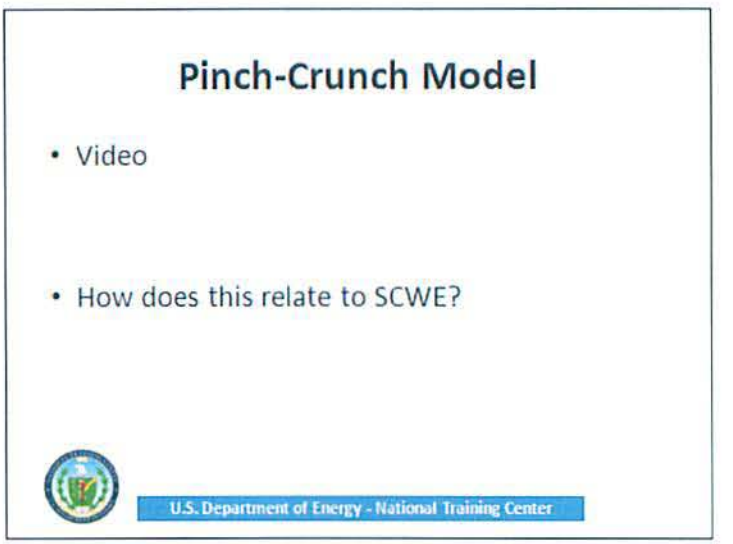
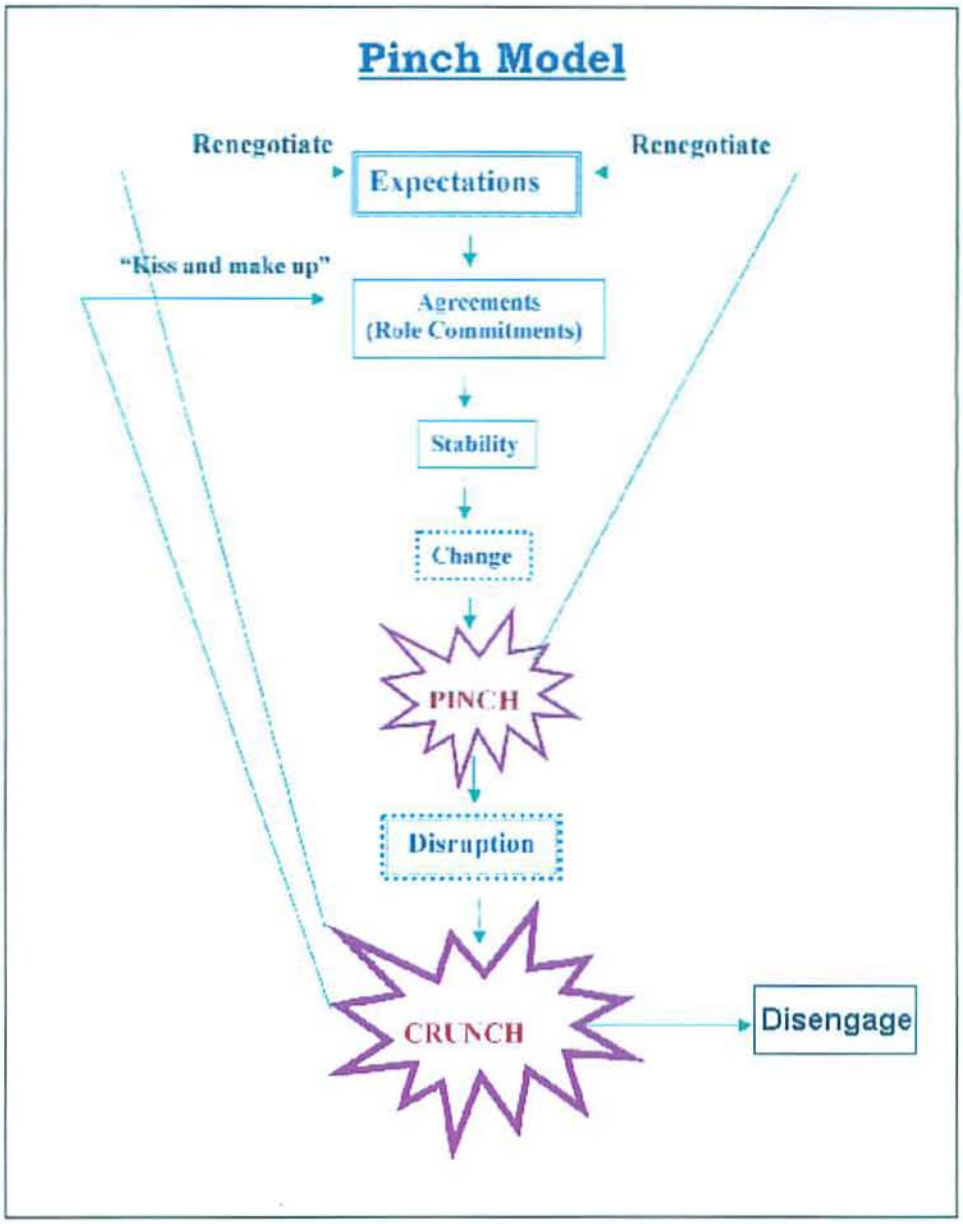

Pinch-Crunch Model
• Video
• How does this relate to SCWE?
U.S. Department of Energy - National Training Center

Fig. 36


Pinch Model
Renegotiate
Renegotiate
Expectations
"Kiss and make up"
Agreements
(Role Commitments)
Stability
Change
PINCH
Disruption
CRUNCH
Disengage

