

U.S. Department of Energy

Office of River Protection

NOV 07 2008

08-ESQ-266

CCN: 186457

Ms. Jane A. Hedges, Program Manager
 Nuclear Waste Program
 Washington State
 Department of Ecology
 3100 Port of Benton Blvd.
 Richland, Washington 99354

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EDMC

Dear Ms. Hedges:

**RESPONSE TO THE WASHINGTON STATE DEPARTMENT OF ECOLOGY
 (ECOLOGY) ASSESSMENT OF CONSTRUCTION CERTIFICATION AND
 CORRECTIVE ACTION MANAGEMENT PROGRAMS**

Reference: Ecology letter from E. Fredenburg to S. J. Olinger, ORP, and W. S. Elkins, BNI, "Transmittal of Assessment of the US-DOE Program to Certify Construction of the Hanford Site Waste Treatment and Immobilization Plant," dated September 5, 2008.

This letter transmits a response to the Reference (attachment). As you know, your letter documented the results of an Ecology assessment of the U.S. Department of Energy, Office of River Protection (ORP) and Bechtel National, Inc. (BNI) preparations for meeting construction certification requirements of the Dangerous Waste Permit (DWP). In addition, Ecology evaluated BNI's corrective action management program with regard to "continuous process improvement" and the quality of work required to certify construction. ORP and BNI appreciate Ecology's interest in this area and believes this was a good opportunity to look at our work processes jointly with your staff and identify any necessary mid-course corrections.

On September 18, 2008, ORP and BNI staff participated in a discussion of the assessment results with Mr. Ed Fredenburg and other members of your staff. As a result of these discussions, ORP and BNI have focused our response on the action items identified in the Ecology presentation and the Reference. Central to our response is that engineering, construction, and quality assurance processes and procedures are the foundation for the permittees' certification of the accuracy of the as-built design and facility construction, and that independent inspections will provide an important level of additional oversight supporting certification in specific areas defined by the state dangerous waste regulations and the DWP.

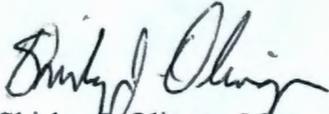
After you have had an opportunity to review these responses, we would be happy to discuss them with you.

Ms. Jane A. Hedges
08-ESQ-266

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If you have questions, please contact either of us, or your staff may contact Ms. Lori Huffman, Director, Environmental Compliance Division, (509) 376-0104, or Mr. Brad Erlandson, Environmental Permit Lead, BNI, (509) 371-3428.



Shirley M. Olinger, Manager
Office of River Protection



W. S. Elkins, Project Director
Bechtel National, Inc.

ESQ:DWB

Attachment

cc w/attach:

G. R. Ashley, BNI
M. S. Cochrane, BNI
M. A. Ehlinger, BNI
W. S. Elkins, BNI
M. D. Ensminger, BNI
B. G. Erlandson, BNI
D. J. Jantoski, BNI
D. E. Kammenzind, BNI
D. A. Klein, BNI
S. C. Lynch, BNI
J. T. Minor, BNI
P. E. Peistrup, BNI
D. A. Rimbey, BNI
S. H. Swenning, BNI
P. J. Townsend, BNI
G. Roni, Caliber Inspections
S. L. Dahl, Ecology
E. A. Fredenburg, Ecology
S. A. Thompson, FHI
A. C. McKarns, RL

Administrative Record (WTP H-0-8)

BNI Correspondence
Environmental Portal, LMSI

cc w/o attach:

S. G. Harris, CTUIR
S. L. Leckband, HAB
G. P. Bohnee, NPT
K. Niles, Oregon Energy
R. Jim, YN

Response to the Washington State Department of Ecology (Ecology) Assessment of
Construction Certification and Corrective Action Management Programs

Reference: Ecology letter from E. Fredenburg to S. J. Olinger, ORP, and W. S. Elkins, BNI, "Transmittal of Assessment of the US-DOE Program to Certify Construction of the Hanford Site Waste Treatment and Immobilization Plant," CCN: 185915, dated September 5, 2008 (received September 8, 2008).

Response to Ecology Identified Actions:

1. "Certification Program Plan (CPP) and responsibilities: ORP and BNI should develop a CPP. We expect the CPP to define management responsibilities and processes for ensuring that the installation of dangerous waste systems and facilities meets DWP certification requirements (see sections 3.1, 3.3.1.1., and Appendix 3 of final report.)

