JUL 2 4 2002

Mr. Michael A. Wilson, Program Manager
Nuclear Waste Program
State of Washington
Department of Ecology
1315 W. Fourth Avenue
Kennewick, Washington 99336

Dear Mr. Wilson:

RESPONSE TO THE STATE OF WASHINGTON DEPARTMENT OF ECOLOGY (ECOLOGY) LETTER REGARDING THE EXERCISING OF ENFORCEMENT DISCRETION AGAINST SECONDARY CONTAINMENT FOR TRANSFER LINES SN-277 THROUGH SN-280, AND LIQW-702

References:


Representatives from the U.S. Department of Energy (DOE), Office of River Protection (ORP), Ecology, and CH2M HILL Hanford Group, Inc. (CHG) recently met in a series of meetings to discuss the remaining upgrades and modifications scheduled for the Double-Shell Tank (DST) Transfer System, being performed in support of Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement) Milestone M-43-00 scheduled for June 30, 2005. At these meetings, held on April 25, 2002, May 2, 2002, and May 16, 2002, ORP presented the results of their recent review of the DST Transfer System components and outlined the remaining modifications to be performed under Project E-525, "DST Transfer System Modifications." Included in these discussions was the response to Reference 1, regarding the conditions for use of Transfer Lines SN-277 through SN-280 and LIQW-702. This response is addressed in the Compensatory Measures portion of this letter (Attachment 1).
The engineering sketches used to define the following three items were discussed during these recent meetings:

1. Components, which make up the current DST Transfer System.

2. Components, which make up the DST Transfer System after June 30, 2005 (TPA Milestone M-43-00).

3. Components of the existing DST Transfer System, which will be removed from service prior to June 30, 2005.

A set of these sketches is provided in Attachment 5. These engineering sketches update the component listings submitted previously in References 2 and 3. In discussions of the methodology used to make up the post-June 30, 2005, DST Transfer System, four key assumptions were made to ensure that all the components had been addressed relative to compliance and conditions for use.

This letter documents those assumptions and their supporting operational position, which in turn provides the basis to define the remaining Transfer System modifications required to meet Tri-Party Agreement Milestone M-43-00. These modifications were assigned to Project E-525. These assumptions incorporate previous discussions with Ecology staff and provides the definition and the conditions of each assumption. The assumptions are contained in the attachments as follows:

- Attachment 1, Assumption 1: Compensatory Measures;
- Attachment 2, Assumption 2: Emergency Use Only Transfer Lines and Pits;
- Attachment 3, Assumption 3: Deferred Use Components; and
- Attachment 4, Assumption 4: Drains

These assumptions are being submitted for Ecology review and concurrence. Written concurrence from Ecology is requested within 30 days of receipt of this letter. Once concurrence is obtained, assumptions and associated conditions will be incorporated into the DST System Resource Conservation and Recovery Act Part B Permit Application.
If you have any questions, please contact me, or your staff may contact Mike Royack, Operations and Maintenance Division, (509) 376-4420.

Sincerely,

James E. Rasmussen, Director
Environmental Management Division

Attachments (5)

cc:w/attach:
D. I. Allen, CHG
W. T. Dixon, CHG
J. G. Field, CHG
F. R. Miera, CHG
T. R. Pauly, CHG
M. A. Payne, CHG
D. J. Washenfelder, CHG
R. Gay, CTUIR
J. Lyon, Ecology
D. G. Singleton, Ecology
R. F. Stanley, Ecology
D. Bartus, EPA c/o Ecology
M. L. Goldstein, EPA
J. S. Hertzel, FHI
O. S. Kramer, FHI
T. Martin, HAB
P. Sobotta, NPT
K. Niles, Oregon Energy
E. M. Mattlin, RL
R. Jim, YN
TPA Administrative Record
ASSUMPTION 1: COMPENSATORY MEASURES

This assumption addresses components, which have a physical configuration that does not fully comply with the requirements or interpretation of WAC 173-303. These components will be operated in their existing configurations utilizing the agreed upon compensatory requirements. The single issue addressed in this assumption at this time pertains to the encased transfer pipes where the encasement does not penetrate the wall of the pits or facilities. A diagram of the transfer line configuration is shown below:

![Diagram of transfer lines](image)

SY/204-AR TRANSFER LINES

On October 3, and November 13, 2000, discussions took place between representatives of the Office of River Protection (ORP), the State of Washington Department of Ecology (Ecology), and CH2M HILL Hanford Group, Inc. (CHG) to discuss the secondary containment of four transfer lines within the 241-SY Tank Farm and the transfer line from the 204-AR Unloading Facility. These five transfer lines are pipe-in-pipe lines with exception of the short sections that penetrate the pit or building walls. The encasement has a drain through the pit or facility wall. The section that penetrates the wall is direct buried in concrete as the encasement is butted against a steel plate on the outside wall surface. The purpose of the discussion was to obtain Ecology’s concurrence that the five lines could be used well into the future without performing upgrades to extend the encasement to the section that penetrates the pit wall.