Ladder of Accountability

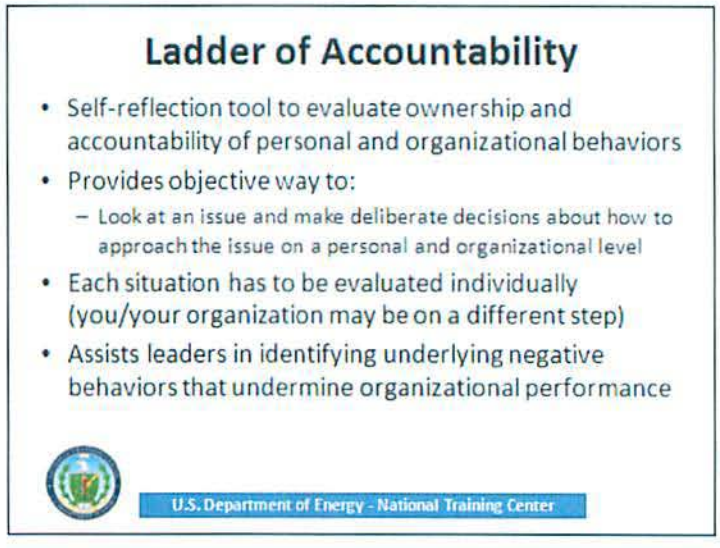


Fig. 37

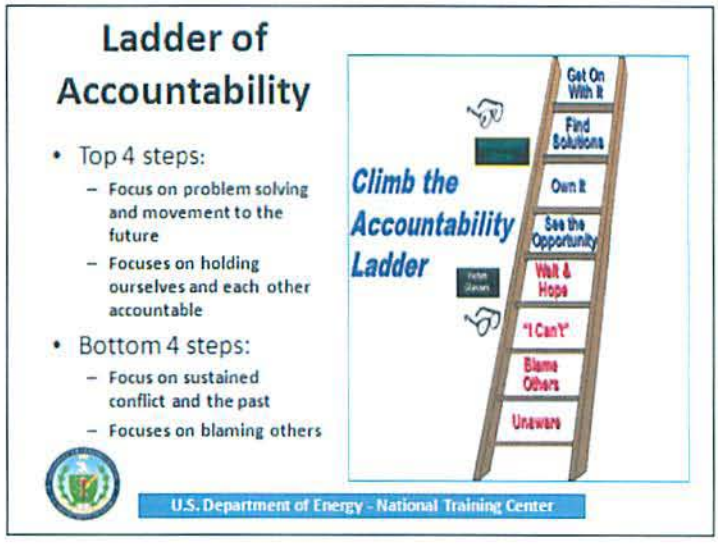
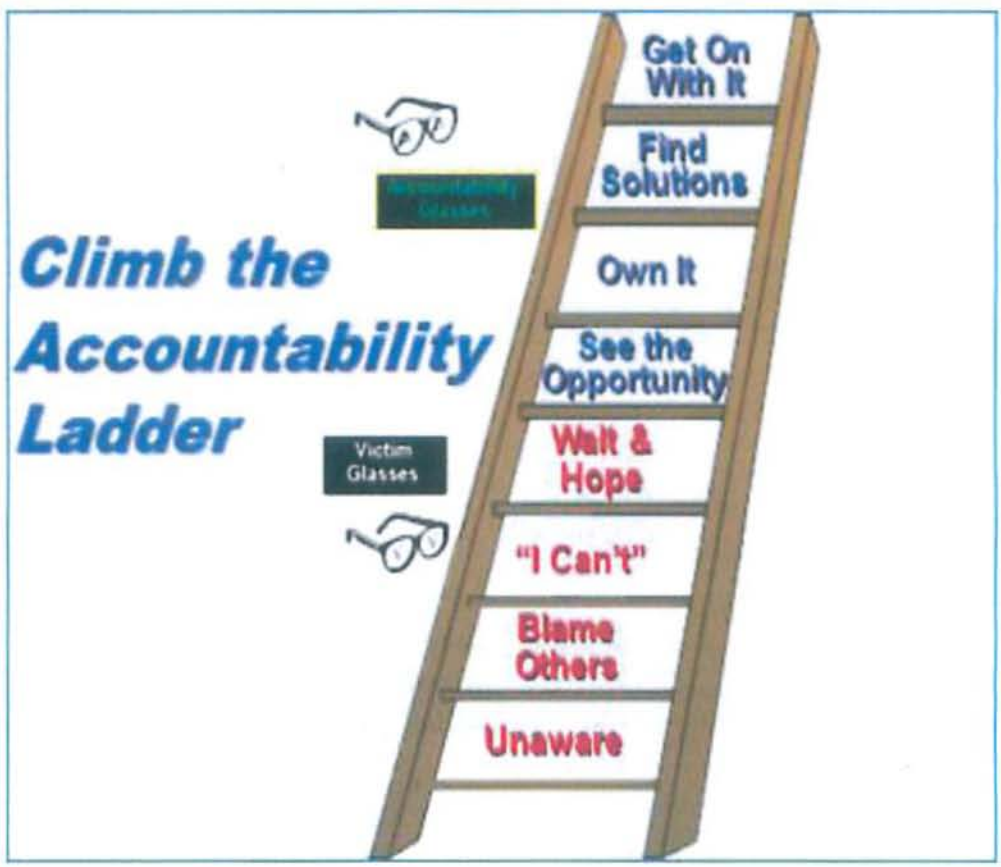


Fig. 38

- Visual tool that provides individuals the ability to evaluate their individual behaviors as well the organizations behaviors for ownership and accountability
- Assists leaders in identifying underlying negative behaviors that undermine
  - An effective way to look objectively at an issue and make some deliberate choices about how you want yourself, and your organization to approach issues

- Provides effective utilization of "positive" reinforcements to move behavior up the ladder
- The greater the percentage of employees/team members who choose stances in the top portion of the ladder, the greater the chance of successful collaboration to attain mission objectives and goals
- Lead by example and demonstrate the behaviors that consistently put you at the top of the ladder



Fair and Consistent Treatment of Employees

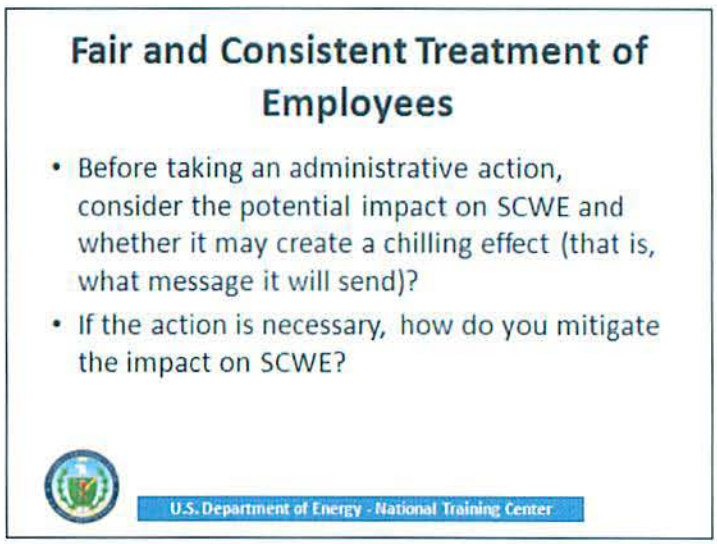


Fig. 39

Walk-Abouts

Fig. 40

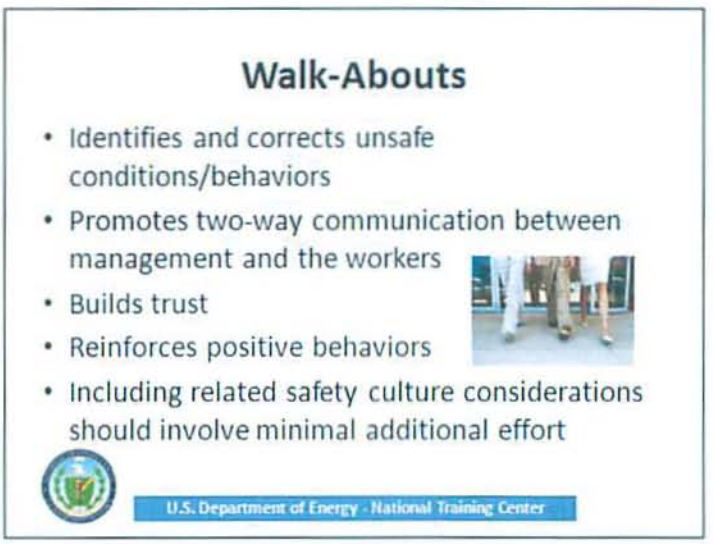


Fig. 41

- Managers and supervisors consistently observe work performed in the field and provide real-time feedback.
- Things that could prevent work from being successful (that is, error-likely situations) are identified and removed and discussed as appropriate.
- Expected behaviors are reinforced positively, and behavioral shortfalls are corrected.
- Work packages, procedures, work plans, and so forth are accurate, walked down, reviewed and ready.

