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STATE OF WASHINGTON  
DEPARTMENT OF ECOLOGY

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July 6, 1995

Mr. Steven H. Wisness  
U. S. Department of Energy  
P. O. Box 550, MSIN: A5-15  
Richland, WA 99352

Dear Mr. Wisness:

Re: Transmittal of Notice of Deficiency Table, 100-D Ponds Closure Plan, Revision 0

11012

This letter transmits the Washington State Department of Ecology's response table in response to the U. S. Department of Energy's Notice of Deficiency Response Table, dated January 12, 1994, submitted January 18, 1994.

2172

If you or your staff have any questions regarding this transmittal, please contact me at (509) 736-3034, or Keith Holliday at (509) 736-3036.

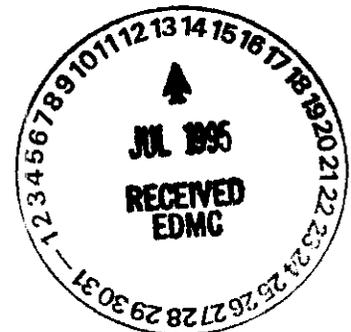
Sincerely,

Alisa D. Huckaby  
Nuclear Waste Program

AH:mf  
Enclosure

cc w/o enclosure:

- Arlene Tortoso, USDOE
- Doug Sherwood, EPA
- Joan Woolard, BHI
- Administrative Records (100-D Ponds)



2/11/29

**100-D PONDS CLOSURE PLAN REVISION 0, MARCH 1993, DOE/RL-92-71**  
**NOTICE OF DEFICIENCY RESPONSE TO RESPONSE TABLE DATED JANUARY 12, 1994**  
**June 26, 1995**

**COMMENT  
NUMBER**

**DEFICIENCY**

1. Part A Forms Section. Concur. Comment is considered closed.
2. 1-1/34-35 (Section 1.1). Concur. Comment is considered closed.
3. 1-1/48-52 (Section 1.1) and 1-2/1-14 (Section 1.1). It is stated that "the proposed closure strategy is clean closure to be based on the analytical results of pond characterization sampling that is already complete." Closure for this unit will be conducted in accordance with WAC 173-303. Specifically, WAC 173-303-610(ii) requires the unit be closed in such a way that a dangerous waste and dangerous waste constituents be controlled, minimized, or eliminated to prevent escape of contaminants, leachate, contaminated run-off, or degradation products to the ground, surface water, groundwater, or the atmosphere. As this is a land based RCRA unit, designed for disposal with an estimated inventory disposed at the unit, "analytical results of pond characterization sampling" will be insufficient to achieve closure in accordance with WAC 173-303. Delete the above referenced proposal. In addition, it should be noted WAC 173-303-610(2)(iii) and 173-303-650(6) require removal or decontamination. During closure of the unit, it must be shown that all applicable medias and equipment/accessories associated with the unit have been removed or decontaminated to the standards of WAC 173-303-610(2).

Regarding the last sentence of the first paragraph of the response, it should be noted that contaminants managed at the site are considered, by the reviewer, to include more than the referenced "acids/bases as indicated in the Part A permit application." To explain, Chapter 4.0 of the closure plan describes waste characteristics associated with the 100-D Ponds and, as explained by Ecology's Comment 16, decontamination confirmation will address more than the acids/bases identified in the Part A permit application. Concur with the remainder of the first paragraph of the response. It is requested the closure plan be updated to reflect that the Phase II Characterization Sampling effort has been agreed upon (through a data quality objective [DQO] process) to be only that of further characterization necessitated by data gaps identified in the Phase I sampling effort.

Regarding the second paragraph of the response, if characterization is to continue, the reviewer recommends the closure plan not be revised until characterization is complete, so the selected closure option (closure-in-place, "clean closure" [as defined by the Hanford Facility permit] or "modified closure" [as defined by the Hanford Facility permit]) may be identified in the revised closure plan.

Regarding the third paragraph of the response, it is the reviewer's understanding the analytical results generated from the Phase I sampling effort indicate the necessity of 100-D Ponds media decontamination or removal in order to meet current Model Toxics Control Act (MTCA) health-based cleanup levels. Therefore, identify the purpose of a Phase II sampling effort. It should be noted that during the January and February unit manager meetings, a Phase II sampling effort has been described. It is the reviewer's opinion that additional sampling to confirm the existence of

contamination is unnecessary. In other words, it is the reviewer's understanding that without removal and/or decontamination, the closure options available for this unit are closure-in-place or a modified closure (as defined by the Hanford Facility permit).

4. 1-2/14-17 (Section 1.1). Within this closure plan, it is inappropriate to defer associated cleanup/closure activities related to this RCRA unit to remediation being conducted by another unit and another program. Therefore, closure activities associated with this RCRA unit will be conducted in accordance with WAC 173-303, where applicable. Delete the statement.

Regarding the first paragraph of the response, it is the reviewer's understanding the "remaining contamination" expected "to be derived only from past practice activities," can neither be defined nor substantiated by documentation. The reviewer has attempted to address this position by Comment number 16 of this Notice of Deficiency (NOD).

Regarding the fourth paragraph of the response (the Tri-Party Agreement [TPA] Action Plan quote), initial investigation has shown the unit does contain hazardous waste constituents and therefore cannot be "clean closed" without decontamination and/or removal. In addition, as "CERCLA only materials" can neither be defined nor substantiated by documentation, the RCRA hazardous waste constituents will be addressed by the RCRA closure plan for this unit.

Regarding the fifth and sixth paragraphs of the response, it is the reviewer's understanding the unit cannot be "clean closed" without decontamination and/or removal. The U. S. Department of Energy (USDOE) has the option to: 1) attempt "clean closure" by removal and/or decontamination, 2) close-in-place (landfill), or 3) enter into modified closure status (as defined by the Hanford Facility permit). If USDOE elects to cease further action on this closure plan "until such action is conducted in conjunction with the operable unit investigation and documentation," the reviewer interprets Permit Condition II.K.3.c. as requiring modified closure activities to be specified in a post-closure permit application. Therefore, if the modified closure option is chosen, a post-closure permit (to be incorporated into the Hanford Facility permit) would be the appropriate mechanism for identifying the status and institutional controls/post-closure care maintenance activities of the unit until such time a CERCLA Record of Decision (ROD) is issued which will identify proposed closure activities related to the RCRA unit. Upon issuance of the CERCLA ROD and agreement upon closure activities at the unit through review of a detailed closure plan, the post-closure permit would be modified to identify the proposed activities and allow an opportunity for public review and comment.

5. 1-2/17-19 (Section 1.1). Define "remediation" as used in the context of closure. If compliance monitoring requirements are imposed related to groundwater contamination, it is inappropriate to defer such activities. To explain by example, if a modified closure option is chosen and the groundwater monitoring program were to change from that of detection to compliance monitoring, the change would be reflected by a post-closure permit modification. In addition, if removal of contaminated wastes, residues, leachates, etc., is necessary to achieve closure, it is inappropriate to defer such activities. The Hanford Federal Facility and Consent Order (TPA) provides for a simultaneous investigation of groundwater contamination for RCRA TSD units and CERCLA operable units. The reviewer interprets this provision (Volume 1, page 3-3) to address groundwater contamination and ultimately corrective action(s) associated with the units. It is inappropriate to defer decontamination verification activities related to the RCRA TSD to another program. Delete or modify the statement.

Concur with the general interpretation provided in the response. If the statement is not deleted, an additional statement is requested to be included which indicates any remediation required for groundwater will be specified in a RCRA post-closure permit for the unit.

6. 2-1/47-50 (Section 2.2). Concur. Comment is considered closed.
7. 2-2/22-27 (Section 2.3). As the unit has been utilized as a RCRA hazardous waste treatment and disposal unit since 1977, the pond influent piping and any dangerous waste constituents associated with the treated and disposed wastes contained within the influent piping or the surface impoundments (including unexcavated ash serving as the impoundment lining, if applicable) is subject to RCRA TSD requirements and is within the scope of this closure plan. Delete the paragraph.

Regarding the first paragraph of the response, as Ecology's comment explained, the pond influent piping is subject to RCRA TSD requirements and is within the scope of the closure plan. As such, the piping and the ash serving as the impoundment lining is considered, by the reviewer, to be within the scope of this closure plan. It should be noted that several Ecology RCRA permit reviewers were consulted regarding this issue. The reviewers consistently interpreted the piping to be considered part of the unit as equipment and or structures, and as such, agreed that any piping associated with the unit must be addressed (i.e., must be included within the closure plan), or be subject to some kind of post-closure requirement if it cannot be decontaminated and/or removed. Also, the reviewers consulted did not know of any exclusion or waiver that excludes the piping as not being part of the regulated unit.

Regarding the second paragraph of the response, to the contrary, WAC 173-303-610(2)(ii) requires the unit be closed in such a way that dangerous waste (i.e., D002) and dangerous waste constituents (applicable 40 CFR 264 Appendix IX constituents) be controlled, minimized or eliminated to prevent escape of contaminants, leachate, contaminated run-off, or degradation products to the ground, surface water, groundwater, or the atmosphere. Therefore, as explained by NOD Comment number 16, 40 CFR 264 Appendix IX constituents will be required to be evaluated for closure. It is an inappropriate contention of the closure plan that any dangerous waste constituents other than the corrosive characteristic dangerous waste for which the unit was/is permitted, are past-practice constituents. It should be noted that the Federal Register on March 19, 1987 (52 FR 8705), explains that under the old closure by removal standard, owners or operators of characteristic waste impoundments had only to demonstrate that the "remaining material did not exhibit the characteristic that first brought the impoundment under regulatory control." The discussion further explains this demonstration "arguably allowed significant and potentially harmful levels of hazardous constituents (i.e., those contained in Appendix VIII of Part 261) to remain in surface impoundment units without subjecting the units to landfill closure, post-closure care, or monitoring requirements." The preamble to the March 19, 1987, final rule clearly identifies that all wastes, waste residues, contaminated containment system components, contaminated subsoils, and structures and equipment contaminated with waste and leachate must be removed or decontaminated. The same preamble continues on to explain that as waste residues may contain significant and potentially harmful levels of other hazardous constituents (listed in Appendix VIII of Part 261) that are not found through testing for corrosivity, the previous language of "or demonstrate what remains is no longer a hazardous waste" has been dropped from the interim status regulations because it is inconsistent with the overall closure performance standard requiring units to close in a manner that eliminates or minimizes the post-closure escape of Appendix VIII (Part 261) constituents. As has been agreed upon in the TPA, the unit will be closed to final facility standards. Therefore, note that WAC 173-

303-650(6)(a)(i) requires removal or decontamination of all dangerous waste and dangerous waste residues . . . . Therefore, these constituents (applicable 40 CFR 264 Appendix IX constituents) are not outside the scope of this closure plan. Lastly, requiring 40 CFR 264 Appendix IX constituents certification is also consistent with the new corrective action requirements of WAC 173-303-646(1)(a). To further explain, new WAC 173-303-646 requires corrective action for releases (from solid waste management unit [i.e., RCRA surface impoundments]), not only of hazardous wastes, but also hazardous constituents.

8. 2-2/37-42 (Section 2.3). A bottom sealing problem is described to have prompted the division of the pond by the construction of a dike. Is there any indication influent may have exceeded the capacity of the ponds? Similarly, has pond sediment/sludge been dredged at any time? In addition, it is requested that all existing aerial photographs which include the 100-D ponds unit be made available to the Ecology unit manager for review.

Regarding the response, concur with the provision of aerial photographs. The response states that there is no "indication or report" of the effluent having exceeded the banks of the unit or of the ponds having been dredged for sludge removal during their operation as a TSD unit. Please identify if past and present operators of the unit have been interviewed.

9. 2-2/37-42 (Section 2.3). Concur. Comment is considered closed. The reviewer requests the measurement/derivation of the south pond's depth be described in the closure plan.

10. 2-4/9-11 (Section 2.3). Concur. Comment is considered closed.

11. 2-4/24-29 (Section 2.4). As indicated by Figure 2-3 and as noted during a July 27, 1993, site visit, the ponds are located north of the perimeter fence and are not secured by a 24-hour surveillance system or an artificial or natural barrier which completely surrounds the unit as required by WAC 173-303-310(2). Milestone M-21-00 of the TPA required the submittal of an interim status compliance assessment for the 100-D Ponds by March 31, 1989. The assessment, entitled "Final Draft Resource Conservation and Recovery Act Interim Status Assessment of Thirteen Facilities," (WHC-EP-0257) identifies the required action of erecting a barrier around the facility and the posting of signs visible from all approaches and a scheduled compliance date of July 31, 1989. It is the reviewer's understanding an agreement was made to allow for wire roping erected around the unit and postings to suffice for the above referenced requirement. An attempt to find the documentation of such an agreement in the Administrative Record was unsuccessful. If documentation exists, please provide copies of the documentation. It is also the reviewer's understanding that additional administrative controls (postings) are in place along the river. If this is correct, please include a description of any additional administrative controls in place to prevent unauthorized entry to the unit. Lastly, during a July 27, 1993, site visit, two of the five placards (stating "RCRA Waste Site -- Do Not Disturb") were noted on the ground. Please reattach the placards to the wire roping.