Ecology issued their response to those discussions on September 7, 2001 (Reference 1). The referenced letter found that the portion of these lines that “traverse the valve or pit walls do not meet the requirements for containment or detection of releases.” Ecology also chose to exercise enforcement discretion for these lines and provided the requirements for use of the lines.
As a result of the determination that these four SY lines and the transfer line at 204-AR did not meet the requirements for containment, all DST Transfer System lines with this physical configuration were evaluated.

The ORP would like to accept Ecology's enforcement discretion with some amendments to address the ongoing work being performed to support Tank Farm Operations and comply with the TPA Milestone M-43-00. ORP proposes the amended conditions for enforcement discretion as defined below. This proposal incorporates the requirements of Reference 1 as well as subsequent requirements discussed with members of CHG’s environmental staff regarding periodic pressure testing. ORP proposes the following:

1) Expand the transfer line list (SN-277, SN-278, SN-279, SN-280, and LIQW-702) for enforcement discretion applicability to include SY Farm transfer lines SN-285, SN-286, SL-178, SL-177, SL-179. It should be noted that existing SY Farm transfer line SL-180 has not been included since that transfer line has been removed from service. The addition of these lines to the enforcement discretion provides the greatest operational flexibility in transfer routing.

2) ORP requests the revision to the enforcement discretion conditions to state: As an option to physically upgrading these lines to provide secondary containment through the pit or facility walls, they may be hydraulically leak tested at a minimum pressure of 150% of the maximum operating pressure during liquid transfer or system flushing, for a minimum of one hour with less than 5% drop in each of the thirty minute intervals. Following that initial testing, the line will be pressure tested annually, or if it is determined that the line will be used on a frequency of less than once per year, will be pressure tested prior to its next use.

This enforcement discretion shall be used in the evaluation of the above lines to determine the immediate action to be taken. It is anticipated that some transfer lines will be replaced based on the projected frequency and duration of their use. Other lines may utilize the enforcement discretion conditions for operation.
ASSUMPTION 2: EMERGENCY PUMP OUT LINES / PITS

This assumption addresses components, which are used only in the case of an accident or emergency. Some components in this list have a physical configuration that does not fully comply with the requirements or interpretation of WAC 173-303. The primary issue covered in this assumption is the annulus pump-out pits and their transfer lines running to the central pump pit of the tank.

ORP requests that the attached list of components be operated under emergency conditions only per the requirements of the existing Double-Shell Tank Emergency Pumping Guide HNF-3484. This guide was developed in a collaborative effort between Ecology, DOE, and the Tank Farm Contractors (Reference Ecology Letter dated June 7, 2000 addressing Rev. 2 of this document) and requires that a pressure test of the line be performed prior to use. The logic and schedule for use of these lines is contained in the Time Deployment Study for Annulus Pumping, RPP-5842.

These pits will maintain an operational leak detection system and drain to a DST.

The listing of components and the line configurations are attached.
Emergency Use Only Transfer Lines and Pits

Type 1

Type 2

Type 3

Type 4
## Emergency Use Components

<table>
<thead>
<tr>
<th>Farm</th>
<th>Pit</th>
<th>Line Type</th>
<th>Line No.</th>
<th>End Points</th>
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<th>Pit</th>
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ASSUMPTION 3: DEFERRED USE COMPONENTS

This assumption addresses components, which do not yet have a specifically defined mission need. This is typically true of components that are not required for tank farm operation but are anticipated to be needed for the retrieval of the individual DST. Upgrading of these components at this time is not deemed to be cost effective, since the method of retrieval has not yet been defined. The physical configuration of the component may not presently fully comply with the requirements or interpretation of WAC 173-303. The majority of these components are mixer pump pits that will not be used until the retrieval of the corresponding DST.

ORP requests that specific DST Transfer System components listed below, which are not scheduled for operation past June 2005, be maintained in their current configuration. As the mission need is defined, these components will be evaluated and upgraded, as required, prior to use. Pits will maintain an operational leak detector and drain with administrative controls to be put in place to prohibit use.

A listing of these components is attached.
### Deferred Use Components

<table>
<thead>
<tr>
<th>Farm</th>
<th>Pit/Box No.</th>
<th>Projected use</th>
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</thead>
<tbody>
<tr>
<td>AN</td>
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<td>SY</td>
<td>241-SY-01A</td>
<td>Central Pump Pit</td>
</tr>
</tbody>
</table>

1 This pit has a drain coming into the pit that then drains through the pit drain (DR-0070)

2 This pit has an active transfer line (SN-200), which may be used for future SST retrievals
ASSUMPTION 4: DRAINS

This assumption addresses drain lines. Included in this category are drains for transfer line encasements, tank farm pits and boxes, and structures of the DST System Operating Facilities.

ORP proposes that the DST transfer system drains are compliant for use in their existing configurations. Though the drains were installed over a period of years and were installed in various configurations, drain lines represent an extension of the secondary containment provided for the piping by the encasement pipe wall and for the in-pit piping by the pit wall. The drain is an extension of the secondary boundary and hence, need only be of single wall construction.

To qualify as a drain, the following requirements must be true:

- The line is not pressurized under normal operation
- The line is not configured to allow the accumulation of waste
- The line is not used to transfer waste during normal operation

Existing drain line configurations are shown below.