



U.S. Department of Energy
Office of River Protection

P.O. Box 450, MSIN H6-60
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JUN 24 2008

08-AMD-159

Ms. N. F. Grover, Business Services Manager
Bechtel National, Inc.
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Richland, Washington 99354

Dear Ms. Grover:

CONTRACT NO. DE-AC27-01RV14136 – BECHTEL NATIONAL, INC. (BNI)
CORRECTIVE ACTION IN RESPONSE TO “ENVIRONMENTAL MANAGEMENT
PROGRAM AUDIT, DEPARTMENT OF ENERGY, OFFICE OF RIVER PROTECTION,
BECHTEL NATIONAL INCORPORATED, WASTE TREATMENT PLANT,
EM-AUDIT-08-015, APRIL 14 – APRIL 22, 2008”

Reference: DOE Memorandum from D. Y. Chung to S. J. Olinger, ORP, “Transmittal of
Final Report --- Headquarters Response to Waste Treatment Plant Quality
Assurance Concerns Conveyed to the Nuclear Regulatory Commission from Tom
Carpenter,” dated May 22, 2008.

This letter forwards the results of the U.S. Department of Energy (DOE), Office of Safety
Management and Operations audit conducted during the week of April 14, 2008 (Reference).

BNI is requested to review the Audit Report (Enclosure) and provide DOE Office of River
Protection (ORP) with Corrective Action Plans (CAP) in response to Findings EM-PA-08-015-
02, EM-PA-08-015-03, and EM-PA-08-015-04 detailed in Appendix 1, “Findings and
Observations,” of the Audit Report. In addition, BNI is requested to evaluate Observations 1, 4,
5, 6, 7, and 8 detailed in Appendix 1 to determine if corrective action is warranted. Within 30
days of receipt of this letter, BNI is requested to provide the justification for not taking corrective
action for any observation and the CAPs for each of the findings and, as applicable, each of the
observations. The CAPs should include the proposed corrective action for each
finding/observation and a schedule for completion of the corrective action. In addition, please
provide ORP monthly updates (e.g., report, or letter) on corrective action status.

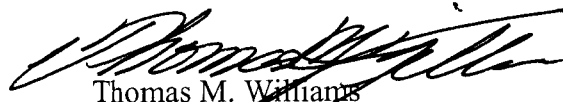
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Ms. N. F. Grover
08-AMD-159

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

Sincerely,



Thomas M. Williams
Contracting Officer

AMD:TMW

Enclosure


cc w/encl:
BNI Correspondence
D. H. Brown, PAC
L. A. Gouvela, PAC

**ENVIRONMENTAL MANAGEMENT
PROGRAM AUDIT
DEPARTMENT OF ENERGY
OFFICE OF RIVER PROTECTION
BECHTEL NATIONAL INCORPORATED
WASTE TREATMENT PLANT
EM-AUDIT-08-015**



APRIL 14 – 22, 2008

**ENVIRONMENTAL MANAGEMENT
PROGRAM AUDIT
DEPARTMENT OF ENERGY
OFFICE OF RIVER PROTECTION
BECHTEL NATIONAL INCORPORATED
WASTE TREATMENT PLANT
EM-AUDIT-08-015**

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EXECUTIVE SUMMARY

The Environmental Management (EM) Program audit team conducted a quality assurance (QA) audit of the Department of Energy (DOE) Office of River Protection (ORP), Hanford Tank Waste Treatment and Immobilization Plant (WTP) and Bechtel National, Incorporated (BNI), at their Offices in Richland, WA, April 14 – 22, 2008.

The audit was conducted as a result of the February 19, 2008, letter to the Nuclear Regulatory Commission (NRC) from Tom Carpenter of the Hanford Challenge, describing what he called significant quality and safety concerns related to the WTP. The letter conveyed that quality and safety issues have been a systemic problem within the WTP. As a result of the contents of the letter, the audit team was presented the task of determining the effectiveness of federal and contractor oversight, focusing specifically on design control, procurement processes, and corrective actions.

The audit was conducted using as a baseline guide the criteria of American Society of Mechanical Engineers (ASME), Nuclear Quality Assurance Standard 1 (NQA-1), 2000, Quality Assurance Requirements for Nuclear Facility Applications. Checklists used during the audit were derived from that Standard. Additional lines of inquiry from Dae Chung, Deputy Assistant Secretary, Office of Safety Management and Operations (EM-60), see appendix 3, and those included in the April 2, 2008, memo from Dae Chung to Shirley Olinger were also addressed.

The audit team concluded that the ORP does not currently have a dedicated corrective action procedure and tracking system for the project although significant revisions to the program are in preparation and, when implemented with suitable modifications, will correct the majority of the issues identified. This, along with ORP reorganization and increase in QA staff, offers opportunity for continued improvement. It should also be noted that ORP has taken appropriate steps to address allegations in the Hanford Challenge letter.

BNI internal oversight has improved, resulting in enhancements in the design process which has significantly improved since the EM evaluation in May 2007. The BNI design engineer selection, training, mentoring, and development process is producing excellent results.

As described in the following report, the audit resulted in the identification of 15 issues categorized as either "Findings" (4), "Observations" (8), or "Recommendations" (3). For the purpose of this audit, a Finding is defined as a failure to comply with the NQA-1-2000 Standard or a deviation from an approved requirement with a potential for programmatic impact; an Observation is a deviation from a requirement which could be regarded as a precursor to a potential finding and a Recommendation is presented as a suggested program improvement.

The issues identified as Findings should be addressed within the audited organizations' internal corrective action program, with the knowledge that the corrective measures identified will be subjected to follow-up review by the audit team.

1.0 INTRODUCTION

The EM Program QA audit of the DOE ORP Hanford Tank WTP and BNI was conducted as a result of the February 19, 2008 Tom Carpenter (of the Hanford Challenge) letter to the NRC describing what he called significant quality and safety concerns related to the WTP.

The audit team was tasked with determining the effectiveness of federal and contractor oversight, focusing specifically on design control, procurement processes, and corrective actions.

The audit was conducted at the BNI offices in Richland, WA, April 14 - 22, 2008, using the criteria of ASME NQA-1-2000, Quality Assurance Requirements for Nuclear Facility Applications, as a baseline guide. Checklists used during the audit were derived from that Standard. Additional lines of inquiry from Dae Chung, Deputy Assistant Secretary, Office of Safety Management and Operations (EM-60), see appendix 3, and those included in the April 2, 2008, memo from Dae Chung to Shirley Olinger were also addressed.