Note: Timing is everything (no Friday afternoons)

Summary

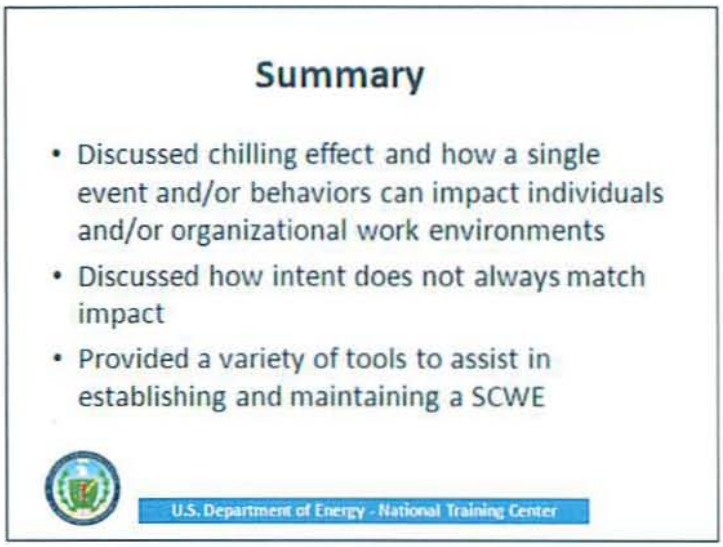


Fig. 42

This lesson provided foundational information and tools to effectively establish and mitigate a SCWE, as well as prevent and mitigate a chilling effect. Senior leaders and instructors also provided best practices from their experience that would help in the implementation of SCWE.

You may be asked to find ways to apply these tools and best practices in the second part of the case study.

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Lesson 4: Shifting Gears, Gaining Ground, Utilizing Your Pit Crew and Toolbox--Case Study

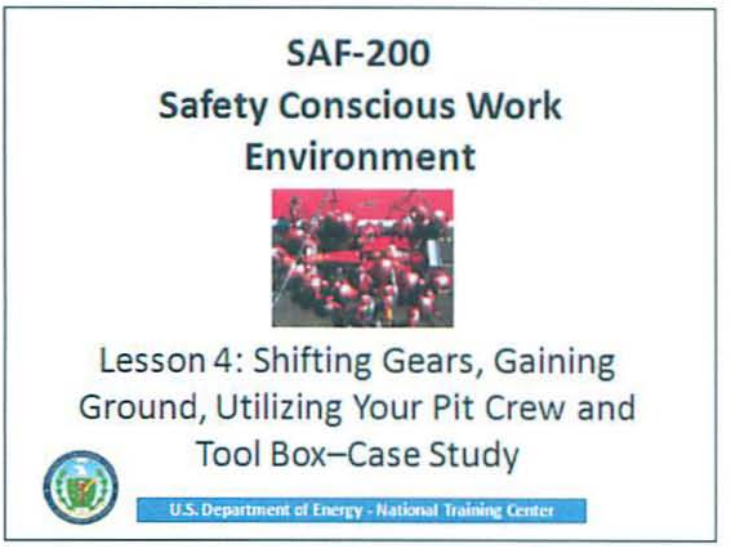

Fig. 43

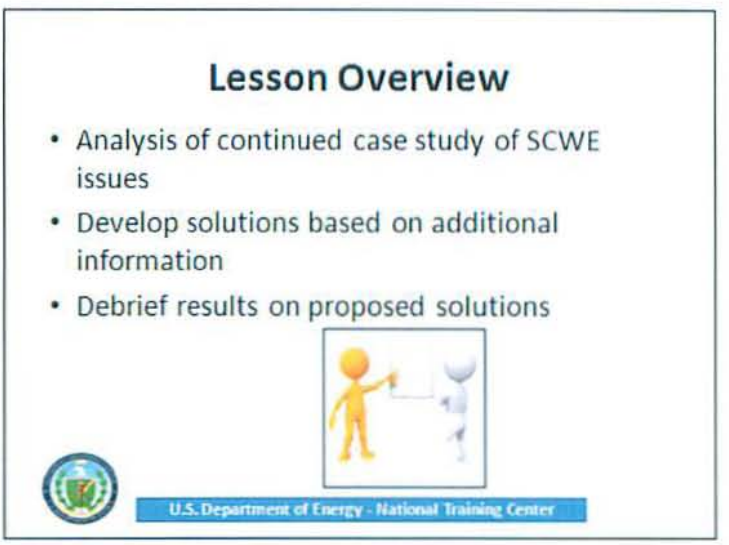

Fig. 44

Introduction

This lesson will challenge each group as they analyze part II of the case study. Senior leaders will analyze the additional data and develop new conclusions and recommendations based on the information provided in Lesson 4. Each group will debrief their results to the class and be prepared to defend their respective solutions.

Instructional Goal

The DOE Federal and/or contractor senior leader will be able to identify barriers to establishing a Safety Conscious Work Environment (SCWE).

Lesson Objective

4. 1 Given a complex case study involving a composite of a real situation encountered at DOE sites and working in small groups, locate the Safety Conscious Work Environment (SCWE) issues within the case study, develop/discuss proposed solutions to the issues and the impacts those solutions may have on the work environment (real or perceived).

Shifting Gears, Gaining Ground, Utilizing Your Pit Crew and Toolbox

Lesson 4 Instructions: This is a two-part exercise

Part 1: Small Group Exercise

- Break into your assigned small group
- Using the Lesson 4 case study, answer the following questions:
  - How has the new information changed the situation?
  - What risks exist to the organization?
  - What red flags do you see that you did not see before?
  - How did management contribute to the CWE?
  - How can you recover/mitigate this situation?
  - How might you have prevented some of these issues? In Lesson 3, you were provided with a variety of tools. Which tools could you have used to prevent this? Which tools can you use now? Why/Why not? How can these tools be leveraged to assist you?
  - What assistance do you need from others? What options do you have? Where can you get the assistance?
- Capture your group responses on a flip chart
- Select a spokesperson to present your responses to classroom

Part 2: Classroom Discussion

- Spokesperson presents responses to the classroom
- Respond to questions from classroom

Questions to discuss after reading the case study

- How has the new information changed the situation?
- What risks exist to the organization?
- What red flags do you see that you did not see before?
- How did management contribute to the chilled work environment?
- How can you recover/mitigate this situation?

- How might you have prevented some of these issues? In Lesson 3, you were provided with a variety of tools. Which tools could you have used to prevent this? Which tools can you use now? Why/why not? How can these tools be leveraged to assist you?
- What assistance do you need from others? What options do you have? Where can you get the assistance?

Case Study Summary

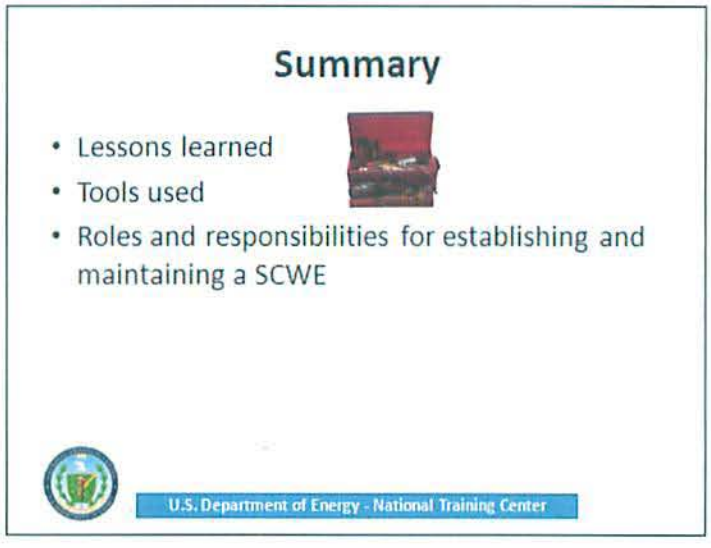

Fig. 49

Lesson 5: Ensuring You Reach Your Destination--Defining the First Steps for Your Journey Ahead

