



STATE OF WASHINGTON
DEPARTMENT OF ECOLOGY

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February 12, 2003

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EDMC

Mr. Gregory Sinton
United States Department of Energy
P.O. Box 550; MSIN: A6-38
Richland, Washington 99352

Dear Mr. Sinton:

Re: Notice of Deficiency Comments for Chapter 8 from the Draft Hanford Facility Dangerous Waste Permit Application Part B, Low-Level Burial Grounds, Revision 2, United States Department of Energy/RL-88-20, Submitted June 27, 2002, and Low-Level Burial Grounds Dangerous Waste Training Plan, Revision 5, HNF-1221

The Washington State Department of Ecology (Ecology) has reviewed the United States Department of Energy's (USDOE) Draft Low-Level Burial Grounds (LLBG) Dangerous Waste Permit Application Part B and has attached Notice of Deficiency (NOD) comments for chapter 8 (Personnel Training). In addition, Ecology has reviewed the LLBG Dangerous Waste Training Plan and has attached comments to parallel the chapter 8 NOD comments.

Ecology appreciates the support you and your contractors have provided. If you have any questions, please feel free to contact me at (509) 736-5721.

Sincerely,

Matt Mills
Permit Lead, Low Level Burial Grounds
Nuclear Waste Program

MM:nc
Attachments

cc w/attachments: Dennis Faulk, EPA
Ellen Mattlin, USDOE-RL
Jeannett Hyatt, FH

Dan Saueressig, FH
Environmental Portal
Administrative Record: LLBG

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Comments on LLBG Dangerous Waste Training Plan Rev. 5

1. **General:** Please include an acronym list – unable to find where the acronym SWSD was spelled out in the training plan.

2. **Page 2, Section 1.0, Para. 1:** The text states “Satellite accumulation areas are not subject to WAC 173-303-330,”. This statement is incorrect. In accordance with WAC 173-303-200(2)(c), Ecology can require satellite accumulation areas, on a case-by-case basis, to be managed in accordance with all or some of the requirements under WAC 173-303-200(1), (WAC 173-303-200(1)(e)(i) includes training requirements), if the nature of the wastes being accumulated, a history of spills or releases from accumulated containers, or other factors are determined by Ecology to be a threat or potential threat to human health or the environment. The remainder of the paragraph, “but certain generator activities...” is unclear and should be explained.

Requirement: Revise the paragraph as follows: “Normally, satellite accumulation areas are not subject to WAC 173-303-330, however, Ecology can require satellite accumulation areas, on a case-by-case basis, to be managed in accordance with all or some of the requirements under WAC 173-303-200(1), which includes training plan requirements in WAC 173-303-330, if the nature of the wastes being accumulated, a history of spills or releases from accumulated containers, or other factors are determined by Ecology to be a threat or potential threat to human health or the environment. Expand on what is meant by “certain generator activities” and include the referenced documentation as an attachment to the training plan.

3. **Page 3, Section 2.0, Bullets 1-2:** The paragraph on Page 2, Section 2.0 indicates these bullets are objectives specific to the LLBG Unit, yet they are written at the Hanford Facility level.

Requirement: Bullet 1: Replace “Hanford Facility’s” with “LLBG Unit’s”. Bullet 2: Replace “contingency plan” with “Building Emergency Plan for LLBG (HNF-IP-0263-BG)”.

4. **Page 3, Section 2.0, Para 1:** The last sentence states “If an employee is not trained within six months, the employee must be supervised until training is complete.”

Requirement: While this statement is correct, not having employees training within the required time period is a violation of your RCRA permit, and could result in enforcement action, depending upon the circumstances.

