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CHRISTINE O. GREGOIRE
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November 21, 1989

Mr. Roger Freeberg
Hanford Project Manager
U.S. Department of Energy
P.O. Box 550
Richland, Washington 99352

Dear Mr. Freeberg:

Re: Notice of Deficiency for the 616 Storage Facility

This letter transmits Ecology's comments on the 616 Nonradioactive Dangerous Waste Storage Facility Part B Application. The permit application was reviewed for compliance with final facility status standards in the state Dangerous Waste Regulations (chapter 173-303 WAC).

Overall, the application was well done. Primary areas of remaining concern are as follows:

- 1) The waste analysis plan was deficient as it relied almost exclusively on the generator being responsible for designating the waste. Although this is not as large of a problem at Hanford as it is in the private sector, it is still a concern and Ecology will therefore require some verification sampling to occur at the 616 Facility.
- 2) The French Drain and Tile Field are of concern as they represent the most likely route for release of hazardous constituents into the environment. Every effort must be taken to prevent this from occurring and as such, Ecology will require additional detail on the aspects of the permit application involving these systems.
- 3) The closure plan must be revised to more adequately verify clean closure status, i.e. include more detailed sampling.
- 4) The procedures outlined in the Appendices are only "Sample Procedures" and not the actual facility procedures. Before the facility can receive its final permit, Ecology must review and approve actual procedures utilized by facility personnel.

Ecology requests that USDOE/WHC respond to this Notice of Deficiency by responding to individual comments rather than redrafting the permit application. This will allow a more efficient response and review for outstanding issues. The permit application should be redrafted as part of the second NOD response.



START

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Should you have questions or concerns regarding this Notice, please contact me or Mr. Toby M. Michelena at (206) 438-7020 or (206) 438-7016 respectively.

Sincerely,



Roger Stanley
Hanford Project Manager

RS:tkr
Enclosure

cc: Paul Day - EPA
Jack Waite - WHC

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Enclosure
Notice of Deficiency
616 Nonradioactive Storage Facility

Page

1) 1-1 Section 1.1

Comment: Citation reads "(WAC) 173-303-630 (Ecology 1989)."

Requirement: Citation must give most recent version of 173-303. This is currently January 1989. Please change the reference appropriately.

2) 2-6 Section 2.1.2.2 Paragraph #3

Comment: This paragraph discusses the containment and clean-up procedures for spills into the containment. A reference to Section 7 (Contingency plans) should be given.

Requirement: Please modify this section accordingly.

3) 2-7 Section 2.1.2.2 Paragraph #2

Comment: The text discusses the location and design of the heating and ventilation system with no referenced design drawings.

Requirement: Please include the design drawings for the entire facility. This should include the ventilation and exhaust systems. This comment also applies to all other facility drawings.

4) 2-7 Section 2.1.2.2.1

Comment: The text states there is a 2 hour fire-wall and a 1 1/2 hour fire-rated door.

Requirement: The effectiveness of the fire barriers is only as good as the lowest fire rated component, in this case the doors. Please justify the difference in fire-rating between the doors and the walls. This justification should be sufficient for all similar fire-rating discrepancies stated throughout the text.

5) 2-8 Section 2.1.2.3 Paragraph #3

Comment: The text states that administrative controls will prevent the release of dangerous wastes into the sink, with the associated discharge to the tile field, without detailing the administrative controls employed to accomplish this task.

Requirement: Detail the administrative controls utilized to prevent the discharge of dangerous wastes into the sink.

6) 2-9 Section 2.1.2.4

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6) 2-9 Section 2.1.2.4

Comment: The text outlines the equipment and material stored in the Packaging and Equipment Handling area without a complete inventory of materials, or a reference to Section 6 (Procedures to Prevent Hazards) or Section 8 (Contingency Plans) for further discussion.

Requirement: Either provide a detailed inventory for this equipment or reference the appropriate section in this application for further discussion.

7) 2-9 Section 2.1.2.6

Comment: The text describes the loading and unloading pad with the trench for liquid collection. The text further discusses the removable plug in the trench to allow rain water to be discharged to a French Drain. This is an extremely vulnerable aspect of the design of the 616 Building. It is difficult to ensure that the plug in this trench is always secured and functioning. Should a release occur into the French Drain, clean closure would only become possible with a very expensive removal action.

