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STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

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June 14, 1999

Mr. Hector Rodriguez
U.S. Department of Energy
P.O. Box 550, MSIN: A5-15
Richland, Washington 99352



Dear Mr. Rodriguez:

Enclosed is the Notice of Deficiency (NOD) for the Double Shell Tank (DST) System and the 204-AR Waste Unloading Station Part B Permit Application. The NOD has been prepared for the draft Chapter 2, Facility Description and General Provisions, provided to the Washington State Department of Ecology (Ecology) April 27, 1999.

This NOD is to assist the U.S. Department of Energy (USDOE) in revising the chapter to meet the requirements for an adequate permit application. Ecology will consider a response table addressing the NOD comments. However, Ecology wishes to minimize resources expended on Chapter 2 until final review of the permit application. The final application will be reviewed in consideration of these comments.

The final permit application will be subject to the formal review and response process in accordance with the Hanford Federal Facility Agreement and Consent Order (Tri-Party Agreement) and the Hanford Facility Dangerous Waste Permit, when submitted.

If you have any questions regarding this letter or the enclosure, please feel free to contact me at (509) 736-3019.

Sincerely,

Jeanne Wallace, Double Shell Tank Permit Manager
Nuclear Waste Program

JJW:sdb
Enclosure

cc: Fred Ruck, FDH
Charles Mulkey, LMHC
Nina Menard, WMH
Mary Lou Blazek, OOE
Administrative Record: DST System and 204-AR Waste Unloading Station

DRAFT **Double Shelled Tanks & 204 AR System Part B**
2.0 Facility Description and General Provisions
 Ecology received draft chapter April 27, 1999

<u>Comment Number</u>	<u>Section number, page number, and Comment</u> (Comments without section or page number where omitted from the chapter)
Chapter 2	
1.	The text of the permit application needs to address each requirement in Ecology publication #95-402 "Dangerous Waste Permit Application Requirements for Facilities which Store and/or Treat Dangerous Waste in Tank Systems and/or Containers." Provide the level of detail required in the dangerous waste permit application. If sections are not applicable, state that the requirement is not applicable and provide the justification.
2.	Chapter 2 editorial comments; Page 1 and 3. Insert "(DST)" between "System" and "is". Page 32 and 33. Insert space between "200" and "East". Insert space between "200" and "West". Page 4 and 5. Three separate sections have "2.4" numeration.
3.	Section 2.0. The information contained in the <i>Hanford Facility Dangerous Waste Permit</i> needs not be duplicated in the Unit-Specific Portion and will be cross-referenced as appropriate. However, the Unit-Specific Portion must address individual operations of treatment, storage, and disposal units (TSD) units for which the Part B Permit application will be submitted. The facility description must be detailed in the Unit-Specific Portion of the permit application. Unit-Specific Portion for operating TSD units contains permit requirements that apply to each individual TSD unit operating under final status. The <i>Hanford Facility Dangerous Waste Permit</i> does not adequately portray the units for permitting. Summarize the <i>Hanford Facility Dangerous Waste Permit</i> information and then describe in detail dangerous waste management operations and processes of the operating TSD in the Unit-Specific application. Revise text accordingly. <i>Dangerous Waste Regulations</i> (WAC 173-303-806(4)(a)(i), (x), (xi), (xviii)); 40 CFR 270.14(b)(1), (9) and (10); and <i>Hanford Facility Dangerous Waste Permit</i> (pages 2-2, 2-8, 2-13, line 31).
4.	Section 2.0. The permit application relies heavily on references to the General Information Portion of the <i>Hanford Facility Dangerous Waste Permit</i> . To understand this permit application as written, it must be read in conjunction with the <i>Hanford Facility Dangerous Waste Permit</i> . Explain the interface among the <i>Hanford Facility Dangerous Waste Permit</i> , the Unit-Specific permit (DST and 204-AR). Explain how the public can obtain <i>Hanford Facility Dangerous Waste Permit</i> and all documents referenced by the <i>Hanford Facility Dangerous Waste Permit</i> and the Unit-Specific Permit application.
5.	Section 2.0. It is not possible to understand this permit application without concurrently reading both the <i>Hanford Facility Dangerous Waste Permit</i> and the Unit-Specific Portion. Therefore, the <i>Hanford Facility Dangerous Waste Permit</i> would be required to accompany the Permit Application during public review. Either describe the process in the permit application making this a stand-alone document or attach the <i>Hanford Facility Dangerous Waste Permit</i> to the application.
6.	Section 2.0, 7. The location of the DST System, the 204-AR System, and all ancillary equipment must be presented in the facility description. Revise text accordingly. Due to the complexity of the unit it should be described independent of the process. Note, the information should be consistent with the Part A permit.
7.	Section 2.0, 14. Identify boundaries for the TSD unit, including equipment used in the DST and the 204-AR systems. Distinguish this TSD unit from other regulated units, facilities and TSD units.
8.	Section 2.1. Describe facility operations including, but not limited to, the following: facility management; dangerous waste managed; the operations to treat and/or store dangerous waste; the production processes and waste management process that generate wastes; and the history and location of units regulated under the <i>Dangerous Waste Regulations</i> , WAC 173-303.
9.	Section 2.1. Describe waste transfers and all associated equipment.
10.	Section 2.1. Include both narrative and detailed flow diagrams and descriptions of the dangerous waste

