



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

P.O. Box 450  
Richland, Washington 99352

01-OSR-0029

Ms. M. P. DeLozier, President  
and General Manager  
CH2M HILL Hanford Group, Inc.  
Richland, Washington 99352

Dear Ms. DeLozier:

**INSPECTION REPORT IR-00-006, INSPECTION FOLLOW-UP ITEM REVIEW**

From December 18, 2000, through January 18, 2001, the Office of Safety Regulation (OSR) performed an inspection of previously identified inspection open items at the CHG RPP-WTP facility. The inspection consisted of detailed reviews of 27 previously identified inspection items to verify that the items were appropriately addressed and that the actions taken to resolve the items reflected the commitments made in formal Contractor written responses. The inspectors closed 26 items.

A Finding (documented in the Notice of Finding [Enclosure 1]) was identified with multiple examples for failure of the Contractor to either implement the corrective actions documented in written responses to OSR inspection issues, or provide revised responses to reflect the corrective actions planned and implemented. You are required to provide a written response to this Finding within 30 days, in accordance with the instructions provided in the enclosed Notice of Finding. Details of the inspection, including the Finding, are documented in the inspection report (Enclosure 2.)

During the inspection, the Contractor informed the OSR inspectors that it had abandoned BNFL Inc. efforts to implement a Quality Program Recovery Plan. This plan was identified as part of the corrective actions for several inspection items and was developed as a result of not only OSR issues but also to address a number of internally identified issues regarding procedural compliance and a host of other quality related performance problems. You are requested to provide to the OSR within 30 days, a written assessment of what actions you have taken in lieu of the plan or why you believe the plan is no longer necessary.

## NOTICE OF FINDING

Standard 4, Safety, Health, and Environmental Program, Section c. 2) (c) requires the Contractor to accept: ii. RL/REG-98-06, Corrective Action/Enforcement Action Program Description.

RL/REG-98-06 states that "A fundamental regulatory expectation is that information submitted to the RU by the Contractor...be (1) timely and (2) complete and accurate in all material respects."

During December 18, 2000, through January 18, 2001, the Office of Safety Regulation of the RPP-WTP Contractor (OSR) conducted inspections of the Contractor's actions to address inspection follow-up items. During the inspections, which were conducted at the offices of the Contractor, the OSR identified the following:

- a. The Contractor's response to Finding IR-99-007-05-FIN, dated 2/24/2000 (CCN: 011525), Section 4, "The Corrective Steps that will be Taken to Avoid Further Findings," stated that "BNFL will perform an internal assessment to determine the extent of the inappropriate practice of lining out document records."

Contrary to the above, no internal assessment was performed (see Section 1.2.16 of IR-00-006).

- b. The Contractor's response to Finding IR-99-007-05-FIN, dated 2/24/2000, Section 4, also stated that "A change to appropriate project procedures will be made to delineate the correct process for correcting factual errors in procedures, forms, etc."

Contrary to the above, the Contractor did not revise its procedures to detail the requirements to revise its records (see Section 1.2.16 of IR-00-006).

- c. The Contractor's response to Finding IR-99-008-02-FIN, dated 2/25/2000 (CCN# 011526), stated in Section 4, "The Corrective Steps that will be Taken to Avoid Further Findings," that a Quality Assurance (QA) Recovery Plan was being implemented that was to significantly enhance the visibility and effectiveness of the project's QA program.

Contrary to the above, the Contractor abandoned the QA Recovery Plan without notifying the OSR in writing of its change to the corrective actions (see Section 1.2.18 of IR-00-006).

- d. The Contractor's response to Finding IR-00-001-02-FIN, dated April 3, 2000 (letter CCN 011412), stated in Section 3, "Corrective Steps that have been taken and the Results Achieved," that the revision to K70C514 will clarify the time phase relationship of reliability, availability, maintainability, and inspectability (RAMI) with design maturity.

Contrary to the above, K70C514D\_0 was revised to consider the requirements for operations, maintenance, testing, and inspection of SSCs, but failed to discuss the "time phase relationship" concept discussed in the response letter (CNN 011412). The

Contractor failed to notify the OSR of its change in resolution of the Finding (see Section 1.2.20 of IR-00-006).

- e. The Contractor's response to Finding IR-00-001-02-FIN, dated April 3, 2000, also stated in Section 4, "It is the intent that the revised ISMP will contain more information of the timing of implementation of all the requirements contained in the ISMP."

Contrary to the above, the Contractor failed to submit a revision to the ISMP that contained information relative to the timing of implementation of ISMP requirements (see Section 1.2.20 of IR-00-006).

The above five examples are considered a Finding for failure to provide to the OSR timely, complete, and accurate information, in that response letters to the OSR were not amended when the Contractor changed its planned corrective actions.

The Contractor is requested to provide to the OSR within 30 days of the date of the cover letter that transmitted this Notice, a reply to the Finding described above. The reply should include (1) agreement or disagreement with the Finding; (2) the reasons for the Finding, if the Contractor agrees with it, and if the Contractor disagrees, the reason why, (3) the corrective steps that have been taken and the results achieved; (4) the corrective steps that will be taken to avoid further Findings; and (5) the date when full compliance with the applicable commitments in the authorization basis will be achieved. Where good cause is shown, consideration will be given to extending the requested response time.

U.S. DEPARTMENT OF ENERGY  
Richland Operations Office  
Office of Safety Regulation  
of the RPP-WTP Contractor (OSR)

INSPECTION: INSPECTION FOLLOW-UP ITEM REVIEW

REPORT NO: IR-00-006

FACILITY: CHG Tank Waste Treatment

LOCATION: 3000 George Washington Way  
Richland, Washington 99352

DATES: December 18, 2000, through January 18, 2001

INSPECTORS: J. McCormick-Barger (Lead), Senior Regulatory Technical Advisor  
P. Carier, Verification and Confirmation Official  
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APPROVED BY: P. Carier, Verification and Confirmation Official  
Office of Safety Regulation of the RPP-WTP Contractor

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**INSPECTION FOLLOW-UP ITEM REVIEW**  
**EXECUTIVE SUMMARY**  
Inspection Report Number IR-00-006

**INTRODUCTION**

Over the last two years, the Office of Safety Regulation of the RPP-WTP Contractor (OSR) has conducted 14 inspections of BNFL Inc. (BNFL) activities associated with the RPP-WTP Contract. During these inspections, a number of inspection follow-up items were identified that, in many cases, required the performance of corrective actions by the Contractor and, in all cases, required follow-up review by the OSR. This inspection of the RPP-WTP Contractor's (currently CH2M Hill Hanford Group, Inc. [CHG]) actions to address previously identified inspection follow-up items was performed to verify that the Contractor (CHG or the previous Contractor, BNFL) had effectively addressed the follow-up items by completing the corrective actions committed to in the Contractor's inspection report responses, or in some cases, completing corrective action activities that were in progress during the previous inspections.

**SIGNIFICANT OBSERVATIONS AND CONCLUSIONS**

- The inspection team reviewed and closed 26 previously opened inspection items. Closure of these items, represent a substantial effort by the Contractor to address isolated and programmatic issues identified mostly during the OSR's first round of the design phase inspection program. (Section 1.2)
- Five examples were identified where the Contractor had revised its corrective action commitments previously documented in formal inspection Finding responses. An inspection Finding was identified for failure to provide to the OSR timely, complete, and accurate information, in that response letters to the OSR were not amended when the Contractor changed its planned corrective actions. (Sections 1.2.16, 1.2.18, and 1.2.20)
- Finding IR-99-007-05-FIN was reviewed but not closed because the Contractor's corrective actions were not as stated in the response letter, and the actions actually taken were not adequate to address the issues leading to the Finding. (Section 1.2.16)

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## INSPECTION FOLLOW-UP ITEM REVIEW

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## **INSPECTION FOLLOW-UP ITEM REVIEW**

### **1.0 REPORT DETAILS**

#### **1.1 Introduction**

Following termination of the TWRS-P Contract, DE-AC27-96RV13308 between DOE and BNFL Inc. (BNFL), dated August 24, 1998, CHG was designated as the Transition Contractor to accomplish, among other things, an efficient transfer of the River Protection Project Waste Treatment Plant (RPP-WTP) design and program information to the new RPP-WTP Contractor once one was selected. In an attempt to facilitate this task, CHG either completed corrective actions to address previously identified inspection follow-up items or assembled packages of information that documented actions taken by BNFL to close the follow-up items. In both cases, CHG made available to the OSR, packages of follow-up item closure information to support close out of these items. During this inspection, the OSR reviewed these packages to assess if the items were adequately addressed. The OSR reviewed objective evidence of actions completed and, when possible for inspection Findings, the effectiveness of the actions taken to ensure that similar problems do not occur in the future.

#### **1.2 Follow-up On Previously Identified Inspection Items (Inspection Administrative Procedure (IAP) A-106)**

Selected inspection follow-up items, identified in previous inspection reports, were reviewed to determine if they could be closed. The inspectors reviewed the Contractor's commitments provided in its responses to these inspection Findings and other information provided. The inspectors verified by work observation, records review, and other means as appropriate, that the corrective actions stated were appropriately completed. When warranted, the inspectors determined (1) whether the Contractor had conducted an in-depth root-cause analysis (and implemented any appropriate corrective actions such as hardware or design modifications, training, procedure changes, or other actions as appropriate); (2) that generic implications were addressed; and (3) that the Contractor's safety management practices and procedures were strengthened, as appropriate, to prevent recurrence.

1.2.1 (Closed) IR-99-002-01-IFI, "Quality related procedures lacked detail." In May of 1999 during review of selected quality-related procedures, OSR inspectors determined that a lack of detail in the procedures reviewed might result in problems as the project progressed. Several examples of quality-related activities or functions that were not addressed in procedures were provided in Inspection Report IR-99-002, including:

- Specifying the control of a list designating personnel with access to the project records files
- Specifying a process for retrieving records files without undue delay

- Specifying the frequency for auditing suppliers and subcontractors on the Approved Suppliers List
- Specifying the process for removing a supplier or subcontractor from the Approved Suppliers List
- Providing specific instruction for converting a purchase requisition into a purchase order or contract
- Specifying a technique to document audits of contractors
- Specifying a process to allow for Quality Assurance Plan (QAP) changes that occur within the one-year mandatory review period.

Lack of detail in procedures was determined to be a project weakness and resolution of this issue was tracked as inspection follow-up item IR-99-002-01-IFI.

The Contractor was not required to and did not describe an approach to resolving the issue raised by inspection follow-up item IR-99-002-01-IFI in its response to Inspection Report IR-99-002. The Contractor did make commitments with regard to some of the specific examples identified in the inspection report (as outlined above). In this regard, the Contractor stated that:

- K13P005, "Quality Assurance Plan: Preparation, Review, Approval, and Distribution," would be revised to clarify the project's policy on revising the QAP
- A code of practice addressing supplier source evaluation and selection would be developed. The code of practice would address the maintenance of an approved suppliers list.

The inspectors reviewed K13P005\_1. The procedure specified, among other things, the criteria for when a change to the QAP must be submitted for DOE approval, before implementation. The procedure was consistent with Section 1.6 of the QAP, which states that QAP changes that "affect commitments" must be submitted for approval. The inspectors noted that this criterion was inconsistent with the Contractor's response to inspection report IR-99-002 and Section 3.3.3 of the Integrated Safety Management Plan (ISMP), which state that all changes to the QAP are submitted for DOE approval. This issue was discussed with Contractor QA personnel and management and the Contractor agreed to address the issue. The Contractor issue Deficiency Report DR-W375-01-QA-00005, dated January 17, 2001, documenting this inconsistency between the QAP and the ISMP.

The inspectors reviewed K13P057\_2, "Supplier Evaluation and Selection," and determined that the procedure addressed supplier evaluation and selection, and maintenance of an approved suppliers list.

In addition to reviewing actions taken by the Contractor to meet specific commitments related to IR-99-002-01-IFI, the inspectors reviewed procedures to determine if the remaining specific examples identified in follow-up item IR-99-002-01-IFI had been addressed. The following describes a review of procurement and record management procedures in this regard.

- The inspectors reviewed procurement procedures and interviewed project QA personnel involved in procurement activities. The inspectors found that K40P001\_1, "Procurement Process," provided a basic process for converting a purchase requisition into a purchase order. The guidance provided by the procedure was limited; however, the inspectors noted that there was very little procurement activity in progress during the current phase of the project.
- The inspectors reviewed K13C020E\_1, "Code of Practice for Project Records Management," and determined that the procedure included provisions regarding access control and records retrieval for project records stored in Project Document Control. During the course of the inspections, the inspectors observed that Project Document Control personnel appropriately controlled access to project records in conformance with the procedure.

With regard to the general issue raised by follow-up item IR-99-002-01-IFI regarding the lack of appropriate detail in project procedures, the inspectors noted that K13P003E\_0, "Production of RPP-WTP Procedures," had been revised to include improved guidance for developing procedures. The inspectors performed an extensive review of recently revised quality assurance program implementing procedures and concluded that the recently revised project procedures have improved considerably (see Section 1.2.23 for details of the review).

Based on the above, this item is closed. However, the OSR will continue to evaluate the quality of project procedures during the performance of future design-phase inspections.

- 1.2.2 (Closed) IR-99-002-04-IFI, "Track to resolution DR-W375-99-QA00029 concerning lack of dual storage of Documents and Records." During the May 1999 inspection, the OSR found that the Contractor did not maintain and store records in remote, duplicate locations (i.e., "dual storage") as required by the Quality Assurance Plan (QAP) that was in effect at that time. Quality records were being stored in one-hour rated file cabinets in a central project location. This issue had been identified previously by the Contractor and was documented in Deficiency Report DR-W375-99-QA00029, dated April 26, 1999. Item IR-99-002-01-IFI was initiated to follow-up on the closure of DR-W375-99-QA00029.