Regarding the response, considering the lack of documentation of the referenced agreement, the unit's proximity to the river, and the documented existence of contamination, it is the reviewer's opinion that the wire roping provides an inadequate artificial barrier. A schedule which identifies when a 24-hour surveillance system or an artificial or natural barrier which completely surrounds the unit, as required by WAC 173-303-310(2), will be installed or provided was requested by Ecology letters dated July 26, 1994, and October 12, 1994, which resulted in a resolution schedule approved by Ecology letter dated November 4, 1994. This comment will remain open until the enforcement action is resolved.

12. 2-4/31-35 (Section 2.4). Concur. Comment is considered closed.
13. Diagram(s)/Plan(s). The closure plan does not include a detailed diagram or plan of the pipes that carry/carried liquid effluent from individual facilities/buildings to the 100-D Ponds. A detailed description of the steps needed to remove or decontaminate all dangerous waste residues and contaminated containment system components, equipment, structures, and soils during closure is required by WAC 173-303-610(3)(a)(v). Although Figure 2-2 establishes the connection of buildings 190-DA, 189-D, 185-D, 183-D, 182-D, 190-D, and 1724-DA to the unit, it does not include the detail required to evaluate how these pipes will be closed in relation to the closure of the 100-D Ponds. Submit the diagrams or plans with the next revision of the closure plan.

Regarding the response, Figure 2-2 establishes the connection of buildings 190-DA, 189-D, 185-D, 183-D, 182-D, 190-D, and 1724-DA to the unit. The response offers to only provide available diagrams for piping from the 183-DWTF. The reviewer requests piping diagrams or plans for the six additional units/buildings not addressed by the response. In addition, the reviewer requests all available diagrams utilized for revising Figure 2-1 be identified by reference within the closure plan.

14. Chapter 2.0. Concur. Comment is considered closed.
15. Figure 2-3. Concur. Comment is considered closed.
16. 3-2/40-42 (Section 3.2). It is inappropriate to make a statement such as this without providing a detailed description of how the determination would be made between contamination resulting from past practice activities and TSD operation activities. Due to the design of the 100-D Area process sewer system, all materials directed to the 100-D Ponds (upon initiation of the surface impoundment as a RCRA TSD unit) are subject to be decontaminated or removed in accordance with WAC 173-303-610 standards. Due to the lack of documentation of materials directed to the sewer system, 40 CFR 264 Appendix IX constituents will be required to be evaluated for closure. Therefore, unless it can be proven that 40 CFR 264 Appendix IX constituents were not directed to the unit, delete the sentence and modify the closure plan accordingly to reflect that 40 CFR 264 Appendix IX constituents will be evaluated during closure of the RCRA unit for decontamination or removal. In addition, it should be noted that even though pond influent piping and coal ash may have predated the unit as a RCRA TSD, the unit (including ancillary equipment and underlying materials constituting surface impoundment sides or bases) will be closed in accordance with WAC 173-303-610 due to the unit's usages as a RCRA TSD unit. It should be noted that the constituent list for evaluation has been agreed upon during the DQO process for Phase II Characterization Sampling which, for the most part, addresses, this issue. It should be noted this deficiency will remain open until review of Phase II Characterization data.

Regarding the second paragraph of the response, please see NOD Comment 7.

17. 3-2/47 (Section 3.2). Delete the wording which indicates mercury as a potential contaminant in the unit as a "past practice constituent." For the reasoning described above under Comment 3-2/40-42, mercury and other 40 CFR 264 Appendix IX constituents will be considered RCRA TSD constituents for purposes of closure.

Regarding the response, the contention remains clear and Ecology's position remains the same as indicated by the original deficiency. Again, the date of usage is immaterial, as no records exist which can prove mercury and other applicable Appendix IX constituents were directed to the unit. For further statement of Ecology's position, please see NOD Comment 7.

18. 4-1/41 (Section 4.1.2). Concur. Comment is considered closed.
19. 4-3/1-7 (Section 4.1.2.2). A detailed description of the ash disposal basin and the associated pond excavation has not been included in the closure plan. The brief description included on page 4-3 states, "[t]he quantity of coal ash actually remaining at the unit after excavation of the ash basin is indeterminate. This is because pre-excavation ash depths are unknown and therefore, the 30 foot deep excavation may or may not have penetrated the ash basin's ash/soil barrier." A detailed description of the unit and surrounding coal ash contacts is requested. Figures 5-15 and 5-18 define the "approximate thickness of backfill in the 100-D Area." It is noted that no differentiation between backfill and fly ash is made. It is also noted the 100-D Pond groundwater monitoring well logs of Appendix 5A do not clearly distinguish "black sand," "gravelly sand," and "fly ash" to provide a differentiation between the backfill and fly ash. A detailed description of the unit and surrounding coal ash/backfill/soil/gravel/etc. contacts based upon visual inspection and any useable information such as that obtained from the geologic logs available for wells installed within the area is requested. It should be noted that during a July 27, 1993, visit to the unit, the ash/gravel contacts noted across and through the ponds appeared to occur at the top of the ponds and to be dipping in a westerly direction. From visual inspection, it appears the basins were excavated through the ash into underlying soil/gravel.

Regarding the response, the response to the NOD comment does not provide the requested information/description. The reviewer's primary concern is the ash/soil barrier. If the extrapolation of well-log information depicted in Figure F5-18 is to be used regarding the soil/ash barrier, modify the text accordingly.

20. 4-3/22-24 (Section 4.1.2.2). Concur. Comment is considered closed.
21. Table 4-4a. The purpose of the table is questioned. Without knowing what the samples were subjected to during the EP toxicity analysis, the results cannot be interpreted to have significant meaning. In addition, for regulatory purposes, the sampling event represents the sampling of pond water that existed at one given time. There is not certification of the pond water being representative of the pond water typically directed to the unit. In addition, Chapter 2 establishes that inventory records for the unit and the seven buildings is limited or lacking altogether. Therefore, the results of Table 4-4a may represent the pond water at the time of sample collection, but conclusions cannot be drawn from the results to represent anything more.

Regarding the response, the purpose of including Phase I pond water sample results is questioned. Again, the Phase I pond water sampling event represents the sampling of pond water that existed at one point in time. It is the reviewer's understanding that when closure activities are performed at this unit, pond water may no longer be a media associated with the unit due to a decision by the USDOE to implement the 183-D Water Treatment Facility deactivation plan before June 1995 and to cease discharges to the 100-D Ponds by June 1994. For closure purposes, the inclusion of pond water sample results serves no purpose other than as additional information regarding the pond water at various times of sample collection.

22. 4-3/30-37 (Section 4.1.2.2). Concur. Comment is considered closed.
23. 4-3/37-39 (Section 4.1.2.2). Concur. Comment is considered closed.
24. 4-4/15-18 (Section 4.1.2.4). The second paragraph of the TPA, Section 6.3 states, "[t]he TSD units containing mixed waste will normally be closed with consideration of all hazardous substances, which includes radioactive constituents." Consequently, the focus of this closure is not limited to

exclusively addressing the dangerous waste constituents. Because the dangerous and radioactive components of the wastes directed to this unit cannot be segregated, it is neither feasible nor prudent to address the constituents separately. Delete the paragraph.

Regarding the response, the reference to the second bullet under Section 6.3 of the TPA action plan provides for "clean closing" a land disposal unit when initial investigation shows the unit no longer contains hazardous waste or constituents. As the initial investigation (Phase I) has shown the unit contains hazardous constituents (i.e., elevated concentrations [above background samples] for arsenic, lead, PCBs and zinc), this is not considered, by the reviewer, to represent an applicable example of "when a unit may be closed without addressing all hazardous substances (e.g., radioactive waste)." In addition, it is the reviewer's understanding that under MTCA, the State of Washington does address radionuclides. Under RCW 70.105D.020(4) Definitions, it is stated that "'Federal cleanup law' means the federal Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. Sec. 9601 et seq., as amended by Public Law 99-499." This inclusion of CERCLA, by reference, includes radioactive materials. MTCA continues under RCW 70.105D.020(5)(c) to state that (5) "Hazardous substance means:" (c) "any substance that, on March 1, 1989, is a hazardous substance under section 101(14) of the federal cleanup law, 42 U.S.C. Sec. 9601(14)." Therefore, it is the reviewer's opinion that the paragraph, as written, neither is applicable nor meets the regulatory intent.

25. 4-4/39-42 (Section 4.2). Concur. Comment is considered closed.

26. 4-5/1-4 (Section 4.2). Concur. Comment is considered closed.

27. Chapter 5.0 and 5-1/12-15 (Section 5.1). Although groundwater monitoring at the 100-D Ponds is stated to be conducted in accordance with the interim status groundwater requirements of 40 CFR 265, Subpart F, 40 CFR 270.1(c) requires an equivalency determination. Also, Section 6.3.1 of the TPA requires the documentation that groundwater has not been adversely impacted by the unit as described in WAC 173-303-645. Therefore, the groundwater monitoring program described in Chapter 5.0 should be upgraded to be conducted in accordance with the final facility status groundwater monitoring requirements of WAC 173-303-645.

Regarding the first paragraph of the response, the response appears to identify a position that the submittal itself represents the conductance of a closure which meets the applicable 40 CFR 264 closure standards. This is an incorrect contention as the groundwater monitoring programs of 40 CFR 264 and 265 greatly differ.

Regarding the second paragraph of the response, it is the reviewer's understanding that the groundwater monitoring program will be upgraded to be conducted in accordance with the final facility status groundwater monitoring requirements of WAC 173-303-645 and to satisfy the requirements of 40 CFR 270.1(c). In addition, a postclosure monitoring period is correctly described during which a groundwater monitoring program included in the closure plan is two-fold, and as such, is designed to: 1) determine if groundwater has been adversely impacted by this unit and 2) demonstrate that the removal and/or decontamination associated with closure activities has been achieved.

Regarding the third paragraph of the response, 40 CFR 265 Subpart F defines the interim status groundwater monitoring requirements (i.e., drinking water, water quality, and indicator parameters). It is the reviewer's understanding that additional parameters/constituents are routinely monitored for. The third paragraph explains the groundwater monitoring program is a "supplemented program" and

includes parameters of concern from TSD-unit and operable-unit operations. It should be noted that 40 CFR 265.93 requires the preparation of an assessment monitoring program capable of determining whether hazardous waste or hazardous waste constituents have entered the groundwater. Therefore, it is the reviewer's interpretation that the existing program is an assessment monitoring program specifically designed to determine if hazardous waste or hazardous waste constituents have entered the groundwater from this unit. It should also be noted due to the considerations identified in NOD Comment number 16, all of the additional parameters are considered TSD-unit related.

Regarding the fourth paragraph of the response, the reviewer concurs with the use of interim status groundwater monitoring data. As described above in response to the first and second paragraphs of the response, the groundwater monitoring program is expected to be upgraded to meet the final facility status groundwater monitoring requirement of WAC 173-303-645 and to satisfy the requirements of 40 CFR 270.1(c). Regarding the next to last sentence of this paragraph, the reviewer requests an explanation of this proposal.

28. Chapter 5.0. The removal and decontamination to be achieved during closure of this unit must be demonstrated for groundwater. The goal at closure is to leave no materials at the unit which require further care. By virtue of this unit being utilized for disposal, it is implied that wastes and/or residues will be remaining at the site. The goal at closure is to assure these remaining wastes and/or residues are managed in a manner that protects human health and the environment. Therefore, it is important to demonstrate that groundwater has not been adversely impacted by this unit. If it is found this unit has adversely impacted the groundwater (i.e., the closure performance standards of WAC 173-303-610 cannot be achieved), clean closure is not an option. The closure plan does not address this determination of options.

Regarding the first paragraph of the response, the closure performance standards of WAC 173-303-610(2) require the control, minimization, or elimination . . . of escape of dangerous waste, dangerous constituents, leachate, contaminated run-off, or dangerous waste decomposition products to the environment. As such, the closure plan is required to address not only corrosive D002 waste, but dangerous constituents (hydrochloric acid, sulfuric acid, mercury, radiological constituents, "dangerous shop chemicals," demineralized constituents, etc.). As correctly stated in the response, "the demineralizer regenerative effluents containing corrosive D002 waste for which the unit was RCRA permitted, represented only a tiny fraction of the total waste volume managed at the unit." Chapter 4.0 of the closure plan describes a varying inventory for the unit. As explained in NOD Comment numbers 7 and 16, closure confirmation verification will require the inclusion of those constituents contained in Appendix IX of 40 CFR 264.

