

U.S. Department of Energy

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P.O. Box 450, MSIN H6-60
Richland, Washington 99352

APR 27 2007

07-ESQ-055

Mr. C. M. Albert, Project Manager
Bechtel National, Inc.
2435 Stevens Center Place
Richland, Washington 99354

Dear Mr. Albert:

**CONTRACT NO. DE-AC27-01RV14136 – ASSESSMENT REPORT A-07-ESQ-RPPWTP-006
– ASSESSMENT OF BECHTEL NATIONAL, INC. (BNI) TRAINING PROGRAM
IMPROVEMENT INITIATIVES, MARCH 12 THROUGH 22, 2007**

This letter forwards the results of the U.S. Department of Energy, Office of River Protection (ORP) assessment of the BNI Training Program Improvement Initiatives conducted from March 12 through 22, 2007 (attached).

The Team concluded BNI had effectively completed 9 of the 11 corrective actions regarding training program improvement initiatives identified in Noncompliance Tracking System (NTS) Report NTS-ORP-BNRP-RRPWTP-2006-0002 and Corrective Action Report (CAR) 24590-WTP-CAR-QA-05-331. The above NTS report and CAR corrective actions specified actions being taken by BNI to improve the nuclear safety culture at the Waste Treatment and Immobilization Plant. The Team also concluded that 2 of the 11 completed corrective actions had not been evaluated with sufficient thoroughness to ensure the corrective action had been completed as specified in the CAR and the NTS report. This demonstrated a weakness in rigor on the part of BNI in closing the CAR or, more importantly, completely and thoroughly closing regulatory corrective action specified in an NTS Report. ORP requests that BNI improves the closure process for CAR and NTS corrective actions to insure that committed actions have been thoroughly completed. Improvements to the BNI closure process will be verified in future ORP assessments.

The Team did not identify any Findings because CAR 05-331 had not been officially closed by BNI.

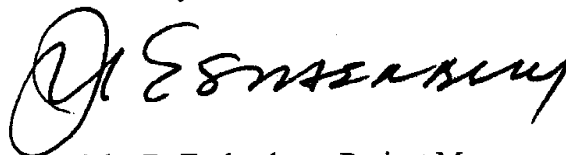
Mr. C. M. Albert
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If you have any questions, please contact me, or your staff may call William J. Taylor, Assistant Manager, Office of Environmental Safety and Quality, (509) 376-7851.

Sincerely,



John R. Eschenberg, Project Manager
Waste Treatment and Immobilization Plant

ESQ:PPC

Attachment

cc w/attach:

W. S. Elkins, BNI

B. G. Erlandson, BNI

D. E. Gergely, BNI

D. J. Jantosik, BNI

D. E. Kammenzind, BNI

W. M. Linzau, DNFSB

R. G. Quirk, DNFSB

S. L. Dahl, Ecology

G. H. Clare, WGI

BNI Correspondence

Attachment
07-ESQ-055
A-07-ESQ-RPPWTP-006

U.S. Department of Energy
Office of River Protection
Environmental Safety and Quality

ASSESSMENT: Bechtel National, Inc. Training Program Improvement Initiatives

REPORT: A-07-ESQ-RPPWTP-006

FACILITY: Waste Treatment and Immobilization Plant Construction

LOCATION: Richland, Washington

DATES: March 12 through 16, 2007

ASSESSORS: P. P. Carier, Team Lead
D. F. Kirsch, Contractor

APPROVED BY: P. P. Carier, Team Lead
Verification and Confirmation Official

Executive Summary

The U.S. Department of Energy, Office of River Protection (ORP) conducted an assessment of Bechtel National, Inc.'s (BNI) training program for the Waste Treatment and Immobilization Plant (WTP) Project from March 12 through 16, 2007. The purpose of the assessment was to evaluate the adequacy, thoroughness, and effectiveness of BNI's efforts to analyze and effect actions to improve overall WTP training effectiveness. Specifically, this assessment evaluated those completed BNI actions specified in Noncompliance Tracking System (NTS) Report NTS-ORP-BNRP-RRPWTP-2006-0002, specifically corrective actions numbered 20, 34, 35, 36, 37, 38, 40, 41, 42, 43, and 44. These corrective actions were labeled as complete in the NTS report.

The Team evaluated the BNI corrective actions for all the NTS Report Corrective Actions, identified above and concluded all were completed as specified and considered closed, except Corrective Action Nos. 20 and 35. The Team identified two examples (Corrective Action Nos. 20 and 35) which demonstrated a weakness in rigor on the part of BNI in closing Corrective Action Report (CAR) actions or, more importantly, completely and thoroughly closing the regulatory corrective action specified in an NTS Report.

BNI had not yet considered which metrics would best serve the evaluation of effectiveness of the training improvement initiative. This alone prevented closing the NTS Report Corrective Action No. 20. BNI had established and chartered a Training Advisory Board, staffed by senior management, to evaluate the progress and completion of the training improvement initiative. Although the Board did not meet certain commitments specified by the NTS Report Corrective Action No. 35, the Team considered these failures minor in nature. In addition, the Board failed to meet during the fourth quarter 2006, as required.

The Team also concluded BNI had established an acceptable Systematic Approach to the training process for positions that may directly affect installed design at WTP. The Team examined applicable procedures and guides, job position task analyses, task-to-training matrices, and position evaluation guides to arrive at this conclusion. The Team found Engineering had unjustifiably omitted jobs associated with implementing commercial grade dedication from the training improvement initiative actions related to systematic approach to training. Engineering took immediate action to correct this oversight.

The Team found BNI Training and Quality Assurance organizations had conducted well-planned and well-executed management assessments and audits, respectively, of training at WTP, in accordance with requirements. BNI demonstrated good performance in the Systematic Approach to Training functions of job task analyses, specification of the task-to-training matrices and job position evaluation guides, conduct of the Training organization management assessments, and performance of the Quality Assurance assessments of training program implementation. Still, the Team observed an inconsistency between the requirements in the training procedure regarding the application of systematic approach to training principles to some positions defined by the procedure as requiring formal qualification. BNI took immediate actions to correct the identified inconsistency.