2.0 AUDIT SCOPE

The scope of the audit was driven by the allegations contained in the February 19, 2008, letter from Tom Carpenter to the Nuclear Regulatory Commission describing inconsistencies in the ORP and BNI oversight programs. The NQA-1 Requirements selected for the audit, based on the content of the allegations, were NQA-1-2000, Requirement 3, Design Control; Requirement 7, Control of Purchased Items and Services; and parts of Requirement 4, Procurement Document Control; Requirement 16, Corrective Action; and Requirement 18, Audits. The audit focused in particular on:

1. Oversight of the WTP design, procurement, and construction activities, with particular emphasis on oversight of BNI by ORP and oversight of second-tier contractors by BNI.
2. Verification of the adequacy of design control, with particular emphasis on:
 - a. Identification and reporting of design deficiencies;
 - b. Identification, reporting, and resolution of noncompliances between the design and safety authorization basis;
 - c. Identification and incorporation of design specifications within procurement requests; and
 - d. Oversight performance by DOE.
3. Verification that procurement procedures and practices are adequate to meet project requirements, with particular emphasis on:
 - a. Adequacy of purchased items, specifically safety significant components, is consistent with the importance and application of the item;

- b. Re-qualification of vendors; and
 - c. Receipt acceptance/inspection.
4. Verification that corrective actions procedures and practices are adequate to meet project requirements with particular emphasis on:
- a. Identification of specific actions and completion of corrective actions;
 - b. Ensuring issues address non-recurrence; and
 - c. Resolution of EM-60 "assist visit" corrective actions to ensure adequate resolution to ensure implementation of an adequate QA Program.

These focus items are identified throughout the text as (Chung, item 1, 2, 3 or 4).

3.0 REVIEW RESULTS

3.1 Design Control

The audit team evaluated the WTP design activities being performed by BNI against ASME NQA-1-2000 Requirement 3, Design Control. The audit team focused the design control effort on four specific lines of inquiry:

1. Determine that the configuration management process includes measures to ensure changes that may affect the approved configuration are recognized and processed.
2. When changes to the approved configuration are necessary, determine whether the design changes were governed by control measures consistent with those applied to the original design. These measures will include evaluation of effects of those changes on the overall design and on any analyses upon which the design is based. This includes the safety analyses.
3. Ensure that design criteria are appropriately flowed down to the subtier documents and the derivation of the key design criteria is appropriately peer or independently reviewed by sampling and vertical slice methods.
4. Oversight of the design process established by BNI by ORP. Oversight Activities are included in Section 3.4 of this report.

The configuration management process at BNI has improved from that which was observed during the assist visit performed in May 2007. The configuration management information system consists of a series of databases including the Component Information System (CIS), the INTOOLS database of instruments and actuated valves, the SETROUTE database describing electrical cables and terminations as well as raceways, the Electronic Document Management System (EDMS), and the Computerized Master Equipment List (CMMS).

Changes to the approved configuration may be transmitted by change notices resulting from field changes, supplier requests for a deviation from a requirement provided in a specification, changes to design bases, or changes developed by the BNI design engineering organization. BNI has modified their change management process such that all change notices use a similar form that lists the affected design documents. The types of affected design documents determine the list of appropriate disciplines that are included in the change review process. Each affected discipline lead engineer approves the disposition of the change request, which includes a review of the effect that change has on the approved configuration as contained in the above data systems, in addition to any design criteria or other basis of design information such as calculations. (Chung, item (2) a.)

The action tracking system and related discipline-specific databases contain design information that may be relevant to design activities being performed by other design disciplines. Staff in these organizations may not be aware of this information. This is addressed in Appendix 1 as Observation 1.

BNI uses Procedure 24590-WTP-3DP-G04B-00001 Revision 10, *Design Criteria*, to identify the applicable design criteria and control changes to these design criteria. This procedure requires any change to the design criteria to be reviewed by the Safety Assurance group, and instructs the discipline lead design engineers to identify the codes and standards, discipline-specific design criteria, and safety envelope requirements to be used as design inputs. (Chung, item (2) b.)

The River Protection Project - Waste Treatment Plant Integrated Safety Management Plan (24590-WTP-ISMP-ESH-001) also provides processes to examine and evaluate plant processes and issues for safety impacts and additional criteria to be satisfied in the design. The ISM processes require inputs to be developed to the safety design case for formal change control and requirements flow down. Changes to design criteria and issued designs receive the same level of review as the original design. Changes to the criticality safety evaluation report (CSER) are not reviewed for impact to design; rather these changes are evaluated against the Safety Requirements Document to determine if there are impacts. This weakness in the process has been identified by DOE-ORP and evaluation and correction of this issue are already being worked. In addition, the change process in place at BNI requires that changes to systems graded as Safety Significant (SS) or Safety Class (SC) be reviewed by the Environmental and Nuclear Safety group for evaluation against the facility safety basis. The audit team examined changes that required examination of the effect of that change on the overall design and the safety basis and determined that BNI is evaluating changes to determine the effect of the change on both the overall design and the safety basis.

The audit team examined BNI's implementation of design criteria flow-down into lower tier documents and design products. BNI has recognized in Corrective Action Report (CAR) 24590-WTP-CAR-QA-05-006, that the flow-down of design criteria into design products has been a problem. The closure action for this CAR included an internal assessment, 24590-WTP-MAR-ENG-05-0010, which performed a vertical slice of safety significant (SS)/ safety class (SC) systems and components to determine compliance of

their design with the safety envelope. Additional assessments that include vertical slices and samples of design products to verify that they correctly incorporate the design criteria are being performed on a regular basis. (Chung, item (2) c.)
Recent assessments include:

- 24590-WTP-MAR-PA-07-0007, Specification Conformance to the Safety Requirements Document (examined 60 specifications/specification change notices)
- 24590-WTP-MAR-PA-07-0007, Drawing Conformance to the Safety Requirements Document and SED (examined 423 drawings/drawing change notices)
- 24590-WTP-MAR-PA-07-0001, Safety Envelope Conformance/Design Criteria Management Assessment (examined 216 design documents in SS/SC systems)

The audit team concluded that the BNI is currently implementing their processes to ensure that the appropriate design criteria are being flowed down to lower-tier documents and design products. Under the current BNI program, once the design work is completed, a “checker” checks to ensure that the identified design inputs are properly incorporated into the design. The Discipline Project Engineering Manager (DPEM) then reviews and approves the design. The DPEM is also responsible to ensure that the appropriate design inputs have been selected and are incorporated into the design. Design Verification then verifies all design inputs, including appropriateness and completeness of selected design inputs, and ensures they are reflected in the design. (Chung, item (2) d.)