Regarding the second paragraph of the response, the reviewer is not debating the adequacy of the treatment (neutralization) utilized at this unit. To the contrary, it may be debated that with neutralization, demineralized constituent precipitates may have been released/deposited/disposed of, which the closure plan must adequately address during closure. For example, an initial review of Phase I sample results indicate elevated levels of zinc, arsenic, and mercury, which may represent waste precipitates. Addressing the last sentence of the second paragraph, the statement is not supported by data which differentiates between waste contents and ash/backfill. In addition, if the statement is accepted, an argument that corrective action should be considered/initiated can be made as the unit is adversely impacting groundwater by the reaction between the wastes/discharges and the unit's lining (ash/backfill). Therefore, such statements are inappropriate.

Regarding the third paragraph of the response, the reviewer concurs with the statements. Ecology's initial NOD comment has not been adequately addressed as there have been no changes proposed and as stated in the initial comment, the closure plan does not address the determination of options as related to groundwater.

29. 5-1/17 (Section 5.1). Concur. Comment is considered closed.

30. 5-1/21 (Section 5.1). It is stated that the statistical comparisons of the indicator monitoring program "will be made." Upon revision of this plan, update the indicator monitoring program data and include the statistical comparison results. In addition, please provide an example of a statistical comparison which identifies which statistical method was utilized.

Concur with the inclusion of a description of the statistical method(s). Although the updated indicator parameter data and the statistical comparisons are provided in the RCRA Quarterly and Annual reports, the reviewer requests an update of the indicator monitoring program data be included in the revised plan, which includes an example of a statistical comparison.

31. 5-1/22 (Section 5.1). Concur. Comment is considered closed.

32. 5-1/40-41 (Section 5.1.1), 5-2/44-52 (Section 5.1.2), 5-3/1-4 (Section 5.1.2), and Figure 5-1. The referenced describe a groundwater monitoring network comprised of the required one upgradient and three downgradient wells. The referenced also propose to use the data generated from two wells for statistical comparison evaluations. In addition, Figure 5-1 shows well D8-5 installed approximately 500 feet away from the point of compliance. In addition, considering the groundwater data and structural information of Figures 5-16, 5-17, 5-20 and Figures 4-10, 4-11, and 4-12 of "Groundwater Impact Assessment Report for the 100-D Ponds" (WHC-EP-0666), it is reasonable to conclude that groundwater flow paths range from a northwesterly to a northeasterly direction. Therefore, the justification for the placement of well D8-5 is required. The justification may be presented in accordance with 40 CFR 265.90(c) or 265.91(a)(3). If the justification is not available or cannot be accepted, an additional well will be required to be installed at the point of compliance and to be utilized for statistical comparison purposes to fulfill 40 CFR 265 Subpart F requirements.

Regarding the response, the technical justification for the placement of well D8-5 is required. As groundwater flow paths range from a northwesterly to a northeasterly direction, a well is required to monitor the northeast groundwater flow direction. USDOE/WHC may consider the utilization of well D8-5 for statistical comparison purposes to fulfill 40 CFR 265 Subpart F requirements.

33. 5-2/25-27 (Section 5.1.1) and Appendix 5A. Concur. Comment is considered closed. The reviewer requests the explanation be included in the revised closure plan.

34. 5-2/32-34 (Section 5.1.2). The referenced plan is required to be included within the closure plan and will be reviewed for approval when made available.

The groundwater monitoring plan was requested to be included as it details sample collection procedures. If the plan will not be included within the closure plan, the applicable descriptions (sample collection, field parameter measurements, analytical methods, chain-of-custody control measures, quality control measures, etc.) are required to be extracted from the plan and included within the closure plan for approval.

35. 5-2/35 (Section 5.1.2). Concur. Comment is considered closed. Prior to the revision of the closure plan, the reviewer requests to review the referenced reference table to be included in the revised Appendix 5B.
36. 5-2/36-38 (Section 5.1.2). Concur. Comment is considered closed.
37. 5-2/44-45 (Section 5.1.2). Depending upon the resolution of the placement of well D8-5, the monitoring frequency may be subject to change.

Please see NOD Comment 32.

38. 5-2/46 (Section 5.1.2), 5-5/15-19 (Section 5.2) and Table 5-2. From the analytes identified on Table 5-2, it appears additional analytes are currently being monitored than are required for the 40 CFR 265.92 program. If the additional analytes are being monitored to satisfy WAC 173-303-645 program requirements, please describe the program as such. In addition, Appendix IX constituents will be required for closure decontamination verification purposes for other medias and are also appropriate for groundwater. The program should include a mechanism for Appendix IX sampling for parameter selection and decontamination verification. In addition, the Appendix IX sampling results of other applicable medias related to the unit should also be utilized for parameter selection.

Regarding the response regarding the requirement for Appendix IX constituents, the reviewer's response to NOD Comments 3 and 16 clearly establishes the justification for Appendix IX constituent evaluation during decontamination verification. Furthermore, to limit the decontamination verification "parameter section" to only those constituents with historical and process knowledge with a "potential to have been managed at the site" neither satisfies WAC 173-303-610(2) nor attempts to address the undocumented potentialities. Again, it is the reviewer's understanding that at least one indicator parameter (pH) of the indicator parameter monitoring program (required by 40 CFR 265 Subpart F which is referenced by WAC 173-303-400) has shown a statistical differentiation which would trigger the initiation of an assessment monitoring program as required (by reference of WAC 173-303-400) by 40 CFR 265 Subpart F. It is the reviewer's understanding the additional parameters/constituents, which are routinely monitored, represent the assessment monitoring program. As stated above in response number 27, it is the reviewer's interpretation that the existing program is an assessment monitoring program specifically designed to determine if dangerous (hazardous) waste or dangerous (hazardous) waste constituents have entered the groundwater from this unit. Regarding the applicability of the entire Appendix IX list, please see NOD Comment 16 which explains this deficiency will remain open until review of Phase II Characterization data.

39. Table 5-2. After parameter selection for groundwater decontamination verification monitoring, the parameters of Table 5-2 (total organic carbon, total organic halogen, coliform bacteria, phenols, etc.) should be evaluated. If certain parameters are to be monitored in lieu of others, the substitutions should be specified, as well as an explanation of how the parameters are to be utilized (i.e., statistical comparisons or levels).

By "attempting to exactly duplicate WAC 173-303-645 groundwater monitoring requirements," the final facility closure standards agreed upon in the TPA (Section 6.3.1) will be met. Please note, Section 6.3.1 of the TPA states that "[T]he process to complete clean closure of any unit will be carried out in accordance with all applicable requirements described in 173-303 WAC and 40 CFR 270.1. Any demonstration for clean closure of a disposal unit, or selected treatment or storage units as determined by the lead regulatory agency, must include documentation that groundwater and soils

have not been adversely impacted by that TSD group/unit, as described in 173-303-645 WAC." First, further note the first sentence references all applicable requirements of the WAC and of 40 CFR 270.1. It is the reviewer's opinion that the groundwater monitoring requirements of WAC 173-303-645 are applicable. Also, the "closure by removal" requirements of 40 CFR 270.1(c)(5) clearly reference 40 CFR 264.228, which clearly references (40 CFR 264.228 (b)(3)) the maintenance of a final facility groundwater monitoring system (of 40 CFR 264 Subpart F of which is equivalent to WAC 173-303-645) in the event that "some waste residues or contaminated materials are left in place at final closure . . . ." Again, it is the reviewer's opinion that the groundwater monitoring requirements of WAC 173-303-645 are applicable. Second, further note that the second above referenced sentence of Section 6.3.1 of the TPA clearly cites the groundwater monitoring requirements of WAC 173-303-645 to apply during any demonstration for clean closure of a disposal unit. The closure plan for this RCRA TSD is interpreted by the reviewer to represent such a demonstration, therefore, again, it is the reviewer's opinion that the groundwater monitoring requirements of WAC 173-303-645 are applicable. Therefore, the closure plan is required to clearly identify and describe which groundwater monitoring program (i.e., detection or compliance) is applicable, which parameters are to be utilized, and how the concentrations measured are to be evaluated. Lastly, it should be noted that it is the reviewer's understanding that a "modified closure" approach may be utilized (if it is an option through the Hanford Facility Permit), whereby the waste is neither removed and/or decontaminated nor stabilized and capped. If this approach is agreed to (i.e., becomes an option through the Hanford Facility Permit), the reviewer recommends that a minimum quarterly monitoring frequency be considered for an initial monitoring period.

40. 5-3/6-9 (Section 5.1.2). Concur. Comment is considered closed. The reviewer requests the document be provided prior to revision of the closure plan.
41. 5-3/29-33 (Section 5.1.2.2). Concur. Comment is considered closed. The reviewer requests the document be provided prior to revision of the closure plan.
42. 5-3/29-33 (Section 5.1.2.2). Concur. Comment is considered closed. The reviewer requests the data be provided prior to revision of the closure plan.
43. 5-3/35-38 (Section 5.1.2.3). Concur. Comment is considered closed.
44. 5-3/40-45 (Section 5.1.2.4). The wells were described to have been developed using different methods. Please provide an explanation. In addition, please provide turbidity results measured to date.

Concur with including an explanation for the different development methods in the revised closure plan. The reviewer again requests the revised closure plan include the most recent data available (referenced as occurring in the quarterly reports and in the HEIS database).

45. 5-4/1-2 (Section 5.1.2.4). Concur. Comment is considered closed.
46. 5-4/18-21 (Section 5.1.2.6). The clarification of which monitoring program will be implemented at which time is required. For purposes of closure, a groundwater monitoring program of 40 CFR 265, Subpart F is required. For purposes of an equivalency determination and, as provided by the TPA, a groundwater monitoring program of WAC 173-303-645 is required.

As explained above under Comment number 39, a groundwater monitoring program of WAC 173-303-645 is required.

47. 5-4/21-22 (Section 5.1.2.6). A description of procedures for groundwater sampling protocols and analytical methods is required to be included within the closure plan and will be reviewed for approval when made available.

The comment is requested to be left "open" until such time the required procedures and methods are approved by Ecology.

48. 5-4/47 (Section 5.1.4). Concur. Comment is considered closed.
49. 5-4/49 (Section 5.1.4). As stated above, 40 CFR 265.91 requires three downgradient wells, unless 40 CFR 265.90(c) or 265.91(a)(3) is (are) demonstrated. NOD Comment 32 has provided an option for resolution. Modify this, if necessary, when the issue is resolved.
50. 5-5/1-5 (Section 5.1.4). If WAC 173-303-645 standards are to be achieved through this closure document, describe the standards and identify the detection and compliance monitoring program.

Please see the response to NOD Comment numbers 27 and 39.

51. 5-5/10-11 (Section 5.2). Concur. Comment is considered closed.
52. 5-6/7-11 (Section 5.2.1). The referenced is noted with interest. At this time, it is assumed the initial year of background data collection has been completed as well as an additional semi-annual sampling event. As the pH measurements are stated to be measured in the field, please provide the data with the NOD response. In addition, please explain why this parameter is measured in the field.

The data is again requested. In addition, please see NOD Comments 30 and 44 regarding an update of data within the closure plan.

53. 5-6/13-17 (Section 5.2.1). Concur. Comment is considered closed.
54. 5-6/19-34 (Section 5.2.1). Describe the status of the audit and data evaluation investigation. Also, identify the available groundwater monitoring options in the event the data cannot be utilized.
55. 5-7/3-4 (Section 5.2.2). Delete or qualify the statement. Currently, the statement is not qualified in any fashion (i.e., there is no description of filtering equipment/methods, no reference to studies conducted under similar conditions which make this conclusion, etc.).

It is requested the revised sentence read ". . . it can be assumed that most of the metals . . ."

56. 5-7/11-13 (Section 5.2.2), Table 5-2 and Appendix 5B. Constituents appearing on Table 5-2 are not reflected in Appendix 5B to have been analyzed. For example, Table 5-2 indicates antimony, beryllium, cadmium, cobalt, copper, tin, vanadium, etc., are to be analyzed, but Appendix 5B does not indicate whether they were. If Appendix 5B does not include the data due to the detection concentrations occurring below CRQLs, please indicate this in the text.

Concur with the explanation provided by response. It is requested that a similar explanation be provided, where applicable, within the text of the closure plan if this is a standard operating procedure.

57. 5-7/42 (Section 5.2.2). Delete or qualify the statement.

It is requested that the reasoning be stated as identified in Ecology's response to NOD Comment number 55.