5. **Page 3, Section 2.0, No. 3:** Item number 3 of the list outlining the process followed for ensuring personnel are assigned the correct training commensurate with their waste management duties addresses supplemental and on-the-job training (OJT). The use of “supplement” here is too general. Once it is determined existing training curriculum does not address waste management duties for a particular job title/position, two options are available: 1) provide classroom instruction, or 2) provide OJT (WAC 173-303-330(1)). Whichever is provided, both of these types of training need to be defined, and your

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training plan updated. In reference to OJT, While it is perfectly acceptable to use OJT to meet personnel training requirements, it must be defined (WAC 173-303-330(2)(b)). For example, without a description of the objectives to be met, a time period for completing those objectives, training frequency, and an indication of how completion of the OJT is documented, it is impossible for an inspector to verify personnel are adequately trained to perform their waste management duties.

Requirement: The list should address how the training plan is updated to include this additional training once it is identified the additional training is required to address waste management duties for a particular job title/position.

6. **Page 4, Table 2-1. Applicability of WAC 173-303-330(1)(d) to LLBG:** Under Column 1, Row 1, the element of WAC 173-303-330(1)(d) being addressed includes procedures for using emergency and monitoring equipment, but does not address procedures for inspecting, repairing, and replacing facility emergency and monitoring equipment.

Requirement: Update your training plan to identify the job title(s)/position(s) at the LLBG who inspect, repair, and replace facility emergency and monitoring equipment, and the duties and training courses/curriculum associated with those positions.

7. **Page 4, Table 2-1. Applicability of WAC 173-303-330(1)(d) to LLBG:** Under Column 1, Row 2, "Key parameters for automatic waste feed cut-off systems" is applicable to "landfills" [Note: see Table 3-2 *LLBG Waste Management Duty Crosswalk*, "Operations Program", "Understand key parameters for automatic waste feed cut-off systems". Course 300085 qualifies the NCO on the systems of the Mixed Waste Trenches, and Course 300090 qualifies and certifies the NCO to operate the Mixed Waste Trenches.].

Requirement: Change the "No" to a "Yes" in the "landfills" column indicating key parameters for automatic waste feed cut-off systems are applicable to landfills.

8. **Page 4, Table 2-1. Applicability of WAC 173-303-330(1)(d) to LLBG:** Under Column 1, Row 6, "Shutdown of operations" is applicable to "landfills" [Note: see Table 3-2 *LLBG Waste Management Duty Crosswalk*, "Operations Program", "Shutdown operations". Course 300085 qualifies the NCO on the systems of the Mixed Waste Trenches, and Course 300090 qualifies and certifies the NCO to operate the Mixed Waste Trenches.]. Shutdown of operations is also applicable to container storage and accumulation areas (shown in Table 2-1 as "Container Management TSD Unit"). For example, in an emergency, procedures for container storage and accumulation areas should address ensuring individual containers and container storage and accumulation areas are secured (i.e., lids are restored to any open containers and the container storage or accumulation area is locked to prevent unauthorized access). In addition, the terminology "Container Management TSD Unit" is incorrect.

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Requirement: Change the “No” to a “Yes” in the “container management TSD unit” and “landfills” columns indicating shutdown of operations are applicable to those dangerous waste management units. Also, change the title “Container Management TSD Unit” to indicate what you are addressing (i.e. >90 day container accumulation area, satellite accumulation area, and/or container storage area). This wording also needs to be changed on Page 4, Section 2.1, paragraph 1 (paragraph just above Table 2-1.).

9. **Page 5, Table 3-1. Job Titles/Positions at the LLBG:** Why are names not maintained for positions 5 *Maintenance Craft*, 6 *Field Work Supervisor*, and 7 *Radiological Control Technician* since these positions clearly have duties related to dangerous waste management at the LLBG Unit? Note that as a generator with >90 day container accumulation areas, your training plan is required to cover those areas, and the employees working with them pursuant to WAC 173-303-200(1)(e)(i).

Requirement: Update Table 3-1., marking positions 5, 6, and 7 with an asterisk. Modify the asterisk footnote of Table 3-1. to read “Names are maintained for this job title/position because a waste management duty is assigned on Table 3-2.” If the names for these job titles/positions are maintained elsewhere, please indicate this with a note as you have done for job title/position 14 “Non-Resident Waste Service Provider”.