The audit team also examined two newly revised processes BNI is planning to implement. The first of these, for turnover of systems for testing/operations, has been used on a pilot scale to turn over a crane system and part of the fire water system. Out of these pilot tests, BNI has developed their new turnover process, which has yet to be implemented formally on any system. The audit team’s review of the process concluded that the process is robust and will result in adequate capture of design requirements and specification of appropriate test and acceptance criteria.

The second new process evaluated was for Commercial Grade Dedication (CGD). This is a newly revised process that was recently made effective. No examples of implementation were available. Based on the process documentation, the audit team concluded that the new CGD is a robust process that will produce quality results. The team identified one potential weakness in the process: the specifying of critical characteristics. While the process specifies that both the design requirements and how they are satisfied must be listed in the System Descriptions, the process stops short of requiring critical component characteristics to be delineated. Providing the critical component characteristics would simplify future activities in the event a specific item that has undergone CGD is discontinued, or material substitutions are made by the vendor. It would also simplify the application of a commercial grade dedication process if needed in the future. The team recommends this area be re-examined after the process has been in use for 6 – 12 months.

BNI performs design efforts by discipline – on any given system the design may be in differing states of maturation between the various discipline design groups. Design verification is done by each discipline on that discipline's contribution to the design of any given system.

Specifications and drawings produced by a discipline are released for procurement or construction after the design verification has been performed for that discipline; however, outstanding assumptions may still exist in the design calculations and products at the point when the design products are released for procurement and construction. These outstanding items are tracked by the BNI Action Tracking System and closed as the necessary information becomes available. Although procurement and construction may proceed prior to final design information being available, the BNI program requires all outstanding design assumptions or other issues outstanding from the design verification to be closed prior to the system, structure, or component being relied upon to perform its function, or prior to turnover from construction to operations.

The BNI process does introduce some risk that procurement and construction could proceed on the basis of incomplete information, but complies with the NQA-1-2000 requirements for design control which allow procurement and construction to proceed on the basis of incomplete design information as long as the incomplete information is identified and controlled, and that the design verification is completed prior to relying on the system, structure, or component to perform its function. However, the Bechtel procedure for design verification in Section 3.1.2 permits design verification to be deferred, providing that a justification for this action is documented. This procedural process does not comply with NQA-1 Requirement 3 Section 500(b). This is documented in Appendix 1 as Finding EM PA-08-015-04

Personnel from both ORP and BNI were interviewed during the audit, including the following positions:

- Deputy Manager of Engineering
- Lead Engineer
- Design Engineer
- Process Engineer
- Configuration Management Engineer

A list of personnel interviewed is included in this report in Appendix 2.

3.2 Control of Purchased Items and Services (including Procurement Document Control and Inspection)

This area of examination included parts of NQA-1, Requirement 4 and Requirement 10 (with respect to Receipt Inspection).

The audit team reviewed the oversight of the WTP procurement and construction activities of BNI by ORP, and oversight of the second-tier contractors by BNI. In addition, the audit team verified that procurement procedures have been adequately implemented to meet WTP project requirements, with particular emphasis on:

- Adequacy of purchase items, specifically safety significant components, is consistent with the importance and application of the item
- Non conformance to requirements is addressed in the procurement process via the ORP oversight findings and Supplier Deviation Disposition Reports generated by the Supplier and dispositioned by BNI. The oversight process is further discussed in Section 3.4 of this report. (Chung, item (3) b)
- Re-qualification of suppliers
- Receipt acceptance/inspection

The audit team interviewed the ORP QA team lead, QA engineers, and an acceptance inspector for a summarization of construction and procurement activities. The audit team reviewed the following:

- Construction Surveillance Summary Report for 4th Quarter of Calendar Year (CY) 2007, consisting of 89 specific surveillances
- Construction Surveillance Summary Report for 1st Quarter of CY2008, consisting of 131 specific surveillances
- Two surveillance reports by ORP of BNI suppliers in the 4th quarter of CY2007, and two surveillance reports by ORP of BNI suppliers in 1st quarter of CY2008
- ORP assessment of BNI Procurement Quality Assurance
- ORP assessment of BNI Commercial Grade Dedication Program

The audit team interviewed the BNI Supplier Qualification Manager and Deputy Supplier Qualification Manager for a summarization of oversight of BNI suppliers. The audit team reviewed two audits of BNI suppliers and five surveillances of BNI sub-tier suppliers.

The audit team reviewed three safety significant purchase orders for inclusion of all appropriate QA Program requirements; two material acceptance plans for appropriate quality acceptance criteria; and two requalification audits of BNI suppliers.

The CGD procedure (24590-WTP-3DPG04T-00909) was revised on 9-25-07 and 4-15-08 as a result of the assist visit in May 2007. The current procedure was reviewed by the team and is adequate. There have been no CGD procurements since a hold has been placed, on CGD activities pending resolution of Price-Anderson Act Amendments (PAAA) and Office of Enforcement (OE) activities.

The audit team concluded that the overview of BNI construction and procurement activities; overview of BNI suppliers and procurement activities; overview of BNI

suppliers and sub-tier suppliers by BNI; procurement and acceptance of safety significant items; and requalification of BNI suppliers has been satisfactorily implemented (Chung 3a, 3b, 3c, and 3d). There were no findings.

Personnel from ORP interviewed during the audit included the following positions:

- Deputy Supplier Quality Manager
- Site Services Supervisor
- Receiving Field Inspector

A list of personnel interviewed is included in this report as Appendix 2.

3.3 Corrective Action

This area of examination included NQA-1, Requirement 16. The audit team reviewed the corrective action processes of ORP and BNI to provide assurance that the following areas were appropriately addressed.

4. Verification that corrective actions procedures and practices are adequate to meet project requirements with particular emphasis on:
 - a. Identification of specific actions and completion of corrective actions;
 - b. Ensuring issues address non-recurrence; and
 - c. Resolution of EM-60 "assist visit" corrective actions to ensure adequate resolution to ensure implementation of an adequate QA Program.

3.3.1 ORP Corrective Action

ORP collects all actions into a Consolidated Action Reporting System (CARS). This system is governed by a procedure, which was revised on 1/31/08. Prior to the revision, there had been no governing procedure for CARS for several years, revision 0 having been removed from ORP's directives system, along with several other procedures. The CARS is ORP's action tracking system and is not dedicated to quality and safety issues.