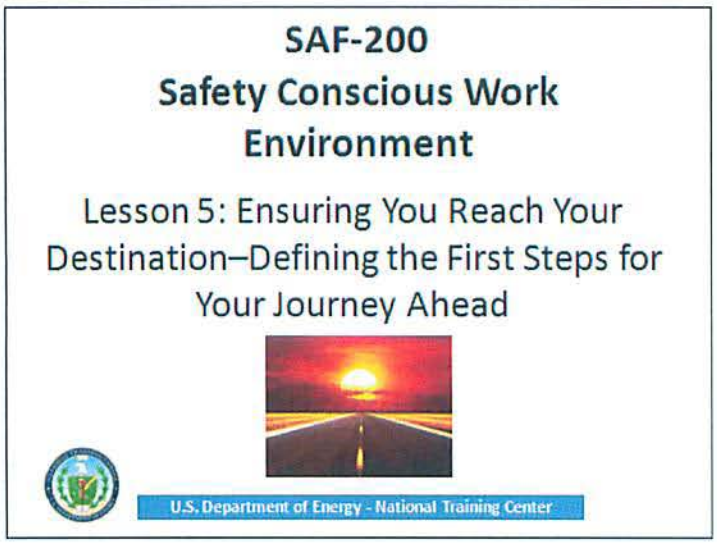

Fig. 50

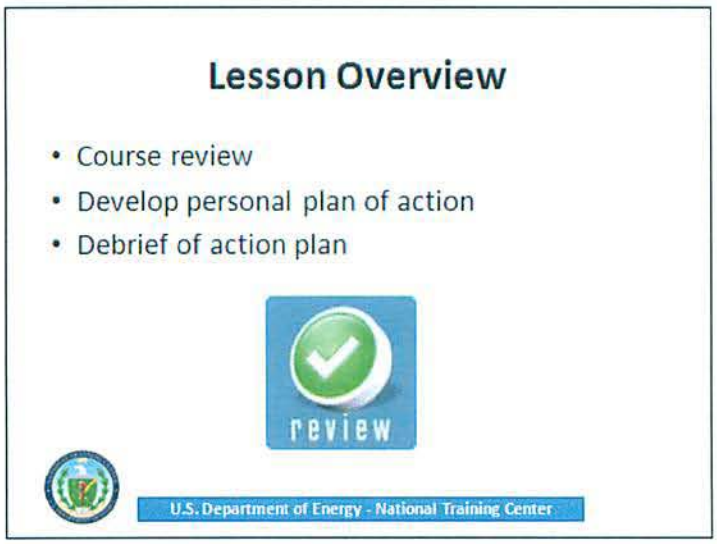

Fig. 51

Introduction

This lesson will provide you with an opportunity to reflect on the lessons of today. Take this time to consider how your site would benefit from the implementation of a SCWE. We hope you use this time to consider goals as well as personal behaviors that might help in the implementation of
a SCWE.

Instructional Goal

The DOE Federal and/or contractor senior leader will be able to implement a Safety Conscious Work Environment at their facility using the information provided in this course.

Lesson Objective

5. 1 Using the information provided in this course, explain what behaviors the senior leader will need to demonstrate in order to establish a work environment that promotes trust, a questioning attitude, and a willingness to raise issues within the Department of Energy.

Ensuring You Reach Your Destination

Course Review

Lesson 1: Preparing for the Journey That Starts With You–The Importance and the Necessity for Change

- Definition of SCWE
- Attributes/Behaviors of a SCWE
- Potential risks of **not** implementing SCWE
- Benefits of implementing SCWE
- Video from the Secretary of Energy

Lesson 2: Warming Up Your Engine–Case Study

- Worked in groups to analyze a composite case study
- Discussed conclusions of group work

Lesson 3: Blind Spots and Road Hazards–Sharing Lessons Learned

- Understand how your actions/behaviors affect your organization
- Intent versus impact
- Tools and resources

Lesson 4: Ensuring You Reach Your Destination–Defining the First Steps for Your Journey Ahead

- Analyzed continued case study of SCWE issues
- Developed solutions based on additional information
- Debriefed results on proposed solutions

Activity Instructions

- Review your pre-assessment document
- What behavior(s) will you change when you go back to your workplace?

- List two short-term goals and expected results
  - What will it look like/feel like?

  - How are these different from today?

- List a way you will measure the progress of these short-term goals

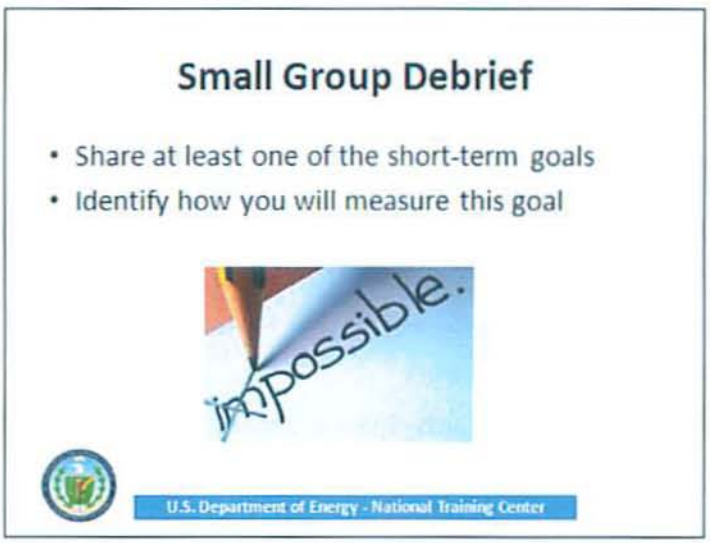

Fig. 53

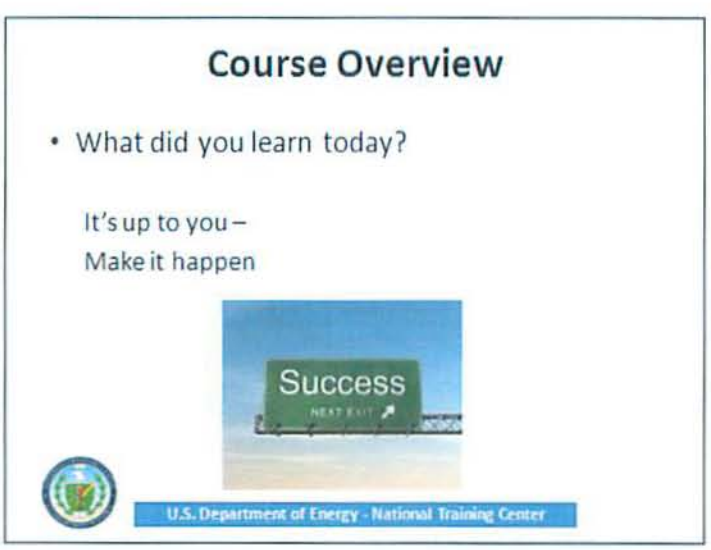

Fig. 54


Climb the Accountability Ladder
Get On With It
Find Solutions
Own It
See the Opportunity
Wait & Hope
"I Can't"
Blame Others
Unaware
U.S. Department of Energy - National Training Center

Fig. 55

Safety Conscious Work Environment Self-Assessment Guidance

PURPOSE

DOE Guide 450.4-1C, *Integrated Safety Management System Guide* (ISMS Guide), 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." Safety conscious work environment (SCWE) is a subset of safety culture related to a work environment in which employees feel free to raise safety concerns to management (and/or a regulator) without fear of retaliation. In the Department's Implementation Plan (IP) for Defense Nuclear Facilities Safety Board (DNFSB) Recommendation 2011-1 (*Safety Culture at the Waste Treatment and Immobilization Plant),* DOE committed to performing an extent of condition review. The extent of condition review includes both independent reviews and self assessments. Action 2-4 of the IP is to prepare guidance that addresses SCWE for use in the self-assessments. The purpose of this guidance document is to provide assistance to organizations performing a self-assessment of attributes and elements of SCWE in accordance with Action 2-5 of the IP. It includes information useful to preparing the self-assessment scope and selecting assessment methods.