	management operations and processes generating dangerous waste.
11.	Section 2.1.1, 34. Provide tables and diagrams identifying all ancillary equipment, including underground piping. Indicate which equipment has been subject to integrity assessments in accordance with <i>Dangerous Waste Regulations</i> , WAC 173-303.
12.	Section 2.1.1.1, 42. Specify the intended life of each component in years. Provide the basis for which the life expectancy is based. Describe the TSD unit design and integrity assessment of each component of the unit. Provide a demonstration of compliance with <i>the Dangerous Waste Regulations</i> , WAC 173-303.
13.	Section 2.1.1.1, 47. Clarify if the "secondary tanks" are equivalent to secondary containment vessels. See WAC 173-303-040 "Tank system" and "Leak-detection system". Provide a detailed description of the comprehensive leak detection system. Demonstrate the effectiveness of the air circulation under the primary tank to move leakage toward the leak detectors.
14.	Section 2.1.1.2, 5. Clarify if the pump pit risers are equivalent to the annulus pump pit or consists of the primary tank pump pit. Provide design detail of pump pit risers, annulus pump pits and primary tank pump pits.
15.	Section 2.1.1.3. Describe in detail the leak detection pits. Explain how releases to the pits is detected and removed within 24 hours. Address <i>Dangerous Waste Regulations</i> , WAC 173-303-040 and 640(4).
16.	Section 2.1.1.3, 30. Specify if the concrete enclosures are coated to prevent leaks and reaction with waste. Specify if the type of waste stored determines the type and number of pits. Specify if the pits are normally wet or dry. Identify which, if any, of the pits are used for "immediate response action".
17.	Section 2.1.1.3, 38. Describe secondary containment in regard to compliance with the requirements of <i>Dangerous Waste Regulations</i> , WAC 173-303-640, -806; and 40 CFR 270.
18.	Section 2.1.1.3, 1. Clarify if "process" components are ancillary equipment. Explain rational if the non-process equipment is not considered ancillary equipment. Explain why secondary containment is not considered necessary for these components of the TSD unit.
19.	Section 2.1.1.3, 11. Explain how the seal pot pits functions. Specifically, addressing how this component removes moisture.
20.	Section 2.1.1.3, 37. Define "process solutions or slurries". If it cannot be demonstrated that waste was not managed in the pits, change the text to include the management of waste (i.e., "process solutions, slurries, and/or wastes").
21.	Section 2.1.1.4, 14. Describe in detail the leak detection pits. Explain how releases to the pits are detected and removed within 24 hours.
22.	Section 2.1.2. The DST and 204-AR systems include ancillary equipment. The ancillary components have not been adequately addressed. Describe piping, fittings, flanges, valves, etc. that are used to control the flow of dangerous waste from its point of introduction and throughout the TSD unit. <i>Dangerous Waste Regulations</i> , WAC 173-303-040 and -640(4) and 40 CFR 264.
23.	Section 2.1.2, 19. Specify the application terms "ancillary equipment" and "secondary containment" are consistent with the <i>Dangerous Waste Regulations</i> definitions. Demonstrate compliance with the tank requirements, especially integrity assessment requirements. Refer to another section of this permit application for more detail if applicable. <i>Dangerous Waste Regulations</i> , WAC 173-303-040 and 640(4).
24.	Section 2.1.2, 25. Specify if, or which, underground piping have double containment compliant with the <i>Dangerous Waste Regulations</i> , WAC 173-303-040 and 640(4). Specify if the "piping" include the cross-site transfer system.
25.	Section 2.1.2, 29. Specify if the diversion boxes, valve pits, and diverter stations are coated or otherwise constructed to detect, prevent, and retain spills. Specify if these enclosures are used for "immediate response action".
26.	Section 2.1.2, 29. Provide diagrams of waste transfer routes. Specify the point of origin, final destination, and all facilities accessible. Address all TSD units with access or connections to this unit. <i>Dangerous Waste Regulations</i> , WAC 173-303-040 and 640(4).
27.	Section 2.1.2, 34. Explain how the source of a leak would be distinguished. Explain the difference between the "secondary tank" and "secondary containment". Address storm water run-on/off control.