The CARS procedure, while describing the CARS process, does not describe a system which complies with applicable DOE O 414.1C criterion 3 requirements, DOE O 226.1 requirements, or NQA-1 Requirement 16. This condition has existed at ORP for several years and is considered to have a high probability of having produced programmatic impact. However, the ORP QA staff is in the early stages of preparing a procedure set intended to address these and other deficiencies. The audit team was shown a draft procedure for corrective action control which, if implemented with certain revisions, would represent considerable progress in addressing this shortcoming. This is documented in Appendix 1 as Finding EM-PA-08-015-01. Related to this matter is the report that the ORP Manager receives that is drawn from CARS. Since programmatic material is included in the CARS system, there is little quality or safety content in these reports. This is documented in Appendix 1 as Observation 3.

The ORP staff personnel are using their Employee Concerns procedure to evaluate the allegations being made by Mr. Carpenter, a use for which the procedure was not intended. This practice results from there being no specific procedure for handling allegations at ORP. This is documented in Appendix 1 as Observation 2.

The 28 items identified by EM during the "assist visit" were entered into the appropriate ORP and BNI action tracking systems. Fourteen of the BNI items have been addressed and closed. Of the remaining BNI open items, three are being worked by BNI and three are being reworked by BNI to address ORP comments. The six ORP items have been completed and closed. The remaining BNI open items are being tracked via the ORP tracking system and their status and progress are being monitored by ORP. (Chung, item (4) c.)

This assessment determined that ORP's corrective action management system is deficient. However, several actions are underway to remedy this deficiency. As an example, ORP has begun a program of internal audits, which was not occurring four months ago. ORP's management system improvement activities are expected to have advanced sufficiently for a meaningful follow-up assessment to be performed sometime around November, 2008. (Chung, item (4) a. b.)

Personnel in the following ORP positions were interviewed during the audit:

- QA Team Lead
- QA, PAC
- Assistant Manager, Environmental Safety and Quality (ESQ)
- QA Employees Concerns Manager

A list of personnel interviewed is included in this report as Appendix 2.

3.3.2 BNI Corrective Action

BNI has a relatively mature corrective action management system that has evolved significantly, particularly in the past year. The system is made up of a large number of components. Most of the procedures reviewed had been revised at least four times; some were in their tenth revision. BNI recently hired a dedicated Corrective Action Manager, and significantly revised their corrective action process. The key feature of the revised process is that significance determinations are made by a review committee from issues identified under a Project Issues Evaluation Reporting (PIER) procedure. The PIER Review Committee (PRC) categorizes issues into three levels of deficiencies: deficiency report (DR), CAR and Significant CAR. Those items that are not deficient remain PIER items and may or may not be dispositioned to effect improvement in the management system.

The trending process described in GPP-QA-204 R5 does not adequately describe the process for preparing trend reports, and the trend reports themselves do not provide information that is likely to contribute to continuous improvement. The result of the

application of the process described in these two procedures is that there is little distinction in the treatment afforded to DRs and CARs. This is documented in Appendix 1 as Finding EM-PA-08-015-02.

DOE O 226.1 requires that causal analysis be applied using a graded approach based on risk. MGT-022 requires that the PRC classify issues by significance and designates the DR, CAR, and Significant CAR classifications. QA-208 prescribes the treatment afforded to each classification requiring assignment of cause codes to DRs, apparent cause analysis for CARs, and root cause analysis for Significant CARs. Cause analysis is governed by MGT-015, "Cause Analysis" and MGT-004, "Cause Analysis Guide". MGT-004 mandates that a "why staircase" analysis be performed for apparent cause analysis, followed by the assignment of apparent cause codes. The analyst has no freedom to select an alternative analysis procedure. The only record of apparent cause analysis is the assigned cause code or codes. There is thus little distinction between the cause analysis treatment afforded DRs and CARs. This is documented in Appendix 1 as Finding EM PA-08-015-03.

Appendix B of MGT-022 has no requirement that inconsistencies with BNI's contract with DOE that affect safety or quality be entered into its corrective action program. Furthermore, inconsistencies with BNI's own QA Program, as well as findings from assessments or audits, are not required to be dispositioned as deficiencies. A definition of "finding" does not exist in BNI's management system, despite being used in several BNI procedures. This is documented in Appendix 1 as Observation 4.

The Management of Corrective Action Procedure, 24590-WTP-GPP-QA-208, states in paragraph 3.1, "Additionally, CARs and Significant CARs may be further identified as Waste Acceptance Impacting (WAI) or as having been reported in the U.S. Department of Energy (DOE) Noncompliance Tracking System (NTS), i.e. related to the Price-Anderson Amendments Act (PAAA)/Worker Safety and Health Program (WSHP)." This implies that DRs have no prospect of being so classified. However, paragraph 3.5 states that the Corrective Action Manager performs PAAA screening on all DRs, CARs, and Significant CARs. The process section, 3.6, addresses PAAA handling for CARs and significant CARs, but not for DRs. The Corrective Action Manager stated that he screens all Condition Reports, including DRs, for potential reporting under PAAA. The inconsistencies within the procedure could result in WAI or PAAA reportable items being improperly handled and need to be addressed. This is documented in Appendix 1 as Observation 5. (Chung, item (4) a.)

The Employee Concerns Program governing Procedure GPP-MGT-005 does not require the Employee Concerns Officer to enter adverse conditions identified in the program into the PIER process. It also requires the Employee Concerns Office to make an affects determination, which is the business of the PRC and should not be undertaken by the Employee Concerns Office. This is documented in Appendix 1 as Observation 6.

The requirement for the Significant CAR classification in QAM 16.1.2.4 is derived entirely from the Quality Assurance Requirements Document (QARD). (The QAM cites DOE O 226.1 in two places, but neither citation requires a Significant CAR

classification.) Nonetheless, MGT-022 does not limit the Significant CAR classification to WAI-related items. The application of the Significant CAR classification to activity outside the purview of the QARD is applied since only Significant CARs receive root cause analysis, while DOE O 226.1 requires that root causes be identified (applied to all items using a graded approach based on risk). BNI performs apparent cause analysis on CARs and identifies cause codes for DR. (Chung, item (4) b.) The process is appropriate, with the exception that the classification decision is made on the basis of consequences rather than risk, as required by 226.1. Minor changes to MGT-022 will remedy this inconsistency. This is documented in Appendix 1 as Observation 7. (Chung, item (4) a.)

