

MASTER  
REVISION SHEET

RESPONSES TO EPA/NMEID COMMENTS OF SEPTEMBER 13, 1985  
ON THE LOS ALAMOS NATIONAL LABORATORY  
TA-50 INCINERATOR TRIAL BURN PLAN SUBMITTED MAY 1985

[Section 302.E.2.B.(2)(a)]

General Response

The regulations cited by EPA [EPA REG 270.62(b)(2)(i) and NMEID REG 302.E.2.b.(2)(a)] specifically address new incinerators. The Los Alamos CAI has been in continuous research operation since 1975 (with occasional shut-downs for upgrading) and therefore may not be subject to the requirements of the cited regulation. A request for an amendment to the Los Alamos Part A permit application to include the CAI under interim status has been submitted to the NMEID. Since the request for interim status may be pending for some time, Los Alamos will respond to the EPA comments which reference the cited new-incinerator regulation.

Comment 1.

Los Alamos needs to state the approximate quantification of hazardous constituents in the waste. (if none are present besides  $CCl_4$ , it should be stated.)

Response:

The Waste Analysis Plan (Section 3.0 of the Part B Application) describes the analyses to be performed on wastes intended for incineration.

Comment 2.

Los Alamos needs to provide the viscosity of liquids to be used in the trial burn.

Response:

The upper limit of viscosity for wastes to be incinerated is noted in Section D-5b(2)(d)4.a and Table 5.

[Section 206.D.8.e.(3)(b)]

General Response

The regulations cited by EPA [EPA REG 264.344(c)(2) and NMEID REG



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206.D.8.e.(3)(b)] specifically address new incinerators. A request for an amendment to the Los Alamos Part A permit application to include the CAI under interim status has been submitted to the NMEID. Since the request for interim status may be pending for some time, Los Alamos will respond to the EPA comments which reference the cited new-incinerator regulation.

Comment 3.

Los Alamos should reference the appropriate cites in the trial burn and not "not applicable".

Response:

Sections D-5a, D-5b(1), D-5b(2)(a) and D-5c have been modified as suggested.

**[Section 302.E.2.b.(2)(b)]**

General Response

The regulations cited by EPA [EPA REG 270.62(b)(2)(ii) and NMEID REG 302.E.2.b.(2)(b)] specifically address new incinerators. A request for an amendment to the Los Alamos Part A permit application to include the CAI under interim status has been submitted to the NMEID. Since the request for interim status may be pending for some time, Los Alamos will respond to the EPA comments which reference the cited new-incinerator regulation.

Comment 4.

Los Alamos needs to provide the internal dimensions of the incinerator (shown on a drawing). (The dimensions provided are not identical to the dimensions provided in the PCB submission.)

Response:

The separate chamber volumes were stated in the PCB submittal to be 108.57 ft<sup>3</sup> for the lower chamber, and 104.80 ft<sup>3</sup> for the upper chamber. These numbers are correct and account for the basic chamber volumes plus the volumes of the secondary-air injector assembly and high-temperature offgas duct.

Internal dimensions of the incinerator and high-temperature ductwork on Figure 2 (Schematic of CAI) are included. Additionally, Section D-5b(2)(b)3 includes the internal dimensions of the incinerator.

Comment 5.

Los Alamos should discuss the use of auxiliary fuel, including the blending of fuel oil in the static mixer.

Response:

Figures 1, 4, 5 and 6 show the current fuel oil addition points at the liquid waste mixing tank, and at a point on the waste liquid feed line just upstream of the static mixer. Additionally, Section D-5b(2)(b)4. provides clarification on the use and blending of fuel oil.

Comment 6.

Los Alamos needs to provide a discussion of the gas monitoring, fuel oil blending, and the air pollution control monitoring devices.

Response:

A discussion of fuel oil blending is contained in the response to Comment 5 above. A discussion of stack gas monitoring and the air pollution control monitoring devices is given in Section D-5b(2)(b)7.

Comment 7.

The automatic waste feed cut-off system needs to be fully described. The waste feed cut-off points are not to be negotiated. They are based upon the trial burn and the trial burn results. The trial burn is to detail the cut-off limits to be established. These limits are to be used during the trial burn. (Los Alamos is to list the limits.) Also, NMEID may establish any other operating condition necessary to ensure that the performance standards are being met in addition to the listed conditions. These may include oxygen limits and scrubber limits such as pressure drop and scrubbant pH, etc. The temperature limit is not a limit minus 50°F. It is the operator's responsibility to maintain a temperature above the permit condition's minimum temperature limit. The CO limit is also a limit and not a two (2) tier limit. The operator may establish a two (2) tier alarm limit to ensure compliance with the permit condition CO limit. Los Alamos has not proposed their two (2) tier CO limit or any CO limit. (EPA will consider a two (2) tier CO limit of a maximum CO limit (50 ppm) and an hourly average of 10 ppm). There is no discussion of waste feed limitations. There will be a POHC limit because  $\text{CCl}_4$  is not the most difficult compound to incinerate per the hierarchy. Most of this data can be found in the PCB trial burn. The PCB trial burn results should be submitted to show the incinerator's performance ability.