Overall, the Team concluded BNI did not demonstrate a level of rigor necessary in assessing the completion and closure of a CAR-specified action and two corrective action commitments

specified in NTS Report NTS-ORP-BNRP-RRPWTP-2006-0002. The Team determined BNI needed to exercise a greater degree of thoroughness in the evaluation and closure of NTS corrective actions and CAR-specified corrective actions.

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ACRONYMS AND TERMS

BNI	Bechtel National, Inc.
BPS	Bechtel Procurement System
CAR	Corrective Action Report
DOE	U.S. Department of Energy
NTS	Noncompliance Tracking System
PIER	Project Issues Evaluation Reporting
ORP	Office of River Protection
QA	Quality Assurance
TAC	Training Advisory Committee
WTP	Waste Treatment and Immobilization Plant

Bechtel National, Inc. (BNI)
Waste Treatment and Immobilization Plant (WTP)
Training Program

1.0 DETAILS

This assessment evaluated the adequacy, thoroughness, and effectiveness of BNI's efforts to analyze and effect actions to improve overall Waste Treatment and Immobilization Plant (WTP) Project training effectiveness. Specifically, this assessment evaluated those completed BNI actions specified in noncompliance report, NTS-ORP-BNRP-RRPWTP-2006-0002, Corrective Action Numbers 20, 34, 35, 36, 37, 38, 40, 41, 42, 43, and 44.

Overview of the WTP Training Program

BNI had received a Preliminary Notice of Violation Enforcement Action, EA-2006-03, dated March 16, 2006, regarding nuclear safety issues at WTP. As part of the corrective action for the subsequent Price-Anderson Amendment Act noncompliance report, NTS-ORP-BNRP-RRPWTP-2006-0002, BNI specified several corrective actions, some of which were related to improvement of the overall training effectiveness at WTP. The corrective actions related to training improvement were specified by Corrective Action Numbers 20, 34, 35, 36, 37, 38, 40, 41, 42, 43, and 44. These corrective actions had all been identified as completed in the noncompliance report.

The source of the above corrective actions was Corrective Action Report (CAR) 24590-WTP-CAR-QA-05-331, "Deficiencies in BNI Nuclear Safety Culture," Revision 0, and dated December 20, 2005. The noncompliance report Corrective Action Numbers were identified in several CAR-specified corrective actions: the Noncompliance Tracking System (NTS) Action 20 was CAR Action 331-26; NTS Action 34 was CAR Actions 331-41, 42, 43, 44, 45, and 46; NTS Action 35 was CAR Action 331-47; NTS Action 36 was CAR Action 331-48; NTS Action 37 was CAR Action 331-49; NTS Action 38 was CAR Action 331-50; NTS Action 40 was CAR Action 331-52; NTS Action 41 was CAR Action 331-53; NTS Action 42 was CAR Action 331-54; NTS Action 43 was CAR Action 331-55 and NTS Action 44 was CAR Action 331-56.

The Team verified the BNI closure of the above CAR actions and reviewed the same documentation used by BNI Quality Assurance (QA) staff to assess action closure. However, for the actions specified by CAR Action 53, the Team performed the closure by sampling the task-to-training matrices of six job position descriptions (two each from Engineering, Construction, and Acquisition Services). The Team verified BNI had appropriately closed CAR Actions 331-41 through 46, 331-48, 331-49, 331-50, 331-52, 331-53, 331-54, 331-55 and 331-56. Details of the review performed by the Team are provided below.

Authorization Basis Training Requirements

The Team examined the authorization basis requirements related to training contained in the following documents: 24590-WTP-QAM-QA-01-001, "Quality Assurance Manual," Revision 7, dated October 31, 2006, Policy Q-02.2, "Personnel Training and Qualification," and

24590-WTP-SRD-ESH-01-001-02, "Safety Requirements Document Volume II," Revision 4, Safety Criterion 7.2, "Training and Procedures." The Team also examined those implementing procedures specifically for training and implementation of a systematic approach to training at WTP (24590-WTP-GPP-CTRG-002, "Training," Revision 11, dated November 30, 2006, and 24590-WTP-GPP-CTRG-007, "Systematic Approach to Training Implementing Procedure," Revision 2, dated March 8, 2007) to assess whether these implemented authorization basis requirements. The Team found the training program implementing procedures acceptably applied authorization basis requirements.

1.1 Adequacy of Training Program Analysis

NTS Corrective Action No. 20 (CAR Action 331-26) provided for using Six Sigma tools and methodologies, thus performing a cross-functional improvement project to analyze the training program and to develop a project-wide, systematic approach for training to improve overall training effectiveness.

A memorandum (CCN: 137466) dated June 15, 2006, from the Six Sigma Performance Improvement Plan leader to the Deputy Project Manager for Operations and Assurance and Training Advisory Board Chairman reported the results and recommendations of the Process Improvement Team. This team recommended implementation of a training program based on DOE-HDBK-1074-95, "Alternative Systematic Approaches to Training."

The Team examined the implementation plan recommendations of the Six Sigma Performance Improvement Plan for training effectiveness. The nine improvement recommendations, including responsibility assignments and target completion dates, were provided as an attachment to the memorandum. The Team found BNI had accomplished the commitment of NTS Action 20, which provided for using Six Sigma tools and methodologies, thus performing a cross-functional improvement project to analyze the training program and develop a project-wide, systematic approach to training to improve the overall training effectiveness.

Conclusions

The Team concluded BNI had conducted a cross-functional improvement project, using Six Sigma tools, to analyze the current training program, and develop a project-wide, systematic approach to training to improve the overall training effectiveness on the project.

1.2 Evaluation of Training Program Metrics

NTS Corrective Action No. 20 also provided for the development of appropriate metrics to evaluate training program improvement progress.