58. 5-8/4-5 (Section 5.2.2). Delete or qualify the statement.

It is requested that the reasoning be stated as identified in Ecology's response to Comment number 55.

59. Figure 5-4. A 100-D - 100-DR areas and well map generated on August 9, 1993, by an Ecology Geographic Information Systems (GIS) Specialist indicates additional wells exist. For example, additional wells D3-1, D2-3, D2-2, D2-1, D5-1, D-2, D5-22, D-1A, D5-25, D5-24, D5-23, D5-6, etc., are identified. Please update Figure 5-4 and include all wells.

Concur. Comment is considered closed.

60. 5-10/43-44 (Section 5.2.4). Concur. Comment is considered closed.

61. 5-10/33 (Section 5.2.4). The referenced interpretive "plume" of groundwater may also be due to the structure and an associated contaminant dilution factor as can be interpreted from figures 5-16, 5-17, and 5-20. Either include the additional interpretation or delete the allusion to the artificial recharge from the 100-D ponds being less contaminated than surrounding groundwater. When data exists to better substantiate or confirm either (or both) interpretation(s), it is appropriate to include such information.

Regarding the response, as the statement is not being proposed to be deleted, include a statement which identifies that an additional interpretation may be reached and the "plume" of groundwater may also be due to the structure as shown by figures 5-16, 5-17, and 5-20.

62. 5-21/35 (Section 5.3.5.3). Considering the groundwater data and structural information of Figures 5-16, 5-17, 5-20 and Figures 4-10, 4-11, and 4-12 of "Groundwater Impact Assessment Report for the 100-D Ponds" (WHC-EP-0666), it is reasonable to conclude that groundwater flow paths range from a northwesterly to a northeasterly direction. Modify the text accordingly.

Concur with the proposed revision of the text. It is requested the text also identify any anticipated groundwater flow direction changes which might result from the cease of discharges to the unit.

63. Figure 5-20. Please include the river level elevation for July 1992.

Can the closest river stage recorder be identified? The reviewer requests river level elevations be included on this figure and/or discussed in the text. If there is no river stage recorder within a useable distance, it is requested the two nearest locations (up and down river) be identified, discussed, and documented in the future.

64. Additional Figures. From the water level measurements of Appendix 5C, it appears additional water table contourings can be made. Due to the varying groundwater flow directions in the vicinity of the 100-D Ponds and the unit's proximity to the river, additional contourings are requested. At a minimum, contourings for July, August, September, and October 1992 are requested to be generated. During generation of the contourings, please include river level elevations.

Upon provision of the requested contourings, the comment will be considered closed.

65. 5-12-14 (Section 6.1). Delete the referenced statement. It is inappropriate to defer post-closure monitoring requirements related to a RCRA unit to another program. If "clean closure" cannot be achieved, a post-closure plan and a RCRA Part B permit application will be required to be submitted pursuant to WAC 173-303-610(7), 610 (8) and WAC 173-303-650(6) and should be stated as such in the closure plan.

The response does not address the NOD comment. It is again requested that the closure plan state that "in the event that 'clean closure' cannot be achieved, a post-closure plan and a RCRA Part B permit application will be submitted pursuant to WAC 173-303-610(7), 610(8) and 650(6)." As discussed above in NOD comment number 39, it is the reviewer's understanding that a "modified closure" approach may be utilized in the future (i.e., if the Hanford Facility Permit goes into effect as written). If this alternate closure option becomes an option through the Hanford Facility Permit, the closure plan must clearly identify the closure approach to be utilized as well as the conditions of the approach (i.e., monitoring frequencies, inspection schedules, maintenance considerations, etc.) in a post-closure permit application as required by Condition II.K.3.c.

66. 6-1/14-16 (Section 6.1). Concur. Comment is considered closed.
67. 6-1/18-20 (Section 6.1). Concur. Comment is considered closed.
68. Figure 6-1. Revise the figure to reflect the requirements of WAC 173-303. For example, the sampling and analysis/data evaluation action should reflect a characterization action. Also, the "expedited response" term is neither defined within the closure plan nor within WAC 173-303 and, therefore, should be deleted. Similarly, although the term "protective closure" is defined by the closure plan, it is not defined within WAC 173-303. Therefore, delete the ovals and the term. Delete all references to RCRA past practice actions within the figure to reflect only those actions relating to the closure of this RCRA unit. Also, delete the term "health-based levels." This term may be substituted, where appropriate, with Model Toxics Control Act (MTCA) cleanup levels, if applicable.

In response to the first paragraph, concur with the proposal to revise the figure to identify this first round of sampling as being for purposes of site characterization. It is the reviewer's understanding that the majority (all but two samples) of the inorganic samples were analyzed using the analytical method for TCLP. If this understanding is correct, it should be noted the analytical method for TCLP is a method used for designation purposes and not for clean closure confirmation purposes. Therefore, it is inappropriate for the figure to reflect "closure verification where no RCRA constituents are found above clean-up levels." In addition, it is the reviewer's opinion that the first round of sampling did not adequately characterize the unit. For example, the berm separating the ponds was not sampled, the walls of the unit were not sampled, and the piping to the unit was not sampled. In addition, the reviewer could not identify a media differentiation based on the text's discussion of the Phase I sampling event. For these reasons, the figure should be revised to identify the first round of sampling as only being for purposes of initial site characterization.

In response to the second paragraph, the reviewer is confused by the proposal to use both MTCA Methods B and C. It is the reviewer's understanding that the appropriate MTCA method would be selected based upon the conditions of the unit. Once the MTCA method has been selected, residential health-based standards are established. It should also be noted that it is the reviewer's understanding that MTCA Method B cleanup levels, with applicable groundwater protection standards applied, are applicable for this unit.

In response to the third paragraph, please see Ecology's response to NOD Comment number 4. While it may be agreed that the coordination of RCRA and past-practice unit activities wherever possible is appropriate, it is the reviewer's understanding that the utilization of MTCA standards alleviates the need to identify CERCLA program leads based upon specific contaminants. If a RCRA clean closure cannot be achieved, it may be appropriate for RCRA corrective actions/closure activities and CERCLA 100-D operable unit actions to be coordinated when applicable (i.e., by

modification of the resulting post-closure permit after the CERCLA ROD is issued). Therefore, delete all references to RCRA past-practice actions within the figure except those reflecting those actions relating to the ultimate corrective action of the unit, if applicable. Lastly, it should be noted that Ecology has attempted to coordinate RCRA and past-practice unit activities as they relate to this unit by involving RCRA and CERCLA Ecology representatives at the RCRA unit manager meetings for this unit and at the DQO meetings for this unit.

In response to the fourth paragraph, the reviewer is not familiar with HSBRAM equations and, therefore, cannot approve the usage as proposed. Therefore, either obtain written concurrence from Ecology's Toxics Cleanup Program regarding the usage of HSBRAM equations for RCRA cleanup levels or delete the term "health-based levels."

69. Footnote on Figure 6-1. The draft permit for the treatment, storage, and disposal of dangerous waste for the Hanford facility may contain a condition(s) addressing the utilization of Hanford Sitewide background data. If the permit is effective prior to the approval of this closure plan and if the condition allows for the usage of this particular data, the footnote is acceptable. Otherwise, delete or modify the definition of "background."

As the Hanford Facility Permit does contain a condition, Condition II.K.2., addressing the usage of Hanford Site Background data, upon approval of the data, the usage is acceptable. It should be noted that the DQO did not address this subject, as the sampling effort will only be that of characterization and not clean closure confirmation.

70. 6-2/26 (Section 6.2.1). Delete the acronyms "RFI/CMS." Within the RCRA program, the "RFI" acronym represents "RCRA Facility Investigation" for which there is a specific usage and definition associated. The definition of RFI is available upon request. Similarly, the "CMS" acronym represents "Corrective Measure Study" for which there is a specific usage and definition associated. The definition of CMS is available upon request. The referenced usage is currently incorrect.

Regarding the response, the referenced acronym and the proposed usage are confusing within the closure plan. The purpose of the closure plan is to identify how the unit will be closed. If the unit cannot be clean closed (by removal and/or decontamination), the closure plan must specify the status of the unit (i.e., "modified closure" [if an option] or closure in place [as a landfill]). When the closure plan uses the referenced acronym in the manner currently being used, there is no mechanism for the reviewer to identify the closure activities, when the closure activities will be conducted, or what cleanup levels the activities will be attempting to meet. If the acronym is to be used in the closure plan, the text must clearly identify the status of the unit (i.e., during a "modified closure" period or a post-closure period). In addition, if the unit enters a "modified closure" status, the closure plan should clearly identify and detail the applicable management conditions of the unit (institutional controls/post-closure maintenance activities). It should be noted that after issuance of the post-closure permit (if a modified closure option is chosen), any CERCLA actions/activities identified by the CERCLA ROD, would be required to be approved and detailed in a post-closure permit modification prior to implementation.

71. 6-1 '29 (Section 6.1). Although the term "action levels" is defined within the closure plan as "concentrations of analytes of interest that prompt an action . . .," the term is not defined by WAC 173-303. As the closure plan addresses a RCRA unit, and to avoid confusion on this subject, delete the "action level" phrase. It should be noted that a definition for "cleanup level" is provided by WAC 173-340-200, which may be utilized by reference of proposed WAC 173-303-610 (scheduled to be promulgated in December 1993 to amend WAC 173-303-610 to include WAC 173-340-200).

Regarding the response, the cleanup levels are intended to define and mandate the level of cleanup activity associated with this RCRA unit. In addition, as explained in the response, the term "action level" has numerous "subset" meanings. It is the reviewer's opinion that the numerous subset meanings make the closure plan unnecessarily confusing and thus, unenforceable. The purpose of this closure plan for this unit is to identify cleanup levels to which this unit will be closed. The cleanup levels will dictate closure options. In addition, it is the reviewer's understanding that for purposes of conducting a RCRA closure through WAC 173-303-610, MTCA "cleanup standards" (of Part VII of the MTCA Rule) are to be utilized rather than the MTCA "cleanup process." As the closure plan addresses a RCRA unit, and to avoid confusion on this subject, delete the "action level" phrase and definition. Lastly, it is the reviewer's understanding that a CERCLA Record of Decision (ROD) is being developed for the 100-D Area. It is recommended the term action levels as they relate to the 100-D Ponds be discussed/defined/established/etc. in/through that particular process. In conclusion, this closure plan addresses the RCRA closure of a unit and must clearly identify the cleanup levels so an identification of status (clean closed, "modified closed," or closed in place) can clearly be made.

72. 6-1/29 (Section 6.1). Concur. Comment is considered closed.

73. 6-1/28-31 (Section 6.1). It is proposed to evaluate characterization sampling results to "determine the absence or presence of contaminants." It is indicated in the Part A application that the unit was utilized for disposal. It is also indicated in Chapter 4 that estimates of "contaminants" have been made to identify "waste inventory." If decontamination by removal has not occurred, for purposes of the closure of this unit, it will be assumed that disposal has occurred. Therefore, revise the statement qualifying that sample analysis results will be evaluated to determine the absence or presence of contaminants within the pond characterization samples. It should be noted that prior to closure, the pond water (if present), sediments, sludges (if present), soils, leachate (if applicable), and groundwater must be evaluated to determine if "removal or decontamination" has occurred.

Regarding the response, WAC 173-303-610(2) clearly requires the ". . . dangerous constituents, leachate, contaminated run-off, or dangerous waste decomposition products . . ." to be addressed. The corrosive characteristic is therefore only one aspect of the waste to address during closure of the unit. Also, please see Ecology's responses to NOD Comments 28, 24, 7, etc., regarding applicable dangerous waste constituents to be addressed during closure of this unit. Regarding the proposal to clarify potential contaminants versus corrosive waste in the revised closure plan, the reviewer requests the closure plan not be revised until it is agreed that the closure plan must address the applicable dangerous waste constituents discussed above. Lastly, it should be noted that the proposal not to remove and/or decontaminate in a selective fashion (i.e., "where sampling indicates that these contaminants do not exist at the unit. . .") is a premature proposal. The reviewer proposes that removal and/or decontamination procedures be deferred until data is available from the Phase II Characterization effort.

74. 6-1/31-33 (Section 6.1). Delete the sentence. Closure standards for RCRA units are found in WAC 173-303-610. This cite quite clearly requires removal or decontamination.

Regarding the response, please see Ecology's response to NOD Comments 71 and 73.

75. 6-1/35-36 (Section 6.1). Delete or modify the sentence. If modifying the text, include and cite background or MTCA as the closure performance standard, if applicable.

Regarding the response, please see Ecology's response to NOD Comment 71.