In response to DR-W375-99-QA00029, the Contractor determined to revise the QAP to allow for storage of records in 1-hour fire rated containers or facilities. The inspectors reviewed Revision 7 of the QAP and determined that Section 4.2.3 states that "QA records shall be stored in a container or facility with a fire rating of one-hour or dual storage will be provided."

The inspectors reviewed DR-W375-99-QA00029. The Contractor was able to retrieve a copy of DR-W375-99-QA00029 from project document control. The Deficiency Report (DR) documented the issue described above; however, the disposition of the issue and verification of the closure actions was not documented on the DR form. The Contractor produced an internal memorandum CCN# 012636, dated April 6, 2000, documenting the actions taken by the Project Administration Manager to address the issue described in the DR-W375-99-QA00029. After the inspectors raised this issue, the Contractor completed the disposition and closure documentation on the DR record during the inspection.

Based on the above, this item is closed.

- 1.2.3 (Closed) IR-99-002-05-IFI, "Removal of an inappropriate note in K40C001-0 concerning attached appendix information (QA requirements) not being interpreted as requirements." Procedure K40P001\_0, "Procurement Process," dated February 1999, and K40C001\_0, "Code of Practice for Preparing Purchase Requisitions," dated February 1999, contained notes indicating that the attached appendices should not be interpreted as requirements even though they contained QAPIP requirements. This problem had earlier been identified by DOE River Protection Project Privatization (RPP-P) staff during its review of the QAPIP and selected implementation procedures. Consequently, the Contractor was able to show that actions were being taken to address the inappropriate note in the two procurement procedures. Since the two procedures described above had not yet been revised to remove the note, the issue was tracked as inspection follow-up item IR-99-002-05-IFI.

In the Contractor's response letter to the item dated July 12, 1999, the Contractor stated that they intended to revise the procedures in question by July 1999. The inspectors reviewed procedures K40P001\_1, dated May 2000, and K40C001\_1, also dated May 2000. The note addressing the Appendix to each of the procedures stated, "Appendix 1 provides additional requirements that must be addressed when preparing Purchase Requisition, depending on the nature, complexity, and quality designation of the procurement." The changes adequately addressed the issue described in the inspection follow-up item. During review of the procedures, the inspectors identified that the procedures had yet to be revised to address the Contractor's recently revised procedure for producing procedures, K13P003C, Production of RPP-WTP Procedures, Revision 0, dated October 18, 2000. The Contractor informed the inspectors that they had intentionally not revised the procurement procedures because they thought the new RPP-WTP Contractor might incorporate their procurement procedures into the process rather than use the current procedures. The inspectors will review the procurement area in detail during a future inspection.

Based on the above, this item is closed.

- 1.2.4 (Closed) IR-99-003-01-IFI, "Track to resolution DR-W375-99-QA-00059 concerning the need for clarification of certain Quality Improvement-related procedures."

During a June 1999 inspection, the OSR observed the lack of clarity in the quality improvement procedures. This same observation was also being reflected in the

Contractor's initial feedback on the use of these procedures. Several Contractor employees, including managers, stated that they thought the procedures were not clear. This lack of clarity was self-identified by the Contractor in DR-W375-99-QA-00059. The DR identified 43 issues on 4 different procedures. The tracking of this DR to resolution was identified as an inspection follow-up item (IR-99-003-01-IFI).

In the Contractor's response to the inspection report, dated August 5, 1999, the Contractor committed to finalize the actions for resolving the above DR by August 27, 1999. The letter also committed to revise the following procedure by September 30, 1999:

K10P008, "Management Assessment"  
K10P004, "Improvement and Suggestions"  
K13P054, "Corrective Action"

Additionally, the Contractor committed to train personnel on the formal requirements for reporting quality deficiencies by October 22, 1999.

This inspection follow up item was initially reviewed for closure in IR-00-004, "Self-Assessment and Corrective Action," dated May 31, 2000. Section 1.7.2 of the report described the review performed by the inspectors. It concluded that the inspection follow-up item could not be closed because two of the affected procedures discussed in the DR had not been revised and the DR was still open.

The inspectors reviewed the completed DR, dated October 3, 2000. The response to the DR addressed each individual issue/question and clarified and strengthened procedures. The inspectors reviewed the latest revision of the above procedures and found that the revised procedures addressed the issues raised in the DR and in the inspection report.

The concerns raised in inspection report IR-99-003 described examples of authorization basis requirements not included in the Contractor's implementing procedures. In particular, the first concern involved the use of performance indicators to determine the frequency of independent assessments as committed to in the Contractor's ISMP. This concern was reviewed by OSR inspectors and closed out in Section 1.7.3 of IR-00-004. The inspectors concluded that the appropriate procedures were revised to ensure that performance indicators would be used as input for determining the frequency of independent assessments. The second concern involved the corrective action implementing procedure. The procedure did not explicitly address the Quality Assurance Plan requirement for an effectiveness review of completed corrective actions. During this inspection, the inspectors reviewed the K13P054C\_2, dated November 9, 2000, and found that effectiveness review were now addressed in Section 3.3.7, "QA Assessment of Adequacy and Effectiveness."

Contractor training on the formal requirements for reporting quality deficiencies was not completed as committed in the Contractor's initial response. Procedure K13P054 delineated the requirements for documentation of quality deficiencies. That procedure was added to the core training for all Waste Treatment Plant (WTP) personnel in the first

quarter of calendar year 2000. Subsequent to this, CHG issued an extensive revision to K13P054 to resolve a number of deficiencies related to corrective action management. Retraining on this procedure was performed for all WTP employees as part of CHG's effort to resume important-to-safety work. QA sampled 50 employee training records and all those sampled indicated that the training was completed. Based on this information, the inspectors concluded that the training commitment has been fulfilled.

Additional discussion of the review performed for the quality improvement procedures are discussed in IR-00-004-01-FIN (Section 1.2.23). Based on the information provided in the closed DR and the procedure review performed in Section 1.2.23, this item is closed.

- 1.2.5 (Closed) IR-99-004-01-FIN, "Lack of discipline specific ALARA design criteria." During a July 1999 inspection, the OSR identified that although required by Integrated Safety Management Plan (ISMP) Section 3.9.2. "ALARA Design," the Contractor had not implemented or documented discipline specific as low as is reasonably achievable (ALARA) design criteria and considerations during performance of design activities. This was Finding IR-99-004-01-FIN.

In the Contractor's response letters to the item dated November 29, 1999, and September 8, 1999, the Contractor stated that it intended to revise the ISMP to reflect their practice of using topical area design criteria and considerations rather than discipline specific ALARA design criteria and considerations. In addition, the Contractor stated that it would issued K70DG532, "ALARA Design Guide," which was to incorporate the informal ALARA design information provided to Contractor staff during ALARA training. The Contractor also stated that it would revise procedures to require staff to use the design guide and address other minor errors and improvements.

The inspectors reviewed Revision 5, Section 3.9.2, "ALARA Design," of the ISMP (BNFL-5193-ISP-01), dated October 2, 2000, and verified that the current version addressed the Contractor's corrective actions regarding the use of topical ALARA design criteria. The inspectors identified no concerns with the ISMP's current description of the ALARA design process. The inspectors reviewed K70DG532, dated February 2000, and confirmed that the procedure incorporated the design guidance used as training aids during ALARA training. A detailed review of the adequacy of the guidance will be performed later as part of a future ALARA design inspection. The inspectors reviewed copies of procedures K70P502\_1, "Applications of ALARA in the Design Process," dated April 2000, K70C530A, "Code of Practice for ALARA Design," dated May 30, 2000, and K70P030A\_5, "Design Change Control," dated October 16, 2000. The inspectors verified that these procedures were modified to address the requirements to use the ALARA Design Guide and to use topical specific design criteria identified in K70P502\_1.

Based on the above, this item is closed.

- 1.2.6 (Closed) IR-99-004-02-IFI, "Design Change procedure did not specify the conduct of an ALARA design review when the change could affect the ALARA Design." During a

July 1999 inspection, the OSR identified that the "Design Change Control" (DCC) Procedure (K70P030\_2, dated 3/99) required a Design Change Application (DCA) or Design Change Note (DCN) to manage and control changes to all approved design documents and drawings to ensure the integrity of the authorization basis and to control cost, schedule, and scope. However, the procedure did not specify the conduct of an ALARA design review when the design change could negatively, or positively, affect the ALARA design. The OSR subsequently determined that this issue had been identified in an Improvement and Suggestion form (number 003769, dated 5/10/99) and that the Contractor was taking action to revise the DCC procedure to reflect the need to perform an ALARA evaluation on DCAs/DCNs that may have an impact on the ALARA design. This issue was tracked as inspection follow-up item IR-99-004-02-IFI.

In a letter dated September 8, 1999, the Contractor responded to this item by stating "Project Procedures K70P030, "Design Change Control," and K70P033, "Design Change Note," were both revised during August 1999 because of self-assessment IAS-W375-99-00005. Both of these procedures assigned the originator with the following action:

"If the potential change is judged to have an ALARA impact (adverse or beneficial), an ALARA Design Review Record is completed. See K72B510, ALARA Design Review Record."

The inspectors reviewed Procedure K70P030A\_5, "Design Change Control," dated October 16, 2000. The procedure was modified to ensure that the originator of the design change took into account potential ALARA impact. Specifically, the procedure was modified to add the following:

"If the potential change is judged to have an ALARA impact (adverse or beneficial), an ALARA Design Review record shall be completed. See K70P502, Application of ALARA in the Design Process."

The above requirement was added in Section 3.2.1, "Responsibilities," for the Design Change Application and in Section 3.3.1, "Responsibilities," for the Design Change Note. Subsequent to the original inspection, the Contractor cancelled procedure K70P033. The requirements from this procedure were incorporated in procedure K70P030. Additionally, the Contractor incorporated the ALARA Design Review Record process into procedure K70P052, "Application of ALARA in the Design Process." The inspectors found the changes made to the above procedures acceptable.

Based on the above, this item is closed.

1.2.7 (Closed) IR-99-004-03-IFI, "Lack of detail in ALARA design implementation procedures (identified as an inspection weakness)." During the July 1999 inspection, the OSR identified that:

- The "Code of Practice for ALARA in Design" (K70C530B\_0) contained a comprehensive list of ALARA design criteria (reflected from the Radiation



Protection Plan), but there was little in the procedure that directed the staff to use the criteria during design activities.

- Although the ALARA Design Guide provided to staff during training was a useful guide, it was not referenced in ALARA procedures or codes of practice.
- The "ALARA Design Review Record" procedure (K72B510\_0) identified that the producer of ALARA records will consist of a multi-disciplinary team. However, reviews of completed ALARA Design Records (ADRs) indicated that the records were not always generated through multi-disciplinary team reviews, but rather through individual reviews. Also, the membership of the multi-disciplinary team could not be determined by review of the ADR records.

The lack of detail in ALARA design implementation procedures, as described above, represented a weakness in the Contractor's ALARA design program and was another example of the procedural weakness identified in the Quality Assurance inspection documented in IR-99-002. Resolution of the procedural problems described above was tracked as inspection follow-up item IR-99-004-03-IFI.

In a letter dated September 8, 1999, the Contractor responded to this item by stating that:

"QA personnel will conduct a review of ALARA procedures and codes of practice to identify these potential "lack of detail" problems. This review will be completed by September 15, 1999. Following completion of the review, PCRs will be completed for the affected procedures and codes of practice and issued by October 30, 1999."

The inspectors reviewed supplemental surveillance report SV-W375-99-QA00008, Rev. 1, that was performed to "Review K70C530B and K70P502 for readability and usability." The surveillance report was provided by the Contractor as evidence that the above commitment was completed on schedule. The surveillance was performed on August 31, 1999, and was therefore completed on or ahead of the committed date. The inspectors found that the surveillance met the literal intent of the commitment; however, the surveillance was weak and did not address the concerns raised in the inspection report.

The Contractor provided the inspectors with an informal copy of an action plan that adequately addressed the concerns raised in the inspection report. The plan discussed modifications, and additions and deletions of several procedures and forms as summarized below:

- K70P003, "Design Review" (modified to incorporate requirements from K70C013, "Code of Practice for Design Review Meetings")
- K70C530B, "Code of Practice for ALARA in Design" (modified)
- K70P030, "Design Change Control" (modified)

- K70P033, "Design Change Note" (cancelled, see discussion for IR-99-004-02-IFI in Section 1.2.6)
- K70P502B, "Application of ALARA in the Design Process" (modified)
- K72B510A, "ALARA Design Review Record" (canceled and requirements incorporated into K70C530B)
- K70DG532, "Design Guide for ALARA" (issued to replace training hand out)
- K13F001, "Document Information Form" (modified to include an ALARA review box)
- K13F019, "ALARA Design Review Record" (modified to add supervisor review)

The inspectors reviewed the above procedure changes and found that they addressed the concerns raised in the inspection report. Based on the above this item is closed.

- 1.2.8 (Closed) IR-99-005-01-IFI, "Follow-up on the Contractor's efforts to develop and implement the Design Input Memorandum (DIM) process." During an August 1999 inspection, the Contractor described its plan to implement a DIM process that would require designers to list in a DIM, all design input information used to develop design documents at the time the documents are being approved. This process was being tested at the time of the inspection and a procedure controlling this activity had been prepared but not issued. The Contractor informed the OSR that the DIM process, once finalized, would be used during the development of all design documents including the development of draft documents (alpha revisions to documents). The Contractor stated that they had not fully developed the list of design inputs that would be required to be entered on DIMs. The lack of a formal method to link design input information to systems, structures, and components (SSCs) would normally have been considered a Finding; however, the Contractor had previously identified this issue in a Quality Assurance (QA) surveillance (Surveillance Report No: SV-W375-99-QA00009, Rev. 0, dated July 22, 1999) and a management self-assessment, dated July 30, 1999. Follow-up of Contractor efforts to develop and implement the DIM process was tracked as inspection follow-up item IR-99-005-01-IFI.