[NOTE: This lengthy comment has been divided into shorter statements to facilitate a response.]

Comment 7a.

The automatic waste feed cutoff system needs to be fully described.

Response:

The automatic waste feed cutoff parameters are described in Section D-5(2)(b)6.

Comment 7b.

The waste feed cutoff points are not to be negotiated. They are based upon the trial burn (plan) and the trial burn results.

Response:

Los Alamos anticipates that some negotiation of proper limits for automatic waste feed cut-off is proper. As an example, should the actual trial burn be run at such conditions that CO levels of >10 ppm are achieved, it would be unreasonable to expect that this low level of CO could be attained when burning other Appendix VIII wastes or on other run dates. Establishment of such a limit in the operating permit would be overly restrictive, and the negotiation of a limit that is higher and yet representative of good incineration practice would be warranted.

Comment 7c.

The trial burn (plan) is to detail the cut-off limits to be established. These limits are to be used during the trial burn. (Los Alamos is to list the limits [in the trial burn plan]). Also, NMEID may establish any other operating condition necessary to ensure that the performance standards are being met in addition to the listed conditions. These may include oxygen limits and scrubber limits such as pressure drop and scrubbing pH, etc.

Response:

Los Alamos recommends that CO concentration in the offgas be recognized as a satisfactory indication of combustion efficiency. Any requirement on oxygen limits would be redundant to the CO limit.

Table 1 provides additional information on waste feed cut-off parameters.

Comment 7d.

The temperature limit is not a limit minus 50°F. It is the operator's responsibility to maintain a temperature above the permit condition's minimum temperature limit.

Response:

Los Alamos plans to operate the primary chamber at a nominal temperature of 1600°F and the secondary combustion chamber at two nominal temperatures (1600°F and 1800°F) during the trial burn. The temperature limits indicated in the response above (50°F lower than desired operating temperature) will allow for some control variation around the temperature set point without a low temperature cut-off during sampling. During the trial burn, Los Alamos will adjust the temperature cut-off limit to either 1550°F or 1750°F as appropriate.

Comment 7e.

The CO limit is also a limit and not a two (2) tier limit. The operator may establish a two (2) tier alarm limit to ensure compliance with the permit condition CO limit. Los Alamos has not proposed their two (2) tier CO limit or any CO limit. (EPA will consider a two (2) tier CO limit of a maximum CO limit (50 ppm) and an hourly average of 10 ppm.)

Response:

Los Alamos has noted a sharp increase in CO concentration when combustion conditions undergo rapid change (such as the startup of the liquid burner or the charging of a waste package). These increases are indicated as "spikes" on the CO concentration recorder that decay rapidly to a low indicated CO concentration. Los Alamos recommends a second CO concentration limit (an upset limit) that is higher than the base limit, under which the CAI will be allowed to operate for a limited time. This situation is common to batch-feed incinerators such as the CAI, and is the basis for two-limit systems being permitted in other EPA Regions.

Los Alamos recommends that the trial burn plan be amended to use the system prescribed by the EPA RCRA permit contained in Appendix 1, which recognizes and addresses the above-described phenomenon. That permit prescribes a CO limit of 75 ppm by volume dry basis as measured by a continuous recording CO

analyzer, except that for a period not to exceed nine minutes the system can continue to burn waste if the CO concentration does not exceed a maximum of 500 ppm.

Comment 7f.

There is no discussion of waste feed (rate) limitations.

Response:

The waste feed rates for the trial burn are listed in Table 8 of the trial burn plan. However, as discussed in Section D-5b(2)(f)1.f. Incinerator Operating Permit Conditions, Los Alamos recommends that the operating permit set a thermal duty limit on the primary chamber rather than a feed rate limit, following the philosophy of the EPA Guidance Manual for Hazardous Waste Incinerator Permits. This philosophy recognizes that different waste forms have different heating values, and that heat density is the primary design parameter in sizing incinerators for desired throughput, or for determining maximum throughput for an existing incinerator.

Comment 7g.

There will be a POHC limit because  $\text{CCl}_4$  is not the most difficult compound to incinerate per the hierarchy.

Response:

No response required.

Comment 7h.

Most of this data can be found in the PCB trial burn (report). The PCB trial burn results should be submitted to show the incinerator's performance ability.

Response:

The PCB trial burn report has not been released by the EPA for general distribution. However, Los Alamos will submit the report to the NMEID as requested.

Comment 8.

[Off] Gas cleaning equipment needs to be described in greater detail including the listing of related performance and operating conditions. Los Alamos states that the venturi removes [particulates] up to 99 percent by weight and the pressure drop is controlled in the 40 to 60 inches W.C. range. What is the mathematical relationship between pressure drop and removal efficiency?