28.	Section 2.1.3, 41. Identify and describe all functions associated with waste management.
29.	Section 2.1.3. Specify the duration of short-term storage and the regulations applicable to such waste management.
30.	Section 2.1.3. Specify if all DCRTs are analogous. Provide design details of the DCRTs.
31.	Section 2.1.4. Explain and justify the process for permitting two interim status TSD units (DST System the 204-AR Waste Unloading Station) in one operating permit. Explain why the Part A's have not been revised to address the units as one TSD.
32.	Section 2.1.4. Provide diagrams and tables of ancillary equipment for the 204-AR vault system.
33.	Section 2.1.4. Leak detection, secondary containment, and compliance with tank standards must be addressed in the Unit-Specific Portion of the application.
34.	Section 2.1.4.1. Specify if the catch tanks have secondary containment compliant with the <i>Dangerous Waste Regulations</i> , WAC 173-303. Specify the variations in wall thickness.
35.	Section 2.1.4.2. Specify the number of tanks and pumps contained in the mechanical equipment room.
36.	Section 2.1.4.2. Elaborate on the truck and railcar design and function.
37.	Section 2.1.4.2. Describe and chemically define "adjustments" to waste.
38.	Section 2.1.4.2. Specify which operations and systems are, and are not, accessible from the control room. Provide diagrams or figures to illustrate.
39.	Section 2.1.4.2. Describe how liquids from the catch tanks are removed, designated, stored and disposed.
40.	Section 2.1.5. Call out permits applicable to this unit. Provide as figure, table, or appendices to the application. As this is a "stand alone" document, this information must be included.
41.	Section 2.2. Submit a topographic map that shows the entire 204-AR/DST TSD unit, at a distance of 1,000 feet around it at a scale of 1" equal to no more than 200 feet. <i>Dangerous Waste Regulations</i> , WAC 173-303-806(4)(a)(xviii).
42.	Section 2.2. The topographic map must include: <ul style="list-style-type: none"> • contours sufficient to show surface water flow around each operational dangerous waste management unit within the facility • map scale and date • 100-year floodplain area • surface waters • surrounding land uses • wind rose • map orientation • legal boundaries of facility site The map must also indicate the location of access control, injection and withdrawal wells, buildings, structures (including sewers, loading and unloading areas, fire control facilities), flood control or drainage barriers, run-off control systems, and new and existing dangerous waste management units and solid waste management units as defined by WAC 173-303-040. "Specific location information for operating TSD units is contained in the topographic maps provided in the Unit-Specific Portion (<i>Hanford Facility Dangerous Waste Permit</i> , page 2-15, line 12)." <i>Dangerous Waste Regulations</i> , WAC 173-303-806(4)(a)(xviii).
43.	The application has failed to supply information on the TSD regarding the floodplain area (<i>Hanford Facility Dangerous Waste Permit</i> , page 2-16, line 22 and figure, F2-9). Revise text accordingly.
44.	Section 2.4.4. Provide a detailed description of all waste management units within the boundary of the TSD unit.
45.	Section 2.4, 47. The application has failed to supply Unit-Specific seismic information. It is reasonable to assume that modification or expansion is likely to occur during the active life of the TSD unit. Describe seismic considerations to be evaluated if the unit is modified or expanded. Revise text accordingly.