DOE O 226.1 requires that systems for issues management must include structured processes for determining the risk, significance, and priority of deficiencies. Currently, deficiencies are not required to be prioritized in either implementing Procedure MGT-022, *Project Issues Evaluation Reporting*, or in QA-208, *Corrective Action Procedure*. This is documented in Appendix 1 as Observation 8.

The PSC governed by 24590-WTP-GPP-SREG-001 Rev 10, is intended to serve as the independent review team required by DOE/RL-96-0004, confirming process standards recommended by the Process Management Team. In the past two or three years, the PSC emphasis has shifted to such matters as review of ABARs, Integrated Safety Management (ISM) process improvements, tailoring for fire safety, criticality hazards, the hazard topography process, and other related topics as the identification rate of new standards to be used by the project has declined.

In a management assessment performed in October 2005, a Deputy Project Director asserted the PSC should "identify real problems and recommend solutions to senior management." Nonetheless, the Corrective Action Manager, in an interview, could not recall having received any PIER inputs from the PSC.

The PSC is composed of BNI senior managers with broad and diverse backgrounds in management and safety. Such a group is likely to approach continuous improvement from a different angle and uncover systemic deficiencies in the BNI systems and the implementation of those systems that are overlooked by groups normally engaged in assessment/audit activity. Input from this group would add diversity and therefore probably improve the process for detection of quality problems. This is documented in Appendix 1 as Recommendation 1.

BNI has adopted a process for encouraging that deficiencies be corrected on the spot (COTS), thus avoiding some of the reporting obligations associated with other deficiencies. However, COTS determinations are required to be made by the PRC, and not the individual or group with the identified deficiency. The BNI procedures governing this process are sufficiently ambiguous that individuals, or even perhaps PRC members, may consider COTS items as not requiring further PRC action. Such misinterpretation could result in items that should have been classified as CARs or Significant CARs being misclassified as COTS. The PIER Review Committee is responsible for making a COTS determination, not the person or organization initiating the PIER item. Since some conditions corrected in the field within the 72-hour period necessary for COTS

determination may in fact qualify as CAR or Significant CAR issues, requiring causal analysis, the misleading statement in 2.1.1 could be interpreted by PIER review committee members to imply that all items corrected in the field are COTS, not requiring a PRC determination. The responsibility of the PRC to make COTS determinations should be specifically stated in section 3.4 of the procedure. The indication is that the PRC is making the determinations, but is not procedurally directed. This is documented in Appendix 1 as Recommendation 2.

MGT-022, section 3.3.2 tends to limit QA's role in oversight of the corrective action process to significant CARs. This is an unnecessary constraint on the authority of an organization that employs personnel who are generally qualified to make significance determinations and who could add value to the PIER process through oversight. A thorough BNI audit of the corrective action process was conducted in November 2007 and reported in IAR-QA-07-0011. Fifteen issues were raised by the audit. There were no issues concerning inappropriate classification of deficiencies, a result which is difficult to reconcile with the large number of PIER items dispositioned by the PRC. Another possible explanation for this development is that Appendix B of MGT-022, which defines the classification process, contains little in the way of objective content. The process of significance assignment is almost entirely subjective. This is documented in Appendix 1 as Recommendation 3.

The team concluded that the BNI corrective action process is effective and is improving. Chung memo item (4).

Personnel in the following ORP positions were interviewed during the audit:

- Performance Manager
- Surveillance and Audit Manager
- Assistant Project Director, Quality and Safety Assurance
- QA Employees Concerns Officer
- Corrective Action Manager
- Manager of Quality and Performance Improvement
- Acting Quality Assurance Manager
- Manager of Environmental and Nuclear Safety

A list of personnel interviewed during the audit is included in this report as Appendix 2.

3.4 Audits

This area of examination included parts of NQA-1, Requirement 2 and Requirement 18 (with respect to Assessment/oversight activities). The audit team reviewed audit and assessment activities performed by ORP on BNI (external assessments) and internal assessments performed by ORP and BNI. The focus was to confirm that oversight of the WTP design, procurement, and construction activities, with particular emphasis on oversight of BNI by ORP and oversight of second-tier contractors by BNI was performed appropriately.

- **NQA-1-2000 allows BNI to approve suppliers to qualify their subtier suppliers. BNI has been actively performing oversight of suppliers and has surveyed all currently active subtier suppliers. BNI's current subtier qualification practices exceed the requirements of NQA-1. This appears to have been changed as a result of corrective measures put in place after the Hirshfield issue.**
- **The team reviewed the ORP oversight. This included QA oversight performed by the ORP QA group and the ORP construction inspections. The ORP engineering group is also performing assessments in the area of design engineering. The team believes ORP's oversight in these areas is sufficient and exceeds the usual level of oversight provided by DOE on other EM nuclear projects.**
- **The ORP has identified that their oversight program and procedures do not strictly comply with NQA-1, 2000. They have a plan for bringing their program into NQA-1 compliance; this is scheduled for full implementation on October 1, 2008.**

In addition to the documentation reviewed as part of the procurement process evaluation, the audit team reviewed the following:

- **ORP Integrated Assessment Schedule, March 31, 2008**
- **ORP Assessment Report A-07-ESQ-RPPWTP-009, WTP Corrective Action Management Program (CAMP)**
- **ORP Assessment Report A-07-ESQ-RPPWTP-010, Waste Treatment and Immobilization Plant Implementation of the Graded Approach to the QA Program Implementation**

The incorporation of the findings from these assessment reports into the ORP CARS and the BNI corrective action system was verified.

The ORP is in the process of revising their QA program. The current assessment process does not fully comply with NQA-1. For example, the ORP does not have NQA-1 lead auditors or a program for qualifying them. These issues have been identified by ORP. They have a plan, which was reviewed by the audit team, to bring the QA program and associated procedures into compliance with NQA-1 by October 1, 2008.

In addition to the assessment documentation reviewed as part of the procurement process evaluation, the audit team reviewed the following:

- **BNI Internal Audit Schedule for 2008**
- **BNI Audit Report for the Internal Audit of Design Control, 24590-WTP-IAR-QA-07-0009**
- **BNI Audit Report Acquisition Services – In Town, 24590-WTP-IAR-06-0001**

The audit team verified that issues identified in these audit reports were entered into the BNI corrective action tracking system.

Personnel in the following ORP and BNI positions were interviewed during the audit:

- ORP QA Team Lead
- BNI Acting QA Manager
- Manager of Quality and Performance Improvement

A list of personnel interviewed during the audit is included in this report as Appendix 2.