Response:

The offgas cleaning equipment is described in greater detail in the Los Alamos response to EPA Comments 6 and 7 above. The intent and use of the venturi scrubber is to prolong the service life of the HEPA filters located further downstream in the PCE. Particulate emissions from the stack are dependent on the efficiency of the HEPA filters and are not dependent on the operation of the venturi scrubber. For calculation of the efficiency of the venturi scrubber at various operating conditions, Los Alamos uses the method of Seymor Calvert et al., "Wet Scrubber System Study, Volume I, Scrubber Handbook," NTIS report number PB-213016 (August 1972), as adapted by Leslie E. Sparks, "SR-52 Programmable Calculator Programs for Venturi Scrubbers and Electrostatic Precipitators," EPA report number EPA-600/7-78-026 (March 1978).

[Section 302.E.2.b.(2)(c)]

General Response:

The regulations cited by EPA [EPA REG 270.62(b)(2)(iii) and NMEID REG 302.E.2.b.(2)(c)] specifically address new incinerators. A request for an amendment to the Los Alamos Part A permit application to include the CAI under interim status has been submitted to the NMEID. Since the request for interim status may be pending for some time, Los Alamos will respond to the EPA comments which reference the cited new-incinerator regulation.

Comment 9.

Los Alamos should do an analysis of the ash for  $\text{CCl}_4$  to prove the statement on J-22 about "the unlikely possibility of  $\text{CCl}_4$  being present in the ash".

Response:

Los Alamos agrees to have the incinerator ash analyzed for  $\text{CCl}_4$  content. The trial burn plan is amended by the last paragraph of Section D-5b(2)(c)1.e. Sampling Locations and Procedures, Incinerator Ash.

[Section 302.E.2.b.(2)(e)]

General Response:

The regulations cited by EPA [EPA REG 270.62(b)(2)(v) and NMEID REG 302.E.2.b.(2)(e)] specifically address new incinerators. A request for an amendment to the Los Alamos Part A permit application to include the CAI under interim status has been submitted to the NMEID. Since the request for interim status may be pending for some time, Los Alamos will respond to the EPA comments which reference the cited new-incinerator regulation.

Comment 10.

This comment has been separated into two separate statements.

Comment 10a.

Page J-41. Los Alamos quotes from the March 1983 Guidance Manual to suggest that there are no permit conditions for minimum or maximum heat value of solids. To ensure the performance standards are met, there will be permit conditions related to the heat input of the solid wastes.

Response:

Los Alamos agrees that the heat contribution from the solid waste is an important factor of the overall thermal duty for the primary chamber. The thermal duty is what determines the chamber temperature. As long as there is a permit condition of minimum chamber temperature, then a minimum heat duty will be present, either from the waste itself (if the waste has a high enough heating value), from the auxiliary fuel alone (if the waste has no heating value, as is the case with lightly-contaminated soil), or from a combination of solid waste and auxiliary fuel. Los Alamos recommends that minimum temperature limits and maximum thermal duty limits be accepted as sufficient conditions to ensure that performance standards are met, and will allow for effective treatment of solid waste forms with very low or very high heating values.

Additional discussion on this point is contained in the trial burn plan under Section D-5b(2)(f)1.f.

Comment 10b.

Also, there may be permit conditions placed on the secondary chamber even if no waste is fed into the chamber to ensure that the performance standards are met.

Response:

Los Alamos agrees that a minimum temperature in the secondary combustion chamber is required for the chamber to serve as an effective afterburner. A permit condition that specifies a minimum temperature limit is appropriate to ensure performance standards.

Comment 11.

The gas velocity needs to be specified.

Response:

Los Alamos recognizes that a limit on maximum stack gas flow is a sound way of ensuring that the CAI is not operating at a higher heat density than that for which an acceptable DRE has been demonstrated. However, the maximum stack gas velocity is a parameter that can only be measured during the trial burn when burning at the maximum attained thermal duty. Los Alamos anticipates that the maximum stack gas flow will not exceed 1500 SCFM during the trial burn.

Comment 12.

The waste feed ash content must be specified and agreed to prior to having a complete Part B application. The ash content is to be specified in the permit.

Response:

Two waste forms are to be fed to the CAI during the trial burn; a liquid waste blend and a solid waste blend. The solid waste package consists of a blend of  $\text{CCl}_4$  in sawdust within a cardboard box. The sawdust and cardboard container are expected to produce an appreciable amount of ash, but a measure of the amount will not be known until the cake on the scrubber liquid filters and the residue remaining on the hearth is collected following each run period. Los Alamos recommends that no permit limitation be imposed on the ash content of solid wastes. Ash content is not known before actual incineration of a solid waste, and in some cases, the residue can represent almost 100% of the weight of the feed material (such as when burning lightly-contaminated soil).

In the case of the liquid waste blend used in the trial burn, a known amount of ash will result from the known amount of ash-producing material added to the  $\text{CCl}_4$  and fuel oil. The ash-producing material will be added to the blend to produce an input value needed to calculate the ash removal efficiency of the incinerator and offgas cleaning system. Los Alamos will amend the trial burn plan to recommend the addition of an amount of ash-producing material to the liquid blend.

Additionally, Section D-5b(2)(d)8. and Table 5 provide information on ash content.