A memorandum (CCN: 137466) dated June 15, 2006, from the Six Sigma Performance Improvement Plan leader to the Deputy Project Manager for Operations and Assurance and Training Advisory Board Chairman recognized the primary metric identified to gauge the effectiveness of the training process improvement initiative was the "Corrective Actions by

Cause Code.” Based upon these identified metrics, BNI’s QA organization had closed the issue in CAR Action 331-26 apparently without considering what those metrics had to do with training program effectiveness evaluation.

The Team observed that none of the cause codes identified a metric applicable to training as a consideration of the cause evaluation. The Team discussed their Observation with the Deputy Project Manager for Operations and Assurance. The Team also evaluated whether the identified metric had been used to evaluate the effectiveness of the training improvement initiative and discussed this question with the Deputy Project Manager for Operations and Assurance as well. The training improvement initiative was in the early phases of implementation and, accordingly, BNI had not considered or applied the metrics to assess the effectiveness of the training program improvement initiative. The Team found BNI had not yet considered how the Corrective Actions by Cause Code metric would be used to provide information on the effectiveness of the training program improvement initiative. However, the Deputy Project Manager for Operations and Assurance stated the metrics to be used to evaluate the effectiveness of the Nuclear Safety and Quality Culture improvement initiatives were currently being evaluated, and the metrics for gauging the effectiveness of the training improvement initiative would be considered and focused during that evaluation.

BNI had closed CAR Action 331-26, and NTS Report Corrective Action No. 20, without considering whether the chosen metrics could be applied when evaluating the effectiveness of the training improvement initiative. The Team considered this to be an example of incomplete closure of a CAR action completion and, more importantly, an action requirement of an NTS Report.

Conclusions

The Team concluded the development of appropriate metrics to evaluate the effectiveness of the training improvement initiative was not complete. Accordingly, NTS Report Corrective Action No. 20 remains open pending development of appropriate metrics to evaluate the effectiveness of the training program improvement initiative.

1.3 Evaluation of Organizational Job Analysis Results

Corrective Action No. 34 provided that functional managers from Construction, Acquisition Services, Engineering, QA, Operations, and Safety Assurance would identify positions which would undergo a job analysis and provide a job analysis completion schedule.

The Team verified that BNI Functional Managers from Construction, Acquisition Services, Engineering, QA, Operations, and Safety Assurance had identified, documented, and approved those positions for which a job analysis would be performed. The positions subject to job analyses had been completed at the time of the assessment, and had been provided as Appendix C to 24590-WTP-PL-TR-06-0002, “Training Program Implementation Plan,” Revision 0, dated August 29, 2006. The Team examined the Engineering job task analyses and observed commercial grade dedication activities had been excluded from the list of activities affecting installed design at WTP. This oversight was discussed with responsible Engineering

management, who took immediate action to correct the oversight by documenting the problem using Project Issues Evaluation Reporting (PIER) 24590-WTP-PIER-MGT-07-0326, Revision 0, dated March 15, 2007.

The Team examined the job task analyses for every position identified in Appendix C to 24590-WTP-PL-TR-06-0002, "Training Program Implementation Plan," and determined a job task analysis had been completed for every position identified in Appendix C of the plan.

Conclusions

The Team concluded BNI had accomplished the Corrective Action No. 34 requirements.

1.4 Evaluation of Training Advisory Committee

Corrective Action No. 35 provided that a training advisory committee be established in accordance with guide 2450-WTP-GPG-CTRG-006, "Training Program Evaluation Guide."

BNI had not established a Training Advisory Committee in accordance with guide 2450-WTP-GPG-CTRG-006, "Training Program Evaluation Guide," as discussed below. Yet, the corrective action had been identified as completed on August 2, 2006, in noncompliance report NTS-ORP-BNRP-RRPWTP-2006-0002.

By memorandum (CCN: 138861) from the Project Director dated July 13, 2006, BNI established a Training Advisory Board and intended the Training Advisory Board would satisfy the commitment of Corrective Action No. 35. The memorandum provided the Board Charter and membership requirements. The Charter provided the membership, reporting requirements, meeting frequency, and responsibilities. The meeting frequency was specified as quarterly. The Charter did not provide any quorum requirements.

The Training Advisory Board met on July 26, 2006, minutes documenting the meeting were provided by memorandum (CCN: 143009). The July 26, 2006, minutes scheduled a meeting on August 10, 2006. The meeting minutes for the August 10, 2006, meeting demonstrated the meeting was held. There were no additional minutes provided to demonstrate the Board met during the fourth quarter 2006, as required by the Charter; accordingly, the Team concluded the Board had not conformed to the requirement to meet quarterly. The Training Manager confirmed no meeting had been held during the fourth quarter 2006. A meeting of the Board had been conducted September 1, 2006; however, BNI identified, pursuant to the Team's request for Board meeting minutes, that minutes of the September 1, 2006, meeting had not been issued. These problems were documented using PIER 24590-WTP-PIER-MGT-07-0324, dated March 14, 2007. A meeting of the Board was scheduled for March 20, 2007, which would satisfy compliance with the quarterly meeting frequency requirement.

The Team examined 2450-WTP-GPG-CTRG-006, "Training Program Evaluation Guide," Revision 0, dated May 12, 2003, and concluded the guide provided useful guidance for the evaluation of training programs. Section 3.4.1 addressed guidance for a Training Advisory Committee (TAC), indicating the desirability of having a TAC for each organization, and

providing several examples of materials the TAC should review. The Charter of the Training Advisory Board did not contain most of the materials identified in Section 3.4.1 of the guide. The guide, Appendix E, provided a form and format for TAC Meeting Agenda. The form identified a quorum requirement of the Chair and three committee members. The quorum requirement was missing from the Training Advisory Board Charter. Accordingly, the Team concluded the Training Advisory Board had not been established in accordance with guide 2450-WTP-GPG-CTRG-006, "Training Program Evaluation Guide." The Team discussed this Observation with BNI staff who agreed to resolve the inconsistencies.

BNI had closed CAR Action 331-47, and NTS Report Corrective Action No. 35, without properly considering the requirements of the specified guide. This was another example of incomplete closure of a CAR action and, more importantly, an action commitment of an NTS report.