Requirement: Outline the administrative controls which will ensure this system will not allow a discharge of hazardous constituents into the environment or design and implement a better valve system (as opposed to the plug) for the trench.

8) 2-9 Section 2.1.2.6

Comment: The plan discusses the "French Drain" associated with this facility but no drawings are provided.

Requirement: Please provide detailed drawings of the French Drain system for this building. This comment also pertains to the tile field which is depicted only in a general manner.

9) 2-10 Section 2.1.2.6

Comment: The text states that the personnel will monitor the pH prior to discharging the contents of the trench without giving any justification for monitoring only pH.

Requirement: A pH only monitoring program for liquids in this trench prior to discharge is unacceptable. Due to the diverse nature of material handled in this facility and the consequences of a discharge to the French Drain, a more detailed monitoring program is required. Please modify this section accordingly.

10) 2-10 Section 2.2

Comment: The topographic map outlines the legal boundaries of the facility yet no legal description is given.

Requirement: Please provide a legal description of this facility.

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11) 2-10 Section 2.3.1

General Comment: Ecology is currently evaluating the necessity of requiring seismic analysis for all facilities on the Hanford site. Section 2.3.1 will be re-evaluated upon completion of this determination.

12) 2-17 Section 2.5.1

Comment: The text outlines the facility's abilities for protection of groundwater yet no discussion is made of the French Drain or Tile Field. Without properly addressing these issues, this section is inadequate.

Requirement: Please modify this section accordingly.

13) 2-18 Section 2.5.7

Comment: The text states that the soil was compacted prior to construction of the 616 facility yet no details of this are given.

Requirement: Please detail how the soils were compacted prior to construction.

14) 3-1 Section 3.1

Comment: The text states that the generating units are responsible for designating the wastes they produce. This is true, however this does not alleviate the receiving facility (i.e. 616) from verifying wastes accepted.

Requirement: Please modify this section to address the 616 facilities responsibility for waste verification. This must include modifying Section 3 to include a waste sampling program for verifying loads received at the facility.

15) 3-2 Section 3.1

Comment: The text states that 616 receives empty waste drums without discussing the sources or handling of these drums.

Requirement: Please modify this section or include a discussion elsewhere which better describes the empty drums received and the procedures for processing them.

16) 3-2 Section 3.1

Comment: The text states that containerized wastes which cannot be assigned a waste code are accepted at this facility.

Requirement: Please detail why these wastes are accepted and how they are treated. This facility should only receive hazardous wastes destined for off-site shipment.

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17) 3-5 Section 3.2 Paragraph #4

Comment: The text states "...waste is either tested for radioactivity or exempted from this testing based on waste location and history."

Requirement: Please provide a list, including justification, of on-site points of generation which would produce waste exempt from radiation screening.

18) 3-5 Section 3.2

Comment: The first bullet under "Waste Disposal Analysis" states that the TSD staff will conduct a waste designation. Is this a verification of the designation provided by the generator or is this the first designation of the waste?

Requirement: Please clarify this statement.

19) 3-6 Section 3-2 Paragraph #1

Comment: The text discusses the responsibilities of the TSD technical staff. Is this staff from the 616 Facility or from another group at Hanford?

Requirement: Please clarify "staff."

20) 3-6 Section 3-2

Comment: The "Waste Spill or Leak Identification" paragraph should reference Section 8 (Contingency Plans).

Requirement: Please modify the text accordingly.

21) 3-6 Section 3.2.1

Comment: This discussion states that "Discarded Chemical Formulations" constitute the bulk of the waste generated on-site. As "Discarded Chemicals" have a very specific meaning in WAC 173-303, this statement does not seem reasonable.

Requirement: Please define "Discarded Chemical Formulations" and provide justification for this statement.

22) 3-7 Table 3-3

Comment: Apparently, Biological Testing was inadvertently omitted from this table.

Requirement: Please modify the table to include biological testing.

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23) 3-7 Table 3-3

Comment: The TCLP testing required for certain Land Disposal Restricted wastes is not on this table.

Requirement: Please justify this omission or include it as an appropriate designation.

