U.S. Department of Energy

Office of River Protection

BECHTEL

SEP 1 5 2010

10-ESQ-267

CCN: 216650

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

RECEIVED
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EDMC

Dear Ms. Hedges:

PROPOSED DANGEROUS WASTE PERMITTING STRATEGY TO ADDRESS ONSITE VESSEL ALTERATIONS

Reference: WA7890008967, "Dangerous Waste Portion of the Hanford Facility Resource Conservation and Recovery Act Permit for the Treatment, Storage, and Disposal of Dangerous Waste, Operating Unit 10, 'Waste Treatment and Immobilization Plant.'"

Over the past several months, the U.S. Department of Energy, Office of River Protection (ORP), Bechtel National, Inc. (BNI), and the Washington State Department of Ecology (Ecology) have been involved in a series of meetings, discussions, and presentations addressing technical issues relative to vessels with Pulse Jet Mixers. Resolution of these technical issues will require alterations of permitted (Reference) and installed vessels. Attachment 1 identifies the installed vessels and summarizes the alterations proposed for each vessel.

This letter describes ORP and BNI's understanding of those discussions and requests Ecology's concurrence on the path forward.

Based on discussions to date, the following preparatory work is allowed under the currently approved Dangerous Waste Permit (DWP).

- Opening the vessel shell for ingress/egress;
- Removal of internal supports to accommodate installation of scaffolding;
- Installation of scaffolding to support internal component mapping;
- Laser-mapping to otherwise verifying the location and orientation of vessel internal components; and
- Installation of temporary supports to accommodate work being performed.

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H-0-8

Ecology staff has also identified to ORP and BNI that an additional Independent, Qualified Registered Professional Engineer (IQRPE) assessment will be required to evaluate the structural integrity of the vessel alterations. Prior to start of repairs, ORP and BNI will submit for Ecology approval "focused" IQRPE report(s) assessing the structural integrity of the altered vessels. The scope of the IQRPE report(s) will be consistent with the outline previously provided by Ecology (Attachment 2). The IQRPE report for the first vessel may be used to evaluate other vessels.

Based on discussions with Ecology, we believe the goals of the DWP permitting strategy for these vessels should include:

1. Provide sufficient time for Ecology to initiate a public review for changes to the vessels identified in Attachment 1 while supporting vessel alteration construction schedules;

2. Allow ORP and BNI to request a temporary construction authorization pursuant to Washington Administrative Code (WAC) 173-303-830(4)(e);

3. Use a consistent permitting process for all vessels;

4. Allow permit modifications to be grouped where practical; and

5. Maintain regulatory compliance throughout the permitting and construction periods.

WAC 173-303-840(1)(b) allows Ecology to request additional information from an applicant when necessary to clarify, modify, or supplement previously submitted material. To satisfy the goals stated above and supply supplemental information describing vessel alterations, BNI proposes the following approach.

ORP and BNI will prepare and submit a supplement to the previously approved DWP permit package for each vessel identified in Attachment 1. Attachment 3 provides an example Table of Contents (TOC) for the supplemental information. A temporary construction authorization will be requested as necessary to support construction schedules. The TOC will be revised to reflect the specific document submittals for each vessel or groups of vessels.

In order to fully incorporate the DWP modification process into the vessel alteration schedule, ORP and BNI request Ecology's response on the following proposed modification approaches:

1. Concurrence that the currently installed vessels can be entered for preparatory work described above;

2. Concurrence that the scope and proposed approach for preparing and submitting focused IQRPE reports described above is acceptable; and

3. Concurrence that the permitting approach is acceptable.

ORP and BNI appreciate Ecology's cooperation in this effort to coordinate permitting activities and support the construction schedule. Our staff is available to answer any questions Ecology may have regarding either technical issues or the proposed permitting approach.

If you have any questions, please contact Lori A. Huffman, Director, Environmental Compliance Division, (509) 376-0104, or Brad G. Erlandson, BNI, (509) 371-3703.

David A. Brockman, Manager
Office of River Protection

F. M. Russo, Project Director
Bechtel National, Inc.

ESQ:LAH

Attachments: (3)

cc: See page 3

cc w/attachs:
B. L. Curn, BNI
B. G. Erlandson, BNI
P. A. Fisher, BNI
R. K. Biyani, Ecology
M. M. Carhart, Ecology
A. S. Carlson, Ecology
S. L. Dahl, Ecology
D. McDonald, Ecology
D. Mears, Ecology
J. J. Wallace, Ecology
S. A. Thompson, MSA
A. C. McKarns, RL
D. J. Sommer, SCS
K. A. Colosi, WRPS
C. G. Spencer, WRPS
Administrative Record (WTP H-0-8)
BNI Correspondence
Environmental Portal, LMSI
WRPS Correspondence

cc w/o attachs:
R. W. Bradford, BNI
R. E. Brown, BNI
D. M. Busche, BNI
J. H. Dunkirk, BNI
R. E. Edwards, BNI
G. F. Futrell, BNI
N. F. Grover, BNI
R. S. Hajner, BNI
R. M. Kacich, BNI
C. H. Knauss, BNI
E. D. Lee, BNI
D. G. McKenzie, BNI
D. C. Robertson, BNI
M. K. Robinson, BNI
F. M. Russo, BNI
J. A. Scarpino, BNI
A. R. Veirup, BNI
J. Cox, CTUIR
S. G. Harris, CTUIR
G. P. Davis, Ecology
G. P. Bohnee, NPT
K. Niles, Oregon Energy
S. R. Weil, RL
R. Jim, YN

Attachment 1
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(2 Pages)

Summary of Recommended Vessel Alterations for Onsite Vessels

Attachment 1. Summary of the Recommended Vessel Alterations for On-Site Vessels.