The Contractor issued procedure K70P557C, "Design Input," to provide instruction for identifying, selecting, controlling, and documenting design inputs for engineering drawings and specifications. This procedure implemented the DIM to document the design inputs. The inspectors reviewed K70P557C\_2, dated November 2000. This procedure described the requirements for identifying, selecting, controlling, and documenting design inputs for engineering drawings and specifications. The inspectors randomly selected the following drawings and associated DIMs for reviewed:

- Drawing DWG-W375HV-M00595, Rev. B, dated 3/9/00, "HLW Vitrification System 310 Mech. Handling Diagram Level 1 Product Canister Handling and Buffer Store,"

and associated DIM-W375-00-01153, Rev. B, dated March 7, 2000

- Drawing DWG-W375PT-M00093, Rev. D, dated 11/18/00, "P&ID - HLW U/F Permeate Vessel C V12006C System PT-220," and associated DIM-W375-00-01317, Rev. D, dated November 20, 2000
- Drawing DWG-W375LV-M00682, Rev. B, dated 3/26/00, "LAW Vitrification System 340 Design Proposal Drawing Turntable Bogie Recovery System," and associated DIM-W375LV-M00682, Rev. B.

The DIMs contained both specific information such as calculations and parent drawings, and general information such as referenced Design Criteria from authorization basis documents. This area will be reviewed in more detail during a future design phase inspection.

Based on the above, this item is closed.

- 1.2.9 (Closed) IR-99-005-02-IFI, "Follow-up on the Contractor's efforts to address inconsistency between QAPIP and current practice concerning use of System Descriptions." During the August 1999 inspection, the Contractor stated that contrary to Section 6.2.5, "Configuration Management (CM)," of the Quality Assurance Program and Implementation Plan (QAPIP), the CM program did not begin with system descriptions. The Contractor stated that a revision to the QAPIP to remove that statement had been submitted to the OSR for approval. The revised statement would replace the system descriptions with functional requirements. The Contractor stated that system descriptions would be developed but not until the design was better defined. No system descriptions had been generated to date. Follow-up of resolution of this authorization basis (AB) inconsistency was tracked as inspection follow-up item IR-99-005-02-IFI.

The Contractor submitted ABAR-W375-00-0010 that, among other things, addressed the issue regarding the statement that the CM program begins with system descriptions. The OSR approved this ABAR in a letter to the Contractor, dated May 2, 2000 (DOE RL letter 00-RU-0336). The inspectors reviewed Section 6.2.5 of the Contractor's Quality Assurance Plan (QAP), BNFL-5193-QAP-01, Rev. 7. This section now states, "Configuration Control, as a part of the overall configuration management plan, originates with the functional requirements and the design criteria established for the Project."

Based on the above, this item is closed.

- 1.2.10 (Closed) IR-99-005-03-IFI, "Follow-up on the Contractor's actions to address computer software verification and validation." During the August 1999 inspection, the OSR reviewed the Contractor's program for validating and verifying computer software used to perform design of important to safety systems, structures, and components (SSCs). Code of practice K70C515\_0, "Code of Practice for Computer Program Use," dated November 1998, was written to provide guidance for the control of computer programs used in the design process to perform calculations and analyses that are considered

"safety critical." The procedure did not provide specific requirements on how to verify and validate software. In addition, the Contractor stated that a large number of design related software had been obtained from a subcontractor that had not been verified or validated by the Contractor. At the time of the inspection, the Contractor had been working to address this issue. Section 6.2.3, "Computer Software Control," of the QAPIP, required: "Software verification and validation testing shall occur prior to software use in preparation of final design documents and includes comparison of program results with benchmark solutions."

Since no final design documents had been prepared that relied on data obtained from software that had not been validated or verified, this issue was not considered a Finding. However, failure to address this area in a timely manner was considered a significant weakness that must be addressed before the software output can be used as input to final design efforts. Follow-up of Contractor activities to address this concern was tracked as inspection follow-up item IR-99-005-03-IFI.

The inspectors interviewed the Configuration/Procedures/Requirements Manager and the Configuration Management Lead to identify which software applications were considered Critical Software Applications (CSAs). During this interview, the inspectors learned that the Contractor had determined that only two software programs were considered CSAs: MicroShield and MCNP, Version 4B2.

Neither of these software programs were developed or modified by the Contractor; however, the Contractor had performed verification and validation on each and had entered them in the software lifecycle. Both of these software programs were related to radiological protection, and were authored by the same Radiological Safety Engineer.

The inspectors learned that the Configuration Management Lead had performed an assessment to verify that the requirements from the Contractor's QAP had been included in procedure K70C515A\_2, "Code of Practice for Computer Program Use," issued February 2000. The inspectors reviewed this assessment and determined it to be comprehensive. In addition, the inspectors independently verified that the requirements for verification and validation had been included in the revision to the procedure that was developed to address this Finding.

The inspectors interviewed the Radiological Safety Engineer who authored each of the CSAs. The inspectors obtained and reviewed the verification and validation reports for each of the two CSAs against each of the requirements specified in Section 5.2, "Software Verification and Software Validation," in the revised procedure. The inspectors reviewed the following objective evidence:

- RPT-W375-NS00002, Rev. 1, "Verification and Validation of MCNP V4B2," dated October 12, 2000
- RPP-WTP Calculation Number CALC-W375LV-NS00025 (Rev 0), "Re-Validation of MCNP for Photons and Verification for All Applications," R. E. Miles, August 2000

- RPP-WTP Calculation Number CALC-W375-NS00012 (Rev 0), "V & V Report for MCNP 4B2," A. C. Woodruffe, September 1999
- RPP-WTP Calculation Number CALC-W375-NS00117 (Rev 0), "Validation of MCNP 4B2 for RPP-WTP Criticality Calculations," S. L. Larson, May 2000
- RPT-W375-NS00003, Rev. 2, "Verification and Validation Report for MicroShield," dated October 12, 2000
- CCN #015469C, "Verification of MicroShield Version 5.05 on Windows 95," S. L. Larson, September 2000
- RPP-WTP Calculation Number CALC-W375-NS00010 (Rev 0), "Comparison of MCNP4B2 and MicroShield V5 with ANS Test Case," A. C. Woodruffe, September 1999
- K70C515A\_2, "Code of Practice for Computer Program Use," issued February 2000
- K14P002A\_0, "IT Department Change Control Board," issued May 2000.

Each item required by the procedure was located in the reports, or the referenced materials supporting the reports listed above, indicating that the procedure had been followed for each of the two CSAs.

The inspectors reviewed the training profiles for the author, the checkers, and the approver of the two verification and validation reports. The inspectors verified that each of these personnel had read procedure K70C515A\_2.

The inspectors reviewed Computer Application Use Registration forms for each of the two CSAs to determine that the verification and validation had been performed, and that the IT Change Control Board had released the software for use on the project.

The inspectors interviewed the Functional Engineering Manager to determine the status of the actions related to the design-related software that had been obtained from a subcontractor and had not been verified and validated. The inspectors learned that the software had been verified and validated within the subcontractor's system, but had not been verified and validated using their system. In addition, this design-related software had not been used for design activities and, thus, was not considered a CSA. The Functional Engineering Manager told the inspectors that no software used for design activities was considered a CSA.

The inspectors interviewed several engineers from various disciplines (e.g., Mechanical, Control Systems, Civil/Structural/Architectural) and in two different areas of the project (e.g., Pretreatment and HLW Vitrification) to determine if they were using any software that was considered a CSA, and had not been verified and validated. The inspectors learned that the Civil/Structural/Architectural Engineers were using software called GT

SRUDL (Georgia Tech Structural Design Language) that was in the process of being verified and validated. The inspectors were told that the verification and validation had been completed on the machines; however, the documentation was not quite complete. The inspectors were assured that the verification and validation would be completed before approval and release for use of drawings and/or calculations. The inspectors were told that this was expected within a couple of months.

In addition, the inspectors learned from interviews with the engineers that a subcontractor (i.e., M&D) was using software developed by Bechtel (San Francisco office) for seismic analysis studies. This software had been verified and validated by Bechtel, but had not been verified and validated by the subcontractor. The Contractor was aware that the software used by the subcontractor could not be used for critical decisions, and planned to re-run any analysis with the Bechtel software that had undergone verification and validation.

Based on the above, this item is closed.

1.2.11 (Closed) IR-99-006-01-IFI, "Verification of the addition of the necessary references or fields as indicated in the list of proposed SIPD fields." During a September 1999 inspection, the OSR could not verify that all items required by the SRD, Rev. 2, Appendix A, to be in the hazard database, were recorded or would be recorded in the SIPD. An SRD list of SIPD fields indicated that there would be either fields or references to retrievable information to meet the database content requirements. For example, the following information was not included in the database directly but the database included (or the Contractor planned to include) references to hardcopy documents that contained this information.

- Severity Level Basis
- Basis for Frequency Estimate.

The OSR considered this acceptable implementation of the requirements for the stage of the project at the time of the September 1999 inspection. Verification of the addition of the necessary references or fields as indicated in the list of proposed SIPD fields was identified as inspection follow-up item IR-99-006-01-IFI.

In the Contractor's response letter to the item, dated November 1, 1999, the Contractor stated, "BNFL Inc. recognizes that the Standards Identification Process Database (SIPD) does not currently contain all items required by the SRD Volume II, Appendix A. The additional fields described by BNFL during the course of the inspection have been added to SIPD to ensure that the additional information required by the SRD are eventually recorded."

The inspectors reviewed SRD Volume II, Appendix A Section 4.9, "Documentation," which lists 10 items the Contractor committed to be in the SIPD database. The inspectors verified these 10 items were contained in the database. The inspector interviewed the individuals responsible for the database maintenance and observed a demonstration of the database program's ability to call up referenced data. For a specific item reviewed, the

SIPD database demonstration involved accessing the control strategy documentation CSD-H100/N0035, and verifying that a link existed between this entry and a calculation, CALC-W375-NS00010, and safety implementation note (SIN), SIN-W375-99-00036A. The calculation, titled "Comparison of MCPP4B2 and Microshield V5 with ANS Test Case," was subsequently located in Project Document Control (PDC). The SIN record notebook was also located in PDC with the working notebook (SIN-W375-99-0036A) for current information, checked out to the engineer as a work in progress. This database linkage demonstration provided evidence of the function of SIPD to link control strategy documentation to reference documentation. For example, in the case reviewed, Severity Level Basis was linked to the calculation documentation and Frequency Estimates were linked to the SIN.

Based on the above, this item is closed.

- 1.2.12 (Closed) IR-99-006-02-FIN, "There was not a clear separation of responsibilities between the PSC and the PMT such that the independence of the PSC was retained." RL/REG-96-0004, "Process for Establishing a Set of Radiological, Nuclear, and Process Safety Standards and Requirements of TWRS Privatization," requires the Contractor to establish a Process Management Team (PMT) and an Independent Review Team (IRT). These teams are designated specific responsibilities in the project's standards selection process. The project had chosen to have the RL/REG-96-0004 IRT responsibilities fulfilled by the Project Safety Committee (PSC).

During a September 1999 inspection, the OSR observed that four of the thirteen members of the PSC were also members of the PMT, and one of the four was identified as a work activity expert. The PSC procedure indicated that the PMT chairman was the vice-chairman of the PSC (although it was indicated during interviews that this was to be changed). Based upon the above, the OSR found that there was not a clear separation of responsibilities between the PSC and the PMT such that the independence of the PSC was retained. This was considered an inspection Finding (IR-99-006-02-FIN).

In the Contractor's response letter to the item, dated December 12, 1999, the Contractor stated that:

- A charter had been established for the PMT that resulted in a clear description of PMT responsibilities
- The PMT Chairman was no longer the PSC Vice Chairman
- The PSC procedure would be modified to specifically describe how the PSC performs its IRT function including guidance on how to maintain clear separation of responsibilities for those PSC members who serve on the PMT.

At the time of the inspection, the design phase transition Contractor (CHG) was still in the early stages of implementing the PMT. The inspectors determined that the previous RPP-WTP Contractor had established a charter for the PMT. CHG was in the process of establishing a new charter. The new PMT charter was drafted and discussed at the first

PMT meeting held by CHG. The inspectors concluded that a PMT charter had been established and CHG was taking appropriate actions to update the charter.

The inspectors reviewed the CHG membership of the PSC and PMT. There was very little overlap in membership. Only the PMT chairman was also a member of the PSC. The chairmen of the PSC and PMT were no longer the same individual.

The inspectors reviewed K70P526C\_1, "Project Safety Committee," and determined that the procedure did specifically address the IRT functions of the PSC. The inspectors noted that the "ISM Subcommittee" section of the procedure designate members of the committee by positions that did not exist in the CHG organization. The Contractor was aware of this issue and stated that a revision to the procedure was being prepared that would correct the situation and that the revised procedure would be available before any PSC activities were undertaken with regard to its IRT function.

Based on the above, this item is closed.

- 1.2.13 (Closed) IR-99-007-02-IFI, "Program weakness regarding inconsistencies with authorization basis implementing procedures." During an inspection conducted in October 1999, the OSR reviewed K70C528A\_1, "Code of Practice for Managing Changes to Control the Authorization Basis," K13P005\_0, "Quality Assurance Program: Preparation, Review, Approval, and Distribution," K71C502\_0, "Code of Practice for Revisions to the Safety Requirements Document," and K71C504\_0, "Code of Practice for Revisions to the Integrated Safety Management Plan." From this review, the OSR identified a large number of procedural issues. The procedural issues were considered a program weakness and was tracked as inspection follow-up item IR-99-007-02-IFI.