76. 6-1/36-42 (Section 6.1). Delete or modify the referenced. If the description is to be modified, include and cite background or MTCA as the closure performance standard, if applicable. References to "health-based" levels must be corrected and specified as background or MTCA levels, if applicable.

Regarding the response, please see Ecology's response to NOD Comment 68.

77. 6-1/44-46 (Section 6.1). Delete the sentence, as the cited methodology has not been approved for usage at RCRA units for purposes of closure.

Regarding the response, please see Ecology's response to NOD Comment 68. It should be noted that the reviewer does not know if MTCA is an equivalent to HSB RAM. Until it can be demonstrated (i.e., by obtaining written concurrence from Ecology's Toxics Cleanup Program regarding the usage of HSB RAM values and equations), delete the sentence.

78. 6-1/46-52 (Section 6.1) and 6-2/1-3 (Section 6.1). Modify this description referencing MTCA, if MTCA standards are to be utilized, if applicable. Correct the descriptions of variables, as appropriate. Also, specify the MTCA database is updated periodically and the cleanup levels will be based on values that are current at the time of approval of this closure plan, if applicable.

Regarding the response, please see Ecology's response to NOD Comment 77. Again, modify this description referencing MTCA, where applicable.

79. 6-2/28-30 (Section 6.2.1). The proposed strategy as described in Section 6.1 of the closure plan could be interpreted as an action of abandonment rather than one of decontamination or removal. As previously stated, during closure of the unit, it must be shown that all applicable medias and equipment/accessories associated with the unit have been removed or decontaminated to the standards of WAC 173-303-610(2). Delete the sentence.

Regarding the proposed text revisions, the text should reflect that the cleanup levels for all applicable dangerous waste constituents established in this closure plan will be utilized for purposes of establishing the closure status of this unit. The text should also reflect where the closure status of the unit has changed due to removal or remediation activities performed by or in conjunction with the 100-DR-1 operable unit, the post-closure permit (if a modified closure option is chosen) will be modified in accordance with either WAC 173-303-610(3) or 610(8), whichever is applicable. The text should also indicate that upon any future 100-DR-1 operable unit removal or remediation activities, removal and/or decontamination confirmation will be conducted in such a way as to confirm that all previously documented contamination has been removed and/or decontaminated in compliance with WAC 173-303-610.

80. 6-2/30-33 (Section 6.2.1). The sentence as written would indicate that clean closure had not been achieved if contaminated soils or water, exceeding the standards of WAC 173-303-610(2), are left in place. Also, as stated earlier, the usage of the "RFI/CMS" acronym is incorrect. Also, as stated earlier, it is inappropriate to defer post-closure requirements to another program. Delete the sentence and replace it with a statement how compliance with WAC 173-303-610(7) and 173-303-650(6) will be achieved.

Regarding the response, please see Ecology's response to NOD Comment 79.

81. 6-2/45-48 (Section 6.2.2). Delete the bullet and replace it with a statement that, where applicable, all applicable contaminated medias and equipment/accessories associated with the unit will be removed or decontaminated to the standards of WAC 173-303-610(2).

Regarding the response, the proposed revision for the first bullet is unacceptable due to the sample results from the Phase I sampling event. Contamination has already been documented to exist. The first bullet should be revised to indicate further sampling will be performed to determine the extent of contamination at the site. The original NOD requested the second bullet be deleted and the proposal is to revise it to add additional text. It should be noted that MTCA Method B, with groundwater protection standards applied, numerical values will be utilized in establishing the cleanup levels, but the MTCA process of WAC 173-340 will not be utilized to make decisions on decontamination of this unit. Again, delete the bullet and replace it with a statement, where applicable, all applicable contaminated medias and equipment/accessories associated with the unit will be removed or decontaminated to the standards of WAC 173-303-610(2).

82. 6-3/6-10 (Section 6.2.3). Concur. Comment is considered closed.

83. Section 6.3/First Bullet. Include a statement that, where applicable, all applicable contaminated medias and equipment/accessories associated with the unit will be sampled to determine if decontamination has occurred or if removal is necessary. As discussed under the comment on Section 7.3.8, a typical function conducted during the closure of a surface impoundment is to identify the maximum extent of contamination prior to the implementation of an approved closure plan. It should be noted that the referenced previous soil and water sampling, as described in Chapter 7.0, will be insufficient to achieve the extent of contamination determination and the decontamination verification.

Regarding the response, the text should also be revised to indicate equipment/accessories associated with the unit will also be sampled to determine if decontamination has occurred or if removal is necessary. Regarding the referral of the reviewer to NOD Comment 3 regarding the need for further soil sampling, please see Ecology's response to NOD Comment 3. It should be noted Ecology has already made a determination that further soil sampling will be necessary for decontamination verification purposes. Lastly, it is requested that Section 6.3 be revised to include appropriate references to Phase I sampling results which indicate that contamination exists at the unit.

84. 6-3/24-26 (Section 6.3). Concur. Comment is considered closed.

85. 6-3/30-31 (Section 6.3). Change the term "action level" to that of "cleanup levels" or "background," whichever approach is to be utilized.

Regarding the response, please see Ecology's response to NOD Comment 71. Again, change the referenced term.

86. 6-3/31 (Section 6.3). Concur. Comment is considered closed.

87. 6-3/32-33 (Section 6.3). Concur. Comment is considered closed.

88. 6-3/38-45 (Section 6.3). Concur. Comment is considered closed.

89. 6-3/48-49 (Section 6.3). Concur. Comment is considered closed.

90. 6-3/47-49 (Section 6.3). Concur. Comment is considered closed.

91. 6-3/49-50 (Section 6.3). Concur. Comment is considered closed.

92. 6-3/51-52 (Section 6.3). Add to the sentence a qualifier that groundwater monitoring initiated specifically due to the 100-D Ponds will continue until such time after closure activities are

completed as is necessary to verify the groundwater has not been contaminated or the decontamination or the removal of waste constituents from groundwater has occurred.

Regarding the first paragraph of the response, cite WAC 173-303-645(2) and state that groundwater monitoring will occur until such time that USDOE demonstrates, and Ecology agrees, that groundwater has not been adversely impacted by 100-D Ponds, if the unit has achieved a "clean closure" status for all other applicable medias related to the unit.

Regarding the second paragraph of the response, rewrite the sentence, cite WAC 173-303-645(2) and state that groundwater monitoring will continue after physical closure activities are completed and until it is demonstrated by USDOE, and accepted by Ecology, that groundwater has not been adversely impacted by the 100-D Ponds, if the unit has achieved a "clean closure" status for all other applicable medias related to the unit.

93. 6-4/1 (Section 6.3). Concur. Comment is considered closed.

94. 6-4/5-6 (Section 6.3). Describe in detail how it would be determined that the contamination is from 100-D Ponds only. If the determination is not definitive, delete the sentence.

Please see Ecology's response to NOD Comment 16.

95. 6-4/7-9 (Section 6.3). Concur. Comment is considered closed.

96. 6-4/18-21 (Section 6.3) and 6-4/27-30 (Section 6.3). Describe in detail how it would be determined that the contamination is from "RCRA past practice activities in addition to 100-D Ponds TSD unit activities." Due to the lack of documentation of materials directed to the sewer system, 40 CFR 264 Appendix IX constituents will be required to be evaluated for closure. The referenced demonstration may be attempted, but it should be noted that it is due to the lack of documentation that justifies Appendix IX decontamination verification and an acceptance of such a demonstration would require the documentation that is reported not to exist. It should also be noted that if soils are contaminated with the waste constituents of Appendix IX, it is appropriate to pursue decontamination or removal of those constituents through the RCRA closure process. If contaminants are identified through the closure process of which cannot be proven to have been directed to or placed within the surface impoundment, it is appropriate to notify the CERCLA program that the contaminants have been identified.

Regarding the first paragraph of the response, please see Ecology's response to NOD Comment 16.

Regarding the second paragraph of the response, it is the reviewer's understanding, the RCRA Appendix IX list is more comprehensive than the CERCLA target compound list, with the exception of radionuclides and certain indicator type parameters (i.e., anions). Therefore, due to CERCLA considerations applicable to this unit and the lack of records which would identify applicable programmatic parameters, Appendix IX and additional CERCLA parameters not occurring on the Appendix IX list will be required for closure activities related to 100-D Ponds. Lastly, although the TPA integrally binds RCRA TSD units with CERCLA efforts, the waste removal and/or decontamination of this unit will be conducted in accordance with an approved RCRA closure plan or through the modification of a RCRA post-closure permit. It is the reviewer's understanding that the timing of the RCRA closure activities related to this unit may be impacted to coincide with the CERCLA operable unit's remediation activities. Therefore, while it is immaterial which entity/program actually performs closure activities related to the unit, the closure activities will be

conducted in accordance with an approved closure plan or modified post-closure permit as required by WAC 173-303-610.

97. 6-4/21-25 (Section 6.3). Concur. Comment is considered closed.
98. 6-4/33 (Section 6.3). Concur. Comment is considered closed.
99. 6-4/34-35 (Section 6.3). Delete "coordinated with the 100-DR-1 Operable Unit RFI/CMS process" and insert "conducted in accordance with WAC 173-303-610 and 173-303-650."

Regarding the acceptability of coordinating operable unit and TSD unit activities, please see the Ecology's response to NOD Comment 4. If the closure plan is to be revised to reflect a "coordination of RCRA unit and operable unit activities," the text must clearly identify that such coordination does not preclude conducting closures "in accordance with WAC 173-303-610 and 173-303-650." Concur with revising the referenced sentence to include compliance to the referenced citations.

100. 6-4/37-38 (Section 6.3). Concur. Comment is considered closed.
101. 6-4/44-45 (Section 6.3). Concur. Comment is considered closed.
102. 7-1/5-8 (Section 7.0). It is stated that "... this chapter provides specific field sampling and laboratory analytical procedures that will be applied in identifying soil contamination (if any) originating from the operation of the 100-D Ponds TSD unit." In addition to an evaluation of soil contamination, an evaluation of all other medias and equipment/accessories present and related to the unit is required. The evaluation is required to determine what associated with the unit must be decontaminated or removed. Re-state the sentence to include provisions to evaluate all other applicable medias and equipment/accessories associated with the unit. In addition, the re-statement should include groundwater as a media to be evaluated.

Restate the statement to be added regarding the RCRA groundwater monitoring program to reflect that a final facility RCRA groundwater monitoring program which satisfies WAC 173-303-645 will be conducted for any clean closure demonstrations. It should be noted that if a modified closure option is chosen and a post-closure permit is issued, much of the current text, including this, will be required to be revised to only reflect a status of the unit. It should also be noted that the mechanism (permit modification) to modify the post-closure permit may be described.

103. 7-1/8-11 (Section 7.0). It is inappropriate to defer associated corrective action monitoring requirements related to the post-closure of this unit to activities to groundwater activities to be completed for another unit and another program. The TPA provides for a simultaneous investigation of groundwater contamination for RCRA TSD units and CERCLA operable units. The reviewer interprets this provision (Volume 1, page 3-3) to address groundwater contamination and, ultimately, corrective action(s) associated with the units. Furthermore, the reviewer does not interpret this provision to allow the deferral of post-closure requirements to another program. Delete the sentence.

In response to the proposal to indicate that coordination of groundwater monitoring between the RCRA unit and the past practice unit will be conditioned on the TSD being the source of groundwater contamination, it should be noted that a distinction between groundwater monitoring and groundwater extent of contamination investigation exists. Therefore, it is inappropriate to defer post-closure groundwater monitoring requirements (WAC 173-303-645(8), (9) and/or (10)) of the RCRA unit to another program. Again, as stated in the original comment, the reviewer does not

interpret the above cited TPA provisions to allow the deferral of post-closure requirements to another program. Either delete the sentence or correctly modify it further. A correct modification of the sentence would describe the mechanism to modify the post-closure permit in the event that another groundwater monitoring program (i.e., compliance groundwater monitoring) is required to be initiated.

104. 7-1/11-14 (Section 7.0). When validated, the analytical results will be used as characterization information. The results cannot be accepted at this time to be used for confirmation of clean closure. A preliminary review of analytical parameters of Table A-1 of Appendix A indicates that not all 40 CFR 264 Appendix IX constituents were sampled for. In addition, all medias and equipment/accessories present and related to the unit are required to be removed or decontaminated in accordance with WAC 173-303-610. Delete the sentence or modify accordingly to indicate that the validated data will be used for unit characterization.

Please see Ecology's response to NOD Comment 3 regarding the need for further sampling. It should be noted that Ecology concurs with the proposal to conduct a Phase II sampling to better characterize the unit's extent of contamination. Please see Ecology's response to NOD Comment 16 regarding the need for full Appendix IX sampling. It should be noted that until such time that the unit has been adequately characterized (i.e., all applicable medias), Appendix IX sampling will be required for clean closure confirmation purposes. Regarding Appendix IX sampling, please see NOD Comment 16.