10. **Pages 6-9, Table 3-2:** Several of the “Waste Management Duties” listed in Table 3-2 have the training course/curriculum listed as on-the job training (OJT). While it is perfectly acceptable to use OJT to meet personnel training requirements, the OJT must be defined. For example, Table 3-2 indicates personnel who have the duty of receiving a transfer or shipment of dangerous or mixed waste learn how to do this through OJT. Because the OJT is not defined, that is, there is no description of the objectives to be met, a time period for completing those objectives, a training frequency, and no indication of how completion of the OJT is documented, it is impossible for an inspector to verify personnel are adequately trained to perform these duties.

Requirement: All OJT used to fulfill training requirements must be defined in your training plan as described above pursuant to WAC 173-303-330. Please see Ecology Comment No. 5.

11. **Pages 13-22, Course Descriptions, Frequency:** Pursuant to WAC 173-303-330(1)(b), facility personnel must participate in an annual review of the training provided in the training program. There is no description in the training plan on how this is achieved, other than the assertion on Page 3 that continuing training meets this requirement. This appears to be true for Hanford general employee training and some LLBG unit-specific training which have a annual training frequency, but cannot be verified for all LLBG unit-specific training since many of those continuing training courses have a frequency less than annually. For clarification, this does not mean all training must be completed annually – it means the training in the training program must be reviewed annually to determine if refresher training is required.

Requirement: Please describe in your training plan how you intend to meet WAC 173-303-330(1)(b). For example, this requirement could be met by providing an annual review of the employees required training with their manager to determine

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what areas the employee requires refresher training in. The evaluation should be based on employee past performance and feedback, addition or reduction of waste management duties for their job title/position, and any changes (i.e. additions/reductions) in the curriculum of required training courses. Documentation that this annual review is performed must be maintained.

12. **Pages 20-21, Course Descriptions, General:** Courses 300085, 300090, 300400, 300410, 300700, 300932, and 300934 descriptions are not detailed enough, to the point that it's difficult to tell the difference between these courses. The worst example of this is Courses 300932 and 300934 where the titles are different, but the rest of the information is exactly the same.

Requirement: At a minimum, these courses descriptions should include more detail on what systems and units the course covers, objectives to be met, and a description of how the course is successfully completed. Please see example below:

Title: 300085 SW Mixed Waste Operator System Training

Description: Qualifies Nuclear Chemical Operators on the systems (i.e. leachate collection and removal systems including associated sumps, pumps and liquid level measurement devices; run-on control systems; run-off management systems, collection and holding facilities (i.e. >90 day tanks and collection basins) associated with run-on and run-off control systems) of the Mixed Waste Trenches. Objectives for this course are to familiarize personnel with the design and function of all operating and waste management systems associated with the Mixed Waste Trenches. Personnel will be qualified on Mixed Waste Trench systems upon completion of the course, followed by an exam with a passing grade of 80%.

Mandating Documents: WAC 173-303-330, -200, -630, -640, and 40 CFR 265 Subpart N

Target Audience: Nuclear Chemical Operators.

Frequency: Every other year, unless determined through employees annual review that more or less frequent training is required (re-qualification through Course 300085).

13. **Pages 20-21, Course Descriptions, General:** None of the course descriptions address procedures for inspecting, repairing, and replacing facility emergency and monitoring equipment as required pursuant WAC 173-303-330(1)(d)(i).

Requirement: Update your training plan to identify how the above training requirements are met.

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Comments on LLBG Chapter 8.0 Personnel Training Rev. 2

1. **General:** The text of this "Unit-specific Chapter 8.0" is too general to be called unit-specific.

Requirement: Rewrite Chapter 8.0, making it specific to the LLBG unit, as indicated in Ecology Comments below.