Conclusions

BNI failed to thoroughly and properly consider the Training Program Evaluation Guide provisions during the closure of the CAR action requirement and, more importantly, the closure of a commitment specified by an NTS Report. This is another example of incomplete closure of a CAR action and NTS Report commitment.

BNI failed to issue Training Advisory Board meeting minutes for one meeting on September 1, 2006, and failed to conduct a Training Advisory Board meeting during the fourth quarter 2006, as required by the Project Director's memorandum establishing the Board.

1.5 Evaluation of WTP Implementation of DOE Order 5480.20A

Corrective Action No. 36 provided for the creation of a training implementation matrix detailing WTP implementation of the U.S. Department of Energy (DOE) Order 5480.20A, "Personnel Selection, Qualification, and Training Requirements for DOE Nuclear Facilities," dated November 15, 1994.

The Team examined 2450-WTP-RPT-TR-06-003, Revision 0, "Hanford Tank Waste Treatment and Immobilization Plant Training Implementation Matrix for Engineering, Procurement, Construction Phase," dated October 30, 2006, and concluded the matrix described the selection, qualification, and training requirements in DOE Order 5480.20A, "Personnel Selection, Qualification, and Training Requirements for Reactor and Non-Reactor Nuclear Facilities," as tailored in Appendix C of 24590-WTP-SRD-ESH-01-001, "Safety Requirements Document, Vol II." The matrix provided a listing of certified and qualified positions in accordance with the DOE Order. During the engineering, procurement, and construction phase of the project BNI concluded there were no certified positions and two positions required formal qualification in accordance with the DOE Order. The positions requiring formal qualification were Radiological Control Technicians and the Radiological Control Technician Supervisors. The matrix also described positions that required qualification based on the Quality Assurance Manual (24590-WTP-QAM-QA-01-001). These positions were Test Personnel, Quality Assurance Auditor, Supplier Quality Auditor, Construction Quality Control Auditor, and Qualified Individuals. The

matrix provided a detailed assessment of how BNI met the order requirements for the above positions. The Team found no issues with the BNI Training Implementation Matrix.

Conclusions

The Team concluded BNI had produced a training implementation matrix detailing the WTP's implementation of DOE Order 5480.20A, "Personnel Selection, Qualification, and Training Requirements for DOE Nuclear Facilities," dated November 15, 1994, as described in corrective Action No. 36.

1.6 Evaluation of Actions to Review and Revise Training Procedures

Corrective Action No. 37 provided for a review of training procedures to determine if an update was needed to support processes and require revisions, as appropriate.

CAR 05-331 (24590-WTP-CAR-QA-05-331, "Deficiencies in BNI Nuclear Safety Culture," Revision 0, dated December 20, 2005), Action 331-49, repeated the NTS Report description as the action to be implemented. The implemented CAR action identified a list of 13 procedures implementing the WTP training program that the responsible BNI manager reviewed. The Team requested BNI to verify by a computerized sorting of procedures whether this list was the totality of training program implementing procedures used by the project. The computer sort validated the list as all the procedures having to do with training program implementation at WTP.

The QA verifier confirmed the procedures cited in the implemented CAR action represented all of the procedures and guides for training implementation at WTP.

The Team found BNI had completed the requirements of the NTS Report Corrective Action No. 37 regarding the review of training procedures.

Conclusions

The Team concluded BNI had reviewed training procedures to determine if an update was needed to support processes and require revisions, and had implemented the requirements of the NTS Report Corrective Action No. 37.

1.7 Evaluation of Training Program Implementation Plan

Corrective Action No. 38 provided that a training program implementation plan and implementation schedule be developed.

24590-WTP-PL-TR-06-0002, "Training Program Implementation Plan," Revision 2, dated January 29, 2007, was reviewed, and the Team concluded the training program implementation plan had been developed, as required. The implementation schedule was provided by Section 2 and Appendix B of the procedure (24590-WTP-GPP-CTRG-007, "Systematic Approach to Training Implementing Procedure," Revision 2, dated March 8, 2007). The Team reviewed the

procedure-specified plan and concluded the procedure provided a complete approach by applying a systematic approach to improve training at WTP.

The Team selected certain requirements of the plan procedure for more detailed examination to determine whether specific provisions of the plan had been completed. Specifically:

- The plan, Section 2.1, specified the performance of a document analysis of procedures applicable to positions affecting installed design to identify the procedural tasks that affect installed design. The Team examined “reviewed and approved” job task analyses that, for positions in Construction, Engineering, and Acquisition Services, identified the procedure and procedural requirements that were applicable to specific positions and could affect installed design. The Team concluded BNI had acceptably accomplished the plan requirement.
- The plan, Section 2.1, specified a functional job analysis to review the results of the document analysis with subject matter experts to identify the broad functional tasks and functional knowledge necessary to perform those tasks from the document analysis. The Team examined “reviewed and approved” job task analyses of Construction, Engineering, and Acquisition Services documentation, demonstrating the specified review had been accomplished.
- The plan, Section 2.2, specified a task-to-training matrix be developed to guide the creation of training materials and strategies for each position. The plan specified a task-to-training matrix for each identified position (Appendix D), the training evaluation guides (Appendix E), a qualification roadmap (Appendix F), and the courses to be developed (Appendix G). The Team examined “reviewed and approved” task-to-training matrices for Construction, Engineering, and Acquisition Services, demonstrating the specified requirement had been acceptably completed.

The Plan implementation was in the development phase (Section 2.3) wherein the training materials and activities to support the objectives created in the design phase (Section 2.2) would be completed.

Section 2.4 of the Plan (Phase IV, Implement) provided the objective of the implementation phase was to conduct training activities; this included the delivery of training materials created in the development phase. The implementation phase would continue until May 31, 2007. It was clear to the Team the Training organization was working to complete the training activities by that date, with a hard scheduled date of June 22, 2007. However, the Deputy Project Manager of Operations and Assurance indicated the training improvement initiative activities, including training nearly all the 1,500 staff in 95 identified positions, would be an effort which would continue after the Plan-required date of May 31, 2007. The Team were concerned that there appeared to be a misalignment in the expectations of senior management and the Training organization management.