	<p>“For ... an expansion of an existing unit, a demonstration that the unit is designed to withstand the maximum horizontal acceleration of the: design earthquake: for Zone 2B will be made in the Unit-Specific Portion (<i>Hanford Facility Dangerous Waste Permit, page 2-17, line 4</i>).”</p> <p><i>Dangerous Waste Regulations, WAC 173-303-806(4)(a)(xi); and 270.14(b)(11)(i), (ii), and 264.18(a).</i></p>
46.	<p>Section 2.4, 52. The application must provide more specific inter/inter area(s) maps and information on roads and railroad tracks. Provide the following traffic-related information for the facility: Traffic patterns on-site (within TSD boundary); estimated volumes, including number and types of all vehicles that travel on-site; traffic control signs, signals, and procedures; adequacy of access and on-site roads, including road surfacing and load bearing capacity; and the load-bearing capacity of load/unload areas. Show which areas on-site are asphalt and which are concrete.</p> <p><i>Dangerous Waste Regulations, WAC 173-303-806(4)(a)(x); and 40 CFR 270.14(b)(10).</i></p>
47.	<p>Section 2.4, 5. Description. Include processes that are regulated under the <i>Dangerous Waste Regulations</i> as “treatment-by-generator,” “permit-by-rule,” recycling activities, satellite accumulation areas, and/or less than 90-day storage areas.</p>
48.	<p>Section 2.4. Provide a detailed description of “other waste management units.”</p> <p><i>Dangerous Waste Regulations, WAC 173-303(806)(4)(a)(xxiii) and (xxiv), WAC 173-303-040, 645 and 646; and 40 CFR 270.14(d).</i></p>
49.	<p>It is noted that the permit checklist item E is significantly incomplete. Not only does the application reference another document (i.e. does not include the information in the application as a “stand-alone: document), but the referenced document is not considered to completely identify all SWMUs associated with the DST and 204 AR system.</p>
50.	<p>Section 2.4. Identify all solid waste management units within the boundary of the TSD unit.</p> <p>Identify all TSD units, past-practice units (including groundwater units), facilities subject to decommissioning and miscellaneous waste management units within the boundary of the unit.</p> <p>Miscellaneous waste management units consist of one-time spills to the environment, sanitary waste disposal facilities (i.e., septic tanks), and facilities managed or addressed by the USDOE Facility Transition or Environmental Restoration Projects (<i>Hanford Facility Dangerous Waste Permit, pages 2-30 and 2-32</i>).</p> <p><i>Dangerous Waste Regulations, WAC 173-303(806)(4)(a)(xxiii) and (xxiv), WAC 173-303-040, 645 and 646; and 40 CFR 270.14(d).</i></p>
51.	<p>Section 2.4. Identify all solid waste management units and know and suspected releases of Dangerous Waste or constituents. Provide the Waste Identification Data System (WIDS) printout for the entire TSD boundary.</p> <p><i>Dangerous Waste Regulations, WAC 173-303(806)(4)(a)(xxiii) and (xxiv), WAC 173-303-040, 645 and 646; and 40 CFR 270.14(d).</i></p>
52.	<p>Section 2.4. Release from Solid Waste Management Units. Facilities must identify locations where solid wastes have been or are managed, and provide information on known and suspected releases of dangerous waste and/or dangerous waste constituents. A solid waste management unit is defined as “any discernable location where solid waste has been placed at any time, even though the location may not have been intended for the management of solid or dangerous waste.” For example, piping left “in place” and piping stored in shielded areas. Revise this section as it pertains to solid waste management units, releases and corrective actions.</p> <p><i>Dangerous Waste Regulations, WAC 173-303(806)(4)(a)(xxiii) and (xxiv), WAC 173-303-040, 645 and 646; and 40 CFR 270.14(d).</i></p>
53.	<p>Table 2-1. Remaining DST equipment must be provided with specific numbers, lines, vaults not associated with any particular tank farm, pits, DCRTs, vaults, leak detection pits and equipment associated with each tank farm. Insert table(s) and/or diagram(s) to address equipment.</p>