Comment 13.

On page J-44, it is stated that only 3 Appendix VIII constituents at levels above 1000 ppm would not be allowed to be incinerated:  $\text{CFCl}_3$ ,  $\text{CHBr}_3$ , and  $\text{CF}_2\text{Cl}_2$ . Los Alamos needs to provide waste analysis on all wastes for these 3 compounds (documentation to show waste analysis was being performed has not been located in the Part B Waste Analysis Plan. Los Alamos also needs to revise the waste analysis plan to include the waste analysis necessary for the incinerator. The concentration limit for insignificant concentration of Appendix VIII waste for incineration is 100 ppm, not 1000 ppm.

Response:

The Waste Analysis Plan (Section 3.0 of the Part B Application) includes analysis (when possible) for halogenated compounds noted for wastes intended for incineration.

Comment 14.

Los Alamos may not burn the residual wastes left from the trial burn without a permit for the incinerator since the incinerator does not have interim status.

Response:

No response required.

**[Section 302.E.2.b.(2)(f)]**

General Response:

The regulations cited by EPA [EPA REG 270.62(b)(2)(vi) and NMEID REG 302.E.2.b.(2)(e)] specifically address new incinerators. A request for an

amendment to the Los Alamos Part A permit application to include the CAI under interim status has been submitted to the NMEID. Since the request for interim status may be pending for some time, Los Alamos will respond to the EPA comments which reference the cited new-incinerator regulation.

Comment 15.

Los Alamos needs to provide more details on scrubbant flow, scrubbant pH, and narrower range of pressure drop for the venturi.

Response:

Details on scrubbant flow and venturi pressure drop are contained in the Los Alamos response to EPA Comments 6 and 7 above.

The offgas cleaning system is designed to operate without damage while recirculating a scrub solution that contains 10 wt% hydrochloric acid. The system has been operated for long periods of time with the scrub solution pH ranging from near 0 to 6, with no appreciable acid carry-over from the absorber tower. This is because of the very high solubility of hydrochloric acid in water. However, for the purpose of setting the trial burn operating conditions, a minimum scrub solution pH limit of 4.0 will be specified.

Additionally, Section D-5b(2)(b)6 and Table 1 provide information on scrubbant pH.

[Section 302.E.2.b.(2)(q)]

General Response:

The regulations cited by EPA [EPA REG 270.62(b)(2)(vii) and NMEID REG 302.E.2.b.(2)(g)] specifically address new incinerators. A request for an amendment to the Los Alamos Part A permit application to include the CAI under interim status has been submitted to the NMEID. Since the request for interim status may be pending for some time, Los Alamos will respond to the EPA comments which reference the cited new-incinerator regulation.

Comment 16.

The shut-down procedures are to be specified.

Response:

The shut-down procedures are specified in the Los Alamos response to EPA Comment 7 above.

**(Section 302.E.2.c)**

General Response:

The regulations cited by EPA [EPA REG 270.62(c) and NMEID REG 302.E.2.c] specifically address new incinerators. A request for an amendment to the Los Alamos Part A permit application to include the CAI under interim status has been submitted to the NMEID. Since the request for interim status may be pending for some time, Los Alamos will respond to the EPA comments which reference the cited new-incinerator regulation.

Comment 17.

Los Alamos cannot continue to operate the incinerator after the trial burn without having been issued a full RCRA permit. The operating conditions must be specified in the permit (those conditions will not be 265 standards).

Response:

No response required.

**[Section 206.B.4.b.(2)(e)(iii)]**

Comment 18.

Los Alamos should submit the PCB trial burn data to support their RCRA permit application

Response:

The PCB trial burn report has not been released by the EPA for general distribution. However, Los Alamos will submit the report to the NMEID as requested.

**[Section 206.B.4.b.(2)]**

## SECURITY

### Comment 19.

Los Alamos needs to provide the height and construction material of the fence at TA-50.

### Response:

Information on the fence around TA-50 is provided in Section 6.1 of the Part B Application.

### **(Section 206.D.8.c)**

### Comment 20.

The warning signs' legend needs to be described. Also, building TA-50 should be posted with warning signs. (Building TA-50 is stated as fenced on page 4-6. Is the fence posted with the warning signs?)

### Response:

Warning signs at TA-50 are described in Section 6.2 of the Part B Application.

### Comment 21.

Section 6.2. The warning signs on the entrances to the TA-50 waste incinerator should be revised to include the additional hazards.

### Response:

See response to Comment 20 above.

## GENERAL INSPECTION

### Comment 22.

Section 6.3.2 and Table 6.2. The inspection schedule needs to include inspection of the fence around TA-50.

### Response:

The inspection logs for TA-50 are provided in Table 6-6 of the Part B Application.

(Section 206.D.8.q)

Comment 23.

Section 6.3.2 and Table 6.2. The inspection schedule for the TA-50 incinerator needs to be revised to show specifically what incinerator equipment will be inspected and when. For example, daily inspections for leaks, spills, fugative emissions, and signs of tampering and weekly testing of the emergency waste cutoff system and alarm systems, etc.