Conclusions

The Team concluded BNI had developed and implemented a training program implementation plan and schedule for phase completion, as required.

1.8 Evaluation of Job Position Training Requirements

Corrective Action No. 40 provided that all organizational functional managers (identified above in Section 1.3) complete a job position analysis identifying tasks and required knowledge for each position identified as requiring a job analysis. The corrective action further specified the job position analysis would yield task lists for each position identified in Appendix C of the most current version of 24510-WTP-PL-TR-06-0002, "Training Program Implementation Plan."

The Team verified the functional managers of Construction, Acquisition Services, Engineering, QA, Operations, and Safety Assurance had completed a job position task analysis for all job positions, as defined in Appendix C of 24590-WTP-PL-TR-06-0002, "Training Program Implementation Plan," Revision 0, dated August 29, 2006, and that the job position task analyses included job position Master Task Lists, and that the job position analyses were translated to Master Task Lists. The Master Task Lists developed by the organizations had been reviewed and approved by responsible management in each organization. Accordingly, it was clear that management had been significantly involved in the job position analysis and Master Task List generation efforts.

The Team selected the Master Task Lists for two positions defined by Construction (Field Engineer-Piping and Field Engineer-Welding), Engineering (Fire Protection Engineer and Mechanical System Designer), and Acquisition Services (Supplier Quality Supervisor and Bechtel Procurement System [BPS] Coordinator) for a more detailed review of defined tasks. The Team determined the Master Task Lists for the selected positions were detailed and complete.

Conclusions

The Team concluded BNI had satisfactorily accomplished the Corrective Action No. 40 requirements. Further, by use of sampling, the assessors concluded the functional managers of Construction, Engineering, and Acquisition Services had provided thorough definitions of the job position Master Task Lists.

1.9 Evaluation of Completion of Job Position Training Requirements

Corrective Action No. 41 provided for the identification of a training format for those positions identified as requiring a job position analysis to address the required tasks and knowledge requirements associated with the job analysis (for each position identified in Appendix C of the most current version of 24510-WTP-PL-TR-06-0002, "Training Program Implementation Plan"). That effort would result in a task-to-training matrix.

The Team reviewed the task-to-training matrices, for the Engineering, Construction, and Acquisition Services organizations and determined a matrix had been generated for each job position defined by Appendix C of 24590-WTP-PL-TR-06-0002, "Training Program Implementation Plan," Revision 0, dated August 29, 2006. The task-to-training matrices had been reviewed and approved by responsible organization management.

The Team selected the Master Task Lists for two positions defined by Construction (Field Engineer-Piping and Field Engineer-Welding), Engineering (Fire Protection Engineer and Mechanical System Designer), and Acquisition Services (Supplier Quality Supervisor and BPS Coordinator) for a more detailed review of defined tasks, knowledge, and training requirements needed to accomplish the defined tasks. The Team found there was acceptable one-to-one specification of training requirements for each task identified by the applicable job task analysis Master Task Lists.

Conclusions

The Team concluded BNI had satisfactorily accomplished the Corrective Action No. 41 requirements. Further, by use of sampling, the Team concluded the functional managers of Construction, Engineering and Acquisition Services had provided thorough definitions of the task-to-training requirements for job position Master Task Lists.

1.10 Evaluation of Human Resources Developed Course

Corrective Action No. 42 provided that Human Resources would develop an approved instructor-led course to describe the progressive discipline process, when it would be used, the roles and responsibilities, and proper training documentation. The course would be approved, issued, and be available on the Training organization's Learning Management System.

The Team verified the Human Resources had developed and approved a classroom course (24590-WTP-CRM-TRA-000026, "Effectively Managing Performance and Discipline," Revision 0, dated November 28, 2006) as required by the NTS Report. The course described the progressive discipline process, when it would be used, the roles and responsibilities, and the proper training documentation. The course was available on the Learning Management system.

Conclusions

The Team concluded BNI had provided the required instructor-led course, and made it available on the Learning Management System.

1.11 Evaluation of Management Training and Completion

Corrective Action No. 43 provided that management would identify those managers who require training, that training be developed and that the appropriate training requirement be entered into the manager's training profiles.

CAR 05-331, Action 331-55 stated "Management will identify those managers who require training developed in action number 54 [sic], and the appropriate training requirement will be entered in the managers training profiles." CAR Action 54 only addressed the Human Resources developed course, "Effectively Managing Performance and Discipline." Accordingly, the Team concluded BNI had failed to properly translate the requirement of CAR Action 331-55 to the NTS Report Corrective Action No. 43, and, in so doing, had broadened the NTS Report action far beyond that intended by the CAR Action 331-55. When this was made clear, BNI took immediate action to clarify the original action description in Corrective Action No. 43 to limit the identification of managers who require training to those managers who were required to have training in the course developed by Human Resources pursuant to NTS Report Corrective Action No. 42 (Section 1.10).

BNI had identified 30 managers who required the training, but presented the training course to 65 selected managers at WTP. The Team examined the list of identified managers and verified these were on the list of managers receiving the training. The Team selected eight managers from the list of personnel receiving the training and verified the course completion had been properly entered as completed in their training profiles.

Conclusions

The Team concluded BNI had identified the managers who were required to take the Human Resources developed course, ensured the course had been completed by the managers, and documented the completion of the course in the training profiles. However, BNI did not properly translate a CAR action into the statement of corrective action commitment in an NTS Report. BNI took immediate action to clarify the NTS report.

1.12 Additional Training Implementation Assessment Activity

The Team performed additional assessment activities in the area of training that were beyond the corrective actions identified in the NTS Report.