In a letter dated February 24, 2000, the Contractor responded to the issue by stating the following:

"BNFL agrees with this weakness and follow-up item. Numerous input documents including the Code of Federal Regulations (CFRs) and project procedures and codes of practice (CoP) have created confusion and inconsistency within the AB change control program. BNFL is in the process of revising the AB maintenance program. One important element of that revised program will be the reconciliation of all procedures and CoPs to ensure consistency and accuracy. Some documents will be deleted and their requirements combined into fewer remaining documents, thus improving consistency and efficient usage. The CFRs and top-level requirement documents will be reviewed to ensure project procedures incorporate all requirements."

The inspectors reviewed procedure K70P528\_3, "Authorization Basis Maintenance," and found that the procedure had been completely revised. The latest revision addressed the following issues raised in inspection report IR-99-007:

- Section 3.9.2, "DOE Approval not Required," now required any changes to the authorization basis to be sent to the DOE, even if those changes do not need DOE



approval. In particular the procedure states:

"The DOE shall receive formal, written notification of AB changes and implementation within 30 days of completing the revision."

This procedure requirement should ensure that the DOE receive all future changes to the RPP and other AB documents.

- The flow chart in the procedure was completely revised and addressed the inconsistencies raised in the inspection report.
- The new procedure deleted the two Appendices that described the process for changing the RPP and the QAP. The requirements in those appendices were moved in the body of the procedure. This change removed the conflicts between the requirements in the procedure and the requirements in the Appendices of the procedure.
- The code of practice for revising the SRD had been cancelled. The pertinent information and requirements were incorporated in the above procedure. Future changes to the SRD will also be governed by the above procedure.

The inspectors found that the rewrite of the Authorization Basis Maintenance procedure improved the readability, clarity, and quality of the procedure and addressed the concerns raised in the inspection report. Based on the above, this item is closed.

- 1.2.14 (Closed) IR-99-007-03-FIN, "Two examples of failure to follow procedures: a) failure to prepare an ABCN for Revision 3 to the RPP; and b) failure to include ISMP and SRD changes on a QAPIP ABCN when it was identified that the changes impacted these documents." During the October 1999 inspection, the OSR requested a copy of change documentation associated with Revision 3 of the RPP that had been submitted to the OSR on November 18, 1999 (document No. CCN: 008308). The Contractor informed the OSR that no authorization basis change notice (ABCN), safety evaluation, or authorization basis amendment request (ABAR) had been generated for this revision. The Contractor stated that it was its view that since change documentation was generated for Revision 2 to the Radiation Protection Plan (RPP), and that Revision 3 contained only minor additional changes as a result of OSR comments, no additional change documentation was required. However, Appendix 5, "Managing changes to the Radiation Protection Program," of K70C528A\_1, required the manager proposing a change to the RPP to prepare an ABCN. The procedure did not provide an option to this requirement for special cases. Failure to prepare appropriate change documentation for Revision 3 of the RPP was considered an example of a Finding for failure to comply with QAPIP, Section 5.3.2, "Instructions and Procedures," regarding the requirement to perform quality related activities in accordance with procedures (IR-99-007-03a-FIN).

Also, during review of screening assessment SCA-W375-99-00123, revision 0, "Quality Assurance Program and Implementation Plan [QAPIP]," dated August 5, 1999, the OSR determined that the originator identified that the proposed change to the QAPIP (Rev. 4a)

would effect the Integrated Safety Management Plan (ISMP) and Safety Requirements Document (SRD) in several locations. However, these changes were not carried forward into the ABCN (ABCN-W375-99-00045) or any other change documentation. Failure to prepare an ABCN to address the needed revisions to the SRD and ISMP was contrary to K70C528A\_1, Section 5.0, "Authorization Basis Change Notice (ABCN)," in that this Section required the generation of an ABCN that describes the authorization basis changes if a proposed change affects the authorization basis. This was consider a second example of a Finding for failure to comply with QAPIP, Section 5.3.2, "Instructions and Procedures," regarding the requirement to perform quality related activities in accordance with procedures (IR-99-007-03b-FIN).

In the Contractor's response letter to this Finding, dated February 24, 2000, the Contractor stated that subsequent to the Finding, ABCNs were issued for Revision 3 to the RPP, and for the ISMP and SRD as a result of the earlier revision to the QAPIP. In addition, the Contractor stated that they were revising the authorization basis process and training staff on the new process.

The inspectors reviewed ABCN W375-00-00008, "Radiation Protection Program," Revision 3, dated February 23, 2000, ABCN-W375-00-00006, "Alignment of ISMP with QAPIP Rev. 5," dated February 23, 2000, and ABCN-W375-00-00010, "Alignment of SRD with QAPIP Rev. 5," dated February 23, 2000. The ABCNs associated with alignment of the ISMP and SRD resulted in the generation of ABAR -W375-00-00010, "Alignment of ISMP and SRD with QAPIP Rev. 5 and Selection of Quality Assurance Implementation Standard," which was transmitted to the OSR for review and approval, on March 17, 2000. The ABAR adequately addressed the OSR's concern regarding aligning the SRD and ISMP with the Rev. 5 of the QAPIP.

The ABCN associated with the RPP did not adequately describe the changes between Revision 2 and 3 of the RPP and did not include a safety evaluation as required by K70C528B, Revision 1, "Code of Practice for Managing Changes to Control the Authorization Basis," dated March 2000. Section 5.0, "Authorization Basis Change Notice (ABCN)," of K70C528B stated, "All ABCNs shall eventually have a completed safety evaluation before incorporation." The inspectors notified the Contractor of this discrepancy. The Contractor immediately prepared and provided a copy of ABCN-W375-00-00060, "Radiation Program for Design, Revision 2 (BNFL-TWP-SER-003)," dated December 21, 2000. This ABCN was prepared in accordance with Revision 2 of K70C528, dated June 2000, and addressed the OSR concern described above.

The inspector's reviewed K70C528B\_1, "Code of Practice for Managing Changes to Control the Authorization Basis," dated March 2000, and determined that the revision adequately addressed the Contractor commitment to revise the procedure to address preparation, review, and approval of all authorization basis documents. The revision was found to have improved and streamlined the Contractor's authorization basis management process, and should result in improved performance in this area.

Based on the above, this item is closed.

- 1.2.15 (Closed) IR-99-007-04-IFI, "Program weakness concerning notification to the RU [now OSR] of changes to Authorization Basis documents that do not reduce effectiveness of the document." During the October 1999 inspection, the OSR identified that, contrary to RL/REG-97-13 and Section 3.3.3 of the ISMP, which specified that the Contractor will notify the OSR within 30 days of changes to authorization basis made without prior OSR approval, there was one change involving a revision to Section 3.9.2 of the ISMP that was issued without formally notifying the OSR. Although the Contractor had transmitted revised ISMP pages to the OSR administrative staff via transmittal DIS-99-0669, the OSR concluded that the transmittal did not meet the intent of RL/REG-97-13 and Section 3.3.3 of the ISMP. Appropriate notification should have been in the form of docketed correspondence to the Regulatory Official identifying the change. This issue was considered a weakness in the implementation of the authorization basis management program and follow-up of Contractor actions to address this issue was tracked as inspection follow-up item IR-99-007-04-IFI.

In the Contractor's response letter to the item, dated February 24, 2000, the Contractor stated that "Beginning immediately, BNFL will notify the RU, in the form of docketed correspondence, of all changes to the authorization basis. This will be proceduralized by revision to K70C528, 'Code of Practice for Management Changes to Control the Authorization Basis.'" The inspectors reviewed procedure K70P528\_3, dated November 9, 2000. Section 3.9.2, "DOE Approval Not Required," states "The DOE shall receive formal, written notification of AB changes and implementation within 30 days of completing the revision." The implementation of this procedure was verified for ABCN's approved after November 9, 2000. There were two ABCN's approved after that date, which affected the AB (ABCN-W375-00-00048 & -00049). ABCN-W375-00-00048, "DOE ORP Correspondence 00-AMSA-046," was approved 11/27/00 and transmitted to the DOE on November 28, 2000. ABCN-W375-00-00049, "BNFL-TWP-SER, Rev.5A, Radiation Protection Program for Design and Construction," was approved on November 17, 2000, and transmitted to the DOE on November 28, 2000. The transmittals were well within the 30-day clock limit.

Based on the above, this item is closed.

- 1.2.16 (Open) IR-99-007-05-FIN, "Failure to revise and issue an ABCN in accordance with the requirements of the QAPIP." During the October 1999 inspection, the OSR reviewed authorization basis change notice ABCN-W375-99-0044 associated with Revision 2 of the Radiation Protection Program and determined that it was inappropriately modified after being accepted by Project Document Control (PDC). The ABCN originally specified that a safety evaluation was to be prepared to address the proposed revision to the RPP. Subsequent to the document being issued by PDC, the originator came to PDC and revised the original document by lining through the requirement to perform a safety evaluation, initialing and dating the change, and annotating that the safety evaluation was not required. The change was not performed in accordance with QAP Section 4.2.2, which required that records that contain errors or discrepancies be corrected, reviewed, and approved by the originating organization. Finding IR-99-007-05-FIN was issued to document this inappropriate revision to a record.

In the Contractor's response letter to the Finding, dated February 24, 2000, the Contractor stated that the following corrective actions would be taken:

- "A change to appropriate project procedures will be made to delineate the correct process for correcting factual errors in procedures, forms, etc.
- BNFL will perform an internal assessment to determine the extent of the inappropriate practice of lining out document records. Depending on the results of this audit, BNFL will determine what additional corrective actions are required.
- Additional corrective actions associated with procedural noncompliance will be identified and implemented in conjunction with the QA program recovery plan discussed in the cover letter."

The inspectors reviewed procedure K13C020E, "Code of Practice for Project Records Management," and found that the procedure had not been revised to include a process for making changes to QA records or implementing the requirement of QAPIP Section 4.2.2.5.

The inspectors reviewed Deficiency Report DR-W375-00-QA00020 that was initiated, in part, based on IR-99-007-05-FIN. The corrective actions described in the DR differ from those committed to by the Contractor as described above. Also, the DR cited Section 4.11 of the procedure K13C020 as the requirements applicable to the OSR Finding. This was incorrect. Section 4.11 of K13C020 identified attributes of an acceptable QA Record, not a process for making changes to QA records. Finding IR-99-007-05-FIN was based on QAP Section 4.2.2, which contained a different requirement. The corrective actions identified in the DR did not address implementation of QAP Section 4.2.2.5.

The inspectors were informed that QA Surveillance SV-W375-00-QA00007 was conducted in order to determine the extent of the condition described in Finding IR-99-007-05-FIN. The inspectors found that the surveillance evaluated and categorized errors identified by Project Document Control (PDC) personnel while performing QA record acceptance reviews. The inspectors determined that this surveillance did not provide information that would be relevant to determining the extent of the condition described by Finding IR-99-007-05-FIN, which involved the improper modification of a QA record after being accepted by PDC. Since the extent of the condition described in IR-99-007-05-FIN had not been determined, the inspectors determined that the Contractor had not identified if any additional corrective actions were warranted.

RL/REG-98-06, *Corrective Action Program Description*, Rev. 3, a Contract requirement, states: "A fundamental regulatory expectation is that information submitted to the RU by the Contractor...be (1) timely and (2) complete and accurate in all material respects." Failure, prior to the committed due date, to either perform the stated internal assessment and revise the procedures to delineate the process for correcting factual errors, as stated in the Contractor's response dated February 24, 2000, or update the response to indicate the actions the Contractor actually implemented to address Finding IR-99-007-05-FIN, is

considered two examples of a Finding against the RL/REG-98-06 requirement discussed above (IR-00-006-01a-FIN and IR-00-006-01b-FIN, respectively).

Based on the above, Finding IR-99-007-05-FIN remains open. During the course of the review described above, the inspectors noted that Section 4.2.2.5 of the QAP could be read in such a way as to allow the alteration of project QA records that have been accepted by PDC, if such alterations are "reviewed and approved by the originating organization." The inspectors questioned the practice of altering QA records by the originating organization, and in particular, where the originating organization was not the sole or final approval authority. This issue was raised with QA and Environment, Safety, and Health (ES&H) management and the Contractor agreed to consider if a QAP revision was warranted and to address specific guidance regarding changing records in administrative procedures.

- 1.2.17 (Closed) IR-99-008-01-IFI, "Self-Identified issue concerning failure to implement the Executive Committee as required by the ISMP." The OSR found that, although the Integrated Safety Management Plan (ISMP), Section 3.16.1.1 required the formation of an Executive Committee to address corporate safety policies and matters as they relate to the TWRS-P project, the Contractor had not implemented this requirement. The Contractor identified that the Executive Committee did not exist in their self-assessment of October 28, 1999. Resolution of this issue was tracked as inspection follow-up item IR-99-008-01-IFI.

The inspectors reviewed the documentation provided for verification of completion of this item. This documentation included the following:

- CCN #016055C, "Tank Waste Treatment Project Executive Committee," Internal Office Memorandum (IOM) from the Office of the President, which appointed five individuals as members of the Executive Committee, dated October 16, 2000
- CCN #016054C, "Tank Waste Treatment Project Executive Committee," IOM from the Office of the President, which appointed an individual to function as the Secretary of the Executive Committee, dated October 16, 2000
- CCN #016053C, "Tank Waste Treatment Project Executive Committee," IOM from the Office of the President which appointed an individual as the Chairman of the Executive Committee, dated October 16, 2000
- CCN #016163C, "Meeting Minutes of the 1<sup>st</sup> Executive Committee Meeting," dated October 25, 2000.

The inspectors reviewed Section 3.16.1.1, "RPP-WTP Contractor Executive Committee," of the RPP-WTP ISMP, BNFL-5193-ISP-01, Revision 5, to compare the required membership of the Executive Committee with the appointed members. Although the organization had changed by the time this assessment was performed, it was found that representatives at the appropriate management level of the required organizations were appointed to the Executive Committee. The minutes of the first Executive Committee

Meeting showed that at least one of the items provided in the ISMP as examples of areas for review was discussed during the meeting.