105. 7-1/17-20 (Section 7.0). For purposes of unit characterization, the pond soil and water sampling activities will be utilized within the closure plan. The pond soil and water sampling activities and results do not fulfill the requirements of WAC 173-303-610 and cannot be utilized by themselves to satisfy as confirmation of clean closure. The closure strategy of Chapter 6.0 clearly indicates a lack of understanding of the requirements of WAC 173-303-610 and cannot be interpreted to fulfill RCRA closure requirements. The sentence should reflect that the sampling activities and resulting generated data were completed for unit characterization purposes.

Concur that the referenced text is factually correct. Concur that this chapter of the closure plan will be revised as indicated. Regarding the need for further sampling, please see Ecology's response to NOD Comment 3. Regarding the unacceptability of characterization (Phase I sampling event) sampling as clean closure verification sampling where all applicable medias at the unit were not sampled, please see the response to NOD Comment 3.

106. 7-1/29-31 (Section 7.1). The sentence should indicate that the corrosive wastes may have contained dangerous waste constituents. In addition, a sentence should be added which indicates that other dangerous wastes and/or dangerous waste constituents may have been directed to the ponds via piping connected to buildings 190-DA, 189-D, 185-D, 183-D, 182-D, 190-D, and 1724-DA.

Regarding the proposal to qualify the statement to indicate that "discharges to the process sewer system could have contained other dangerous waste constituents but at levels that are expected to have been so small as to not be detectable in the ponds" is inappropriate without documentation. It is the reviewer's understanding that very few documents exist to identify what may have been directed to the ponds. Therefore, it is incorrect to qualify the statement as proposed, as it is unknown if the dangerous waste constituents directed to the process sewer were at levels expected to have "been so small as to not be detectable in the ponds." To the contrary, from sample data collected to date, it appears that dangerous waste constituents were directed to the process sewer system which are detectable in the pond media sampled thus far.

Regarding the demineralizer regeneration process sentence, please see Ecology's response to NOD Comments 3 and 7. It is the reviewer's opinion that inorganics related to the demineralizer regeneration effluent must be confirmed to not be present during any clean closure confirmation sampling related to this unit. The reviewer has requested additional information on the chemical processes which may have allowed inorganics to be precipitated at the unit or to have been directly accumulatively deposited/directed to the unit. It should be noted that the response's reference to "operation's analysis of demineralizer effluent" does not answer the request. Again, as requested above, the sentence should indicate that the corrosive wastes may have contained dangerous waste constituents. In addition, a sentence should be added which indicates that other dangerous wastes and/or dangerous waste constituents may have been directed to the ponds via piping connected to buildings 190-DA, 189-D, 185-D, 183-D, 182-D, 190-D, and 1724-DA.

107. 7-1/29 (Section 7.1). Concur. Comment is considered closed.
108. 7-1/32-34 (Section 7.1). Due to the piping connection to seven buildings and the lack of records, the statement that the ponds have received no corrosive or dangerous waste constituents since 1986 cannot be substantiated. Delete the sentence.

There are at least four concerns applicable to the response. First, the 189D MDL complex is stated to have been deactivated in 1988, but the closure plan sentence that the reviewer is taking exception with states that since "1986 the ponds have received no corrosive or dangerous waste constituents, only nondangerous and nonradioactive waste water from the 183-D WTF." Therefore, without documentation (and the reviewer has been provided none), it cannot be substantiated that from 1986 to 1988, the ponds received no corrosive or dangerous waste constituents from the 189-D MDL complex. Second, unless there are records from all buildings/units identified by Figure 2-2 (182-D, 183-D, and 189-D MDL complex), which substantiate the statement that the reviewer is taking exception with, the statement can easily be refuted. Third, by a theory identified in Section 3.4.4 of the closure plan, dangerous wastes and dangerous waste constituents remaining in the pond's influent piping could have been carried into the ponds by otherwise clean effluent from the 183-D WTF. Fourth, 183-D WTF effluent sample results indicate the presence of dangerous waste constituents. Whether the presence is due to the theory of Section 3.4.4 or due to the nature of the 183-D WTF effluent is not known to the reviewer, but the sample results refute the statement that no dangerous waste constituents have been received at the ponds since 1986. Again, delete the sentence.

109. 7-1/34-36 (Section 7.1). Concur. Comment is considered closed.
110. 7-1/38-40 (Section 7.1). The statement does not accurately reflect the disposal process for which the unit was utilized. Although no recorded documentation may exist that dangerous waste constituents were deposited directly into the ponds, there is evidence that dangerous waste constituents were directed and discharged to the ponds. An evaluation of the chemical reaction of the hydrochloric acid, sulfuric acid, and sodium hydroxide utilized to regenerate the three demineralizers would reflect the generation of constituent-laden acids/bases. A further evaluation of the chemical reaction of the neutralization of such constituent-laden acids/bases would reflect the generation of constituent-laden precipitates.

The statement should not be rephrased to state that no direct dumping of other waste forms occurred without a qualifier that identifies the lack of records. Again, an evaluation of the chemical reaction of the hydrochloric acid, sulfuric acid, and sodium hydroxide utilized to regenerate the three demineralizers would reflect the generation of constituent-laden acids/bases. A further evaluation of

the chemical reaction of the neutralization of such constituent-laden acids/bases would reflect the generation of constituent-laden precipitates. Currently, the closure plan neither includes such an evaluation nor is such an evaluation proposed to be provided.

111. 7-1/40 (Section 7.1). Concur. Comment is considered closed.

112. 7-1/45 (Section 7.1). Delete or define the term "in minute quantities."

While there is concurrence regarding the proposed definition, it is requested the statement be qualified by the additional information obtained since the writing of the closure plan (i.e., results from the Phase I sampling event and effluent monitoring sample results from the 183-D WTF).

113. 7-1/48-50 (Section 7.1). The purpose of the closure plan is to demonstrate and document closure by removal or decontamination. Therefore, the closure plan must demonstrate and document that all medias and equipment/accessories present and related to the unit have been removed or decontaminated. Delete the sentence.

Concur with the proposed deletion of the referenced sentence. It should be noted that Section 7.1 should commit to demonstrate and document that all medias and equipment/accessories present and related to the unit have or will be removed and/or decontaminated.

114. 7-2/1-3 (Section 7.1). Without identifying which contaminants are of concern, the statement is meaningless. In addition, without identifying the "dangerous levels" of those dangerous waste constituents, the statement is meaningless. Delete the sentence.

In response to the first paragraph, concur with revising the sentence. It should be noted that it would be an incorrect usage of the RFI/CMS acronym to identify the Phase I actions as related to the CERCLA operable unit as those which would satisfy a RCRA Facility Investigation/Corrective Measures Study for this RCRA TSD unit.

In response to the second paragraph, due to the lack of documentation and the logic as described/explained by Ecology's NOD Comments 3, 4, 5, 7, 16, etc., the reviewer cannot concur with identifying mercury "more as a potential pre-RCRA site contaminant than as a TSD unit contaminant." It will not be acceptable to modify Table 4-2 and the closure plan text to reflect the chronology of mercury deposition to the pre-RCRA site.

115. 7-2/5-8 (Section 7.1). Delete the paragraph. Insert a paragraph stating that if sampling results of all medias and equipment/accessories present and related to the unit are contaminated, removal, or decontamination will occur to those performance standards of WAC 173-303-610.

Regarding the response, as explained above in Ecology's response to NOD Comment 114, due to the lack of documentation and the logic described/explained by Ecology's NOD Comments 3, 4, 5, 7, 16, etc., pre-RCRA contaminant contributions will not be differentiated between programs during the closure of this unit. Again, delete the paragraph. Insert a paragraph stating that if sampling results of all medias and equipment/accessories present and related to the unit are contaminated, removal or decontamination will occur to those performance standards of WAC 173-303-610.

116. 7-12-15 (Section 7.3.2). The surface phase of soil sampling is described as occurring from the surface to three feet deep. Lines 33 and 34 describe extracting the sample material from the "top 1 foot of hardpack." Figure 7-2 contours the settling pond sediment depth of which it appears that at least two samples (numbers 5 and 6) may have been collected from "hardpack" occurring deeper than three feet. Clarify the discrepancies.

The reviewer is requesting clarification regarding a potentially important discrepancy. A detailed description of how the soil sampling was conducted for all samples is requested. It should be noted that the Phase II Characterization effort has been designed to address this discrepancy.

117. 7-2/13-20 (Section 7.2). The section should include a description of the precipitation of dangerous waste constituents associated with the neutralized corrosive wastes. In addition, there should be a description of the unit's connection to seven buildings and the potential discharge of dangerous waste or constituents to the unit. In addition, the section should include a description of sludge, sediment, soil, ash, etc., associated with the ponds. In addition, the section should include a description of effluent, ash, sludge, etc., associated or remaining within the unit's piping.

Regarding the first paragraph of the response, the original NOD comment requested an identification of all applicable medias associated with the unit. A description of "any precipitation constituents associated with the neutralized corrosive wastes" does not satisfy the request.

Regarding the second paragraph of the response, concur upon adequate revision of the closure plan to address the requirements of WAC 173-303-610 to describe the unit and how it will be closed.

Regarding the third paragraph of the response, please see Ecology's NOD Comment 7 regarding the inclusion of the concrete outfall structure and all process sewer piping, including the pond influent piping.

118. 7-3/34 (Section 7.3.2). The term "hardpack" is used to describe the location of sediment sampling without defining the term. Define the term. In addition, if the term is describing a "layer," the continuity of the layer should be described.

During recent DQO's which occurred on May 17 and 25 and June 1, it has been made clear to the reviewer that the term "hardpack" has been identified as being synonymous with a "caliche" layer. During subsequent DQO meetings, the term has evolved to "compacted or silted layer material." Furthermore, it is clear to the reviewer that layer cannot at this time be defined as either until field verification occurs which can eliminate the possibility of a chemical precipitation deposit directly related to the treatment activities of the TSD unit.

119. 7-3/25-27 (Section 7.3.2). From the contouring of the settling pond sediment of Figure 7-2, it appears the influent sampling location (location number 7 of Figure 7-1) is one of the two most shallow sediment depths. It does not appear (from Figure 7-1) that a sample was collected from near sediment depth measurement number 4. Considering the possible effluent discharge rates, under high flow rates of discharge, the deposition of influent most heavily contaminated with insoluble or quickly precipitated constituents may not have occurred at nonrandom sample location number 7. Identify if this concern was evaluated.

The NOD comment requested an identification of whether or not this concern was evaluated for the Phase I sampling event. If the Phase II sampling event will characterize the extent of contamination (i.e., collect non-random samples), this consideration is appropriate.

120. 7-3/24-25 (Section 7.3.2). Concur. Comment is considered closed.

121. 7-3/28-29 (Section 7.3.2). Provide a description of how the random sample locations were selected. It appears from Figure 7-1 that, if the settling pond were divided into four quadrants, the southeastern quadrant was not sampled.

The NOD comment requested a description of how the random sample locations were selected for the Phase I sampling event. The request was not satisfied.

122. Figure 7-1. It appears that no samples were taken of the mounded material in the western end of the northern pond (percolation pond). This material must be identified and evaluated during closure of the unit.

Concur. Comment will be considered closed upon field verification and agreement on mounded material.

123. Figure 7-1. It appears that no sediment or sludge samples were taken from the northern pond (settling pond), but rather, samples were collected directly from the "hardpack." Please provide the rationale for this sampling approach.

During recent a recent DQO which occurred on June 1, it was described that a "hardpan" was not identified as existing in the northern pond. It is clear that the reviewer does not understand what media(s) were sampled during the Phase I sampling event. Please provide a description of which media(s) was(were) sampled during the Phase I sampling event.

124. 7-3/41-42 (Section 7.3.2). The sentence should read "[A]ppendix A, Table A-4 provides the list of analytes sampled." For closure of this unit, decontamination confirmation will be required for 40 CFR 264 Appendix IX constituents.

Regarding the justification for full Appendix IX constituent sampling for all applicable medias during clean closure confirmation, please see Ecology's NOD Comment 16.

125. 7-3/42-44 (Section 7.3.2). Delete the sentence. Due to the lack of records and the piping connection to at least seven buildings, it is appropriate for decontamination confirmation to include 40 CFR 264 Appendix IX constituents.

Regarding the justification for full Appendix IX constituent sampling for all applicable medias during clean closure confirmation, please see Ecology's NOD Comment 16.

126. 7-3/44-47 (Section 7.3.2). Delete the sentence. For closure of this unit, decontamination confirmation will be required for 40 CFR 264 Appendix IX constituents.