The Recommendation 2011-1 self-assessments are an activity aimed at continued engagement of Line Management in the process of managing safety culture and evaluating the effectiveness of programs and processes related to establishing and maintaining a healthy SCWE. It is intended to provide DOE and contractors confidence that they understand strengths and shortfalls related to standards of excellence in SCWE.

DOE's understanding of the extent of condition will also be informed by independent HSS oversight of the self-assessment process, conducted in accordance with Action 2-7 of the IP. This independent oversight has already included review and comment by HSS personnel on this self-assessment guidance. HSS will also conduct an independent review of safety culture at selected major DOE projects as outlined in Action 2-6 of the IP to assist the Department in the development of its understanding of safety culture and SCWE at DOE defense nuclear facilities.

The self-assessment guidance was developed using the attributes associated with an excellent safety culture described within DOE Guide 450.4-1C, *Integrated Safety Management System Guide* and key lessons learned from independent assessments of safety culture performed by the Department of Energy (DOE) Office of Health, Safety and Security (HSS). This self-assessment guidance identifies the ISMS safety culture attributes that offer the greatest potential for achieving SCWE excellence. Management is expected to use this guidance to compare current performance with lines of inquiry (LOIs) that define best practices and standards of excellence, to identify strengths and opportunities for improvement in performance effectiveness. DOE plans to conduct a workshop(s) on use of the self-assessment guidance.

DEVELOPMENT and USE of SELF-ASSESSMENT LINES of INQUIRY

The 2011-1 Implementation Plan commits to performing extent of condition reviews to determine whether SCWE weaknesses exist at other DOE sites and Headquarters and to identify gaps to achieving an excellent SCWE. As noted in the Implementation Plan the self-assessments are to be based on the safety culture guidance in the ISMS Guide and "key lessons learned" from the HSS review. The self-assessment lines of inquiry (LOIs) described in Attachment 1 were developed in accordance with that commitment. The Response Team also evaluated the findings of the Depatment's recent review of safety culture at major DOE construction projects (*Management of Nuclear Construction Projects That Exceed $1Billion: Impact of Safety Culture*, Report to Congress, May 2012) for insights relevant to the development of this self-assessment guide.

The importance of management's role in establishing a strong SCWE at the Waste Treatment Plant was a key lesson learned from the HSS and DOE reviews. The SCWE self-assessment guidance was developed by comparing the Nuclear Regulatory Commission guidance on SCWE against the detailed description of the attributes of safety culture described by DOE in Attachment 10 to the ISMS Guide. The attributes of safety culture excellence italicized below were those that most clearly support SCWE at DOE facilities:

Leadership Focus Area

a. Demonstrated safety leadership
b. Risk-informed, conservative decision-making
c. Management engagement and time in the field
d. Staff recruitment, selection, training, and development
e. Open communication and fostering an environment free from retribution
f. Clear expectations and accountability

Employee Engagement Focus Area

a. Personal commitment to everyone's safety
b. Teamwork and mutual respect
c. Participation in work planning and improvement
d. Mindful of hazards and controls

Organizational Learning Focus Area

a. Credibility, trust and reporting errors and problems
b. Effective resolution of reported problems
c. Performance monitoring through multiple means
d. Use of operational experience
e. Questioning attitude

The ISMS Guide provides a set of characteristics for each safety culture attribute. The characteristics for each safety culture attribute were developed to promote a shift from mere compliance toward excellence in both safety and production performance. Therefore, these characteristics were evaluated for their relevance to SCWE and subsequently used to develop self-assessment lines of inquiry. Benchmarking SCWE to the level of excellence defined by the characteristics associated with the ISM Focus Area attributes is intended to create assessment results that help to drive continuous improvement.

Focusing the scope of the self-assessment on SCWE is not meant to de-emphasize the role that the other attributes play in implementing a sound safety culture at DOE sites and facilities, but to focus initially on determining if problems similar to those encountered in safety culture implementation at WTP exist elsewhere. DOE determined, in its causal analysis in the IP that attributes directly related to SCWE were fundamental to the safety culture issues at WTP. Based on the outcomes of the SCWE evaluations, the reviews at individual sites may be expanded to address other safety culture elements, as stated in the IP.

A supplemental assessment area is included to evaluate the performance measures available to measure behaviors related to SCWE and to determine whether there are contract incentives that might contribute to safety culture deterioration. These were elements that were found to have contributed to safety culture deficiencies at WTP and were also highlighted in the DOE review of major projects.

Safety culture is manifested in the attitudes and behaviors of an organization's workers. The results of these attributes and behaviors can be observed and indirectly measured in performance metrics. Therefore, a perspective on the results of an organization's behavior can be gained through an evaluation of performance metric data. The results of such an evaluation may indicate that the self-assessment team needs to dig deeper on a particular topic. For example, consider a situation where the metrics related to reportable events indicate a decreasing trend in the number of reportable events per quarter while there is an increasing trend in the significance of reported events. Such metric results may represent a combination that warrants additional investigation to better understand the behavior and underlying causes associated with those trends.

Through use of these LOIs, teams will assess the effectiveness of SCWE-related programs and the manager/supervisor role in nurturing a SCWE by demonstrating behaviors such as listening to employees and not allowing safety issues to languish. Two SCWE-related programs specifically identified in the 2011-1 IP are the Differing Professional Opinion (DPO) process and the Employee Concerns Program (ECP).

The self-assessment results obtained by applying these LOIs at each Site or Area Office will be documented to meet the commitment stated in Action 2-5 of the 2011-1 IP. The LOIs contained within this guidance document represent the minimum set necessary to ensure consistent

application across the DOE complex. They were written broadly so as to be applicable to assessing SCWE at any DOE/NNSA site and may be tailored to accommodate differing terminology used at a particular site. Organizations may elect to define additional LOIs. However, headquarters program office approval is required prior to deleting or significantly revising the LOIs defined in this guidance document.

SELF ASSESSMENT TEAM COMPOSITION

The self-assessment team composition has a direct impact on the overall quality of the self-assessment. Information in NEI-09-07, *Fostering a Strong Nuclear Safety Culture,* was adapted to develop guidance pertaining to team composition for self-assessments to be performed at DOE. A team should be comprised of a team leader, an advisor, a team executive, a nuclear safety culture subject matter expert (SME), team members, and administrative support. All personnel conducting the self-assessment should be knowledgeable of the principles associated with safety culture and a safety conscious work environment.

The team leader is responsible for preparation and conduct of the assessment and for writing the assessment report. In order to personnally engage Line Management in the process of evaluating the effectiveness of programs and processes related to establishing and maintaining a healthy SCWE, the team leader may be from the organization being assessed. The team leader ensures that the team is adequately staffed to achieve the objectives of the assessment. The team leader also ensures that team members have sufficient SCWE expertise to assess assigned focus areas and provide training when needed.

The team leader also provides leadership to the team in completing the following planning activities:

- Develop a thorough scope of work to guide the assessment incorporating the LOIs described within this guidance document,
- Determine the methods to be used to evaluate each LOI, and
- Where possible, consider and credit recent self-assessments and action plans already in place as one data source for LOIs that were addressed.