Within 60 days of receipt of this letter, please respond with a schedule for developing the CPP or with your alternative to the CPP if you disagree. We would like to review and provide feedback on the draft CPP."

Response: The U.S. Department of Energy, Office of River Protection (ORP)/Bechtel National, Inc. (BNI) will provide a draft Certification Program Plan for Ecology review and comment by February 19, 2009.

Discussion: ORP/BNI agree that the project would benefit from better defining the process and responsibilities for certifying that construction has been completed in compliance with the Dangerous Waste Permit (DWP).

The plan will emphasize the integration of engineering, construction, and quality assurance processes and procedures that are already in place to ensure that the as-built facility meets design and permit requirements. Many of these programs are described in the Dana Engineering, Inc. (DEI) "Task 3 Report - Bechtel National Inc. and Office of River Protection Certification Assurance Approach," dated June 2008. ORP/BNI will also consider DEI observations and insights regarding opportunities to more clearly identify, communicate, and monitor the certification process.

2. "Inspection of offsite-fabricated tanks: Ecology will add permit conditions that require the Independent Installation Inspector (Inspector) to inspect tanks received from vendors off the Hanford Site. BNI representatives told us that BNI would schedule entry to installed tanks for required final cleanliness inspections. That may provide an opportunity for the Inspector to conduct internal inspections of the tanks concurrently with BNI's cleanliness inspections. Ecology will confer with BNI and ORP before we develop draft permit conditions to address inspection of offsite-fabricated tanks by the Inspector (See Sections 3.3.1.2, 3.3.3, and Appendix 2, Sections 3.1 and 3.3.3 of the Final Report.)"

Response: BNI/ORP will cooperate with Ecology in addressing the inspection scope for tanks received from off the Hanford Site.

Discussion: Installation inspection of tanks fabricated off the Hanford Site is performed by Caliber Inspection. Ecology's recommendation that the independent installation inspector assess tank internals to ensure they have not been damaged during transportation to the site or during the process of installing the tank will be addressed in a revision to Caliber Inspection's "Tank Installation Inspection Plan," 24590-CM-HC4-W000-00055-01, Revision 2, dated October 28, 2003.

Caliber will provide a revised draft Tank Installation Inspection Plan, 24590-CM-HC4-W000-00055-01, for BNI, ORP, and Ecology review and comment by February 28, 2009.

In lieu of a new permit condition, ORP and BNI propose updating "Installation of Tank Systems and Miscellaneous Units," 24590-WTP-PER-CON-02-001, contained in Appendix 7.12 of the permit to reflect inspection of tank internals.

3. "The final report identified several potential issues with BNI's subcontract management and direction to the Inspector and with the Inspector's approach to accomplishing work BNI assigned to them.

Within 60 days of receipt of this letter, please provide feedback on changes that DEI recommended to resolve the deficiencies they identified.

Ecology grouped the deficiencies in three broad categories:

- a. Lack of Quality Assurance (QA) requirements: BNI does not consider the Inspectors work as quality affecting, even though BNI designated a large portion of the items that the Inspector inspects as quality-level. Consequently, BNI does not impose its QA requirements on the Inspector. The additional rigor that BNI would impose through an effective QA program and inspector subcontractor surveillance is therefore absent. (See Section 3.3.2 and Appendix 2, Sections 3.2.2 and 3.2.6 of the Final Report.)"

Response: BNI will review and update the Caliber Inspection subcontract to identify quality assurance requirements for the independent inspection program. Caliber Inspections will incorporate quality assurance requirements, including internal oversight of their inspection activities, into the next revision of their Tank Installation Inspection Plan. In addition, BNI will conduct an audit of the Independent Inspection Program to ensure that the independent inspection processes and procedures are both adequate and effective.

Discussion: Based on Ecology's September 18, 2008, presentation BNI and ORP understand Ecology's position that incorporation of quality assurance requirements into the independent installation inspection program and additional oversight of independent inspection activities would enhance the defensibility of certifications.

BNI and ORP agree that some additional description of quality assurance requirements in the Caliber Inspection contract and inspection plans would be beneficial.

- BNI will revise Caliber Inspections' statement of work by January 31, 2009, to incorporate specific quality assurance requirements.
 - Caliber Inspections will provide a revised draft Tank Installation Inspection Plan, 24590-CM-HC4-W000-00055-01, for BNI, ORP, and Ecology review and comment by February 28, 2009.
 - A BNI audit of the independent inspection program will be completed by December 31, 2009.
- b. "Inaccurate or unclear inspector work scope, procedures, and plans: The Inspector's statement of work and design media that BNI provided do not delineate the inspection scope and boundaries clearly.