24) 3-11 Section 3.2.3

Comment: This section describes sampling methods for waste designation. Is this done at the 616 facility or at the point of generation?

Requirement: Please clarify this point.

25) 3-11 Section 3.2.3 Paragraph #2

Comment: This paragraph discusses sampling material which has phase separated by using a COLIWASA for obtaining a composite sample.

Requirement: Waste which has phase separated must be sampled and designated for each phase in the container. Please modify this sampling procedure to clarify this issue.

26) 3-12 Section 3.2.3

Comment: The first paragraph states that "... will be handled so that analytical interference ... will be precluded." The second paragraph gives one example and no other justification or procedure is given.

Requirement: Further explanation of the steps taken to ensure cross-contamination of samples and sampling equipment does not occur is required.

27) 3-12 Section 3.2.4

Comment: This paragraph discusses the designation procedure to be followed if a continuous waste stream is generated on-site. This procedure would be to give a one-time designation with an annual verification of this designation. Although the annual verification may be acceptable (depending on the waste stream) more than the initial stream characterization would be required to ensure that the stream is consistent.

Requirement: Please modify this discussion to recognize a more intensive waste stream analysis is required for an initial designation of a continuously generated waste stream.

28) 3-12 Section 3.2.5 Paragraph #3

General Comment: This paragraph discusses designation based upon process knowledge. There is far too much reliance on process knowledge for waste stream characterization and designation on the Hanford site.

Hanford staff should consider undertaking a site wide re-evaluation of the use of process knowledge to designate waste streams.

29) 3-15 Section 3.2.5 Paragraph #3 (of pg 3-15)

Comment: This paragraph states "[w]aste shipments are not analytically verified" This is not acceptable.

Requirement: There must be some type of waste shipment verification (to include analytical verification) of incoming waste streams. This NOD will not mandate a specific frequency of verification but will require a revision of this section to include such sampling for inclusion in the next application submittal for review and approval.

30) 3-18 Figure 3-6

Comment: This figure is barely legible.

Requirement: Please enlarge this figure so it is more readable.

31) 4-4 Section 4.1.1.4

Comment: This paragraph outlines the use of "Aquapon" as a concrete sealant and refers the reader to Appendix 4C for further details. Appendix 4C only has the MSDS for this product and no performance evaluations.

Requirement: Please provide further documentation on this product. Of particular importance will be information which details the performance of this material when exposed to the various waste types located in the 616 Facility.

32) 4-4 Section 4.1.1.4

Comment: The text describes cement crack repair yet there are no details of this procedure.

Requirement: Please provide a procedure for cement crack repair.

33) 4-4 Table 4-3

Comment: Table 4-3 states the Storage Cell Volume in gallons. This volume is based upon double stacking containers in rows as depicted in Figure 6-3. There should be no double stacking of drums which are in one row as is shown for row 3 in the Acid, Combustible, Oxidizer, and Caustic Cells.

Requirement: Please modify Section 4.1.1.6, Table 4-3, Figure 6-3 and any other section affected by this comment.

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34) 4-5 Section 4.1.1.7

Comment: The text describes the procedures for collecting run-on to the facility but no reference is made to Section 7 (Contingency Plans) where these procedures are spelled out in more detail.

35) 5-1 Section 5.0
Requirement: Please include a reference to the appropriate section.

General Comment: This statement is true until the French Drain or Tile Field systems receive dangerous wastes (See Comments 7 and 8).

36) 6-1 Section 6.1.1.3

Comment: This paragraph seems to say that the facility is occupied from 7:30 to 4:00 daily. This is misleading. Conversations with facility staff have shown that the facility is only occupied when waste is being received, moved or inspected.

Requirement: Please clarify this section.

37) 6-4 Section 6.3.1.1

Comment: The text describes the onsite communications system yet no references to locations are given.

Requirement: Please include in Figure 6-1 the locations of internal and external communications devices (See Comment #3).

38) 6-5 Section 6.3.1.3

Comment: This section outlines the types of available emergency equipment but not the exact inventory.

Requirement: Please provide the inventory and locations of all emergency equipment.

39) 6-7 Section 6.3.2

Comment: The aisle space between the waste containers and the wall should be 3 feet.

Requirement: Please amend this section appropriately.