The team advisor supports the team leader and brings independence to the team. The advisor must not be selected from the organization being assessed. Given this independence, the team advisor should interview and collect data from management representatives. The team advisor will also help bring outside perspective to the gathering and interpretation of data. For teams assessing contractor organizations in the field, the DOE field office will review and concur with the selection of the advisor. The Headquarters program office will review and concur with the selection of the advisor for teams assessing DOE organizations in the field.

The team executive brings senior management insight and independence to the team. The team executive works with and mentors the team in the development of results by bringing an executive's viewpoint and personal experience in nuclear facility management. The team executive may not be selected from the site where the organization is being assessed. For teams assessing contractor organizations in the field, the DOE field office will review and concur with the selection of the team executive. The Headquarters program office will review and concur with the selection of the team executive for teams assessing DOE organizations in the field.

The safety culture SME assists the team leader with determining what team training is necessary (based upon the experience and expertise of team members) and by providing subject matter advice related to SCWE and safety culture to team members.

Team members conduct individual and group interviews and observe activities using standard sets of questions based upon the LOIs defined within this assessment guidance. The number of team members should reflect the number of employees and size of the organization(s) being assessed. At least one team member should not be from the organization(s) being assessed; for large assessments team additional independent members should be added.

SELF-ASSESSMENT TECHNIQUES

Since safety culture and SCWE are products of behaviors, a self-assessment of SCWE necessitates observation of those behaviors in addition to review of written direction and processes. Descriptions of the organization's work processes are important to an organizational evaluation, but the staff perceptions, opinions and feelings are first-hand indicators of the actual functioning of the system. These subjective opinions may have predictive power concerning the organization's safety performance. These opinions can only be analyzed after collecting data in the field. A combination of data collection methods must be used to develop a complete picture of performance associated with each LOI. Methods can include document analysis, personnel interviews, personnel surveys and observation of group situations in the working environment (e.g., meetings, seminars, fieldwork).

The assessment techniques identified in the following paragraphs are a summary of information described in a handout produced by the Energy Facility Contractors Group titled *Assessing safety culture in DOE facilities.* The suggested activities are not meant to be comprehensive or prescriptive and the self-assessment team should determine the specific techniques during planning of the assessment. The self-assessment lines of inquiry can and should be implemented using a combination of several techniques to assess an organization's SCWE. Methods used may include direct observations, surveys, interviews, review of SCWE related processes, performance indicator monitoring and trending, and VPP type assessments.

Direct observations of work place behavior may provide objective and subjective information regarding the effectiveness of training, management effectiveness, accountability, and behavior

expectations. Observed management behaviors may indicate whether supervisors are receptive to concerns and support and reward employees for raising concerns.

Direct observation of employees in the work environment can provide valuable insights into the employees' buy-in to the ISMS, their questioning attitude, and willingness to challenge perceived unsafe behavior. One advantage of these direct observations is that assessors can watch the culture in action, allowing the observer to confirm results obtained from interviews and/or surveys. Observations provide new information on cultural phenomena, but they cannot be quantified and used for statistical purposes. Additionally, care must be taken so as not to over-generalize from too few observations.

Surveys can be useful tools and complement other tools used to assess safety culture. The extent of such surveys will vary depending on the size and organizational structure of the contractor. Survey results can indicate employee beliefs, attitudes, and satisfaction with key attributes and suggests ways to strengthen the safety culture. To produce useable, reliable results, surveys should be designed by personnel with prior survey development experience. Pre-survey communications can be a very important aspect of such tools.

Face-to-face interviews have a significant role to play in assessment of culture. They are commonly used as a means of providing data that will assist survey design or to explore qualitatively the issues emerging from a written survey. Interviews provide an opportunity to ask for examples, rationales and clarifications. Interviews can be executed in many ways. Organizational evaluation teams typically use semi-structured interviews in which the main questions to be discussed are defined based on the lines of inquiry. A predefined structure helps to direct the discussions so that all important aspects are covered. It is also important to make interview situations natural and easy for the interviewee. It is then also easy to ask additional questions to clarify how the interviewee sees things.

An advantage of the interview is that the respondent can use his or her own words and expressions. It also allows for a greater flexibility in questioning, with the possibility for follow-up questions, making it easier to get to the deeper meanings and to clarify ambiguities in meaning. For example, face-to-face interviews could be an effective means for determining whether staff are aware of how to use processes such as the DPO process and ECP process, whether they trust or believe in their effectiveness, and whether line management is aware of how to use those processes.

A difficulty with interviews is that they are not directly comparable with one another. They are also relatively time consuming, usually based on only a limited sample. This can make it difficult to generalize results for the whole organization.

The selection of interviewees needs to be considered carefully. It is ideal to interview representatives from all organizational groups and levels of the organization. At a minimum organizational groups should be selected based on the objectives and scope of the evaluation and

all major personnel groups should be represented. To gain a broad view of the organization, the interviewees should represent different working experiences and educational backgrounds. A less sociable personality or critical attitude towards the work should not be exclusion criteria when interviews are designed. In many cases, persons with critical viewpoints have thought carefully about the work and organizational issues, and they can provide valuable information.

Review of key SCWE related processes includes reviewing documentation. Organizations within the DOE generally possess an extensive hierarchy of documentation. For example, an important component of a sound SCWE is open communication and fostering an environment free from retribution. A review of documents will give some indication of whether these processes exist.

SCWE cannot be assessed by only reviewing documentation but the documentary evidence can reinforce information gained from a performance based assessment. The review of SCWE related processes should evaluate whether or not employees feel free to identify issues using the various processes available to them; whether these processes are viewed as effective; and develop insights as to why those perceptions exist. One-on-one or small group, face-to-face interviews are both effective means for gathering this type of information.

Within the 2011-1 Implementation Plan resolution approach, DOE defined a strategy for assessing SCWE that entailed a review of associated processes such as the DPO process and ECP process. Other associated processes should also be considered when defining the scope of an organization-specific SCWE self-assessment plan. The following SCWE-related processes are considered to be common to all organizations that perform work at DOE defense nuclear facilities:

- Processes used to fix problems (e.g., the corrective action program)
- Alternative processes for raising concerns (e.g., employee concerns program, ombudsman, DPO)
- Human resources available for work environment concerns, disciplinary action, etc.
- DOE assessment findings or observations
- Use of self-assessments
- Effectiveness of the root cause analyses for significant issues, causal analysis in general, and the effectiveness of associated corrective actions
- Worker participation in work planning and feedback

Full evaluation of all of these processes would represent an exhastive quality assurance assessment. Only those portions appropriate to assessment of SCWE, graded for the size and complexity of the assessed organization, should be included.

Performance indicators may provide regular feedback on the health of an organization's SCWE. Although no single indicator is sufficient to identify the state of the SCWE, monitoring trends in a number of safety culture performance indicators as a function of time may provide insights into strengths and weaknesses. The complexity and number of useful performance indicators depend on the size and organizational structure of an organization. A practical way forward is to evaluate the portfolio of indicators that an organization uses to measure and monitor the important characteristics of a positive SCWE.

VPP assessments may be a source of information regarding the culture of an organization. The assessments generally include a high level of worker participation which can provide a different perspective than typical assessments. VPP assessment criteria include certain cultural aspects related to the team focus areas such as employee involvement which could provide valuable insights into an organization's SCWE.