Response:

See response to Comment 23 above.

[Section 206.B.6.d.(1) & (2)]

Comment 24.

Los Alamos needs to describe the training records to show that the required the minimum information is being maintained for incinerator personnel.

Response:

Personnel training is described in Section 8.0 and Appendices U and V in the Part B Application.

[Section 206.D.2.c.(1)(b)]

CLOSURE

Comment 25.

There is no detailed maximum waste inventory for the incinerator given in the Closure Plan.

Response:

The maximum waste inventory for the incinerator at the time of closure is provided in Section 9.3.2.1 of the Part B Application.

[Section 206.D.2.c.(1)(d)]

Comment 26.

Los Alamos needs a full schedule for the final closure (procedures and the schedule).

Response:

Since the incinerator will be contaminated by radionuclides, closure procedures will have to be developed that take the radiation hazard into account. Thus, these procedures will be developed after the radiation hazard has been determined.

[Section 206.D.2.d.(1) & (2)]

Comment 27.

Los Alamos has not applied for an extension of the closure time (180 days). Therefore, the closure activities must be scheduled and completed within 180 days.

Response:

See response to Comment 26 above. Additionally, an extension will be sought, if necessary, when plans for closure are developed.

(Section 206.D.2.e)

Comment 28.

The Closure Plan is required to contain details of the decontamination procedures. Los Alamos needs to submit criteria for determining the existence and levels of contamination and the method used to demonstrate that decontamination is complete (a visual inspection is not adequate). Also, Los Alamos needs to provide decontamination procedures for the equipment used in the cleanup.

Response:

See response to Comment 26 above.

(Section 206.D.8.h)

Comment 29.

Los Alamos needs to discuss the closure of the incinerator tanks in Figure 6, page J-21. Also, Los Alamos needs to define the term, "appropriate manner for disposal". All wastes generated in the cleanup are RCRA wastes (besides being DOE wastes) and must be handled as such. The 2 (two) incinerator chambers must be sent to a designated HAZARDOUS WASTE treatment and disposal facility or be decontaminated.

Response:

See response to Comment 26 above.

RESPONSES TO THE NMEID COMMENTS OF SEPTEMBER 16, 1985 ON THE  
LOS ALAMOS NATIONAL LABORATORY PART B APPLICATION SUBMITTED MAY, 1985

SECTION 1: INTRODUCTION AND PART A APPLICATION

(Section 302.A.4.a)

Comment 1.

Form 1. LANL needs to complete and submit Form 1 of the Part A Application.

Response:

Form 1 of the Part A application is included in the revised Part B Application.

Comment 2.

Form 3, Part II-A. LANL needs to complete this part of the application.

Response:

Form 3, Part II-A of the Part A Application is completed and provided in the revised Part B Application.

Comment 3.

Form 3, Part III-C. LANL needs to change the unit of measurement code for D80 from "B" to either A or F.

Response:

The unit of measurement code has been changed to "A" in Form 3, Part III-C of the Part A Application.

Comment 4.

Form 3, Part III-C. LANL needs to identify the term "HE", and where the HE is collected, packaged, and stored if greater than 90 days. LANL also needs to demonstrate how the treatment of HE sludge in the pressure vessels is not treatment in a tank(s) and subject to a permit.

Response:

The management and handling of high explosives (HE) at Los Alamos is clarified in Form 3, Part III-C of the Part A Application.

Comment 5.

Form 3, Part III-C. LANL needs to correct the reference to "Page 1, line 2 and Page 1, line 6", to "Page 1, line 3 and Page 1, line 5", respectively.

Response:

The appropriate change has been made in the Part A Application.

Comment 6.

Form 3, Part IV, Page 3A. LANL needs to change the "y" identified on line 6 to the required unit of measurement.

Response:

The letter "y" has been changed to "P" on line 6 of Form 3, Part IV, Page 3A of the Part A Application.

Comment 7.

Form 3, Part IV-E. LANL needs to retype the work "quality".

Response:

The appropriate change has been made in Form 3, Part IV-E of the Part A Application.

Comment 8.

Form 3, Part V. LANL needs to identify the location of all past, present and proposed hazardous waste treatment, storage and disposal areas.

Response:

The report "Site Characterization Technical Plans for the Los Alamos National Laboratory", October 16, 1984 is appended to the Part A Application. This report represents the most recent published information on past waste disposal sites at Los Alamos.

Comment 9.

Form 3, Part VI. LANL needs to provide a photograph that clearly identifies all existing structures and all existing hazardous waste treatment, storage and disposal areas.

Response:

Photographs of existing hazardous waste treatment, storage and disposal areas are included in Form 3, Part VI of the Part A Application.

**SECTION 2: FACILITY DESCRIPTION**

**[Section 302.A.4.b(1)(r)]**

Comment 10.

Page 2-6. LANL needs to provide a topographic map which shows the entire facility including 1,000 feet beyond the property boundary. This map does not need a scale of 1 inch <200 feet. This map must clearly identify the legal boundaries of the hazardous waste management facility site.