BNI's procedures and plans for independent inspection do not incorporate the DWP requirements properly or provide the detail necessary to support the Inspector's certification. (See Sections 3.3.1.2., 3.3.3, and Appendix 2, Sections 3.2.1, 3.2.3, 3.2.4, 3.2.5, and 3.2.7 of the final report.)"

Response: BNI and ORP believe the independent inspectors' work scope is being performed in compliance with both Washington Administrative Code and permit requirements. BNI agrees that the Ecology assessment identified elements of the independent inspection program that can be clarified and improved.

Discussion: The following BNI actions are proposed to clarify Caliber's inspection work scope:

- BNI will revise the Caliber Inspection statement of work to identify the Waste Treatment and Immobilization Plant DWP as the basis for inspection scope by January 31, 2009.
- BNI/ORP will review the following documents to ensure they consistently identify applicable DWP requirements: "Tank Installation Inspection Program Plan," 24590-WTP-PL-M-02-001; "Installation of Tank Systems and Miscellaneous Unit Systems," 24590-WTP-PER-CON-02-001; "Dangerous Waste Permit (DWP) Third Party Inspection Interface," 24590-WTP-GPP-CON-7112, and Caliber Inspection's, "Tank Installation Inspection Plan." Documents will be revised or cancelled as appropriate by February 28, 2009.

- c. “Perceived shortcomings in the Inspector’s inspection approach: While DEI found that the inspectors were knowledgeable and generally compliant with their own procedures, DEI noted some shortcomings in:

- Selection of inspection points.
- Procedures.
- Inspector qualification program.
- Tracking and record keeping.
- Acceptance criteria.

(See Sections 3.3.1.2, 3.3.1.3, 3.3.3, and Appendix 2, Sections 3.3.1, 3.3.2, 3.3.3, 3.3.6, 3.3.7, 3.3.8, and 3.3.9 of the Final Report)”

Response: Caliber Inspections will review DEI recommendations and revise their Tank Installation Inspection Plan as appropriate. A draft plan will be provided for Ecology comment.

Discussion: ORP, BNI, and Caliber Inspection have reviewed the recommendations made in the DEI reports. There are areas where we believe DEI did not fully understand the existing process and work is actually being performed as DEI recommends, areas where we agree DEI recommendations can be used to improve the inspection process, and areas where we do not believe the DEI recommendations should be implemented. Caliber will provide a revised draft Tank Installation Inspection Plan, 24590-CM-HC4-W000-00055-01, for BNI, ORP, and Ecology review and comment by February 28, 2009.

4. “Ecology included an assessment of BNI’s Corrective Action Management Program in DEI’s work scope because continuous improvement processes, of which Corrective Action Management is one part, have a direct bearing on the quality of work that ORP and BNI must certify. In the Final Report, DEI found that BNI’s continuous improvement processes have matured, and they are generally adequate, but some weaknesses exist. DEI categorized the areas of weakness as:

- Limited depth of analysis.
- Lack of focus on issues that cross organizational boundaries.
- Compliance-based rather than performance-based focus.

DEI discussed their findings, conclusions, and recommendations about those processes in Sections 3.2, 5.1, and Appendices 1A, 1B, 1C, and 1D of the Final Report. We request that you consider DEI’s findings and recommendations as input to your ongoing continuous improvement processes. Within the next 18 months, we plan to conduct a follow-up assessment of progress in the continuous improvement process areas where DEI identified weaknesses.”

Response: BNI has documented the Ecology issues within our Corrective Action Program. These issues/recommendations are documented as:

- 24590-WTP-PIER-MGT-08-1809, “Limiting analysis to process and procedure weaknesses causes BNI to miss potential opportunities to identify programmatic improvements.”
- 24590-WTP-PIER-MGT-08-1810, “The continuous improvement activities are not consistently finding issues that are important to management.”
- 24590-WTP-PIER-MGT-08-1811, “Identified issues are not effectively managed to ensure corrective actions are clear and appropriate.”
- 24590-WTP-PIER-MGT-08-1812, “Organizations tend to review and correct only elements that are under their direct management control.”
- 24590-WTP-PIER-MGT-08-1813, “The continuous improvement activities have a compliance based focus with limited performance based analysis.”

Discussion: These issues/recommendations will be evaluated in accordance with the “Project Issues and Evaluation Reporting” procedure, 24590-WTP-GPP-MGT-022.