ASSESSMENT PERFORMANCE and REPORT GUIDANCE

Action 2-5 of the 2011-1 Implementation Plan requires contractor and federal organizations to complete SCWE self-assessments and report results to the appropriate program office. The deliverable for that action is a report to headquarters from each Site or Area Office. Factors such as the type and number of contractors, contract structure, physical facility arrangement, and number of federal organizations at a site can result in a variety of options for performing self-assessments and documenting the results. Examples illustrating this point are described in the following paragraphs.

Consider a site with multiple contractors performing work. The Field Element Manager may choose to assemble a single team to assess all organizations on site. The site deliverable would then be a single report documenting the team's results. As another option, the Field Element Manager could also choose to establish one team to assess the federal organization and direct each contractor organization to perform its own self-assessment. In the second case, the federal organization's final report would contain a roll up and analysis of the contractor(s) results in addition to the results of its own self-assessment. When determining the approach to be used at sites with multiple contractors, consideration should be given to the merits inherent in the checks and balances, along with the learning opportunities, created when forming a composite team to review an entire site.

As another example, consider a site such as the Savannah River Site with two separate federal organizations (DOE-EM and NNSA) and multiple contractors performing work – one of which provides services to both federal organizations. In this example each federal organization could develop a report documenting its SCWE self-assessment as well as the results (or rollup and analysis of results) for the contractor associated with their scope of work.

However, this guidance document does not prescribe any one method for performing the self-assessment. Regardless of the option that is chosen for performing self-assessments, a consistent

approach to documenting self-assessment results is necessary to facilitate the reviews associated with development of a DOE/NNSA consolidated report on SCWE (Action 2-8 of the 2011-1 Implementation Plan).

The self-assessment of SCWE is not the standard analysis of the products and processes typically performed during an oversight assessment. Rather, it is an evaluation of behavior and the team is expected to go beyond just making reference to documented processes when applying the LOIs. The assessor's analysis should summarize the team's understanding and interpretation of the data collected and it should reference the sources of information, interviews conducted, and what activities were observed in order to collect the data necessary to answer each LOI.

The following paragraphs describe the final report format and provide a brief discussion of the material to be included in each section.

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

Executive Summary - An executive summary is recommended. This summary is a synopsis of the review, strengths and weaknesses identified, and conclusions drawn. The executive summary should introduce information and direct the reader to those portions of the report that provide more detail concerning the information. Suggested points for the executive summary include:

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

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

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

attribute-level analysis should include the team's summary evaluation of the level of implementation and effectiveness for each attribute. Attachment 2 provides additional evaluation guidance.

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

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

REFERENCES

1) DOE Guide 450.4-1C, *Integrated Safety Management System Guide*, September 29, 2011.
2) NEI-09-07, *Fostering a Strong Nuclear Safety Culture*, Revision 0.
3) Energy Facility Contractors Group (EFCOG) handout titled *Assessing safety culture in DOE facilities*, January 23, 2009.
4) Implementation Plan for Defense Nuclear Facilities Safety Board Recommendation 2011-1, *Safety Culture at the Waste Treatment and Immobilization Plant*, Revision 0.
5) EFCOG/DOE ISMS Safety Culture Task Team Final Report, June 4, 2010.
6) Presentation handout from the Chemical Safety and Lifecycle Management Workshop and ESH Group Spring Meeting, *Teaming with Others for a Strong Safety Culture and a Safer Workplace*, Dr. Peter Winokur, March 16, 2010.
7) International Atomic Energy Agency (IAEA) Technical Document 1329, *Safety Culture in Nuclear Installations*, December 2002.
8) Report 2011:20, *Guidebook for Evaluating Organizations in the Nuclear Industry – An Example of Safety Culture Evaluation*, Swedish Radiation Safety Authority.
9) DOE, *Management of Nuclear Construction Projects That Exceed $1Billion: Impact of Safety Culture*, Report to Congress, May 2012

ATTACHMENT 1:

SCWE SELF-ASSESSMENT

LINES of INQUIRY

Attachment 1

Focus Area 1: Leadership

Attribute: Demonstrated safety leadership

Attribute expectations of excellence:

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

Attribute: Management engagement and time in the field

Attribute expectations of excellence:

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

Attribute: Open communication and fostering and environment free from retribution

Attribute expectations of excellence:

- A high level of trust is established in the organization.
- Reporting individual errors is encouraged and valued. Individuals feel safe from reprisal when reporting errors and incidents.

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

Attribute: Clear expectations and accountability

Attribute expectations of excellence:

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

Focus Area 2: Employee/Worker Engagement

Attribute: Teamwork and mutual respect

Attribute expectations of excellence:

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

Attachment 1

Focus Area 3: Organizational Learning

Attribute: Credibility, trust and reporting errors and problems

Attribute expectations of excellence:

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

Attribute: Effective resolution of reported problems

Attribute expectations of excellence:

- Vigorous corrective and improvement action programs are established and effectively implemented, providing both transparency and traceability of all corrective actions. Corrective action programs effectively prioritize issues, enabling rapid response to imminent problems while closing minor issues in a timely manner to prevent them from escalating into major issues.
- Results from performance assurance activities are effectively integrated into the performance improvement processes, such that they receive adequate and timely attention. Linkages with other performance monitoring inputs are examined, high-quality causal analyses are conducted, as needed, and corrective actions are tracked to closure with effectiveness verified to prevent future occurrences.
- Processes identify, examine and communicate latent organizational weaknesses that can aggravate relatively minor events if not corrected. Organizational trends are examined and communicated.
- Organizational systems and processes are designed to provide layers of defenses, recognizing that people are fallible. Lessons learned are shared frequently; prevention and mitigation measures are used to preclude errors from occurring or propagating. Error-likely situations

are sought out and corrected, and recurrent errors are carefully examined as indicators of latent organizational weaknesses.

- Incident reviews are conducted promptly after an incident to ensure data quality and to identify improvement opportunities. Causal analysis expertise is applied effectively to examine events and improve safe work performance. Causal analysis is performed on a graded approach for major and minor incidents, and near-misses, to identify causes and follow-up actions. Causal analysis incorporates multi-discipline analytical perspectives. Even small failures are viewed as windows into the system that can spur learning.
- Performance improvement processes require direct worker participation. Individuals are encouraged, recognized and rewarded for offering innovative ideas to improve performance and to solve problems.

Attribute: Performance monitoring through multiple means

Attribute expectations of excellence:

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

Attribute: Questioning attitude

Attribute expectations of excellence:

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

Supplemental Information Topic: Performance Measures and Contract Incentives

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

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

Performance metric insights into SCWE

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

- What evidence exists to show decision making reflects a safety first attitude? The recommended approach is to evaluate operations and management information/metrics to determine whether trends and changes are present in performance indicators, such as: 1) rate of unplanned LCO entries; 2) rate and nature of procedural violations; 3) the rate of deferred/overdue training; 4) currency of SCWE-related procedures and policies (e.g.,

Differing Professional Opinion process, Employee Concerns Program); and 5) number of problem identification reports submitted on a periodic basis (e.g., monthly).

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

- What evidence exists that demonstrates managers/supervisors perform first hand observations of the work environment, listen to workers, and make changes where necessary? The recommended team approach is to evaluate performance assurance system information to determine what trends and changes are present in performance indicators such as: 1) the number of management observations by senior managers; 2) the number of management observations that identify deficiencies or best practices; and 3) the number of deficiencies or best practices that result in change.

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

ATTACHMENT 2:

ADDITIONAL ASSESSMENT GUIDANCE

Goals of the Self-Assessment

1. Assess the extent that DOE and contractor organizations model the behaviors of an outstanding SCWE.
2. Determine the strengths and improvement opportunities for each DOE and contractor organization with respect to SCWE.