Regarding the justification for full Appendix IX constituent sampling for all applicable medias during clean closure confirmation, please see Ecology's NOD Comment 16.

127. 7-4/45 (Section 7.3.6). The sentence indicates soil and sediment samples were collected in both ponds. The description of Section 7.3.4 indicates the collection of "firm subsurface soil" after the sampling device was pushed through the sediment. As it is unknown if sludges exist at the bottom of the settling pond, the distinction between sediment and soil is important. Clarify the sentence.

Regarding the response, it remains unknown if sludges exist at the bottom of the settling pond. If field verification was not performed to enable an identification of sediment versus sludge during the Phase I sampling event, it is requested an explanation/description of the lack of identification be included in the revised closure plan.

128. 7-4/47-48 (Section 7.3.6). Concur. Comment is considered closed.

129. 7-5/1-6 (Section 7.3.6). Concur. Comment is considered closed.

130. 7-5/17 (Section 7.3.7). Concur. Comment is considered closed.

131. 7-5/18-20 (Section 7.3.7). As decontamination confirmation for all medias and equipment/accessories present and related to the unit will include 40 CFR 264 Appendix IX constituents, delete the sentence.

Concur with deletion of the referenced sentence. Regarding the justification for full Appendix IX constituent sampling of all applicable medias and equipment/accessories for clean closure confirmation purposes, please see Ecology's response to NOD Comment 16.

132. Section 7.3.8. This section needs to be rewritten and relocated to occur after the decontamination and verification sections of this closure plan. Typically, the approach followed within a closure plan for a RCRA unit is to describe in detail; 1) the unit (including descriptions of all medias and equipment/accessories present and related to the unit), 2) procedures to be performed to identify the maximum extent of contamination, 3) procedures to be performed to achieve decontamination or removal, 3) decontamination verification sampling procedures, 4) analysis of the data generated during decontamination verification sampling, 5) evaluation of need for further decontamination or removal procedures, 6) etc.

Regarding the second paragraph, the reviewer does not agree that the "closure planning for RCRA units at Hanford" allows the omission of steps 2, 3, and 4. It is noted by the reviewer that the primary content of the response to NOD Comment 3 is a timing and coordination process rather than the conductance of steps 2, 3, and 4 of Ecology's original NOD Comment 132. It may be agreed that the Phase I sampling event has confirmed the existence of dangerous waste constituent contamination at the unit and the need for further characterization sampling. The clean closure confirmation logic remains the same as identified in Ecology's original NOD Comment 132.

133. 7-5/26 and 35 (Section 7.3.8). Assuming Section 7.3.8 is to be rewritten, the sentence should identify if a statistical and/or comparative (MTCA) evaluation will be performed. The inclusion of a detailed description of procedures for the evaluations is required by WAC 173-303-610(3).

It is the reviewer's interpretation of the response that it is assumed the sampling data of the Phase I sampling event can be used for clean closure confirmation purposes. If the interpretation is correct, the assumption is incorrect. It must be noted that the elevated inorganic levels measured at the unit (in surficial media samples from the southern pond) are above current MTCA residential values.

Thus, it is the reviewer's opinion that without removal and/or decontamination, clean closure of this unit is not an option at this time. Therefore, the approach to conduct a comparative evaluation between MTCA values and measured contaminant concentrations for Phase I and II sampling results is inappropriate.

134. 7-5/28 (Section 7.3.8). Concur. Comment is considered closed.

135. 7-5/31-33 (Section 7.3.8). As decontamination confirmation for all medias and equipment/accessories present and related to the unit will include 40 CFR 264 Appendix IX constituents, delete the sentence.

Regarding justification for full Appendix IX constituent sampling, please see Ecology's response to NOD Comment 16.

136. 7-5/40 (Section 7.3.8). Pond sediment is not the only media associated with this unit. Modify to include all medias and equipment/accessories present and related to the unit.

During recent DQO meetings associated with Phase II sampling, it has been agreed that the objective of the Phase II sampling event will not be that of confirming clean closure. Therefore, it is the reviewer's understanding that the Phase II sampling event will provide a status of the unit to enable decontamination and/or removal decisions to be made in the future. Therefore, for clean closure confirmation purposes, all applicable medias associated with the unit must be evaluated after decontamination and/or removal has occurred at the unit. The closure plan should be revised to differentiate between clean closure confirmation and a status-type sampling objective.

137. 7-5/44-45 (Section 7.3.8). Delete the sentence. No mechanism exists for testing the significance of a location which indicates contamination.

Either identify the mechanism by which contamination will be determined to be significant or delete the sentence. Again, the closure plan should be revised to differentiate between clean closure confirmation and a status-type sampling objective. It should be noted that it is the reviewer's opinion that unless the data is to be evaluated for clean closure confirmation purposes, there is no need to evaluate the significance of a location which indicates contamination.

138. 7-5/47-49 (Section 7.3.8). During a July 27, 1993, site visit, the ash/gravel contacts noted across and through the ponds appeared to occur at the top of the ponds and to be dipping in a westerly direction. From visual inspection, it appears that the basins were excavated through the ash into underlying soil/gravel. If noted correctly, it is inappropriate to compare pond sampling results with ash pile sampling results except in the case that the upper portion of the walls of the unit where the ash occurs is sampled. Considering comment under 4-3/1-7, if the ash/soil/gravel/etc. contacts associated with the unit cannot be established, it may be inappropriate to make the described comparisons. Modify the approach accordingly.

Regarding the second paragraph of the response, it is agreed that ignoring the ash as a fractional background medium is inappropriate. Similarly, it is inappropriate to consider the ash the primary medium in establishing local background if soil is the primary medium present in the applicable media. It may be agreed that resolution of this issue may not be necessary at this time if a modified closure option is chosen.

139. 7-5/47-52 (Section 7.3.8) and 7-6/1-4 (Section 7.3.8). Assuming Section 7.3.8 is to be rewritten, the approach should identify if a statistical or a comparative (MTCA) evaluation will be performed. A detailed description of the procedures to be followed for the approach(es) selected should be included. Guidance regarding these approaches is provided in the Washington State Department of Ecology's "Guidance for Clean Closure of Dangerous Waste Facilities" (Draft), dated April 1993.

Please see Ecology's response to NOD Comment 133. It should be noted that while a comparative MTCA evaluation has been proposed for application, where no MTCA values exist for parameters, it may be necessary for background to be generated and therefore, a statistical basis for obtaining applicable background values may be appropriate to identify. As stated above in NOD Comment 138, resolution of this issue may not be necessary at this time if a modified closure option is chosen.

140. Section 7.3.8. In the rewritten Section 7.3.8, please include a provision to submit to the Ecology Unit Manager, copies of all analytical results with associated quality assurance/quality control information generated during closure sampling activities including radiation surveys.

Regarding the first paragraph of the response, concur. Regarding the second paragraph of the response, while it is recognized that the referenced analysis does not meet all laboratory protocols, it may be argued that the information may be used in making closure decisions. Therefore, it is

requested that the field radiation survey results also be provided or at least entered onto the administrative record for this unit.

141. 7-6/11-13 (Section 7.3.9). It should be noted that the referenced analysis report will not suffice for certification of closure. It should also be noted that a period of groundwater monitoring will be required after the completion of decontamination or removal activities associated with everything other than groundwater. Upon completion of the groundwater monitoring period and if the groundwater is not contaminated, certification of closure is appropriate.

Regarding the first paragraph, please see the NOD Comment 133 response. Regarding the second paragraph, the original comment was made to identify the reviewer's interpretation that as the unit was utilized for disposal, the groundwater is a part of the unit and as such, decontamination and/or removal would be required to be confirmed for this particular media. As stated above in NOD Comments 138 and 139, resolution of this issue may not be necessary at this time if a modified closure option is chosen.

142. 7-6/13-14 (Section 7.3.9). Concur. Comment is considered closed.
143. 7-6/17 (Section 7.4). Concur. Comment is considered closed.
144. 7-6/19 (Section 7.4). Concur. Comment is considered closed.
145. 7-6/29-31 (Section 7.4). Concur. Comment is considered closed.
146. 7-6/35-37 (Section 7.4). Concur. Comment is considered closed.
147. 7-6/37-40 (Section 7.4). Concur. Comment is considered closed.
148. 7-6/39 (Section 7.4). Concur. Comment is considered closed.
149. 7-6/40-45 (Section 7.4). Delete the two sentences and insert a reference to the closure performance standards of WAC 173-303-610(2) indicating that all applicable contaminated medias and equipment/accessories associated with the unit will be removed or decontaminated.

Regarding the inclusion of applicable equipment/accessories and underlying structures, please see NOD Comment 7.

150. 7-6/51-52 (Section 7.5) and 7-7/1-4 (Section 7.5). As recited in Section 7.4, the closure plan must include "[A] detailed description of the steps needed to remove or decontaminate . . . equipment, structures, . . ." The decontamination or removal of the associated piping must be addressed in the closure plan, prior to the approval of the plan as the piping is considered part of the unit. In addition, during an August 11, 1993, unit manager's meeting, it was explained that all discharges to the unit may be ceased by March 1994. If this understanding is correct, delete or modify the referenced sentences.

Although the inclusion of the piping will likely be addressed by separate correspondence, Ecology's position regarding the piping consistently has been and remains that the piping: 1) was used to carry dangerous waste to the surface impoundment, 2) was dedicated to the surface impoundment system, 3) was used to manage dangerous waste as part of the surface impoundment (dangerous waste was considered discarded when it entered the piping), 4) may contain residuals and/or the piping may be contaminated by dangerous waste and dangerous waste residuals, 5) is required to be removed and/or decontaminated by WAC 173-303-650(6)(a)(i) and -610(3)(a)(v), and 6) must be decontaminated of dangerous waste and dangerous waste residuals and/or removed as contaminated

equipment. Also, it should be noted that the sampling of TSD unit related piping was not addressed through the DQO process for Phase II sampling in an effort to finalize characterization of the surface impoundment.

151. 7-6/Additional Section. An additional section (7.3.10) should be included which will address the determination of extent/existence of contamination. The section should include all relevant elements of a plan to meet the objectives including a description of work, a description of medias to be sampled, a description of sampling methods, an identification of analytical methods and laboratory analysis, etc.

Concur with the proposal to rewrite Chapter 7.0 to address any future sampling and/or decontamination. It is recognized that all resulting data/information obtained from characterization efforts will be incorporated and described in detail. In addition, it should be noted that if a modified closure option is chosen, approval for any future decontamination will be required to be obtained through modification of the post-closure permit.

152. Section 7.6. Delete the sentence. As stated above for Section 7.3.8, the section needs to be rewritten to include a description of 1) decontamination verification sampling procedures, 2) analysis of the data generated during decontamination verification sampling, 3) evaluation of need for further decontamination or removal procedures, 4) etc. In addition, a period of groundwater monitoring will be required after the completion of removal or decontamination activities associated with everything other than groundwater.

Concur with the inclusion of additional applicable bullets. While the usage of a standard format is acceptable, it should be noted that this section does not satisfy as a description of the three items initially identified in this deficiency. It is recognized that a DQO is currently underway to achieve a characterization of the unit. It is also recognized that the resulting characterization information will be used as described by USDOE/WHC's response to Comment 155. In addition, it is recommended that additional applicable bullets which address "modified closure" activities be incorporated where appropriate.

153. Section 7.6. Concur. Comment is considered closed.

154. 7-7/9 (Section 7.6). Concur. Comment is considered closed.

155. 7-7/10 (Section 7.6). The closure plan should include enough detail to allow for a description of activities to be performed. Delete the word "may."

During the DQO process, it has been agreed that a Phase II characterization for the unit is needed in order to formulate the extent of physical activities necessary to close the unit. The main objective of the characterization effort is to obtain enough information to allow closure considerations to be made. Concur with the proposal to revise this section as indicated.

156. 7-7/16 and 18 (Section 7.6). Concur. Comment is considered closed.

157. Section 7.6. Concur. Comment is considered closed.

158. 7-7/23 (Section 7.7). Concur. Comment is considered closed.

159. 7-7/33 (Section 7.7). Concur. Comment is considered closed.

160. 7-7/35 (Section 7.7). Delete the wording "as rapidly as practicable" and insert an action or activity that will trigger the referenced stabilization activities.

The proposed wording should not be limited to dangerous waste, but should also include dangerous constituents, leachate, contaminated run-off, and dangerous waste decomposition products and should be directly related to concentrations measured at the unit. It should be noted that if a modified closure option is chosen, Condition II.K.3.c. of the Hanford Facility Permit specifies activities resulting from a modified closure shall be specified in a post-closure permit application. It is requested that a closure/post-closure permit application format be identified which will detail the various closure-related considerations.