2. **Page 8-1, Line 18-19:** Line 18 uses "TSD unit" in the singular, and Line 19 uses it in the plural. At the Hanford Facility, the LLBG is considered a single TSD unit. Also, see Ecology Comment #1.

Requirement: Change "the TSD unit(s)" on Lines 18-19" to "the LLBG TSD unit".

3. **Page 8-1, Lines 25-32:** These bulleted objectives should be specific to the LLBG unit. See Ecology Comment #1.

Requirement: Line 25 – Replace "Hanford Facility personnel" with "LLBG unit personnel", and "Hanford Facility's" with "LLBG unit's". Line 28 – Replace "Hanford Facility personnel" with "LLBG unit personnel". Line 32 – Replace Hanford Facility personnel" with "LLBG unit personnel".

4. **Page 8-1, Lines 36-44:** See Ecology Comment #1.

Requirement: Line 36 – Insert "LLBG" in front of "TSD unit-specific training". Line 38 – Insert "The LLBG" in front of "TSD unit-specific training". Line 38-39 – replace "Hanford Facility personnel" with "LLBG unit personnel". Line 40 – replace "Hanford Facility personnel" with "LLBG unit personnel". Lines 42-43 – replace "Hanford Facility" with "LLBG unit".

5. **Page 8-2, Lines 3-25:** See Ecology Comment #1.

Requirement: Rewrite the sections on Contingency Plan, Emergency Coordinator and Operations training making them specific to the LLBG unit.

6. **Page 8-2, Line 6:** The "description of actions" reference needs to be more specific.

Requirement: Insert ",as indicated on Table 7-1," after "Appendix 7A".

7. **Page 8-2, Line 17:** Is the use of "unit-by-unit" here in reference to TSD unit, or to dangerous waste management unit as defined in WAC 173-303-040?

Requirement: Please clarify.

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8. **Pages 8-2, Line 17:** The definition of a dangerous waste management unit in WAC 173-303-040 includes container storage areas, not “container management unit”.

Requirement: Change “container management unit” to “container storage area”.

9. **Page 8-2, Line 21:** The term “general training” is inconsistent with terminology used in the LLBG Training Plan, and could be confused with General Hanford Facility training.

Requirement: Change “general training” to “general waste management unit training” to be consistent with your training plan (see Page 3, last paragraph, item #2 (HNF-1221, Rev. 5)).

10. **Page 8-2, Line 20-25 and Page 8-3, Lines 3-8:** There is not enough detail on the “supplemented training” at the TSD unit. In the LLBG Training Plan, the wording “supplement training” is used to describe the type of additional training provided when general waste management unit training curriculum doesn’t address the waste management duties for a job title/position (see Page 3, last paragraph, item #3 (HNF-1221, Rev. 5)). Once it is determined existing training curriculum does not address waste management duties for a particular job title/position, two options are available: 1) provide classroom instruction, or 2) provide on-the-job training (OJT) [WAC 173-303-330(1)]. Whichever is provided, both of these types of training need to be defined, and your training plan updated. Please note that the LLBG Training Plan does not define OJT (i.e. there is no description of the objectives to be met, a time period for completing those objectives, a training frequency, nor an indication of how completion of the OJT is documented). Without this information in your training plan, it is unacceptable to refer to OJT as meeting personnel dangerous waste training requirements. Also, see Ecology Comment #1.

Requirement: In Section 8.2, *Description of Training Design*, explain the process of supplementing training when it’s discovered existing training curriculum does not cover waste management duties for a job title/position, addressing both development of new classroom instruction and OJT. Note that until OJT is defined in the LLBG Training Plan, it is unacceptable to reference it here in Chapter 8.0.