Response:

LANL has provided a topographic map which shows the entire facility including 1,000 feet beyond the property boundary and identifies the legal boundaries of the hazardous waste management facility (see Figure 2-21).

Comment 11.

Page 2-7. LANL needs to correct the reference made to Section 2.2.2. This section does not describe surface waters.

Response:

Section 2.2.2 describes the potential for flooding of laboratory waste management facilities, not surface water as previously indicated. The appropriate change has been made.

**[Section 302.A.4.b(1)(k)]**

Comment 12.

Page 2-9. LANL needs to correct the reference made to Section 2.2.3.2. This section does not exist.

Response:

This was an editorial error. Section 2.2.3.2 should have been 2.2.4. The appropriate change has been made in the revised text.

[Section 302.A.4.b(3)]

Comment 13.

Page 2-15. LANL needs to correct the references made to Figure 2-15 and Figure 2-17. Based on the discussion, these are not the correct references.

Response:

These were editorial errors. References should have been to Figures 2-18 and 2-19. Appropriate changes have been made in the revised text.

Comment 14.

Figure 2-19. LANL needs to identify the direction of ground water flow, the ground water flow rate, the boundaries of the uppermost aquifer and any interconnections between the uppermost aquifer and the lower aquifer.

Response:

The direction of groundwater flow is noted in Figure 2-19. The groundwater flow rate is discussed in Section 2.2.5. The boundaries of the uppermost aquifer and any interconnections between the uppermost aquifer and the lower aquifer could not be provided as requested because they are not known. However, what is known is that the boundary of the aquifer begins in the mountains to the west of LANL and most of the groundwater discharges to the Rio Grande River (east of LANL). The aquifer boundaries to the north and south are not known. Groundwater conditions are discussed in Section 2.2.5.

[Section 302.A.4.b(1)(j)]

Comment 15.

Page 2-18. LANL needs to identify the routes of travel, the traffic volume, traffic control signals, road load bearing capacity, and road surfacing from each technical area that generates hazardous waste to the technical areas for treatment, storage or disposal.

Response:

The following sections provide information on transportation routes:

- o Routes of travel - Section 2.3.2
- o Traffic volume - Section 2.3.4

- o Traffic control signals - Section 2.3.5
- o Road load-bearing capacity - Section 2.3.6
- o Road surfacing from each technical area that generates hazardous waste to the technical areas for treatment, storage and disposal - Section 2.3.7

### SECTION 3: WASTE CHARACTERISTICS AND ANALYSIS PLAN

[Section 302.A.4.b(1)(b)]

Comment 16.

Page 3-0. LANL indicates that Section 3.3 describes procedures for identification and segregation of hazardous waste, however, this section identifies only general categories for segregation. LANL needs to make the appropriate change.

Response:

Reference to Appendix L, Los Alamos Procedure for Identification and Segregation of Hazardous Waste has been added. Appendix L and Section 3.3 provide sufficiently detailed procedures to identify and segregate hazardous waste.

Comment 17.

Pages 3-2, 3-3, and 3-4. LANL needs to identify each process generating hazardous waste and provide a detailed chemical and physical analysis from each hazardous waste stream. This must include a discussion on the rationale for each analysis performed; the test methods used to perform each analyses; the sampling methods used to collect samples; and, that the samples to be collected are representative. LANL also needs to identify the type of treatment, storage or disposal for each hazardous waste stream. LANL must also discuss what QA/QC procedures will be followed if they differ from those in SW-846.

Response:

- o Identification of each process generating hazardous waste: see Section 3.2.1.
- o Detailed chemical and physical analysis for each hazardous waste stream: see Section 3.2.1.
- o Discussion on the rationale for each analysis performed: see Section 3.2.2.

- o Test methods used to perform each analysis: see Section 3.2.3.
- o Sampling methods used to collect samples: see Section 3.2.4.
- o Samples to be collected are representative: see Section 3.2.4. Methods from SW-846 are employed. These methods are inherently designed to obtain representative samples.
- o Identification of the type of treatment, storage or disposal for each hazardous waste stream: see Section 3.2.7. Information is also provided in the Part A application.
- o QA/QC procedures which will be followed: see Section 3.2.6.

**[Section 302.A.4.b(1)(c)]**

Comment 18.

Page 3-4. LANL needs to provide a copy of the Waste Analysis Plan.

Response:

The original submittal mistakenly infers that a separate Waste Analysis Plan document exists and that information provided in Section 3.2 is only a brief description of the longer plan. No separate Waste Analysis Plan exists. The information provided in Section 3.2 constitutes the complete Los Alamos Waste Analysis Plan prepared and implemented for RCRA compliance.

Comment 19.

Page 3-5. LANL needs to discuss the rationale for only performing analysis for: reactivity, pH, and ignitability, on small volumes of unknown wastes; the guidelines used to determine when an unknown may be too reactive to perform an analysis; and, how large volumes of an unknown are characterized.