Based on the above, this item is closed.

- 1.2.18 (Closed) IR-99-008-02-FIN, "Four examples of failure to follow procedures: (a) PSC procedure not followed; (b) review criteria not specified; (c) review and comment records not properly maintained; and (d) failure to control output of HAZOP efforts." During the performance of an inspection in November 1999, the OSR identified the above-mentioned four examples of failure of Contractor staff to follow procedures. These examples of failure to follow procedures were considered a Finding against the Contractor's QAPIP, Section 5.3.2, "Instructions and Procedures," (IR-99-008-02-FIN).

In the Contractor's formal response letter to the item, dated February 25, 2000, the Contractor provided specific corrective actions to address the Finding. However, during review of the corrective actions, the inspectors learned that the Contractor had not performed all the corrective actions described in the response letter. For example, in Section 4, "The corrective steps that will be taken to avoid further Findings," of the response, the Contractor stated that it would implement a QA Program Recovery Plan to significantly enhance the visibility and effectiveness of the project's QA program. The current transition Contractor informed the inspectors that it had terminated the QA Program Recovery Plan. Failure, prior to the committed due date, to update the response to indicate the actions the Contractor actually implemented to address the Finding is considered another example of a Finding against the RL/REG-98-06 requirement discussed in Section 1.2.16 above (IR-00-006-01c-FIN).

The inspector's discussed with the Contractor its failure to either implement all of the corrective actions committed to in its response letter or to revise the response. To facilitate closure of this item and after obtaining agreement with the OSR Regulatory Official that for this inspection only, a Contractor memorandum to file documenting its revised corrective actions would be acceptable, the Contractor prepared and provided to the inspectors a memorandum from the Environmental, Safety and Health organization to the Quality Assurance Manger, dated January 15, 2001, documenting the discrepancies in the response letter and providing the corrective actions taken to address the Finding. The following is a summary of significant elements of the corrective actions provided in the memorandum and a discussion of the inspectors' review of each of the corrective actions:

To address the specific examples of the Finding described above, the Contractor performed the following:

- Regarding example (a), PSC procedure not followed (in this case the Contractor had not maintained copies of PSC appointment letters or the membership list in Project Document Control (PDC) as required by procedure), the Contractor stated that appointment letters were issued and both the letters and a copy of the membership list were on file in PDC. The Contractor also instructed the PSC secretary to re-read procedure K70P526, Project Safety Committee, to ensure full understanding and compliance with the procedure.

The inspectors verified that current copies of PSC appointment letters (including appointment letters for the full PSC Committee and the ALARA Subcommittee) and the membership list for both committees were available in PDC.

- Regarding example (b), review criteria not specified (concerns a procedural requirement to establish review requirements before performing review of documents), the Contractor stated that it issued procedure K13P023\_0, "Internal Review and Approval of Documents," to more clearly define the minimum criteria to be applied in reviewing implementing documents and documents that specify technical or quality requirements.

The inspectors reviewed K13P023\_0 and determined that it adequately addressed the corrective actions described above based on generic requirements to direct reviewers to, at a minimum, review documents for applicability, correctness, technical adequacy, completeness, accuracy, and compliance with established authorization basis requirements. Effectiveness of the corrective actions will be reviewed during future OSR design phase inspection activities.

- Regarding example (c), review and comment records not properly maintained, the Contractor stated that it revised procedure K70P551, "Drawings and Sketches: Preparation, Checking, and Approval," to establish that review comments for drawings and sketches will be provided to PDC for processing and retention. The Document Review Request and the Document Review Record were the forms that were stated to be the records that capture review and comment information for documents.

The inspectors reviewed K70P551 and determined that the procedure clearly identified the requirement to forward Document Review Records with comments attached to PDC for record retention. Revising this procedure resolved a discrepancy between K70P551, which previously required that document review comments be maintained in the project file, and K70PC023A\_2, that required comment and comment resolutions to be submitted to PDC for retention. The corrective actions regarding Contractor staff following procedures and, if necessary, addressing conflicting procedures, is discussed below as part of the Contractor's actions to address the root causes of the generic procedural compliance issue.

- Regarding example (d), failure to control output of HAZOP efforts (specifically concerned failure of PDC to control the Standards Identification Process Database (SIPD) as a record), the Contractor stated that the SIPD was now being controlled as a project record. Electronic copies of the applicable SIPD were to be provided to PDC by the Environmental Safety and Health organization for retention as a record of the basis of information to support issuance of safety document deliverables (e.g., Hazards Analysis Report, Preliminary Safety Analysis, Final Safety Analysis Report).

The inspectors reviewed procedure K71P508C\_O, "Standards identification Process Database," dated January 17, 2001. Section 4.0, "Records Retention," stated: An

electronic copy [of SIPD] will be provided to PDC by ES&H for retention as a record of the basis of information to support issuance of safety document deliverables (e.g., HAR, PSAR, FSAR). The SIPD shall be backed up electronically [daily] by the Information Technology group for project asset protection, per current project procedures."

The Contractor also stated that they had performed the following as immediate actions to address the Finding:

- Brief Contractor staff on the issues and instructing them on the need for procedural compliance. This action was reported to have been accomplished through a number of Project orientation and QA training and briefings sessions. In addition, during transition from BNFL to CHG, the Contractor stated that it again addressed this issue during meetings and briefings and in senior management memorandums.

Although the inspectors were provided attendance and training records of some of the Contractor's efforts to address this corrective action, in many cases, records of all hands meetings and briefings were not maintained. With some minor exceptions, records reviewed indicated that Contractor management had taken actions to inform staff of their need to follow procedures.

- Strengthen QA resources in both the QA department and on the project.

The inspector reviewed organization charts and verified that there was an increase of QA personnel to strengthen support in the areas of audits/surveillances and Quality Engineering. Because little important to safety activities have occurred since the Contract was assigned to the transition Contractor, the inspectors were not able to evaluate the effectiveness of these staffing changes. QA activities associated with audits and surveillances will be reviewed during future OSR design phase inspections.

In addition to the specific corrective actions discussed above, the Contractor provided a number of corrective actions designed to address the root causes of the procedural noncompliance issue. Root causes were identified as (1) schedule and resource constraints, (2) insufficient training, (3) insufficient management attention, and (4) insufficient internal assessments. Significant corrective actions listed to address these root causes included:



- To address root cause (1), concerning schedule and resource constraints, the Contractor (CHG) stated that it evaluated resource needs following assumption of the Contract and had taken action to supplement existing staff with CHG staff as needed to address work demands.

Although the inspectors were able to see evidence of staff augmentation by new CHG staff, the inspectors were not able to evaluate the effectiveness of this effort. As stated elsewhere in this inspection report, additional inspections of Contractor performance during the design phase will be conducted to, among other things, determine the effectiveness of actions taken to ensure that procedural compliance problems are adequately addressed.

- To address root cause (2), concerning insufficient training, the Contractor revised its training procedures in order to establish position-specific training requirements. The Contractor also required management and supervisors to review and maintain familiarity with Project training program requirements and processes. In addition, the Contractor stated that it was undertaking a rigorous procedure consolidation and improvement project.

The inspectors reviewed K20P009E, "Personnel Orientation and Training," dated January 8, 2001; lesson plan MTRRO-0001-01, "Management Training Responsibilities and Requirements Orientation," dated 2/29/00; and a number of internal memorandum, e-mails, and delinquency training reports that described the Contractor's efforts to improve staff training. In addition, the inspectors reviewed a number of procedures that had recently been revised to reflect the Contractor's effort to consolidated and improve procedures (specifically discussed in Section 1.2.23, and other Sections of this inspection report). Based on the review of the above, the inspectors identified adequate effort to address this root cause.

- To address root cause (3), concerning insufficient management attention, the Contractor (CHG) conducted a series of all-hands meetings to reinforce strict procedural compliance, attention to detail, stop-work authority, and other important workplace expectations. In addition, senior management stated that it issued a memorandum that explicitly directed that procedure compliance is mandatory.

As stated earlier, the inspectors found evidence that that Contractor management had taken actions to inform staff of their need to follow procedures.

- To address root cause (4), concerning insufficient internal assessments, the Contractor stated that it had performed both self- and independent-assessments of its readiness to begin important to quality and important to safety work. The Contractor also stated that it has revised its management assessments and corrective action procedures to clearly describe CHG's expectations for performing internal assessments and documenting problems.

The inspectors performed a review of the procedural changes as documented in Section 1.2.23 of this inspection report. In addition, the inspector reviewed a number

of the independent assessments (surveillances) described above as discussed in Section 1.2.25 of this inspection report. A large number of surveillance and audit activities were underway at the time of this inspection but not completed. Although these efforts indicate some improvement in this area, the inspectors were not able to fully evaluate the effectiveness of the action taken. Additional inspections of this area will be performed as part of the OSR routine design phase inspection program.

The Contractor's memorandum that documented its revised response to this Finding stated that it had abandoned BNFL efforts to implement a Quality Program Recovery Plan. This plan was identified as part of the original corrective actions to this Finding and was developed as a result of not only the Finding but also to address a number of internally identified issues regarding procedural compliance and a host of other quality related performance problems. Although the inspectors have determined that the actions described in the memorandum addressed the specific problems associated with the Finding, the decision to withdraw the commitment to perform the Quality Program Recovery Plan was not well documented. The cover letter to this inspection report has requested the Contractor to provide to the OSR, a written assessment of what actions the Contractor had taken in lieu of the plan or why it believes the plan was no longer necessary.

Based on the above, this item is closed.

- 1.2.19 (Closed) IR-00-001-01-FIN, "Four examples of failure to follow procedures: (a) failure to issue an approved surveillance schedule; (b) failure to generate surveillance checklists; (c) failure to use DCCLs; and (d) failure to properly control design review actions." During a January 2000 inspection, the OSR identified the four examples described above regarding the failure of the Contractor staff to follow procedures. These examples of failure to follow procedures were considered a Finding against the Contractor's QAPIP, Section 5.3.2, "Instructions and Procedures," (IR-00-001-01-FIN).

In the Contractor's response letter to the Finding, dated April 3, 2000, the Contractor stated:

- A project assessment schedule was updated and approved on February 15, 2000
- K13C053, "Quality Assurance Surveillance," will be revised to include the detailed requirement to document the areas surveilled or to maintain checklists or redlined requirement documents as part of the surveillance file
- K70P003, "Design Review," will be revised to clarify the use of Design Control Checklists (DCCLs) and intended function of the DCCLs
- K70P003 will be revised to clarify responsibility for addressing design review action items and closure of actions will be documented in Project Document Control (PDC).

The inspectors verified that the Contractor had issued the surveillance schedule (SC-W375-QA0003, Rev. 0,) on February 15, 2000, in response to the Finding. The inspectors found that the schedule was being updated. SC-W375-QA0003, Rev. 1 was issued on October 12, 2000, which identified planned surveillances through January 2001. The surveillance schedule was maintained as a project record in PDC.

The inspectors reviewed K13C053 and verified that Section 4.0, "Records," of the procedure was revised to include specific requirements that would result in documentation of the areas covered by the surveillance.

The inspectors reviewed K70P003\_A with regard to DCCLs. The inspectors determined that the procedure identified when a DCCL was required. The inspectors also verified that Section 5.1 of the procedure described the purpose and content of the DCCL.

The inspectors reviewed K70P003\_A with regard to documentation of action items from design reviews and responsibilities for closing these actions. The inspectors determined that the procedure addressed documentation of action items in design review meeting minutes that are then required to be filed in PDC. The inspectors reviewed meeting minutes from three recent design reviews: CCN# 016834C, CCN# 016634C, and CCN# 016693C and interviewed Contractor staff involved in design reviews. The inspectors found that the meeting minutes documented new action items, established during the design review, and that previously identified actions in related design reviews were updated or closed as appropriate.

In addition to the above actions taken to address the specific issues associated with the procedure noncompliance examples identified in the Finding, the inspectors noted that the Contractor management had taken other steps to emphasize procedure compliance expectations with Contractor staff. Interviews with Contractor staff indicated that there was a clear understanding that procedure compliance was expected on the project and that this policy was fully supported by management.

Based on the above, this item is closed.

- 1.2.20 (Closed) IR-00-001-02-FIN, "Lack of proceduralization or implementation of the ISMP, Section 3.13 requirement for testability and inspectability consideration in the design process." Section 3.13, "Reliability, Availability, Maintainability, and Inspectability (RAMI)," of the Contractor's Integrated Safety Management Plan (BNFL-5193-ISP-01, Rev. 4, dated December 2, 1998), required that testability of Safety Design Class systems and components be facilitated by such features as redundancy that allow for a system or component to be removed from service for maintenance or testing without loss of safety protection. Based upon review of Contractor design guide K70DG528A, the OSR determined that the hazard analysis process required the guideword "testing" to be used in identifying hazards and hazardous situations. Interviews with safety management and personnel indicated that the consideration of testing was limited to hazards presented by the testing activities and hazards to personnel performing the testing. The control strategy selection element of the ISM process, as reflected in K70DG528A and implemented by the hazard analysis teams, did not include consideration of the impacts

of removing important-to-safety SSCs from service for testing and the resulting potential loss of safety protection. Section 3.13 also specified the requirement to address inspectability, particularly as it is related to the ease with which items or systems can be inspected for preventative maintenance or assessment of conditions, however, the Contractor was again not considering this element during the design process. The lack of proceduralization or implementation of the ISMP, Section 3.13 requirements for testability and inspectability consideration in the design process was identified as a Finding against Section 3.13 of the ISMP (IR-00-001-02-FIN).