The audit team determined that, overall, the assessment programs of BNI and ORP are adequate, satisfactorily implemented, and effective. There were no findings in this area.

4.0 TEAM COMPOSITION

Robert Murray	Management Representative, DOE-EM
Dave Kimbro	Audit Team Leader, Navarro Research and Engineering (NRE)
Dave Faulkner	Audit Team Member, DOE - RL, Design Control
Clark Gibbs	Audit Team Member, Dade Moeller & Associates, Corrective Action
Wayne Ledford	Audit Team Member, NRE, Procurement
Jack Walsh	Audit Team Member, NRE, Procurement
Ray Wood	Audit Team Member, Trinity Engineering, Design Control

APPENDIX 1 FINDINGS AND OBSERVATIONS

Finding EM-PA-08-015-01

DOE-ORP's Consolidated Action Reporting System (CARS) is an action tracking system and is not dedicated to items adverse to quality. The system and its implementation is non-compliant with many applicable requirements:

- (a) Items that are quality related cannot be separated from programmatic items nor can their importance be recognized.
- (b) The CARS procedure does not describe the actions of the point-of-contact relative to preparation of reports. The procedure states, "Develops reports as requested by managers and other staff."
- (c) The CARS procedure does not require identification of the causes of problems.
- (d) The CARS procedure makes no provision for prevention of recurrence of conditions adverse to quality.
- (e) There is no system in place to identify items, services, or processes needing improvement. The Performance, Objectives, Measures, and Commitments (POMC) treatment of corrective actions is limited to HQ-initiated items. Weaknesses in the issues management area of the POMC are the subject of Observation 2.
- (f) The CARS procedure allows the Tracking Area Manager to approve closure of all items, including those that are quality related. This practice could result in an inappropriate closure of a quality related item. ISO-F-347, the baseline document list, does not include all elements required by NQA-1- 2000, Requirement 3, Section 601.3. Specifically, supplier manuals and instructions, and operating and maintenance requirements are not being included

Finding EM-PA-08-015-02

This finding has two parts, the first part dealing with the procedural system for preparing trend reports and the second part dealing with the trend reports themselves:

- a. The Corrective Action Program Trending Procedure, 24590-WTP-GPP-QA-204, Rev. 5, does not describe the trend report prepared by the Corrective Action Manager. The procedure requires only that the manager shall "employ methods appropriate to identify trends from the data collected," and lists types of information to be used for determining potential trends. The two most recent trend reports contain much material that is repetitive in basic content. Thus, there has been adopted a repetitive process that is not described in the governing procedure. [414.1C Criterion 5 (a)]

- b. The two most recent trend reports, CNN 163624 And CNN 168953 cover the second and third quarters of 2007. Neither of these reports identifies "areas requiring attention" as required by the governing procedure, 24590-WTP-GPP-QA-204, Rev 5. The reports show populations of PIERs and CAs, provide data on self identification, provide data on timeliness, and group issues by process area. Data on extent of condition are not included. There is little in the way of statements of conclusion. The reports do not appear to be fulfilling their intended purpose. The Corrective Action Manager informed the assessor that he was in the process of making improvements to the trending process.

Finding EM-PA-08-015-03

DOE O 226.1 requires that causal analysis be applied using a graded approach based on risk. MGT-022 requires that the PRC classify issues by significance and designates the DR, CAR, and Significant CAR classifications. QA-208 prescribes the treatment afforded to each classification requiring assignment of cause codes to DRs, apparent cause analysis for CARs, and root cause analysis for Significant CARs. Cause analysis is governed by MGT-015, "Cause Analysis" and MGT-004, "Cause Analysis Guide". MGT-004 mandates that a "why staircase" analysis be performed for apparent cause analysis followed by the assignment of apparent cause codes. The analyst has no freedom to select an alternative analysis procedure. The only record of apparent cause analysis is the assigned cause code or codes. There is thus little distinction between the cause analysis treatment afforded DRs and CARs.

Finding EM-PA-08-015-04

NQA-1 Requirement 3 Section 500(b) states that design verification shall be performed prior to releasing the design for procurement, manufacture, construction, or use by another organization, except where this timing cannot be met, such as when insufficient information exist. In those cases, the unverified portion of the design shall be identified and controlled. The Bechtel procedure for design verification in Section 3.1.2 permits design verification to be deferred, providing that a justification for this action is documented. This procedural process does not comply with NQA-1 Requirement 3 Section 500(b).

Observation 1

The action tracking system and related discipline-specific databases contain design information that may be relevant to design activities being performed by other design disciplines. Staff in these organizations may not be aware of this information.

Observation 2

Significant conditions adverse to quality are not reported to the ORP Manager in an effective fashion. The 4/11/08 version of "ORP's Top Priorities, Issues & Deliverables Report" furnished to the ORP Manager and derived from CARS contains just one quality related item. This is believed to stem from the inclusion of non-quality affecting items in CARS.

Observation 3

ORP has no committed and specific system for handling allegations. Allegations can be a source for the identification of quality problems. (They can also be a prelude to an employee concern.)

Observation 4

Appendix B of MGT-022 has no requirement that inconsistencies with BNI's contract with DOE that affect safety or quality be entered into its corrective action program. Furthermore, inconsistencies with BNI's own quality assurance program, as well as findings from assessments or audits, are not required to be dispositioned as deficiencies. A definition of "finding" does not exist in BNI's management system, despite being used in several BNI procedures.

Observation 5

The Management of Corrective Action procedure, 24590-WTP-GPP-QA-208 states in paragraph 3.1, "Additionally, CARs and Significant CARs may be further identified as Waste Acceptance Impacting (WAI) or as having been reported in the U.S. Department of Energy (DOE) Noncompliance Tracking System (NTS), i.e. related to the Price-Anderson Amendments Act (PAAA)/Worker Safety and Health Program (WSHP)." This implies that DRs have no prospect of being so classified. However, 3.5 states that the Corrective Action Manager performs PAAA screening on all DRs, CARs, and Significant CARs. The process section, 3.6, addresses PAAA handling for CARs and significant CARs, but not for DRs. The Corrective Action Manager informed this assessor that he screens all CRPTs including DRs for potential reporting under PAAA. The inconsistencies within the procedure and with practice need to be addressed.

Observation 6

The description of the entry of deficiencies from the Employee Concerns Program into the corrective action program described in MGT-005, "Employee Concerns Program," is inconsistent with MGT-022, which describes the PIER process. Paragraph 4.5.1 of MGT-005 requires the ECP Office to "review concern and fact finding for potential conditions adverse to quality that, if uncorrected, could have a serious affect on safety, operability of systems, structures or components, or product quality. It may be necessary to complete a corrective action report ..."