- **Job Position Evaluation Guide Assessment**

The Team selected the Engineering position, Mechanical Systems System Engineer, to evaluate the consistency of the requirements of the job position Master Task List (24590-WTP-JTA-TRA-100106, "Program Master Task List for Mechanical Systems System Engineer," Revision 1, dated January 26, 2007), the task-to-training matrix (24590-WTP-TTM-TRA-110067, "Task to Training Matrix for Mechanical Systems System Engineer," Revision 0, dated January 26, 2007), and the job position evaluation guide (24590-WTP-EGA-TRA-110060, "Job Position Evaluation Guide for Mechanical Systems System Engineer," Revision 0, dated March 4, 2007) for the selected position. The job position evaluation guide provides guidance for the supervisor or subject matter expert to use during the verbal examination of the candidate's knowledge. The Team found the documents were consistent from task definition through the job position evaluation guide.

- **Training Procedure Evaluation**

The Team examined the training procedure (24590-WTP-GPP-CTRG-002, "Training," Revision 11, dated November 30, 2006) and the procedure used by the Training organization to implement the systematic approach to training for positions directly affecting installed design at WTP (24590-WTP-GPP-CTRG-007, "Systematic Approach to Training Implementing Procedure," Revision 2, dated March 8, 2007) to assess whether the procedures were consistent in implementation of the systematic approach to training initiative. Section 3.4.1 of the training procedure (24590-WTP-GPP-CTRG-002) identified some job positions requiring formal qualification and/or certification. The Team questioned Training organization personnel to determine whether the systematic approach to training process would be used for the job position identified in Section 3.4.1. Training responded that because these positions did not directly affect installed design (Section 2.0 [Scope] of 24590-WTP-GPP-CTRG-007), the positions identified in Section 3.4.1 were exempt from the systematic approach to training initiative. However, the Team and Training organization management identified an apparent inconsistency in the Training procedure, Section 3.11, which stated "A systematic approach to the training model must be used to develop training leading to formal qualification." Discussion with Training organization management, coupled with the scope of the systematic approach to training implementing procedure, clearly identified the requirement of Section 3.11, above, as an oversight and an error in the training procedure. Training organization personnel took immediate action to document the error in Section 3.11 of the training procedure using the PIER process for revision and correction of the procedure inconsistency.

- **Evaluations and Audits Performed By Training and Quality Assurance Organizations**

The Training organization's guidance (24590-WTP-GPG-CTRG-006, "Training Program Evaluation Guide," Revision 0, dated May 12, 2003), Section 3.6, provides that the Training organization periodically evaluates training effectiveness and its relation to-on-the-job performance to ensure training programs convey the required skills and knowledge. 2450-WTP-GPG-CTRG-006, Section 3.6, further provides the expectation "In accordance with 'Training,' 24590-WTP-GPP-CTRG-002, management and administration objectives and criteria should be assessed annually." This guidance was not consistent with the requirements of 24590-WTP-GPP-CTRG-002, "Training," Revision 11, dated November 30, 2006, Section 3.1.8, as discussed below.

The BNI Procedure 24590-WTP-GPP-CTRG-002, "Training," Revision 11, dated November 30, 2006, Section 3.1.8, specifies the QA Manager shall conduct periodic assessments of the status and effectiveness of the training and qualification program to ensure it continues to reflect the current systems, procedures, and policies for each position. This higher order procedure requirement was not properly implemented by 24590-WTP-GPG-CTRG-006, "Training Program Evaluation Guide," Revision 0, dated May 12, 2003, Section 3.6.

The Team examined two management assessments of training performed by training management (24590-WTP-MAR-TR-04-0001, "WTP Training 2005 Management Assessment," Revision 0, dated January 17, 2006, and the lower-tier management assessment

24590-WTP-MAR-TR-06-0001, "Line Management Involvement in Determining Training Requirements," Revision 0, dated December 21, 2006). The Team concluded training management had acceptably executed the requirement to perform periodic assessments, and the management assessments were well-planned examinations of the topics assessed and resulted in several issues to improve performance in the area of training.

The Team examined two QA organization audits of training (24590-WTP-IAR-QA-05-0015, "Internal Audit of Training and Construction Training," Revision 0, dated January 3, 2006, and 24590-WTP-IAR-QA-06-0018, "Training," Revision 0, and dated February 21, 2007) to assess the thoroughness and depth of the audits. The Team concluded QA management had acceptably executed the requirement to perform periodic examinations of training effectiveness. The audits were well-planned, in-depth examinations of the topics audited and resulted in several issues to improve performance in the area of training.

2.0 ASSESSMENT OVERALL CONCLUSION

The Team concluded BNI had not demonstrated the necessary level of rigor in assessing the completion and closure of a CAR-specified action and two corrective action commitments specified in NTS Report, NTS-ORP-BNRP-RRPWTP-2006-0002. The Team determined BNI needed to exercise a greater degree of thoroughness in the evaluation and closure of NTS commitments and CAR-specified corrective actions.

BNI demonstrated good performance in the systematic approach to training functions of job task analyses, specification of the task-to-training matrices, and job position evaluation guides; in the conduct of Training organization management assessments, and in the performance of QA assessments of training program implementation.

Specifically, the Team found:

Two examples were identified demonstrating a lack of rigor on the part of BNI in closing CAR actions or, more importantly, completely closing the regulatory corrective actions specified in an NTS Report. The two examples are listed below:

- The development of appropriate metrics to evaluate the effectiveness of the training improvement initiative was not complete, although the item was listed as closed in the NTS Report. Accordingly, NTS Report Corrective Action No. 20 remains open pending development of appropriate metrics to evaluate the effectiveness of the training program improvement initiative. This was an example of weakness in rigor in closing the commitment of an NTS Report.
- BNI had not established a Training Advisory Committee in accordance with the guide committed by Corrective Action No. 35. The Training Advisory Board, established to implement the commitment of Corrective Action No. 35, had not conformed to the requirement, as stated in the Project Director's memorandum that established the Board, to meet quarterly; no meeting had been conducted during the fourth quarter 2006. The Charter of the Training Advisory Board did not contain most of the materials identified

for committee review in Section 3.4.1 of 2450-WTP-GPG-CTRG-006, "Training Program Evaluation Guide." The guide, Appendix E, provided a form and format for TAC Meeting Agenda and identified a quorum requirement of the Chair and three committee members. The quorum requirement was missing from the Training Advisory Board Charter. This was a second example of weakness in rigor exercised in closing and verifying closure of a CAR-specified corrective action and a commitment specified by an NTS Report.