In the Contractor's response letter to the item, dated April 3, 2000, the Contractor stated that the level of design detail was such that little consideration of inspection and testing was possible. In Section 3 of the response, the Contractor stated that a revision to K70C514, "Code of Practice for Development of Hazard Control Strategies and Identification of Standards," would clarify the time phase relationship of reliability, availability, maintainability, and inspectability (RAMI) with design maturity. Although K70C514D\_0 was revised to consider the requirements for operations, maintenance, testing, and inspection of SSCs, it did not address the "time phase relationship" concept discussed in the response letter. Failure to update the response to indicate the actions the Contractor subsequently planned and eventually took is considered another example of a Finding against the RL/REG-98-06 requirement discussed in Section 1.2.16 above (IR-00-006-01d-FIN).

Section 4 of the Contractor's response, stated, "It is the intent that the revised ISMP will contain more information of the timing of implementation of all the requirements contained in the ISMP." However, the Contractor failed to submit a revision to the ISMP that contained information relative to the timing of implementation of ISMP requirements. This is also considered another example of a Finding against the RL/REG-98-06 requirement discussed in Section 1.2.16 above (IR-00-006-01e-FIN).

As in Section 1.2.18 above, the inspector's discussed with the Contractor its failure to either implement all of the corrective actions committed to in its response letter or to revise the response. To facilitate closure of this item and after obtaining agreement with the OSR Regulatory Official that for this inspection only, a Contractor memorandum to file documenting its revised corrective actions would be acceptable, the Contractor prepared and provided to the inspectors a memorandum from the Environmental, Safety and Health organization to the Quality Assurance Manger, dated January 15, 2001, documenting the discrepancies in the response letter and providing the corrective actions taken to address the Finding. The memorandum stated that a new procedure, K70P568, "Hazard Analysis, Development of Hazard Control Strategies, and Identification of Standards," was generated that addressed, among other things, the requirements for considering inspection and testing during design. The new response information again stated that the design had not progressed sufficiently to identify inspection and testing requirements. The Contractor stated that these requirements would be identified and documented following Design Bases Event selection and analysis.

The inspectors reviewed K70P568\_0, dated January 12, 2001, and found it to adequately address inspection and testing required by the ISMP. The 38-page procedure provided

detailed instructions concerning the hazard analysis and standards identification process. During several stages of this process, including during development of preferred hazard control strategies, identification of engineering standards, and designation of systems, structures, and components (SSCs), Contractor staff were to consider inspection and testing requirements. Under Section 3.9, "Identification of Standards," the procedure stated, "it will not be possible to define maintenance and testing requirements until the design is mature."

Based on the review of the actions taken by the Contractor in accordance with the above described revised response, this item is closed. However, because the Contractor had yet to implement its efforts to identify and document testing and inspection requirements, the inspectors were unable to verify the effectiveness of the corrective actions. This area will be reviewed during future design phase inspections.

- 1.2.21 (Closed) IR-00-001-03-FIN, "QA organization not effectively addressing the QAPIP requirement to review selected engineering documents, etc." During the January 2000 inspection, a list of completed QA audits was reviewed by the OSR to determine the general breadth of the audit program as it relates to design engineering document reviews. The audit program had generally reflected similar areas as the OSR inspection program. Although the audits covered most important-to-safety project activities, it did not focus, in any substantial way, on design documents. The OSR concluded that the QA organization had not effectively addressed the QAPIP requirements to review selected engineering documents, and technical and design review efforts to ascertain compliance with QAPIP requirements. This was considered a Finding against QAPIP Sections 6.2.2 and 6.3 (IR-00-001-03-FIN).

In a letter dated April 3, 2000, the Contractor responded to the above Finding. In this letter, the Contractor provided a listing of several corrective actions that had been taken to resolve the issues discussed in the inspection report. Additionally, the Contractor committed to several corrective steps to avoid recurrence of the Finding.

These correction actions are summarized below:

- (1) Issue a surveillance schedule by April 30, 2000
- (2) Revise "Code of Practice for QA Reviews of Documents," K13C050, to clarify the requirement to clearly document the selected reviews conducted
- (3) Train QA personnel on the above revised procedure.

For the first corrective action, the inspectors were provided with copies of internal correspondence that confirmed the issuance of a surveillance schedule on February 15, 2000. Copies of this surveillance schedule could not be found in document control and as a result, actual verification by the inspectors could not be performed. However, the Contractor provided copies of an approved QA surveillance schedule (CCN # 015810C), dated October 12, 2000, and Audit and Assessment 120 day rolling schedule (SC-W375-QA00002, Rev 6) as evidence that scheduling of surveillances and audits was an on-

going practice. Based on the above information the inspectors concluded that this corrective action had been successfully implemented.

The second corrective action was intended to address undocumented reviews performed by QA personnel as discussed in the inspection report. For this corrective action, the inspectors were provided a copy of the Procedure Change Request for K13C050A\_1, "Code of Practice for QA Review of Documents," which was approved on May 3, 2000. The revision added a new subsection that added the following requirement:

"The review of engineering, design, research, and technology documentation by the QA organization either by selection or process activity shall be documented. The review activity either as part of the review cycle (documented on either the review document or the Document Review Request (Form No. K70F507)), or via an ad-hoc surveillance activity (documented on a surveillance report), or by checklist completion (See Appendix 1 – 5 of this procedure), shall be adequately documented and recorded.

QA reviews are performed on selected documents to ensure that appropriate quality requirements, QC inspection requirements, and QA criteria are adequately specified."

The inspectors reviewed the latest version of procedure K13C050A and found that the above requirement had been maintained in subsequent revisions to the Code of Practice. The inspectors determined that the added requirement clearly communicated expectations for documenting reviews performed by QA personnel. Based on the above, the inspectors found that the above corrective action had been successfully implemented.

The third corrective action was intended to ensure that all QA personnel had been trained on the new requirements discussed above. The inspectors were provided with a training roster that indicated the targeted population, and a signed required reading form for each individual on the training roster. The form made the reader of the procedure acknowledge that he/she had read, understood, and could apply the procedure. Based on the above the inspectors found that the corrective action had been successfully implemented.

In addition to above corrective actions, the existing Contractor took some steps to address the issue of QA participation in the design process. The inspectors were provided with a memorandum (CCN 017117C) that provided objective evidence of enhancements and improvements that were made subsequent to the issuance of the Finding. A summary of the information provided is listed below:

- A Quality Engineering (QE) Organization was established and moved to the QA department. This was done to ensure consistency of quality requirement application across the project.
- Roles and Responsibilities for the QE organization were clearly communicated, including participation of QE in design review committee activities.

- A QA document review log, which demonstrated that design procedures, drawings, data, and studies were being reviewed by the QA Organization.

Based on the successful implementation of the corrective actions and the above additional information the inspectors concluded that the Quality Organization was actively involved with the oversight of the design program and that design activities were systematically being reviewed and documented. This Finding is therefore considered closed.

- 1.2.22 (Closed) IR-00-003-01-FIN, "Failure to issue, in a timely fashion, a surveillance report, its associated deficiency report, and the corrective action report." During a March 2000 inspection, the OSR reviewed a copy of surveillance report SV-W375-00-QA00003, signed February 18, 2000. Attached to the surveillance report was deficiency report DR-W375-99-QA00115, signed February 18, 2000. The results of the surveillance were marked as unsatisfactory and the attached DR identified numerous deficient conditions found during the surveillance. This DR had been evaluated as "Significant" by the Contractor QA organization, but the Corrective Action Report, which is required for "Significant" DRs, was generated during the OSR inspection on March 8, 2000. Although the surveillance report was signed February 18, 2000, interviews with the surveillance team members indicated that the surveillance had been conducted in October 1999. The OSR was informed by the surveillance team lead that neither the QA management nor the line management had been informed of the results of the surveillance (nor of the attached DR) until February 18, 2000. As stated above, Corrective Action Report, CAR-W375-QA00002 was not issued until March 8, 2000. Therefore, the potential problems from the surveillance were not identified to promote improvement to those responsible for potential corrective actions for several months.

Section 3.2 of the QAPIP, required "Early identification of potential problems through structured surveillance and audits," and 10 CFR 830.120 (c)(3)(ii) required independent assessments to "be planned and conducted . . . to promote improvement." Failure to issue, in a timely fashion, the surveillance report SV-W375-00-QA00003, the associated deficiency report DR-W375-99-QA00115, and the corrective action report CAR-W375-QA00002, was considered a Finding (IR-00-003-01-FIN).

In the Contractor's response letter to the item, dated April 3, 2000, the Contractor stated that:

- Additional personnel resources would be added to the QA organization
- Procedures K10P008, K13C051, K13P053, K13P062, and K13P054 related to assessment, surveillance, and corrective action would be revised. These revisions would include measurable timeframe elements for completion of key activities
- Suitable metrics would be implemented to provide management with the information necessary to monitor completion and issuance of documentation associated with the assessment process

- Project personnel involved with assessment activities would be trained on the revised procedures.

The inspectors found that the Contractor had performed an assessment, SA-W375-00-00023, to determine the extent of the condition identified in IR-00-003-01-FIN. Based on the assessment and Finding, the Contractor initiated Deficiency Report DR-W375-00-QA00017 and Corrective Action Report CAR-W375-00-QA00019 to document and resolve the condition. The inspectors reviewed the Corrective Action Report documentation and determined that a root cause analysis had been performed and that corrective actions were developed, implemented, and verified. The inspectors were provided documentation that demonstrated that CAR-W375-00-QA00019 was closed on October 23, 2000.

The inspectors reviewed "CHG-WTP-QA Organization Chart," Revision 3, dated August 17, 2000, and found that the QA organization staffing had increased substantially since Finding IR-00-003-01-FIN was established. From interviews with QA personnel, the inspectors determined that current QA staffing was sufficient for the current workload of the QA organization.

The inspectors reviewed the following procedures:

- K13P066\_0, "Quality Assurance Program Audits," dated December 14, 2000 (Replaced K13C051A, "Quality Assurance Program Audits and Assessments")
- K10P008A\_1, "Management Assessments," date November 13, 2000
- K13P053B\_2, "Quality Assurance Surveillance," dated October 2, 00
- K13P054B\_2, "Corrective Action Program," dated October 26, 2000.

The inspectors determined that these procedures included specific timeliness criteria associated with completing and submitting key documentation. As outlined above, the Contractor had committed to revising K13P062 to include timeliness criteria, however, the Contractor determined, and the OSR inspectors concurred, that such criteria was not relevant to K13P062, "Quality Trending." The inspectors reviewed training records and verified that the QA personnel had received training on these procedures.

The inspectors interviewed the QA manager and staff, and reviewed examples of recent graphs, charts, and statistics and determined that metrics associated with completing corrective actions had been established, implemented, and presented at management meetings. The inspectors found that the completion of QA audits, assessments, and surveillances were being followed by QA management using a QA Open Action Item List.

Based on the above, this item is closed.



1.2.23 (Closed) IR-00-004-01-FIN, "Inadequate quality improvement procedures." During a April 2000 inspection, the OSR identified that procedures for controlling the Contractor's quality improvement program were found to contain errors, lacked detail, and did not adequately describe and control the processes necessary to ensure an effective quality improvement program. A Finding was issued for failure to comply with Section 5.3.2 of the QAPIP regarding the requirement to have adequate procedures (IR-00-004-01-FIN).

In the Contractor's response letter to the item, dated July 14, 2000, the Contractor stated that it had generated a Corrective Action Report (CAR-W375-00-QA00016) to review and address the issues. The Contractor also stated that it had taken immediate actions to increase awareness within the QA organization of the importance of procedural integrity and accuracy, increase QA human resources to address conduct of QA activities and improve QA procedures, and increase project management awareness of the serious deficiencies in QA procedures. The Contractor also stated its intent to fully implement its new procedure, K13P003, Production of RPP-WTP Procedures, to improve the clarity and quality of its procedures, and to revise a number of its QA related procedures to address the deficiencies identified during the April 2000 inspection.

The inspectors reviewed CAR-W375-00-QA00016, dated June 20, 2000. The Corrective Action Report (CAR) documented the procedural issue described in inspection report IR-00-004 and the corrective actions documented in the Contractor's response letter dated July 14, 2000. The inspectors also review RC-W375-00-00001, Rev. 0, "Root Cause Analysis of Finding Related to the WTP Quality Improvement Program," issued on September 21, 2000. This root causes identified included:

- Management did not identify clearly the scope and content of the procedures
- The project did not provide ample resources to produce and review the initial procedures, revise the existing procedures, and adequately perform the activities of the QA Organization
- Management did not establish clear instructions on writing Deficiency Reports (DRs) and CARs
- The QA Manager did not provide the staff with corrective feedback on effective DRs and CARs
- Management did not establish a procedure with defined intermediate key steps to ensure timeliness.

These root causes were addressed in the Contractors corrective actions to this and the next two Findings discussed below.

The inspectors reviewed the quality improvement procedures and verified that they addressed the issues raised in inspection report IR-00-004 and the Contractors proposed corrective actions. In some cases, the Contractor had revised the procedures to meet the OSR commitments, and latter revised them to reflect the new procedure format and

content requirements prescribed in K13P003, "Production of RPP-WTP Procedures." The change to the new format, in some cases resulted in removal of sections of the procedures that had earlier been revised to address OSR issues as committed in the Contractor's response letter. However, in all cases, the inspectors found the current procedures to be acceptable, in that the original concerns were no longer of issue. The following procedures were reviewed:

- K13P054B\_2, "Corrective Action," dated October 26, 00
- K13P051\_3, "Stop Work," dated December 18, 2000
- K13P066\_0, "Quality Assurance Program Audits," dated December 14, 2000 (Replaced K13C051A, "Quality Assurance Program Audits and Assessments")
- K10P008A\_1, "Management Assessments," date November 13, 2000
- K13P061\_1, "Root Cause Analysis," dated November 1, 2000
- K13P056C\_2, "Identification of Nonconforming Conditions," dated November 27, 2000
- K13P059\_1, "Identification, Tracking, and Reporting Price Anderson Amendment Act [PAAA] Noncompliance," dated September 26, 2000 (Note: This procedure transferred responsibility for PAAA reporting to CHG, a new procedure will be required when the new RPP-WTP Contractor comes on board)
- K13P062E\_0, "Quality Trending," dated December 18, 2000
- K13P003E\_0, "Production of RPP-WTP Procedures," dated November 17, 2000.