MGT-022 requires only that adverse conditions be entered into PIER, without making the affects determination, which is the responsibility of the PIER Review Committee. Moreover, the use of the word "may" implies that the Employee Concerns Office has an option to not enter adverse conditions into the PIER process. Further confusion in this area is potentially created by Section 2.3 of MGT-022, which explicitly states that Employee Concerns are not entered into the PIER process. Once the ECP Office makes a determination that the concern is an adverse condition, it should be (with a "shall" statement) reported into the PIER process.

Observation 7

The BNI classification decision process is made on the basis of consequences rather than risk, as required by 226.1. Minor changes to MGT-022 will remedy this inconsistency.

Observation 8

DOE O 226.1 requires that systems for issues management must include structured processes for determining the risk, significance, and priority of deficiencies. Currently, deficiencies are not required to be prioritized in either MGT-022 or in QA-208.

Recommendation 1

The Project Issues Evaluation Reporting procedure, 24590-WTP-GPP-MGT-022, Rev 4 includes in paragraph 2.1.1 "under issues to be entered into the PIER system" Conditions Corrected on the Spot (COTS). In fact, the PIER Review Committee is responsible for making a COTS determination, and not the person or organization initiating the PIER item. Since some conditions corrected in the field within the 72-hour period necessary for COTS determination may in fact qualify as CAR or Significant CAR issues, requiring causal analysis, the misleading statement in 2.1.1 could be interpreted by PIER review committee members to imply that all items corrected in the field are COTS, not requiring a PRC determination. The responsibility of the PRC to make COTS determinations should be specifically stated in section 3.4 of the procedure. The assessor was informed by the Corrective Action Manager that the PRC is making COTS determinations, but the procedure needs to be modified to clarify the point. It is recommended that a sample of about 50 COTS items, to include some drawn from prior to the arrival of the current Corrective Action Manager, be examined to ensure they were all properly classified.

Recommendation 2

It is recommended that procedure MGT-022 require that QA sample the significance assignment process through surveillance or audit on some periodic basis. It is further recommended that avenues to increase the objective content of Appendix B to MGT-022 be explored.

Recommendation 3

It is recommended that the Project Safety Committee select one relatively broad area for assessment each year, and enter their results into the corrective action system. BNI management could explore the use of other possible entities composed of managers and other senior level personnel from within the project for assessment activity intended to detect systemic deficiencies in the management system.

**APPENDIX 2
PERSONNEL CONTACTED DURING THE AUDIT**

PERSONNEL CONTACTED DURING THE AUDIT				
NAME	TITLE/ORG	PREAUDIT MEETING	CONTACTED DURING AUDIT	POST AUDIT MEETING
Abdul, W.	HW-EPD/ORP			X
Austin, T.	SQ Program/BNI	X		
Barger, J.	Construction Inspection/ORP	X	X	
Billings, T.	Engineer/WTP	X	X	
Bogges, T.	Manager ACQ. Services/BNI	X	X	
Carrier, P.	Quality Assurance/ORP	X	X	X
Clare, G.	Assistant Project Director/WTP	X	X	X
Clements, B.	Area Project Manager/BNI	X		
Cochrane, M.	Quality Assurance Manager/BNI	X		
Ehlinger, M.	WTP QA Programs/BNI	X		
Eschenberg, J.	Program Manager/ORP	X	X	
Fish, J.	Software Quality Program/BNI	X		
Griffith, B.	Safety Team Lead/ORP	X		
Jantosik, D.	Quality Assurance Manager/BNI	X	X	X
Kerrigan, B.	Supplier Quality/BNI	X	X	X
Klum, D.	WTP Manager/BNI	X	X	X
Linzau, B.	DNFSB Site Rep/DNFSB			X
Lynch, S.	Deputy Manager Engineering/BNI		X	
Pisarcik, D.	Design Support Manager/BNI	X	X	X
Quirk, R.	DNFSB Site Rep/DNFSB			X
Simmons, L.	Project Manager/BNI			X
Swenning, S.	Corrective Action Manager/BNI	X	X	X
Taylor, B.	AM-ESQ/ORP	X	X	X
Ungerecht, C.	Project Assistant/ORP		X	
Vega, S.	Quality Assurance Engineer/ORP	X	X	
Wade, K.	DOE/ORP – WCD DD	X	X	X
Wilson, J.	Plant Ops. Manager/ORP			X

APPENDIX 3 SUPPLEMENTAL AREAS OF INQUIRY

This appendix contains a list of questions to investigate that were provided to the audit team by the DAS EM-60 in addition to what is already delineated in the plan:

- 1) "Engineering has been the main part that has been reviewing the procurement documents to ensure the various design specifications are correctly conveyed in these documents. I was told this has recently been modified to have the QA folks to verify instead of the engineers."

Answer: The process has not changed since last May when we were here on the "assist visit". Engineering and Quality Assurance continue to review procurement documents and revisions as well.

- 2) "Flow down and implementation of the Safety requirements document that governs the overall design basis. BBR is looking into the flow down but not the aspect of how lower tier codes and standards have been managed by the BNI's configuration management system. Dave Faulkner has been looking into DTD and ABAR processes and he can assist your team in this area."

Answer: Configuration management controls the basis of design which includes the library of applicable standards (e.g., codes and standards, calculations, design guides). The design process controls selection of design inputs, specifically standards, and reviews the selection at least twice during the design process. Design verification again verifies design inputs during discipline design verification. BNI has added a second verification of the requirements flow down into the design product when they develop the system description document prior to system turnover.

- 3) "Make sure all the Carpenter issues have been addressed by the BNI management system."

Answer: All Carpenter issues have been previously addressed. ORP will use the ECP to take another look at the issues. Some on the team do not feel this is the best system to manage allegations; but, the ECP can accommodate Mr. Carpenter's issue if Shirley Olinger is the concerned employee. We met with the ECP manager (Bobby Williams) and the ECP is expected to be only used as the gatekeeper to disposition and manage the issues. The ECP will use its tracking database to maintain the issues. Each issue (totaling roughly 30) will be assigned to an appropriate manager within ORP and BNI to manage. Any CAs generated from this additional investigation will go into CARs.