11. **Page 8-2, Lines 29-30 and Lines 41-44:** Here you assert that continuing training meets the WAC 173-303-330(1)(b) requirements which is “...an annual review of the training provided in the training program.” Further discussion states operations refresher training occurs on many frequencies, and some training occurs one-time only when accompanied by a justification. This assertion is incorrect. Neither Chapter 8.0 nor the LLBG Training Plan describes a documented, annual review of the training provided in the training program with personnel. As a result, training courses offered on a frequency of less than annual do not comply with WAC 173-303-330(1)(b). For clarification, this does not mean all training must be offered and completed annually – it means the training provided in the LLBG Training Program must be reviewed annually to determine if refresher training is required. In addition, note that the LLBG Training Plan does not provide a justification for

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the one-time only frequency for courses 300410 and 300700. Also, see Ecology Comment #1.

Requirement: Describe in Chapter 8.0 how you intend to meet WAC 173-303-330(1)(b). For example, this requirement could be met by providing an annual review of the employees training with their manager to determine what areas the employee requires refresher training in. The evaluation should be based on employee past performance and feedback, addition or reduction of waste management duties for their job title/position, and any changes (i.e. additions/reductions) in the curriculum of required training courses. Documentation that this annual review is performed must be maintained to demonstrate compliance.

12. **Page 8-3, Line 10:** Other than the reference on Page 8-2, Lines 9-10 to “emergency coordinator duties in WAC 173-303-360”, no other waste management duties are mentioned. Referencing the reader to the entire Section of 8.1 is misleading.

Requirement: Specifically identify which waste management duties you wish to include here (i.e. waste management duties contained in the LLBG Training Plan, which includes those identified in WAC 173-303-330(1)(d) and -360).

13. **Page 8-3, Line 14:** Here you list procedures for using, inspecting, repairing, and replacing emergency and monitoring equipment as a training element of WAC 173-303-330(1)(d) applicable to the LLBG operations. Note that the LLBG Training Plan does not address procedures for inspecting, repairing, and replacing emergency and monitoring equipment, only those procedures for using emergency and monitoring equipment.

Requirement: The LLBG Training Plan requires updating to address procedures for inspecting, repairing, and replacing emergency and monitoring equipment. Until that is completed, the listing of those procedures here in Chapter 8.0 is unacceptable.

14. **Page 8-3, Lines 10-17:** Pursuant to WAC 173-303-330(1)(d)(vi) and Table 3-2 of the LLBG Training Plan (HNF-1221, Rev. 5) [Note: see Table 3-2 *LLBG Waste Management Duty Crosswalk*, “Operations Program”, “Understand key parameters for automatic waste feed cut-off systems”. Course 300085 qualifies the NCO on the systems of the Mixed Waste Trenches, and Course 300090 qualifies and certifies the NCO to operate the Mixed Waste Trenches.], “Key parameters for automatic waste feed cut-off systems” should be included in this bulleted list, since it applies to the operation of mixed waste trenches.

Requirement: Include “Key parameters for automatic waste feed cut-off systems” as a bullet in this list.

15. **Page 8-3, Lines 10-17:** Pursuant to WAC 173-303-330(1)(d)(vi) and Table 3-2 of the LLBG Training Plan (HNF-1221, Rev. 5) [Note: see Table 3-2 *LLBG Waste Management Duty Crosswalk*, “Operations Program”, “Shutdown operations”. Course 300085 qualifies the NCO on the systems of the Mixed Waste Trenches, and Course 300090 qualifies and certifies the NCO to operate the Mixed Waste Trenches.], “Shutdown of operations” should be included in this bulleted list, since it applies to

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the operation of mixed waste trenches. In addition, shutdown of operations is also applicable to container storage and accumulation areas. For example, in an emergency, procedures for container storage and accumulation areas should address ensuring individual containers and container storage and accumulation areas are secured (i.e., lids are restored to any open containers and the container storage or accumulation area is locked to prevent unauthorized access).

Requirement: Include "Shutdown of operations" as a bullet in this list.