161. 7-7/41-42 (Section 7.7). Delete the phrase "following the 100-DR-1 operable unit RFI/CMS" and insert a description of what action or activity will trigger the referenced submittal of a final closure cover design.

Please see the response to NOD Comment 160 regarding a modified closure option and the status of the unit in a post-closure permit application. Again, if a modified closure option is chosen, while a final closure decision for the 100-D Pond unit may be pending on a CERCLA ROD related to the 100-DR-1 operable unit, the 100-D Pond will remain in a modified closure status (which will be detailed in a post-closure permit). In addition, upon issuance of the ROD for the 100-DR-1 operable unit, the 100-D Pond post-closure permit would be required to be modified prior to the implementation of further closure activities (to include detailed descriptions of stabilization and cover design and removal and/or decontamination). Again, delete the phrase or re-write the bullet to identify the post-closure permit modification process just described.

162. 7-8/43-44 (Section 7.7.2.1). Concur. Comment is considered closed. Again, it should be noted that if the unit will be statused as a modified closure, upon final decision dictated by the CERCLA 100-DR-1 OU ROD, the post-closure permit will be required to be modified to detail further closure actions. This is to say the plan currently does not include enough detailed description of stabilization and cover design and removal and/or decontamination to be approved for implementation. Therefore, it is requested that where applicable, a commitment be included to modify the post-closure permit accordingly prior to implementation of further closure activities.

163. Pages 7-8 - 7-15 (Sections 7.7.2 through 7.7.3.4). Concur. Comment is considered closed. Please see NOD Comment 162 and include a commitment to modify the post-closure permit accordingly prior to implementation of further closure activities. This is to say that the closure plan currently does not include enough detailed description of stabilization and cover design to be approved for implementation.

164. Pages 7-8 - 7-15 (Sections 7.7.2 through 7.7.3.4). If decontamination or removal (clean closure) is not attained, a RCRA cover should be designed and constructed with best available technology at the time of construction. If a cover is required, a detailed cover design including construction specifications must be submitted to Ecology for approval prior to construction. Include a provision to submit the detailed construction specifications in the event that "clean closure" is not achieved.

Concur. Comment is considered closed. It should be noted that if a modified closure option is chosen, the inclusion of a provision to submit the detailed construction specifications in the event that "clean closure" is not achieved is no longer required. It should also be noted that prior to implementation of further closure activities, a modification of the post-closure permit will be required as described in NOD Comment numbers 161, 162, and 163. Therefore, include a provision to submit detailed construction specifications as a permit modification request prior to implementation of further closure activities (stabilization and cover construction or removal and/or decontamination).

165. 7-13/11-12 (Section 7.7.3.3.1). The statement that no wastes have been buried below the 100-D Ponds is not an accurate reflection of the usage of the ponds for disposal purposes. Either clarify the statement or add another statement which reflects disposal.

Concur with the addition of a statement that no buried, containerized waste is known to exist at the site. It is requested that if the statement "compression and consolidation of sediments will occur with dewatering" is to be added, a statement also be added which describes resulting sludges from the treatment, as well as the probable precipitation and deposition of dangerous waste constituents (as has been evidenced by Phase I characterization sample results).

166. 7-13/12-12 (Section 7.7.3.3.1). The closure plan does not address the possibility of the existence of wastes at the unit. In addition, due to the continued usage of the ponds, wastewater does exist. Therefore, consolidation and compression of wastes can occur by dewatering of wastes. Either clarify the statement or add another statement which reflects that prior to closure, removal or decontamination of existing wastes will occur. Also, clarify that in the event that closure in place is required, dewatering of the ponds will occur prior to the initiation of closure activities.

Concur that the ponds have been dewatered by the time of post-closure permit issuance or further closure activity implementation. Please see NOD Comment 165 regarding revision of this portion of text.

167. Section 7.8. Modify as necessary to incorporate any additional necessary training courses to achieve the decontamination or removal requirements associated with closure.

If a modified closure option is chosen, only the necessary training to address modified-closure monitoring and applicable institutional control monitoring/inspections/maintenance/etc. activities is required to be described (in the post-closure permit application). Therefore, revise Section 7.8 accordingly, to describe necessary personnel training applicable to a modified closed unit.

168. 7-15/12 (Section 7.8). Due to the number of necessary changes to the closure plan, a definition of "actual closure activities" is requested. If closure-related work is to be done prior to the approval of the closure plan, a clear identification of which activities will be performed through this plan is requested.

Concur with the proposal to submit future closure activity work plans to the lead regulatory agency for review prior to implementation. Please see NOD Comments 160, 161, 162, 163, and 164. Again, if further closure activities are to occur after a post- (modified-) closure permit is issued, such activities would be required to be approved through the permit modification process as specified by Hanford Facility Permit, Condition I.C.

169. 7-15/21 (Section 7.9). Concur. Comment is considered closed. It should be noted that Section 7.9 will very likely change substantially prior to the issuance of a post- (-modified) closure permit. To further explain, characterization of the surface impoundments will very likely be completed by the Phase II Characterization Sampling, the results of which will be included elsewhere in the permit. Also, as stated in NOD Comment number 168, any future closure activities will be approved through the permit modification process. In conclusion, this section will very likely describe the modified closure status and no further closure activity scheduled until the permit is modified.

170. Figure 7-3. The closure schedule should be re-drawn to reflect the modifications that will be made to the closure plan.

Concur with revision of the figure. It should be noted that if a modified closure option is chosen, the closure schedule will likely have very little to reflect. Again, revise the schedule accordingly, noting that it is unnecessary to reflect Phase II Sampling scheduling as this is not considered a closure activity.

171. Figure 7-3. Delete footnote number 1. The activities described in the closure plan do not meet the requirements of WAC 173-303 and cannot be approved as a "RCRA/TSD unit" integration.

Concur with the revision of the closure schedule. Please see NOD Comment numbers 160 through 164, 168, 169, and 170 regarding the issuance of a post-closure permit if the modified closure option is chosen and the subsequent modification of that permit prior to implementation of further closure activities (after the 100-DR-1 CERCLA ROD is approved). Concur with the commitment to integrate further closure activities where applicable and possible. Again, either delete the footnote or re-write the footnote describing the permit modification process prior to implementation of further closure activities. Lastly, it should be noted that this particular footnote will very likely not be applicable as the revised table will very likely not reflect further closure activities (as those will be detailed in a permit modification application).

172. Figure 7-3. Delete footnote number 2. As integration has not been achieved, the completion deadlines associated with the operable unit are not necessary within this document.

Please see NOD Comment 171.

173. Figure 7-3. Modify the figure to reflect the schedule of activities only associated with the closure of 100-D Ponds. In addition, such activities should include conductance of a radiation survey, decontamination or removal to identified cleanup levels, decontamination verification sampling, analyze verification sampling, evaluate data, further decontamination or removal, decontamination verification sampling, etc.

Regarding redrawing the schedule to reflect only those closure activities associated with this unit, please see the responses to NOD Comments 170, 171, and 172.

174. Figure 7-5. Modify the dates and months to agree with the closure activities and dates that will be performed upon approval of the closure plan.

Concur with the updating of the schedule to coincide with revised TSD unit closure activities. Comment is considered closed. It should be noted, as reflected by responses to NOD Comments 160 through 164, 168 through 170, etc., that this contingency closure may not be applicable if a modified closure option is chosen.

175. Section 7.11. Concur. Comment is considered closed.

176. Chapter 7. Concur. Comment is considered closed. It should be noted that one example of applicability may occur through Hanford Facility Permit Condition, II.K.3.c., which requires the submittal of a post-closure permit application in the event that a modified closure option is chosen. If this is the case, either the existing closure plan will require modification or a post-closure permit application will be required to be generated.

177. Chapter 7. Concur. Comment is considered closed. It should be noted that this issue has been resolved for the Phase II Characterization Sampling through the DQO process.

178. Figure 7-4. Concur. Comment is considered closed.

179. 7-16/7.11 (Section 7.11). Concur. Comment is considered closed.
180. 8-1/17 (Section 8.1). Concur. Comment is considered closed.
181. 8-1/16 (Section 8.1). Concur. Comment is considered closed.
182. 8-1/28 (Section 8.1). Concur. Comment is considered closed.
183. 8-1/43 (Section 8.1). Concur. Comment is considered closed.
184. 8-2/8 (Section 8.2). Concur. Comment is considered closed.
185. 8-2/10-12 (Section 8.2). Concur. Comment is considered closed.
186. 8-2/13-15 (Section 8.2). Add a statement which reflects that, if applicable, post-closure care of the property will be conducted in accordance with WAC 173-303-610(7), 650(6), and 645. It should be noted that the RCRA requirements of WAC 173-303 must be satisfied and cannot appropriately be deferred to another program. As stated above under Comment 1-2/17-19, the TPA provides for a simultaneous investigation of groundwater contamination for RCRA TSD units and CERCLA operable units. The reviewer interprets this provision to address groundwater contamination and ultimately corrective action(s) associated with the units. It is inappropriate to defer decontamination verification activities related to the RCRA TSD to another program. In addition, if corrective action is required (i.e., groundwater monitoring indicates the disposal unit is the source of contamination), the corrective action requirements of WAC 173-303-645 will be imposed.

Concur with the revision of the text to indicate that post-closure care of the property will be conducted in accordance with WAC 173-303-610(7) and 650(6) and will meet the technical requirements of WAC 173-303-645. It should be noted that if a modified closure option is chosen, the applicable post-closure care/institutional controls will be described in detail in a post-closure permit application.

Regarding the implementation of the groundwater corrective action requirements of WAC 173-303-645, please see the responses to NOD Comments 5 and 4 respectively.

187. 8-2/15 (Section 8.2). Write out the words for the "RFI/CMS" acronym.

Please see the response to NOD Comment 70.

188. 8-2/24 (Section 8.2). Include that the data will also be used to comply with WAC 173-303-610, 650, and 645 requirements.

Concur with revision of the text to include the requested referenced citations. Regarding the adherence to the technical requirements of WAC 173-303-645, please see the response to NOD Comments 4 and 5.

189. 8-2/42-45 (Section 8.2.1). Delete the sentence and specify that the postclosure inspection will continue until such time as is specified by WAC 173-303-610, 650 and 645.

Concur with the deletion of the statement. As indicated by responses to NOD Comments 174, 176, 187, and 188, if applicable, post-closure care/institutional control provisions will be required to be detailed in a post-closure permit application.

190. Section 8.2.1.1. Concur. Comment is considered closed.

191. 8-4/21-30 (Section 8.2.2). Specify that the groundwater monitoring will be conducted under an approved, postclosure groundwater monitoring plan, if applicable. Delete the description of the current groundwater monitoring program.

While it is appropriate to assess the groundwater monitoring program at the time of closure and when a change to the unit has occurred which might impact groundwater quality (the ceasing of discharges), the groundwater monitoring program must be evaluated for the closure option chosen. To further explain, if a modified closure option is chosen, the groundwater monitoring program must be evaluated to determine the appropriate groundwater monitoring frequency and constituents to be monitored during the post-closure care/institutional control period. Therefore, the proposed revised text is only applicable until such time that a closure option is chosen.

192. 8-4/32-35 (Section 8.2.2). See comments under 5-1/12-15, 5-1/22 and Chapter 5.0. The groundwater monitoring program which will be implemented should be described here.

Please see NOD Comment 27.

193. 8-4/37-45 (Section 8.2.2). Cite WAC 173-303-645 and indicate that the groundwater detection, compliance, and/or corrective action program(s) will be conducted in accordance with those requirements.

Concur that the interim status groundwater monitoring program can suffice for unit closure if the program meets the technical requirements of the final status program. Please see the response to NOD Comment 27 and 191, which indicate that the current groundwater monitoring program has been interpreted to be interim status assessment monitoring and that upon selection of a closure option, the current groundwater monitoring program should be assessed for adequacy and applicability.

194. 8-5/24 (Section 8.2.3.2). Concur. Comment is considered closed.

195. 8-5/25-27 (Section 8.2.3.2). Concur. Comment is considered closed.

196. Section 8.2.3.3. Concur. Comment is considered closed.

197. 8-8/47 (Section 8.2.5.1.3). Concur. Comment is considered closed.

198. 8-8/40-43 (Section 8.2.5.1.3). What time frame is the statement referring to? If Sitewide controlled access requirements change prior to closure, is the building of a fence being proposed? The statement is unclear.

Please see the response to NOD Comment 11 which addresses the barrier issue associated with this unit.

199. Section 8.4. Concur. Comment is considered closed.

200. 8-9/29-36 (Section 8.5). Concur. Comment is considered closed.

201. 8-9/38-40 (Section 8.5). Concur. Comment is considered closed.

202. Section 8.6. Concur. Comment is considered closed.

203. Table 8-1. Concur. Comment is considered closed.

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