Pat Carier has been directed by Shirley Olinger to meet with Tom Carpenter in Seattle. Mr. Carpenter has requested this meeting to take place sometime in May or June. ORP is expecting that Mr. Carpenter will discuss the remaining issues he has with the WTP. Pat plans to take the Communications Director and

one BNI manager with him when he meets with Mr. Carpenter. Any additional issues presented by Mr. Carpenter will also be managed through the ECP.

- 4) "BNI supplier chain QA implementation- BNI has had tendencies to rely on its suppliers and to oversee and audit the lower tier fabricators and others. Please look into how much of BNI direct oversight has been done in the past years with QA implementation of supply chains."

Answer: NQA-1-2000 allows BNI to approve suppliers to qualify their subtier suppliers. BNI has been actively performing oversight of suppliers and has surveyed all currently active subtier suppliers. BNI's current subtier qualification practices exceed the requirements of NQA-1. This appears to have been changed as a result of corrective measures put in place after the Hirshfield issue.

- 5) "Review BNI's commercial grade dedication and graded approach methodology and implementation."

Answer: The CGD procedure (24590-WTP-3DPG04T-00909) was revised on 9-25-07 and 4-15-08 as a result of the assist visit in May 2007. The current procedure was reviewed by the team and is adequate. There have been no CGD procurements since a hold has been placed on CGD activities pending resolution of PAAA and Office of Enforcement issues therefore the team was unable to review implementation of the revised procedure.

- 6) "Please review how design engineers are trained and qualified particularly those that more directly impacting key SSC designs."

Answer: The team reviewed the training program and it is a very structured process. The program reviews an engineer's skill from two foci. First discipline specific knowledge is reviewed and secondly, their experience in the nuclear field. The program then tailors a specific set of knowledge requirements that the engineer must demonstrate for qualification. In addition to this, BNI performs an augmented monitoring program for engineers that are newly assigned to the project to determine the level of supervisory oversight to be applied to the individual and their work.

- 7) "Perform a vertical slice review of how testing plan, acceptance criteria, data quality and control, and QA oversight are being done (Dave may be able to support)."

Answer: The engineering structure is in place to develop system descriptions as the system designs are being completed. The system descriptions will include test plans and acceptance criteria. The QA organization and process engineering are involved in reviewing the system descriptions as they are completed. ORP should monitor the development of the system descriptions

and inform EM-60 as major system descriptions are nearing completion. Based on that information we can best decide when to perform additional oversight.

APPENDIX 4

Audit Plan Investigative Focus Areas

- 1) The oversight of the WTP design, procurement, and construction activities is sufficient with particular emphasis on oversight of BNI by ORP, and oversight of second tier contractors by BNI.

Discussion: The team reviewed the ORP oversight of these activities. This included QA oversight performed by Pat Carier's QA group and the ORP construction inspections performed by Ken Wade's group (J. Barger). The ORP engineering group is also performing assessments in the area of design engineering. The team believes ORP's oversight in these areas is sufficient and exceeds the usual level of oversight provided by DOE on other EM nuclear projects. The ORP has identified that their oversight program and procedures do not strictly comply with NQA-1, 2000. They have a plan for bringing their program into NQA-1 compliance; this is scheduled for full implementation on October 1, 2008.

The team also reviewed the oversight performed by BNI's QA organization. As discussed above, BNI is performing direct oversight of their supplier's and sub-tier suppliers. This exceeds the minimum requirements of NQA-1, 2000. The team reviewed the audit and surveillance program implemented by BNI and believe that the program meets the requirements of NQA-1, 2000.

- 2) The verification of the adequacy of design control with particular emphasis on the following:
 - a. Identification and reporting of design deficiencies;
 - b. Identification, reporting and resolution of non-compliances between the design and safety authorization basis;
 - c. Identification and incorporation of design specifications within procurement requests;
 - d. Flow-down of design criteria; and
 - e. Oversight performance by DOE.

Discussion: The team determined that, with the exception of "d" & "e" these items are adequately described in the BNI process and adequately implemented. Item "d" is being covered by the BBR. For item "e", the team determined there is a significant level of oversight performed by ORP, including BNI design activities.

- 3) Verification that procurement procedures and practices are adequate to meet project requirements with particular emphasis on:
 - a. Adequacy of purchased items, specifically safety significant components, are consistent with the importance and application of the item;

- b. Nonconformance to requirements is appropriately addressed;
- c. Re-qualification of vendors; and
- d. Receipt acceptance / inspection.

Discussion: The audit team concluded that the oversight of BNI procurement activities; oversight of BNI suppliers and procurement activities; procurement and acceptance of safety significant items; and requalification of BNI suppliers is being satisfactorily implemented.

- 4) Verification that corrective actions procedures and practices are adequate to meet project requirements with particular emphasis on:
- a. Identification of specific actions and completion of corrective actions;
 - b. Ensuring issues address non-recurrence; and
 - c. Resolution of EM-60 "assist visit" corrective actions to ensure adequate resolution and implementation of an adequate Quality Assurance program.

Discussion:

- a. BNI has a relatively mature corrective action management system that has evolved significantly, particularly in the past year. The system is made up of a large number of components. Most of the procedures reviewed had been revised at least four times; some were in their tenth revision. BNI recently hired a dedicated Corrective Action Manager, and significantly revised their corrective action process. The key feature of the revised process is that significance determinations are made by a review committee from issues identified under a Project Issues Evaluation Reporting (PIER) procedure. The PIER Review Committee (PRC) categorizes issues into three levels of deficiencies: deficiency report (DR), corrective action report (CAR) and Significant CAR. Those items that are not deficient remain PIER items and may or may not be dispositioned to effect improvement in the management system.
- b. The requirement for the Significant CAR classification in QAM 16.1.2.4 is derived entirely from the Quality Assurance Requirements Document (QARD). (The QAM cites DOE O 226.1 in two places, but neither citation requires a Significant CAR classification.) Nonetheless, MGT-022 does not limit the Significant CAR classification to WAI-related items. The application of the Significant CAR classification to activity outside the purview of the QARD is applied since only Significant CARs receive root cause analysis, while DOE O 226.1 requires that root causes be identified (applied to all items using a graded approach based on risk). BNI performs apparent cause analysis on CARs and identifies cause codes for DR
- c. The 28 items identified by EM during the "assist visit" were entered into the appropriate ORP and BNI action tracking systems. Fourteen of the BNI items

have been addressed and closed. Of the remaining BNI open items, three are being worked by BNI and three are being reworked by BNI to address ORP comments. The six ORP items have been completed and closed. The remaining BNI open items are being tracked via the ORP tracking system and their status and progress are being monitored by ORP.