Steps to follow when planning and performing the self assessment

Step 1: Planning the Self-Assessment

a) Consider the following when identifying members of the self-assessment team

- Does the evaluation team have competence in data collection and analysis?
- Does the evaluation team have experience with the attributes that define a Safety Conscious Work Environment?

b) Develop a thorough scope of work to guide the assessment incorporating the mandatory LOIs and facility/site-specific LOIs.

Step 2: Selecting Data Collection Methods

a) When determining the methods used to evaluate each LOI, using the guidance provided in the self-assessment techniques section, consider the following:

- Are at least two different data collection methods used in the evaluation?
- Have any assessments (internal or external) been recently performed that would provide insight into the organization's safety culture? If so, consider and credit recent self-assessments and action plans that are already in place as one data source for applicable LOIs.
- Does the team have sufficient experience/expertise to conduct a survey and evaluate the results? If so, survey data is highly recommended as a means for determining the health of a SCWE.
- Does the data collection cover all areas of interest and all groups of interest within the organization?

- Does the collection method allow for the data and observations to be analyzed and reanalyzed later?

Step 3: Collect, Structure and Analyze Data

a) Collect and analyze data using the guidance in the data collection and analysis section.

Keep in mind the as data is collected a picture of the organization emerges. Each piece of data (e.g., one document, one interview) provides a perspective of the organization and helps to complement and diversify the picture. Keeping clear and comprehensive notes of results is important, to capture data and impressions.

It is also helpful for members of the team to discuss preliminary interpretations they are making during the evaluation process to raise awareness of emerging conceptions concerning the organization and test the validity of interpretations. Daily team meetings are a good mechanism for accomplishing this.

b) Points to consider during data collection:

- Are the team member's observations during the collection process consistent?
- Are the issues from documents, interviews, observations or statistical analysis on tables or forms in a format that will help in the interpretation of results?
- Do you have an overview on the applicability of your issues to the overall organization?
- Have you analyzed differences in the employees' opinions and perceptions with respect to the organizational subunit, staff position or seniority of staff?

c) The guidance within this document does not require a pass/fail determination with regard to each attribute within a focus area; however, an informal evaluation of the level of implementation and effectiveness of the expectations described in each attribute is one means to guide the team when drawing conclusions and making recommendations for the three focus areas and one supplemental assessment area. The evaluation summaries below are based on the stages that an organization goes through in developing a mature safety culture, as described in Attachment 11 of the ISMS Guide (derived from the IAEA's Safety Culture Maturity Model). They represent one way to benchmark the implementation and effectiveness of a safety culture (further description of the IAEA model can be found in IAEA Technical Document 1329, *Safety Culture in Nuclear Installations*).

Chose the summary evaluation that best describes the level of ***Implementation and Effectiveness*** *for each attribute.*	
Implemented and Effective (I&E)	Evidence demonstrates that the expectations described in the attribute are routinely demonstrated in a repeatable, reliable manner. Processes are aligned with outcomes and performance is monitored to ensure that desired results are achieved.
Partially Implemented or Partially Effective (PI/E)	Evidence demonstrates that the expectations described in the attribute are not routinely demonstrated in a repeatable, reliable manner. Processes are partially in alignment with outcomes and performance is not monitored to ensure desired results are achieved.
Not Implemented or Not Effective (NI/E)	Insufficient evidence -or- evidence demonstrates that the expectations described in the attribute are not being met. Processes are substantially misaligned with outcomes and performance is not repeatable or not being achieved.

Step 4: Interpret the results

a) After the data is collected and analyzed the issues should be integrated under the focus areas of Leadership, Employee/Worker Engagement and Organizational Learning, and the supplemental review area of Performance Measures/Contract Incentives. This requires interpretation of the significance of the issues and the relationship between different issues. To ensure the reliability of the interpretations it is necessary to *triangulate* different data, i.e., to cross-check whether a document analysis and survey give similar results to interviews. This effort may suggest new data analysis, e.g., analyzing if a certain theme comes up in the interviews. For more information see the guidance in the data interpretation section below.

Step 5: Identifying strengths, opportunities for improvement, and team recommendations for corrective action.

a) For each focus area provide a brief evaluation on how well the attribute is established within the organization and identify any underlying organizational weaknesses. Depending upon the overall results of a specific attribute, a recommendation may or may not be necessary.

DATA COLLECTION AND ANALYSIS

Interviews and Document review

Qualitative data such as the interview material and documents should be structured according to the framework using the evaluation criteria. Each interview or document should be reviewed with each of the evaluation criteria in mind and whenever there is an observation that relates to the criteria, it should be collected under that criterion of the analysis framework. The same framework that was used for interviews can work in structuring the open answers, but, in many cases, the answers vary significantly in terms or their specificity. To avoid losing information the answers can be categorized looking for natural groupings natural clusters that arise from the data.

Surveys

Survey data usually require factor analysis or formulation of summated scales based on some principle other than factor analysis. The evaluation team should consider *whether the survey answers are similar across* organizational units, personnel or age groups to identify shared cultural features. Numeric values from surveys represent the respondent perceptions and it should be remembered that they are not objective facts about the organizational reality.

For example, given the survey statement "Management puts safety first" employees are asked to judge the statement on a 6-point scale from 1 (Strongly disagree) to 6 (Strongly agree). If the mean score of a group of respondents is 5.2, it would be inappropriate to conclude that the management actually emphasizes safety as a first priority in its decision-making. Similarly it is not appropriate to conclude that the organization holds safety as a higher priority than in an organization that scores 3.3. A mean score of 5.2 only implies that with respect to its expectations and knowledge, the employee's perception of the management's safety priorities is, on average, very positive. This may actually tell us more about the employee's expectations than the management's behavior. This is why it is important to include additional information on the possible explanations of the issues rather than rely on survey analysis alone.

DATA INTERPRETATION

Challenges of interpreting the issues and judging the organization may include the following:

- Interviewees have had different opinions and have provided the team with examples that could be interpreted as opposite results.
- The managers and the official documents describe safety goals and practices convincingly, but the personnel do not mention them and survey results show that the personnel negatively perceive the quality of safety management.
- One person brings up an apparently severe safety-related challenge but there is no other evidence of it.
- The interviewees do not mention any problems with certain organizational practices even though other data, e.g., documents on event investigations or observation data, suggest that there are major deficiencies.
- Survey results produce little variance, for example, mean scores that are quite positive (or very negative) all along the line.
- The respondents and interviewees have produced many development ideas and safety concerns, even though there are organizational functions that work well and much on-going safety work.

The contradictory issues described above do not necessarily indicate that the methods or analysis are invalid. Instead, the material that does not include any contradictory issues may have been narrowly selected or the questions may have been insensitive to detecting the nuances of the organizational reality. While it is important to illustrate the way people in the organization construct their view of safety and risks differently, organizational evaluations should be able to look at the entire picture and conclude which of the issues, opinions and observations characterize the organization as an entity. Furthermore, the evaluation should clarify what the contradictory views mean to safety. If different issues are reported without these conclusions, there is a risk that occasional issues are overemphasized and corrective actions may focus on topics that have a relatively small impact on the overall performance. Sometimes, however, a single issue may carry weight in the final evaluation because of its safety relevance. For example, a concern about a neglected accident scenario raised by a technical expert or an anecdote about a sensitive issue, such as fitness for duty problems or falsification of documents, need to be thoroughly considered and reported.