40) 6-9 Figure 6-3

General Comment: Please refer to Comment 33

41) 6-11 Section 6.5.1

Comment: This paragraph states that water reactive wastes are stored in waterproof cabinets in the flammable liquid storage cells. Figure 6-3 does not show these cabinets as part of the storage layout.

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Requirement: Please modify Figure 6-3 accordingly. Similarly Figure 6-3 should show the location of other storage units (such as wall racks).

42) 7-1 Section 7.0

Comment: Paragraph 2 states this is a "summary emergency plan." This plan should not be a summary; it should be the entire emergency plan.

Requirement: Please modify accordingly.

43) 7-3 Section 7.2

Comment: The emergency coordinator is not identified.

Requirement: The plan must identify (by name and position) the emergency coordinator for this facility.

44) 7-3 Section 7.2.1 Paragraph #2

Comment: The text states that the building emergency director is not on call 24 hours/day. The person who is on call must be familiar with the facilities and emergency procedures for this building.

Requirement: Please clarify the text to appropriately explain this.

45) 7-5 Section 7.2.2

Comment: The first bullet identifies the "Building Warden" in the emergency organization. What is a building warden?

Requirement: Please clarify this position.

46) 7-5 Section 7.2.2.1

Comment: This section briefly explains the "Building Emergency Organization" without identifying these key personnel.

Requirement: Please identify these persons.

47) 7-14 Section 7.3

Comment: The text discusses the NRDWSF emergency plan. This plan is apparently not included in this document.

Requirement: Please include the emergency plan in this document for review and approval.

48) 7-18 Section 7.4.1.3 First Bullet

Comment: The text references reportable quantities for notifications of releases. The State of Washington Dangerous Waste Regulations do not use reportable quantities for notification and response purposes.

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Requirement: Please strike any reference to reportable quantities for releases to the environment. Ecology will address this issue on a site wide basis in the General Hanford Permit. For purposes of this application, Ecology will provide guidance to Energy prior to the next NOD response cycle.

49) 7-18 Section 7.4.1.3 Fourth Bullet

Comment: The Ecology telephone number is the general Ecology reception number. The notification number for Hanford should be (206) 438-7016.

Requirement: Please modify this bullet accordingly.

50) 7-20 Section 7.4.2

Comment: The fifth bullet discusses the possibility of permanent stabilization of spills. If clean closure is the strategy for this facility and Ecology agrees not to insist on a Post-Closure Plan for this facility, permanent stabilization is not an option for spill remediation.

Requirement: Either strike this language and revise any internal spill response procedures to ensure full removal of any release or submit a Post-Closure plan for addressing permanent stabilization as an option for spill remediation.

51) 7-32 Section 7.4.16.1

Comment: The text mentions seismic activity as a potential natural event which could effect 616 operations. There is, however, no discussion in the application as to the facility's design capability of withstanding such an event.

Requirement: Please state the size of earthquake which the 616 Facility could withstand without structural damage.

52) 7-33 Section 7.4.16.3

Comment: The last section on this page discusses the procedures to be implemented in case of an emergency power outage. The third bullet of this procedure states the outside doors will be opened and the inside doors will be closed "[i]f instructed by supervision," The staff should be trained to the point that they could make this determination without approval from "supervision."

Requirement: Please modify this section accordingly or justify otherwise.

53) 7-37 Figure 7-4

Comment: This map is not readable.

Requirement: Please resubmit this map in a larger scale.

9 1 1 8 9 4 0 4 9 5

54) 7-44 Section 7.6.5

Comment: This paragraph discusses the Hanford Exposure Evaluator. There is, however, no discussion of what this is.

Requirement: Please explain in the text of this section what the Hanford Exposure Evaluator is.

55) 11-2 Section 11.1.1.1

Comment: This section discusses the decontamination of the equipment and concrete in the facility. The text states that decontamination will continue until the rinsate is no longer designated. The determination for decontamination will not be the solution but will be based upon how clean the equipment or concrete is.

Requirement: Please revise this section to properly address the decontamination of equipment and concrete. This must include established clean-up levels (to include sample verification) of the material in question.

56) 11-2 Section 11.1.1.1 Paragraph #2

Comment: The text states that background will be taken by coring the walkway. This is not adequate. Background will need to be at a point outside the potential area of impact. This would ideally be at a point outside any of the operative (100, 200 etc.) areas.