Response:

Procedures for dealing with unknown wastes are provided in Section 3.2.9.

Comment 20.

Page 3-6. LANL indicates that Table 3-2 contains a list of equivalent test methods. Table 3-2 does not contain this information. LANL needs to make the appropriate change.

Response:

Table 3-3 actually contains the list of test methods employed. The original document incorrectly identified the material as being contained in Table 3-2. The correction has been made in the text (refer to Section 3.2.3).

Comment 21.

Page 3-6. LANL needs to identify which EPA test method in SW-846 addresses analyses of unknowns.

Response:

The wording in the original test implies that an EPA test method in SW-846 exists which does address analysis of unknowns. Since this is not the case, Los Alamos has developed its own procedure (see Section 3.2.9).

Comment 22.

Page 3-6, Appendix L. LANL needs to provide Table 1 of Appendix L.

Response:

The appropriate editorial changes have been made.

Comment 23.

Table 3-1. LANL needs to convert (m<sup>3</sup>) to a unit of measurement similar to those identified in the Part A, and correct the reference made to Appendix F. Appendix F does not contain a list of hazardous waste.

Response:

Table 3-1 has been changed so that the units are the same as those used in the Part A application.

Comment 24.

Table 3-2. LANL needs to clarify if the parameters identified are those for known wastes or for unknown wastes.

Response:

Tables 3-2 and 3-5 have been revised to provide additional discussion on the selection rationale for parameters identified for both known and "unknown" waste streams.

Comment 25.

Tables 3-2 and 3-5. LANL needs to discuss the rationale for the parameters identified and provide a list of the parameters for which unknowns will be analyzed and the rationale for these parameters.

Response:

Procedures for analysis of unknown wastes are clarified in Tables 3-2 and 3-5.

Comment 26.

Table 3-4. LANL needs to discuss the number of samples to be taken and how the sampling methods listed will ensure a representative sample.

Response:

The sampling methods listed are appropriate for sampling the types of wastes in the containers described (according 59 SW-846). Thus, representative samples are expected.

Comment 27.

Table 3-5. LANL needs to be more specific as to the frequency of analysis than "As Require". LANL will need laboratory analyses each time a process changes.

Response:

Frequency of analysis: see Section 3.2.5 and Table 3-5.

**SECTION 4: WASTE MANAGEMENT PRACTICES AND FACILITIES**

**[Section 302.A.4.b(2)(a)]**

Comment 28.

Pages 4-0 and 4-11. LANL needs to document that the concrete floor at the TA-50 storage area and the metal storage building located at TA-54 is free of cracks; compatible with hazardous waste to be stored; and sloped or otherwise designed to prevent container contact with free liquids.

Response:

The concrete floors at the TA-50 storage area and the metal storage building at TA-54 are presently in good condition, free of cracks, gaps or holes. The

concrete is coated with Plasite epoxy to prevent damage in the event of a spill. The containers are stored on wooden pallets to prevent contact with standing liquid. See Sections 4.1 and 4.3.2 for discussions, and Appendix I for the vendor information on Plasite.

**[Section 302.A.4.b(1)(b)]**

Comment 29.

Page 4-3. LANL needs to provide information on the analyses performed after treatment to include: parameters, rationale, test methods, sampling methods; and copies of existing laboratory analyses.

Responses:

The wastes that are currently treated in the batch treatment system include the electrochemistry processing wastes. The Waste Analysis Plan, Section 3.0, discusses the parameters, rationales, test methods and sampling methods pertinent for characterizing these wastes. The same Waste Analysis Plan will be utilized to characterize the wastes after treatment. See Section 4.1.1 for discussion.

**[Section 302.A.4.b(2)(a)]**

Comment 30.

Page 4-3. LANL needs to discuss means of preventing escape of hazardous waste via the raised floor drains should a spill occur.

Response:

Floor drains are blanked off by a blind flange (see Section 4.1.2).

Comment 31.

Pages 4-3 and 4-11. LANL needs to provide information on the type of containers used to store hazardous waste, compatibility of the containers with the waste, and procedures for handling the containers.

Response:

Steel 55-gallon drums will be used to store wastes at the TA-50 container storage area. These drums meet the U.S. Department of Transportation Specification No. 17C and 17H. Corrosive wastes are stored in DOT 17C or 17H drums

with polyethylene liners. They are transported and positioned by hand trucks or forklifts. See Sections 4.1.1 and 4.3 for discussion.

[Section 302.A.4.b(2)(b)]

Comment 32.

Page 4-4. LANL needs to provide information on the specific gravity of all liquids to be treated, the compatibility of the liner with all liquids to be treated, the resistance of the tank shell to corrosion, how the tank shell thickness will be maintained, and a detailed chemical and physical analysis of all wastes prior to treatment and after treatment.

Response:

The maximum specific gravity of all wastes that will be treated in the batch treatment tank is 1.25. The KYNAR lining for the tank was chosen for its corrosion-resistant capabilities (see Appendix K for the Chemical Resistance Table for compatibility information). The tank shell and liner will be inspected annually to maintain a minimum thickness. See Section 4.1.3 for discussion.