From review of the above listed procedures, the inspectors verified that the action stated in the Contractor's response letter to the Finding were completed. The new K13P003E\_0, used to generate new or revised procedures, was found to provide adequate guidance and, if appropriately implemented, should ensure that future procedures are effective and meet Contractor needs.

Based on the above, this item is closed.

- 1.2.24 (Closed) IR-00-004-02-FIN, "Twelve examples of untimely corrective actions associated with deficiency reports." During the April 2000 inspection, the OSR identified significant problems with implementation of the processes associated with identification of deficient items and the ability to timely and adequately address them. Over half of the Deficiency Reports (DRs) and Corrective Action Reports (CARs) reviewed were not being addressed in a timely manner. A Finding was identified with twelve examples of failure to address deficiencies in a timely manner (IR-00-004-02-FIN).

In the Contractor's response letter to the item, dated July 14, 2000, the Contractor stated that Deficiency Report DR-W375-00-QA0043, "Failure to Address Deficiencies in a Timely Manner IR-00-004-02-FIN," was initiated to document corrective actions for this Finding. The Contractor was to designate QA point of contacts with the responsibility of tracking to closure all open corrective actions. QA also was to provide weekly status reports to each point of contact to assure visibility was maintained on each open corrective action. This effort was intended to improve timeliness of corrective actions associated with identified deficiencies. The Contractor also committed to revise K13P054, "Corrective Actions," to incorporate time limits into the process of addressing deficiencies to avoid further Findings in this area.

The inspectors reviewed DR-W375-00-QA0043, dated June 17, 2000 and associated CAR-W375-00-QA00016, Rev. 0, dated January 8, 2001. The DR and CAR reflected the issues and corrective actions identified in the Contractor's response letter dated July 14, 2000.

The inspectors reviewed K13P054C\_2, and verified that the procedure was revised to implement processes that would ensure that deficiencies are addressed in a timely manner. The revised procedure greatly improved the process for identifying, processing, and resolving conditions adverse to quality. In addition, the procedure addressed the requirement to review DRs for adverse trends.

The inspectors reviewed the Contractors Corrective Action Management System (CAMS) database and reviewed statistical information that graphically illustrated the Contractor's current performance regarding timeliness for resolution and closure of deficiency reports. The CAMS database indicated that there were only 12 items open at the time of the inspection. The QA organization reported that it was meeting with Contractor senior management on a weekly basis to discuss line organization progress on closing open items. The inspectors were informed that "Hard Spot" items were being discussed during these meetings with the responsible organization providing its status and discussing problems it was having addressing the issues. This management attention was reported to have had a substantial impact on moving "Hard Spot" issues toward closure. Since transition from the original Contractor, there had been only 24 new deficiency reports (DRs) identified, most likely reflecting that little important to safety work had been performed since transition.

Actions prescribed in K13P054C\_2, combined with increased management attention, addressed this issue. However, the lack of significant numbers of incoming DRs, have resulted in a corrective action program that has been untested under normal working conditions. Additional OSR inspection of this area will be performed following resumption of design work by the new RPP-WTP Contractor to verify that the actions put in place continue and that the new problem identification and resolution processes are capable of handling the volume of issues typically raised during full design and eventual construction activities.

Based on the above, this item is closed.

1.2.25 (Closed) IR-00-004-03-FIN, "Three examples of failure to follow procedures: 1) failure to write a CAR when a DR [DR-W375-99-QA00095] was classified as significant, 2) failure to write a DR when a surveillance [SV-W375-00-QA0007] identified document control errors, and 3) failure to generate DRs for deficiencies identified by outside entities." During the April 2000 inspection, the OSR identified a Finding with three examples, for failure to follow procedures as described above (IR-00-004-03a-FIN, IR-00-004-03b-FIN, and IR-00-004-3c-FIN).

In the Contractor's response letter to the item, dated July 14, 2000, the Contractor stated that it had generated a DR and CAR to document the failure to follow procedures. The Contractor also reported that it added eight individuals to the QA organization to redistribute the workload within QA, and closed the issues that initially led to the Finding. Procedure K13P054, "Corrective Action," was reported to have been revised to improve the process of addressing significant conditions adverse to quality, and management awareness and priority was increased regarding the need for improvement in the corrective action program.

The inspectors reviewed K13P054C\_2, dated November 9, 2000. The inspectors determined that, among other changes, the procedure no longer required the generation of a separate CAR by combining the DR and CAR into one single document, simplifying the process for initiating additional actions for significant DRs. In addition, the procedure was changed to require that externally identified conditions adverse to quality be identified, tracked, and completed in a similar manner as those identified internally. These changes, along with improvements in the processing of deficiencies should improve performance in this area.

The inspectors reviewed DR-W374-00-QA00044, dated June 16, 2000, and associated CAR-W375-00-QA-00018, dated January 8, 2001, that were generated to address the Finding. The DR and CAR reflected the inspection report Finding and the Contractor's written response to the Finding. The inspectors reviewed a sample of recently performed surveillance reports to determine if conditions adverse to quality were being identified and appropriately processed. The following surveillance reports were reviewed:

- SV-W375-00-QA0042, "Verification of Adequacy of Corrective Actions for Non-conformances, July 25 through September 30, 2000," dated October 31, 2000
- SV-W375-00-QA00035, "Closure of PDC Resumption Plan Action Items, and QA Surveillance Observations," dated September 21, 2000
- SV-W375-00-QA-00043, "RPP-WTP Corrective Action Procedure K13P054B," dated November 6, 2000
- SV-W375-00-QA00037, "Training Resumption Plan Surveillance Follow-up," dated October 16, 2000
- SV-W375-00-QA00037, "Closeout Surveillance of Information Technology (IT) Resumption Plan Action Items and QA Surveillance Observation," dated

October 4, 2000

- SV-W375-00-QA0041, "TWT Interim Design Resumption Plan Surveillance Follow-up," dated October 26, 2000
- SV-W375-00-QA00040, "ES&H Resumption Plan Surveillance Follow-up," dated October 16, 2000.

None of the above listed surveillance reports resulted in the generation of a DR. Some resulted in action items that had to be addressed before the QA organization would conclude that the organization being reviewed was ready to resume important to safety activities. The inspectors did not identify any action items that should have resulted in the generation of DRs based on the Contractor's corrective action procedure requirements. The last surveillance report that had been issued was in October 2000, well before the OSR had issued its evaluation of the transition Contractor's capability to safely initiated changes in the RPP-WTP authorization basis, dated November 15, 2000. However, a number of surveillance reports were reported to have been in various stages of draft as a result of recently performed surveillance activities of ongoing Contractor activities. In addition, other than three audits of subcontractor/vendors, no audits of transition Contractor activities had occurred since the transition Contractor had assumed the Contract. Again, the inspectors were informed that a number of audits were in progress but not completed.

The inspectors met with the QA manager and were informed that 14 additional QA staff had been added to the QA organization since the Finding was identified and that many of these new resources were used to improve procedures and oversee the closure of old DRs.

As with IR-00-004-02-FIN (see Section 1.2.24 above), the inspectors were not able to fully assess the effectiveness of the Contractors actions to address the Finding described above. Additional OSR inspections of this area will be performed following resumption of design work by the new RPP-WTP Contractor to verify that the actions put in place continue and that the audit and surveillance program appropriately identify and process issues that are typically identified during full design and eventual construction activities.

Based on the above, this item is closed.

- 1.2.26 (Closed) IR-00-005-01-FIN, "Failure of the Contractor to assure that the Project QA Manager had sufficient authority and organizational freedom to verify that project activities were performed in accordance with applicable codes and standards." During a special April-May 2000 inspection, the OSR identified a Finding concerning the lack of independence of the QA Organization, as indicated by the reassignment of the Project QA Manager by the General Manager, who had no reassignment authority over the Project QA Manager (IR-00-005-01-FIN).

In a letter dated August 2, 2000, the Contractor responded to the Finding. In the letter, the Contractor acknowledged the appearance of a lack of independence of the Project QA

Manager based on the reassignment of that manager by the General Manager. The Contractor also acknowledged that several elements of the reassignment were handled poorly. However, the Contractor disagreed with the Finding and offered several facts and clarifications regarding the reassignment of the Project QA Manager to justify their position. The additional information provided in the above mentioned letter was subsequently evaluated by the OSR and was found unacceptable. This conclusion was communicated to the Contractor in a letter dated September 21, 2000. By the time of the correspondence was issued, the Contract with BNFL had been terminated for unrelated reasons and additional actions from the Contractor were not requested by the OSR. The OSR, however, communicated with the Contractor that the OSR would report the Finding to the DOE Enforcement and Investigations staff, in accordance with DOE/RL-96-26, *Memorandum of Agreement for the Safety Regulation of the RPP-WTP Contractor*. The OSR took this step to ensure that future contractors on the waste treatment plant would, as a minimum, use the circumstances surrounding this Finding as an opportunity to review their organizational structure with respect to the independence of the QA organization.

As part of the closure of this issue, the OSR reviewed the new Contractor's organizational structure to assess if the new organization reflected an independent QA organization. The inspectors reviewed the current organization chart and found that the QA Manager did not report directly to the Tank Waste Treatment Operation Project. The QA Manager reported directly to the CHG QA Director who in turn reported back to the President and General Manager of CHG. This reporting mechanism should provide the QA Manager direct access to senior management on matters affecting project quality. The inspectors reviewed a copy of an internal memorandum, dated July 27, 2000, that appointed the project QA Manager. The memorandum also reinforced the reporting relationship described above and discussed the direct line of access available to the project QA Manager. This memorandum was signed by the President and General Manager of CHG and was sent to the Senior Vice President of Tank Waste Treatment. This memorandum provided positive evidence that independence of the QA organization was achieved and that CHG Senior Management supported the necessary separation of QA and project function. The inspectors also interviewed the project QA Manager and the Acting Tank Waste Treatment Operation Project Senior Vice President to better understand the reporting relationship. Based on these interviews the inspectors concluded that the reporting relationship and lines of authority were well understood by the organization.

Based on the above, this item is closed.

- 1.2.27 (Closed) IR-00-005-02-FIN, "Failure of the Contractor to comply with procedure K13P051\_2, "Authority to Stop Work." During the special April-May 2000 inspection, the OSR identified a Finding concerning the failure to follow the "Authority to Stop Work" procedure, K13P051\_2. The Responsible Manager, the Deputy Project Manager, did not take immediate action to cease work activities as advised by the project QA Manager and did not proceed in an orderly manner with the action requested (IR-00-005-02-FIN).

In a letter dated August 2, 2000, the Contractor responded to the Finding. The Contractor acknowledged the Finding and provided a listing of several corrective actions that had been taken to resolve the issue. In the response, Contractor management stated that they were aware of and would henceforth strictly adhere to, and enforce, the compulsory use of procedures and the necessary process for determining quality related activities. There was also a recognition of circumstances surrounding the events leading up to the above Finding and how these circumstances could be mistakenly construed as inappropriate handling of the issues. The Contractor stated that this Finding would be used as a "lessons learned" for future business.

The inspectors reviewed Stop Work Order (SWO) (SWO-W375-00-QA0002) issued on April 12, 2000, and the completed Corrective Action Report (CAR-W375-00-QA00011, Rev 1) associated with the SWO that resulted in the above Finding. The Contractor resolved the issue by performing the following:

- Stopping all BNFL Engineering Limited (BEL) activities (the subcontractor activities that caused the QA manager to initiate the SWO) and ensuring that the new CH2M Hill Hanford Group, Inc. Contract would not support task order work to BEL for design activities
- Not issuing new task order work to Bechtel National, Inc. (BNI), another BNFL subcontractor, for design activities
- Canceling procedure K70P532, "BNI Off-Project Task Order"
- Ensuring that procedure K40C001, "Code of Practice for Preparing Purchase Requisitions," was used for future design task orders
- Reviewing all work performed by BNI and BEL under task order activities and concluding that those activities had no quality-affecting design documents issued outside of the RPP-WTP project without the appropriate project review and approval process implemented.

The inspectors found that the statements made in the August 2, 2000, letter and the actions completed above addressed the issues raised in the Finding. Based on this information, this item is closed.

## **2.0 EXIT MEETING SUMMARY**

The inspectors presented the inspection results to members of Contractor management at an exit meeting on January 18, 2001. The Contractor acknowledged the observations and conclusions presented. The inspectors asked the Contractor whether any materials examined during the inspection should be considered proprietary information. The Contractor stated that the information presented at the exit meeting did not contain proprietary information.

### 3.0 REPORT BACKGROUND INFORMATION

#### 3.1 Partial List of Persons Contacted

J. Honeyman, Senior VP, Operations  
R. Ni, Deputy, Operations  
C. Hall, VP, Interim Design  
R. Popielarczyk, Deputy, Interim Design  
M. Witherspoon, QA Director  
R. Lipfert, ES&H Director  
D. Klein, Nuclear Safety Manager  
M. Platt, Regulatory Safety Manager  
D. Smith, Licensing Engineer  
P. Bruce, Corrective Action Lead  
P. Praetorius, Procurement QA Lead  
K. Lehman, ES&H Inspection Coordinator

#### 3.2 List of Inspection Procedures Used

Inspection Administrative Procedure I-106, "Verification of Corrective Actions"

#### 3.3 List of Items Opened, Closed, and Discussed

##### Opened

IR-00-006-01-FIN	Finding	Five examples of failure to provide to the OSR timely, complete, and accurate information, in that response letters to the OSR were not amended when the Contractor changed its planned corrective actions.
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##### Closed

IR-99-002-01-IFI	Follow-up item	Quality related procedures lacked detail.
IR-99-002-04-IFI	Follow-up item	Track to resolution DR-W375-99-QA00029 concerning lack of dual storage of Documents and Records.
IR-99-002-05-IFI	Follow-up item	Removal of an inappropriate note in K40C001_0 concerning appendix (QA requirements) not being interpreted as requirements.
IR-99-003-01-IFI	Follow-up item	Track to resolution DR-W375-99-QA00059



concerning the need for clarification of certain Quality Improvement-related procedures.