The team concluded the following the following corrective actions were completed as described in the NTS report:

- BNI had accomplished the commitment of NTS Report Corrective Action No. 20 provided for using Six Sigma tools and methodologies to perform a cross-functional improvement project to analyze the training program and develop a project-wide, systematic approach to training to improve the overall training effectiveness.
- BNI had accomplished the Corrective Action No. 34 requirements; this item is closed.
- BNI had implemented the commitment of Corrective Action No. 36. BNI had established a Training Implementation Matrix detailing the WTP implementation of DOE Order 5480.20A, "Personnel Selection, Qualification, and Training Requirements for DOE Nuclear Facilities."
- BNI had reviewed training procedures to determine if an update was needed to support processes and require revisions. BNI had implemented the requirements of the NTS Report Corrective Action No. 37.
- BNI had developed and implemented a training program implementation plan and schedule for phased completion of the training program improvement plan, completing the commitment of NTS Report Corrective Action No. 38.
- BNI had satisfactorily completed the commitment requirements of NTS Report Corrective Action No. 40.
- BNI had satisfactorily accomplished the commitment requirements of NTS Report Corrective Action No. 41. The NTS Report commitment is closed.
- BNI Human Resources had provided the required instructor-led course, "Effectively Managing Performance and Discipline," and made it available on the Learning Management System. This action closed the NTS Report Corrective Action No. 42.
- BNI had identified the managers who were required to take the Human Resources developed course, ensured the course had been completed by the managers, and documented the completion of the course in the training profiles. This closed NTS Report Corrective Action No. 43. However, BNI did not properly translate the CAR-specified corrective action to the NTS Report commitment, resulting in a much broader commitment of corrective action than specified by the CAR. The NTS Report

commitment was closed based upon the more limited action completion specified by the CAR.

The Team conducted assessment activities in the area of training that were beyond the corrective actions identified in the NTS Report and found:

- The Team sampled the job position Master Task List, task-to-training matrix, and position evaluation guide for the Mechanical Systems System Engineer position provided a consistent basis for candidate qualification.
- The Team and Training organization management identified an apparent inconsistency in the training procedure, Section 3.11, which stated "A systematic approach to the training model must be used to develop training leading to formal qualification." Section 3.4.1 identified several positions requiring formal qualification. Discussion with Training organization management, coupled with the scope of the systematic approach to training implementing procedure, clearly identified the requirement of Section 3.11 as an oversight and an error in the training procedure.
- Training management had acceptably executed the requirement to perform periodic assessments, and the management assessments were well-planned examinations of the topics assessed and resulted in several issues to improve performance in the area of training. QA management had acceptably executed the requirement to perform periodic examinations of training effectiveness. The audits were well-planned, in-depth examinations of the topics audited and resulted in several issues to improve performance in the area of training.

3.0 ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

None

Closed

None

Discussed

None

4.0 SIGNATURE



Patrick P. Carrier, Team Lead
Verification and Confirmation Team

DOCUMENTS REVIEWED

24590-WTP-CAR-QA-05-331, "Deficiencies in BNI Nuclear Safety Culture," Revision 0, dated December 20, 2005.

24590-WTP-CRM-TRA-000026, "Effectively Managing Performance and Discipline," Revision 0, dated November 28, 2006.

24590-WTP-EGA-TRA-110060, "Job Position Evaluation Guide for Mechanical Systems System Engineer," Revision 0, dated March 4, 2007.

24590-WTP-GPG-CTRG-002, "Training Program Analysis Guide," Revision 0, dated May 12, 2003.

24590-WTP-GPG-CTRG-005, "Training Program Implementation Guide," Revision 0, dated May 12, 2003.

24590-WTP-GPG-CTRG-006, "Training Program Evaluation Guide," Revision 0, dated May 12, 2003.

24590-WTP-GPP-CRTG-006, "Radiological Control Technician and Supervisor Training Program Description," Revision 0, dated August 29, 2003.

24590-WTP-GPP-CTRG-002, "Training," Revision 11, dated November 30, 2006.

24590-WTP-GPP-CTRG-004, "Instructor Training Program Description," Revision 1, dated August 4, 2003.

24590-WTP-GPP-CTRG-007, "Systematic Approach to Training Implementing Procedure," Revision 2, dated March 8, 2007.

24590-WTP-GPP-CTRG-007, "Systematic Approach to Training Implementing Procedure," Revision 0, dated May 1, 2003; Revision 1, dated April 1, 2004; Revision 2, dated March 7, 2007.

24590-WTP-GPP-MGT-007, "WTP Document Administration," Revision 2, dated July 19, 2006.

24590-WTP-IAR-QA-05-0015, "Internal Audit of Training and Construction Training," Revision 0, dated January 3, 2006 (QA audit).

24590-WTP-IAR-QA-06-0018, "Training," Revision 0, dated February 21, 2007 (QA audit).

24590-WTP-JTA-TRA-100106, "Program Master Task List for Mechanical Systems System Engineer," Revision 1, dated January 26, 2007.

24590-WTP-MAR-TR-04-0001, "WTP Training 2005 Management Assessment," Revision 0, dated January 17, 2006.

24590-WTP-MAR-TR-06-0001, "Line Management Involvement in Determining Training Requirements," Revision 0, dated December 21, 2006 (lower-tier management assessment).

24590-WTP-PIER-MGT-07-0326, Revision 0, dated March 15, 2007.

24590-WTP-PIER-MGT-07-0324, dated March 14, 2007.

24590-WTP-PL-TR-06-0002, "Training Program Implementation Plan," Revision 0, dated August 29, 2006; Revision 1, dated November 15, 2006; Revision 2, dated January 29, 2007.