	Vessel Number	Alterations resulting from vessel internal load reanalysis[1]	EFRT M3 Mixing Assessment Alteration Recommendations					
			Camera Access Ports	Lower Suction Lines to 3"	Increase Drive Velocity from 8 to 12 m/s	Change angle of outer PJM nozzles	External Shifts in Pipe Routings	Report Volume Number (24590-WTP-RPT-ENG-08-021)
1	UFP-VSL-00062A	X						2
2	UFP-VSL-00062B	X						2
3	UFP-VSL-00062C	X						2
4	FRP-VSL-00002A	X				X	X	6
5	FRP-VSL-00002B	X			X	X	X	6
6	FRP-VSL-00002C	X			X	X	X	6
7	FRP-VSL-00002D	X			X	X	X	6
8	HOP-VSL-00903	X						4
9	HOP-VSL-00904	X						4
10	CNP-VSL-00001	X						NA
11	CNP-VSL-00003	X						2
12	CNP-VSL-00004	X						2
13	CXP-VSL-00004	X						2
14	CXP-VSL-00001	X						NA
15	CXP-VSL-00026A	X						1
16	CXP-VSL-00026B	X						1
17	CXP-VSL-00026C	X						1
18	FEP-VSL-00017A	X	X	X	X	X	X	9
19	FEP-VSL-00017B	X	X	X	X	X	X	9
20	PVP-VSL-00001	X						NA
21	PWD-VSL-00015	X						4
22	PWD-VSL-00016	X						4
23	PWD-VSL-00033	X						5
24	PWD-VSL-00043	X						5
25	RDP-VSL-00002A	X						2
26	RDP-VSL-00002B	X						2

	Vessel Number	Alterations resulting from vessel internal load reanalysis[1]	EFRT M3 Mixing Assessment Alteration Recommendations					
			Camera Access Ports	Lower Suction Lines to 3"	Increase Drive Velocity from 8 to 12 m/s	Change angle of outer PJM nozzles	External Shifts in Pipe Routings	Report Volume Number (24590-WTP-RPT-ENG-08-021)
27	RDP-VSL-00002C	X						2
28	TLP-VSL-00009A	X						4
29	TLP-VSL-00009B	X						4
30	CXP-VSL-00005	X						NA
31	TCP-VSL-00001	X						4

[1] The re-analysis of the PJM vessels resulted from:

- Application of revised PJM multiple over-blow loads.
- Seismic application of WTP Site Specific Ground Motion (WSGM).
- Process changes from external flow-sheet review team (EFRT) recommendations.

Typically the vessel alterations will include one or more of the following additions and/or modifications:

- PJM air line modifications
- Internal pipe support ring
- PJM support modifications
- Process pipe supports
- Charge vessel supports

Attachment 2
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(1 Page)

Scope of Focused IQRPE Report for Onsite Vessel Alterations

Attachment 2. Scope of Focused IQRPE Report for On-Site Vessel Alterations

Scope of Focused IQRPE Report for On-Site Vessel Alterations	
Scope	Scope of this Integrity Assessment (limited to vessel rework)
References	Specifications, Mechanical Data Sheets, and Design Proposal Drawings
	Other Documents and Information Reviewed
Summary of Assessment	
Information Assessed	
Design	Vessel entry and repair will not compromise vessel integrity
	Modified internal supports (materials, welding details, design configuration) will not compromise vessel integrity
	Modified internal supports (materials, welding details, design configuration) will not compromise integrity of pulse jet mixers and charge vessels

Notes:

1. Results of this focused IQRPE report will be folded into the final IQRPE reports for vessels already installed.
2. Final IQRPE reports will address all elements of the standard scope.
3. This focused IQRPE report may be a separate report for each vessel or group of vessels, or may be a single report amended each time new design information becomes available that is applicable to a different vessel or group of vessels.

Attachment 3
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(1 Page)

Example DWP Supplemental Information Table of Contents

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Supplement to Permit Package No. PTF-040 Tank System for Pretreatment Facility Vessel UFP-VSL-00062c

Table of Contents
For Incorporation into the Permit

Engineering Document Title	Document Number	Revision	Permit Condition	Included	Remarks
Mechanical Systems Data Sheet	24590-PTF-MVD-UFP-00007	10	III.10.E.9.c.ii	Y	Replace 24590-PTF-MVD-UFP-P0007, Rev. 1 in Appendix 8.6 with 24590-PTF-MVD-UFP-00007, Rev. 10

For Incorporation into the Administrative Record

Engineering Document Title	Document Number	Revision	Permit Condition	Included	Remarks
Focused IQRPE Independent Assessment Report	CCN XXXXX	00A	III.10.E.9.c.i	Y	
Drawing Change Notice	24590-PTF-VDCN-MS-10-00002	NA	III.10.E.9.c.ii	Y	Submitted with CCN 213044, July 26, 2010
Engineering Specification for Alteration and Repair of Site Stamped ASME Code Vessels and Boilers for Subcontract	24590-WTP-3PS-MVB2-T0002	0	III.10.E.9.c.ii	Y	
EFRT Issue M3 PJM Vessel Mixing Assessment	24590-WTP-RPT-ENG-08-021-02	0	III.10.E.9.c.ii	Y	
Pretreatment Vessel Heel Dilution/Cleanout Feasibility Study	24590-WTP-RPT-PET-10-013	0	III.10.E.9.c.ii	Y	