IR-99-004-01-FIN	Finding	Lack of discipline specific ALARA design criteria.
IR-99-004-02-IFI	Follow-up item	Design Change procedure did not specify the conduct of an ALARA design review when the change could affect the ALARA Design.
IR-99-004-03-IFI	Follow-up item	Lack of detail in ALARA design implementation procedures (identified as an inspection weakness).
IR-99-005-01-IFI	Follow-up item	Follow-up on the Contractor's efforts to develop and implement the Design Input Memorandum (DIM) process.
IR-99-005-02-IFI	Follow-up item	Follow-up on the Contractor's efforts to address inconsistency between QAPIP and current practice concerning use of system descriptions.
IR-99-005-03-IFI	Follow-up item	Follow-up on the Contractor's actions to address computer software verification and validation.
IR-99-006-01-IFI	Follow-up item	Verification of the addition of the necessary references or fields as indicated in the list of proposed SIPD fields.
IR-99-006-02-FIN	Finding	There was not a clear separation of responsibilities between the PSC and the PMT such that the independence of the PSC was retained.
IR-99-007-02-IFI	Follow-up item	Program weakness regarding inconsistencies with authorization basis implementing procedures.
IR-99-007-03-FIN	Finding	Two examples of failure to follow procedures: a) Failure to prepare an ABCN for Revision 3 to the RPP; and b) Failure to include ISMP and SRD changes on a QAPIP ABCN when it was identified that the changes impacted these documents.
IR-99-008-01-IFI	Follow-up Item	Self-Identified issue concerning failure to implement the Executive Committee as required by the ISMP.
IR-99-007-04-IFI	Follow-up item	Program weakness concerning notification of RU of changes to Authorization Basis documents that do not reduce effectiveness of document.

IR-99-008-02-FIN	Finding	Four examples (a-d) of failure to follow procedures: PSC procedure not followed; review criteria not specified; review and comment records not properly maintained; and failure to control output of HAZOP efforts.
IR-00-001-01-FIN	Finding	Four examples of failure to follow procedures: failure to issue an approved surveillance schedule; failure to generate surveillance checklists; failure to use DCCLs; and failure to properly control design review actions.
IR-00-001-02-FIN	Finding	Lack of proceduralization or implementation of the ISMP, Section 3.13, requirement for testability and inspectability consideration in the design process.
IR-00-001-03-FIN	Finding	QA organization not effectively addressing the QAPIP requirement to review selected engineering documents, etc.
IR-00-003-01-FIN	Finding	Failure to issue, in a timely fashion, a surveillance report, its associated deficiency report, and the corrective action report.
IR-00-004-01-FIN	Finding	Inadequate quality implementing procedures
IR-00-004-02-FIN	Finding	Twelve examples of untimely corrective actions associated with deficiency reports.
IR-00-004-03-FIN	Finding	Three examples of failure to follow procedures: (1) Failure to write a CAR when a DR was classified as significant, (2) Failure to write a DR when surveillance identified document control errors, and (3) failure to generate DRs for deficiencies identified by outside entities.
IR-00-005-01-FIN	Finding	Failure of the Contractor to assure the project QA Manager had sufficient authority and organizational freedom to verify that project activities were performed in accordance with applicable codes and standards.
IR-00-005-02-FIN	FIN	Failure of the Contractor to comply with procedure K13P051_2, "Authority to Stop Work."

Discussed

IR-99-007-05-FIN Finding Failure to revise and issue an ABCN in accordance with the requirements of the QAPIP.

**3.4 Closure of Contractor Corrective Action Commitments**

The following table lists the corrective action commitments items, assigned by the OSR to track Contractor corrective actions identified in formal Finding responses and in some cases inspection follow-up items (IFIs), that were reviewed and determined to have been appropriately implemented or are no longer applicable. These Commitment Management System (CMS) items are closed:

<b>Commitment Number</b>	<b>Commitment Description</b>	<b>Expected Completion Date</b>	<b>Contractor action completed</b>	<b>Inspection Verification</b>
99-CMS-021	Revise K13P005, Rev. 1 to clarify BNFL's policy on revising the QAPIP. (IR-99-002-01-IFI)	10/15/99	Procedure Revised	See Section 1.2.1
99-CMS-024	Revise code of practice for source evaluation and selection to address approved vendor list (AVL) control. (IR-99-002-01-IFI)	8/31/99	Procedures revised	See Section 1.2.1
99-CMS-022	Revise QAPIP to remove Dual Storage requirements for records. (IR-99-002-04-IFI)	9/30/99	QAPIP revised to require 1hr fire rated containers or facilities	See Section 1.2.2
99-CMS-023	Revise K40P001 and K40C002 to remove inappropriate note concerning applicability of QA requirements. (IR-99-002-05-IFI)	07/99	Procedures revised	See Section 1.2.3
99-CMS-028	Finalize actions to resolve DR-W375-99-QA00059. (IR-99-003-01-IFI)	8/27/99	DR actions resolved	See Section 1.2.4
99-CMS-029	Revise K10P008, K10P004, and K13P054. (IR-99-003-01-IFI)	9/30/99	Procedures revised	See Section 1.2.4
99-CMS-030	Train personnel on the requirements for documentation of quality deficiencies. (IR-99-003-01-IFI)	10/22/99	Training performed	See Section 1.2.4

99-CMS-031	Incorporate authorization basis requirements into implementing procedures. (IR-99-003-01-IFI)	9/30/99	Actions completed	See Section 1.2.4
99-CMS-032	Revise K13P054 and K10P008 to include significance rational and effectiveness evaluation, respectively.	9/30/99	See Note 1 below	
99-CMS-033	Revise K13P054 and K13P055 to address corporate assessments.	9/30/99	See Note 1 below	
99-CMS-034	Revise K13C051 and K13P055 to address safety significance for scheduling assessments.	9/30/99	See Note 1 below	
99-CMS-035	Revise K13P054, "Corrective Actions," to require DRs to be reviewed for performance trends.	9/30/99	Action completed	See Section 1.2.24
99-CMS-036	Revise Section 3.9.2 of the ISMP and procedure K70P502 to eliminate the reference to design specific ALARA criteria; also, issue K70DG532, ALARA Design Guide (containing ALARA Design Considerations) to replace the uncontrolled training handout. (IR-99-004-01-FIN)	9/30/99	Actions completed	See Section 1.2.5
99-CMS-037	Revised procedures K70P030 and K70P033 (DCA/DCN procedures) to require ALARA review if change affects the ALARA design. (IR-99-004-02-IFI)	8/99	Actions completed	See Section 1.2.6
99-CMS-038	QA to review ALARA procedures to identify "level of detail" problems. (IR-99-004-03-IFI)	10/30/99	Action completed	See Section 1.2.7
99-CMS-039	Add additional fields to SIPD as described during the inspection. (IR-99-006-01-IFI)	11/01/99	Action completed	See Section 1.2.11
99-CMS-040	Establish a charter for the PMT. (IR-99-006-02-FIN)	12/07/99	Action completed	See Section 1.2.12

99-CMS-041	PMT Chairman is no longer also the PSC Vice-Chairman. (IR-99-006-02-FIN)	12/07/99	Action complete	See Section 1.2.12
99-CMS-042	Modify the PSC procedure. (IR-99-006-02-FIN)	1/31/00	Action completed	See Section 1.2.12
99-CMS-048	Initiate action under the authorization basis management process (issue an ABCN) to address Revision 3 of the RPP. (IR-99-007-03a-FIN)	2/24/00	Action completed	See Section 1.2.14
99-CMS-049	Initiate action under the authorization basis management process (issue an ABCN) to address ISMP and SRD changes to reflect changes made in Revision 5 of the QAPIP. (IR-99-007-03b-FIN)	2/24/00	Action completed	See Section 1.2.14
99-CMS-050	Revise K70C528 to clarify process for revising authorization basis documents. (IR-99-007-03-FIN)	4/24/00	Actions completed	See Section 1.2.14
99-CMS-043	Issue PSC appointment letters for all members; perform a self-assessment of PSC activities, (IR-99-008-02a-FIN)	2/25/00	Contractor changed corrective actions, see Section 1.2.18	See Section 1.2.18
99-CMS-044	Revise K70P526 to define minimum criteria to be applied in reviewing documents. (IR-99-008-02b-FIN)	2/25/00	Contractor changed corrective actions, see Section 1.2.18	See Section 1.2.18
99-CMS-045	Revise K70P551 to require DRR forms to be retained by the originating organization. (IR-99-008-02c-FIN)	2/25/00	Contractor changed corrective actions, see Section 1.2.18	See Section 1.2.18
99-CMS-046	SIPD is now being controlled by PDC. (IR-99-008-02d-FIN)	2/25/00	Contractor changed corrective actions, see Section 1.2.18	See Section 1.2.18
99-CMS-047	QA Program Recovery Plan to address CA to avoid further Findings. (IR-99-008-02-FIN)	8/1/00	Contractor changed corrective actions, see Section 1.2.18	See Section 1.2.18
00-CMS-010	Revise K70P003 to eliminate use of DCCL for single discipline review. (IR-00-001-01a-FIN)	3/1/00	Action completed	See Section 1.2.19

00-CMS-011	Revise K70P003 to clarify responsibility for addressing design review action items; Complete review of previous design reviews to address action items raised. (IR-00-001-01b-FIN)	6/30/00	Action completed	See Section 1.2.19
00-CMS-012	Issue project assessment schedule; update periodically. (IR-00-001-01c-FIN)	2/15/00	Action completed	See Section 1.2.19
00-CMS-013	Revise K13C053 to require documentation of areas surveilled or to maintain checklists, etc. (IR-00-001-01d-FIN)	4/30/00	Action completed	See Section 1.2.19
00-CMS-014	Revise K70C514 to address when Inspectability and Testability will be addressed in the ISM process. (IR-00-001-02-FIN)	3/31/00	Contractor changed corrective actions, see Section 1.2.20	See Section 1.2.20
00-CMS-015	Document testing and inspection requirements at a level consistent with the current stage of design. (IR-00-001-02-FIN)	4/30/00	Contractor changed corrective actions, see Section 1.2.20	See Section 1.2.20
00-CMS-016	Revise K13C050 to clarify the requirement for documenting the QA design reviews conducted; conduct training. (IR-00-001-03-FIN)	4/30/00	Actions completed	See Section 1.2.21
00-CMS-017	Implement quality improvement program as it relates to audit, surveillance, and corrective action programs. (IR-00-001-03-FIN)	8/1/00	Action completed	See Section 1.2.21

00-CMS-018	Revise procedures: <ul style="list-style-type: none"> <li>• K10P008, "Management Assessment"</li> <li>• K13C051, "Quality Assurance Audit and Assessment"</li> <li>• K13P053, "Quality Assurance Surveillance"</li> <li>• K13P062, "Quality Trending"</li> <li>• K13P054, "Corrective Actions"</li> </ul> to address measurable timeframe elements for completion of key activities. (IR-00-003-01-FIN)	07/28/00	Actions completed	See Section 1.2.22
00-CMS-019	Train Project personnel involved with assessment activities on the revised procedures. (IR-00-003-01-FIN)	08/16/00	Action completed	See Section 1.2.22

Note 1: The commitments were closed by the OSR. These commitments were not related to inspection Findings and should not have been tracked as commitment items.

### 3.5 List of Acronyms

AB	authorization basis
ABAR	Authorization Basis Amendment Request
ABCN	Authorization Basis Change Notice
ADR	ALARA Design Record
ALARA	as low as is reasonably achievable
AVL	Approved Vendor List
BEL	BNFL Engineering Limited
BNFL	BNFL Inc.
CAMS	Corrective Action Management System
CAR	Corrective Action Request
CHG	CH2M Hill Hanford Group, Inc.
CFRs	Code of Federal Regulations
CM	Configuration Management
CMS	Commitment Management System
CoP	Code of Practice
DCA	Design Change Application
DCC	Design Change Control

DCCL	Design Control Checklist
DCN	Design Change Note
DIM	Design Input Memorandum
DOE	U.S. Department of Energy
DR	Deficiency Report
ES&H	Environment, Safety, and Health
HLW	High-level waste
IFI	Inspection Follow-up Item
IOM	internal office memorandum
IRT	Independent Review Team
ISMP	Integrated Safety Management Plan
IT	Information Technology
ITP	Inspection Technical Procedure
LAW	Low-activity waste
PAAA	Price Anderson Amendment Act
PCR	Procedure Change Request
PDC	Project Document Control
P&ID	Piping and Instrumentation Drawing
PMT	Process Management Team
PSC	Project Safety Committee
ORP	Office of River Protection
OSR	Office of Safety Regulation of the RPP-WTP Contractor
QA	quality assurance
QAP	Quality Assurance Plan
QAPIP	Quality Assurance Program and Implementation Plan
QE	Quality Engineer
RAMI	reliability, availability, maintainability, and inspectability
RPP	Radiation Protection Plan
RPP-P	River Protection Project Privatization
RPP-WTP	River Protection Project Waste Treatment Plant
RU	Regulatory Unit
SIN	safety implementation note
SIPD	Standards Identification Process Database
SRD	Safety Requirements Document
SSCs	Structures, Systems, and Components
TWRS-P	Tank Waste Remediation System Privatization



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