24590-WTP-QAM-QA-01-001, "Quality Assurance Manual," Revision 7, dated October 31, 2006.

24590-WTP-SRD-ESH-01-001-02, "Safety Requirements Document Volume II," Revision 4, Safety Criterion 7.2, "Training and Procedures."

24590-WTP-TTM-TRA-110067, "Task to Training Matrix for Mechanical Systems System Engineer," Revision 0, dated January 26, 2007.

CCN 138861, memorandum from W. S. Elkins, "Training Advisory Board," dated July 13, 2006.

DOE Order 5480.20A, "Personnel Selection, Qualification, and Training Requirements for DOE Nuclear Facilities," dated November 15, 1994.

DOE-HDBK-1074-95, "Alternative Systematic Approaches to Training," dated January 1995.

Task# ORP-ESQ-2007-0060

E-STARs™ Report
Task Detail Report
04/30/2007 1215

TASK INFORMATION			
Task#	ORP-ESQ-2007-0060		
Subject	CONCUR:07-ESQ-055; ASSESSMENT REPORT A-07-ESQ-RPPWTP-006 - ASSESSMENT OF BNI TRAINING PROGRAM IMPROVEMENT INITIATIVES, MARCH 12-22-2007		
Parent Task#		Status	CLOSED
Reference	07-ESQ-055	Due	
Originator	Gano, Becky	Priority	High
Originator Phone	(509) 376-6004	Category	None
Origination Date	04/13/2007 1009	Generic1	
Remote Task#		Generic2	
Deliverable	None	Generic3	
Class	Long Term	View Permissions	Normal
Instructions	<p>Correspondence is being routed for concurrence via hard copy instead of electronically. Once you receive the correspondence, please approve or disapprove electronically via E-STARs and route to next person on the routing/concurrence list.</p> <p>BCC: ESQ OFF FILE ESQ RDG FILE MGR RDG FILE P.P.CARIER, ESQ W.J.TAYLOR, ESQ</p> <p>RECORD NOTE:</p>		
ROUTING LISTS			
1	Route List		Inactive
	<ul style="list-style-type: none"> • Carier, Patrick P - Review - Concur - 04/17/2007 0827 <i>Instructions:</i> • Taylor, William - Review - Concur - 04/16/2007 0812 <i>Instructions:</i> • Eschenberg, John R - Review - Withdrawn - 04/13/2007 1035 <i>Instructions:</i> • Olinger, Shirley J - Review - Withdrawn - 04/13/2007 1035 <i>Instructions:</i> • Olinger, Shirley J - Review - Cancelled - 04/30/2007 1215 <i>Instructions:</i> • Eschenberg, John R - Approve - Approved - 04/27/2007 1507 <i>Instructions:</i> 		
ATTACHMENTS			
Attachments	<ol style="list-style-type: none"> 1. 07-ESQ-055 att Assessment Report A-07-ESQ-RPPWTP-006 Training Assessment Report Kirsh.doc 2. 07-ESQ-055 BNI LTR Assessment Report A-07-ESQ-RPPWTP-006 BNI TRNG Prog Improvement Initiatives.doc 		
COLLABORATION			

RECEIVED

APR 30 2007

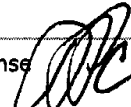




DOE-ORP/ORPCC

Task# ORP-ESQ-2007-0060	
COMMENTS	
Poster	Gano, Becky (Gano, Becky) - 04/30/2007 1204
	CLOSED
	Shirley Olinger concurred on 4/27/07.
TASK DUE DATE HISTORY	
<i>No Due Date History</i>	
SUB TASK HISTORY	
<i>No Subtasks</i>	

-- end of report --

Task# ORP-ESQ-2007-0060

E-STARS™ Report
 Task Detail Report
 04/13/2007 1035

TASK INFORMATION			
Task#	ORP-ESQ-2007-0060		
Subject	CONCUR:07-ESQ-055; ASSESSMENT REPORT A-07-ESQ-RPPWTP-006 - ASSESSMENT OF BNI TRAINING PROGRAM IMPROVEMENT INITIATIVES, MARCH 12-22-2007		
Parent Task#		Status	Open
Reference	07-ESQ-055	Due	
Originator	Gano, Becky	Priority	High
Originator Phone	(509) 376-6004	Category	None
Origination Date	04/13/2007 1009	Generic1	
Remote Task#		Generic2	
Deliverable	None	Generic3	
Class	Long Term	View Permissions	Normal
Instructions	Correspondence is being routed for concurrence via hard copy instead of electronically. Once you receive the correspondence, please approve or disapprove electronically via E-STARS and route to next person on the routing/concurrence list. BCC: ESQ OFF FILE ESQ RDG FILE MGR RDG FILE P.P.CARIER, ESQ W.J.TAYLOR, ESQ RECORD NOTE:		
ROUTING LISTS			
1	Route List		Active
	<ul style="list-style-type: none"> Carier, Patrick P - Review - Awaiting Response <i>Instructions:</i>  4/13/07 		
	<ul style="list-style-type: none"> Taylor, William - Review - Awaiting Response <i>Instructions:</i> WJT 4/15/07 		
	<ul style="list-style-type: none"> Eschenberg, John R - Review - Withdrawn - 04/13/2007 1035 <i>Instructions:</i>  		
	<ul style="list-style-type: none"> Olinger, Shirley J - Review - Withdrawn - 04/13/2007 1035 <i>Instructions:</i>  		
	<ul style="list-style-type: none"> Olinger, Shirley J - Review - Awaiting Response <i>Instructions:</i>  		
	<ul style="list-style-type: none"> Eschenberg, John R - Approve - Awaiting Response <i>Instructions:</i>  4/16/07 		
ATTACHMENTS			
Attachments	1. 07-ESQ-055 att Assessment Report A-07-ESQ-RPPWTP-006 Training Assessment Report Kirsh.doc 2. 07-ESQ-055 BNI LTR Assessment Report A-07-ESQ-RPPWTP-006 BNI TRNG Prog Improvement Initiatives.doc		
COLLABORATION			