16. **Page 8-3, Lines 27-29:** The statement is made that Training Plan documentation is maintained outside of the Hanford Facility Dangerous Waste Part B Permit Application and the HF RCRA Permit, and therefore, changes made to the training plan documentation are not subject to the HF RCRA Permit modification process. This statement is incorrect. In accordance with WAC 173-303-830, Appendix 1 *Modifications*, changes in the training plan that effect the type or decrease the amount of training given to employees is a Class 2 permit modification. All other changes are a Class 1 permit modification.

Requirement: Add the following qualifier: "therefore, changes made to the training plan documentation are not subject to the HF RCRA Permit modification process, to the extent that those changes do not affect the type or decrease the amount of training given to employees, or do not cause a modification to information contained in Chapter 8.0, *Personnel Training*."

17. **Page 8-3, Lines 32-35:** This entire paragraph on "documentation" is too general to be clearly understood. Rather than specifying what exactly that documentation is, you include the generic sentence "The training plan documentation consists of one or more documents and/or a training database with all the components identified in the core document." This outline of the training program must be specific to the LLBG unit. In addition, you assert that all the components of the training plan documentation are identified in the core document. The "core document" is never identified.

Requirement: Specifically identify what documentation is used to meet the requirements of WAC 173-303-330. Indicate (for each) if that documentation is maintained in hard copy, electronic media, or both. For example, you could begin the paragraph with "Documentation prepared to meet the training plan requirements consists of the LLBG Training Plan (hard copy), and the Training Records Database (electronic)."

18. **Page 8-3, Lines 47-49:** Here you state "Only names of Hanford Facility personnel who carry out job duties relating to TSD unit waste management operations at the LLBG are maintained." Pursuant to WAC 173-303-200(1)(e), you are also required to maintain names of personnel at the LLBG unit who perform >90 day accumulation activities.

Requirement: Delete the word "Only".

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19. **Page 8-3, Lines 48-49:** The text "Names are maintained within the training plan documentation." is too general. Again, you have not defined training plan documentation (see Ecology Comment #17).

Requirement: Specify where the names are maintained, and if they are maintained in hard copy, electronic copy, or both.

20. **Page 8-4, Lines 1-2:** In reference to requisite skills, education, other qualifications for job titles/positions" See Ecology Comments #17 and #19.

Requirement: Specify where this information is maintained, rather than using the example "human resources".

21. **Page 8-4, Lines 9-12:** This paragraph asserts that both the type and amount of training is specified in the training plan documentation as shown in Table 8-1. This is too general, and as to the assertion that the amount of training is shown in Table 8-1, incorrect.

Requirement: Specifically identify what training plan documentation you are referring to.

22. **Page T8-1, Table 8-1. LLBG Training Matrix:** The training matrix is too general, and doesn't completely match Table 3-2 *LLBG Waste Management Duty Crosswalk* (HNF-1221, Rev. 5), causing a couple of problems. First, the "Operations Program" title from Table 3-2 does not clearly correspond to Table 8-1. Second, because the categories on Table 8-1 are listed generally, it is impossible to tell what training from that category each job title/position is required to have without looking at the training plan. For example, according to Table 8-1, the NCO is required to have "General Waste Management" training. Because the amount of training isn't specified on Table 8-1, the assumption is that the NCO is required to complete any training related to "General Waste Management". When Table 3-2 is reviewed, it is clear that the NCO only needs part of the "General Waste Management" training for the duties he/she is required to perform. Table 8-1, in its current format, prohibits Ecology from performing its obligation to control, through your RCRA permit, changes that affect the type or decrease the amount of training being offered to personnel (WAC 173-303-830, Appendix 1).

Requirement: Decide on a consistent title, either "Operations Program" or "Emergency Response (contingency plan), for clarity within LLBG Waste Management Duty Crosswalk comparison to Table 8-1 Training Matrix. Revise the format of Table 8-1, providing enough detail for Ecology to determine the amount of training required for each job title/position in each training category.