



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

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September 5, 2008

Ms. Shirley J. Olinger, Manager
Office of River Protection
United States Department of Energy
P.O. Box 450, MSIN: H6-60
Richland, Washington 99352

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EDMC

Mr. William S. Elkins, Project Director
Bechtel National, Inc.
2435 Stevens Center Place, MSIN: H4-02
Richland, Washington 99354

Re: Transmittal of *Assessment of the US-DOE Program to Certify Construction of the Hanford Site Waste Treatment and Immobilization Plant*

Dear Ms. Olinger and Mr. Elkins:

The Department of Ecology appreciates the cooperation of the United States Department of Energy-Office of River Protection (ORP) and Bechtel National, Inc. (BNI) in our recent assessment of:

1. Preparations for meeting certification requirements specified in the Waste Treatment Plant Dangerous Waste Permit (DWP).
2. BNI's Corrective Action Management Program.

We are pleased with your demonstration of commitment to process improvement that facilitated this assessment. Your managements' expressions of support in initial meetings when we explained the objectives of this effort and the open access to individuals and documents that you allowed us were instrumental to the conduct of the assessment.

This assessment addressed certification requirements in Permit Conditions III.10.C.2.a, III.10.E.3.g, III.10.F.7.b, III.10.G.3.g, III.10.H.1.a.x, and III.10.J.1.a.x of the DWP. The conclusions and recommendations in this assessment also apply to Permit Condition III.10.D.3.b, although the assessment did not address that permit condition specifically.

Dana Engineering, Inc. (DEI), who conducted these assessments for us, prepared the enclosed final report *Assessment of the US-DOE Program to Certify Construction of the Hanford Site Waste Treatment and Immobilization Plant* (Final Report) containing their findings and conclusions.

From this assessment, we have reached two conclusions about the management of the certification preparation and the inspection practices now in effect:

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 the 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 a draft of the CPP.

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 3.3.4 of the Final Report.)

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 the 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:

1. Lack of Quality Assurance (QA) requirements: BNI does not consider the Inspector's work as quality affecting, even though BNI designated a large portion of 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.)
2. 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.)

3. 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.)

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 weaknesses 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.

We have scheduled a meeting with your representatives on September 18, 2008, to discuss assessment findings and conclusions and to respond to requests for clarification, as needed.

Ms. Olinger and Mr. Elkins
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If there are any questions, contact me at 509-372-7899.

Ed Fredenburg

Ed Fredenburg
Acting Tank Waste Disposal Project Manager
Nuclear Waste Program

jc
Enclosure

cc electronic w/o enc:

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Administrative Record: Waste Treatment Plant ✓
Environmental Portal
Hanford Operating Record General File
USDOE-ORP Correspondence Control

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