Requirement: Please rewrite this section to include a more appropriate background sampling point. This comment applies to all discussions on background sampling in this application.

57) 11-8 Section 11.1.4.3

Comment: The text describes the process for decontaminating the walls of the facility. There is, however, no discussion of verification sampling.

Requirement: Please revise this section to include verification sampling. This comment is also applicable to the discussion in Section 11.1.4.3.1 (Sampling and Decontamination of Concrete Floor).

58) 11-11 Section 11.1.4.3.2 Paragraph #2

Comment: The text discusses decontamination of the north "and/or" east loading pads. Both of these pads must be included in the sampling and decontamination process.

Requirement: Please revise this section appropriately.

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59) 11-11 Section 11.1.4.3.2 Paragraph #2

Comment: This paragraph also discusses the grid sampling process for the pads and the soils immediately surrounding the pads. There is no clear discussion of how extensive the grid will be in incorporating the adjacent soils.

Requirement: Please expand this discussion to better clarify the extent of soil sampling (horizontal). The plan must extend several grid sizes off of the cement pad.

60) 11-12 Section 11.1.4.3.2

Comment: The first partial paragraph on this page states that soil samples will only be collected on the surface. This is not acceptable.

Requirement: The soil sampling must occur to a prescribed depth. Please revise this section to include vertical sampling of the soils.

61) 11-12 Section 11.1.4.4

Comment: The proposed constituents for analysis in sampling the tile and french drain systems are to be limited to those of documented spills. Due to the potential constituents which may be discharged to these systems, a full Appendix IX analysis must be accomplished.

Requirement: Please modify this section accordingly.

62) 11-12 Section 11.1.4.4 Paragraph #2

Comment: The text states that one core sample will be taken in the french drain system. This is inadequate.

Requirement: Please revise this section to include a more comprehensive sampling and analysis plan for this site.

63) 11-16 Section 11.1.7

Comment: This section discusses potential extensions for the 180 day closure completion time limit. Lack of Congressional funding is given as an example of a reason for requesting an extension. Congressional funding is not an acceptable reason for requesting an extension.

Requirement: Delete the reference to Congressional funding.

64) 11-17 Section 11.3

General Comment: At present there is no Post-Closure Plan incorporated in the application. Due to the nature of this facility, Ecology agrees that clean closure is realistic and hence will not require submission of a Post-Closure Plan at this time. This position will be evaluated yearly based upon the operating record of the facility. If at any time Ecology determines that releases to the

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environment have occurred and inappropriate responses have been made, a requirement for preparation and inclusion of a Post-closure plan into the permit will be made. This annual facility review will be included in the permit once it is issued.

65) 11-17 Section 11.6

Comment: The closure cost estimate references the federal regulations. The plan must reference the appropriate state regulation.

Requirement: Please revise this section to include the proper state citation.

66) 12-4 Table 12-1

Comment: The table erroneously shows that the Closure Cost estimates are not required. Please refer to comment #65.

Requirement: Please modify the table accordingly.

67) 12-9 Section 12.4.1.6.1

Comment: The last paragraph on this page discusses notification procedures. Ecology does not have reportable quantities as a trigger for notification of releases. We require notification of any release. Please refer to Comment 48.

Requirement: Please revise this section accordingly.

68) 12-15 Section 12.4.2.3.3

General Comment: Please refer to Comment 65.

69) Appendix 2B-ii

Comment: This appendix gives "Sample Procedures". Sample procedures are not adequate. The actual procedures must be given. This appendix will not be reviewed until the actual procedures are given. It should be noted that changes in the procedures (after the permit has been issued) would not require a major modification of the permit in most cases.

Requirement: Please submit the actual procedures for 616 facility operations for review and approval.

70) Appendix 8A-ii

Comment: This appendix gives "Sample Training Course Summaries". Sample summaries are not adequate. The actual course descriptions are required (See comment #69).

Requirement: Please submit the actual training course descriptions for review and approval.

DISTRIBUTION COVERSHEET

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Subject NOTICE OF DEFICIENCY FOR THE 616 STORAGE FACILITY		

11/28/89JLW:dh Internal Distribution

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