Comment 33.

Page 4-4. LANL needs to provide information on the transfer pump, to include: the pumping capacity, type of tubing, safety features, and the compatibility of the pump and tubing with the hazardous waste.

Response:

Vendor information on the transfer pumps is presented in Appendix I.

Comment 34.

Page 4-4. LANL needs to provide information on the load bearing capacity of the tank supports and the concrete floor.

Response:

The tank leg supports (four legs) are designed to sustain loads in excess of 2,000 pounds per support, which is sufficient to support the tank at maximum capacity. The bases of the tank supports are 2-1/2 feet in diameter and will exert approximately 800 pounds per square foot to the concrete pad. The

concrete pad design load-bearing capacity is approximately 3,000 pounds per square foot; therefore, the concrete pad will support the tank. See Section 4.1.3 for discussion.

Comment 35.

Page 4-4. LANL needs to provide information on how the transfer of chromate plating solution differs from that for cyanide wastes.

Response:

The plating solutions and the cyanide wastes are transferred in the same manner. See Section 4.1.3.2 for clarification.

Comment 36.

Page 4-4. LANL needs to provide information on where the acid/base wastes are stored prior to treatment.

Response:

Acid/base wastes are stored at Area L prior to treatment. See Section 4.1.3.3.

Comment 37.

Page 4-5. LANL needs to provide information on the treatment process used to remove metals from the acid/base wastes.

Response:

The removal of metals from the acid wastes is accomplished by precipitation and removal of the insoluble metal hydroxides. Treatment and removal of metals is accomplished by the following simplified steps:

1. Raise the pH of the batch to 9.0 - 10.0 range by the addition of sodium hydroxide.
2. Metal hydroxides will form and settle to the bottom of the tank.
3. The metal hydroxide sludges are then removed from the tank through a hopper.
4. After removal of the hydroxides, the pH is neutralized with sulfuric or hydrochloric acid.

Procedures for removal of metals from alkali solutions have not yet been developed for the treatment system. See Section 4.1.3.3 for discussion.

[Section 302.A.4.b(2)(e)]

Comment 38.

Page 4-5. LANL needs to provide information on the relationship of the two 155-gallon storage tanks to the operation of the incinerator.

Response:

The two tanks are the holding/blending tanks for the incinerator waste feed system. Wastes are stored in these tanks for less than 90 days prior to incineration. See Section 4.2.1.

Comment 39.

Page 4-7. LANL needs to provide information on where, and for how long hazardous waste will be stored prior to incineration at Building 37.

Response:

Wastes will be stored at the Area L waste storage facilities if greater than 90 day storage is required. See Section 4.2.2.

Comment 40.

Page 4-7. LANL needs to provide information on the holding/blending tanks if they are not the storage tanks previously identified, and on the dip tube/pump to include the same information as requested in #33.

Response:

The holding/blending tanks are the 155-gallon KYNAR-lined steel waste storage tanks. Information on the pumps used to transfer the wastes to the tanks is included in Section 4.2.2.

Comment 41.

Page 4-8. LANL needs to provide information on the "(radioactive) waste treatment system" located at building TA-50.

Response:

Section 4.2.2 has been revised to clarify the role of the radioactive waste treatment system as it relates to the incinerator operations.

Comment 42.

Page 4-8. LANL needs to note that the ash will also need to be analyzed and treated if necessary, as a hazardous waste.

Response:

The incinerator will be analyzed for both radioactive and hazardous constituents. The final disposition of the ash will depend on the results of the analyses as discussed in Section 4.2.2.

Comment 43.

Page 4-10. LANL will not be authorized to use the incinerator for hazardous waste after the trial burn until a permit is issued. LANL needs to make the appropriate corrections.

Response:

The appropriate correction has been made in Section 4.2.3.

**[Section 302.A.4.b(2)(b)]**

Comment 44.

Page 4-11. LANL needs to provide the following information on the two storage tanks: design standards, specifications on the construction material and lining material, dimensions, capacity, shell thickness, diagram of the piping, waste feed systems, safety features, corrosion resistance, compatibility with the waste being stored, load bearing capacity of tank supports, and specific gravity of the waste to be stored in the tanks.

Response:

The two 225-gallon tanks discussed on page 4-11 satisfy the definition of a container instead of a tank, according to 40 CFR 260.10. These containers are constructed of polyethylene and are designed to facilitate movement with a forklift truck. The containers meet the U.S. Department of Transportation Specification No. E9052. The material of construction, polyethylene, is compatible with any waste that will be stored in them based on vendor chemical suitability data. Vendor information on these containers is contained in Appendix I-2. See Section 4.3 for discussion.

Comment 45.

Page 4-11. LANL needs to correct the Part A to identify these storage tanks.

Response:

See Response to Comment 44. The volume contained in these containers is included in the Part A.

**[Section 302.A.4.b(2)(a)]**

Comment 46.

Page 4-11. LANL needs to correct the reference to Appendix K. This appendix does not contain operational procedures.

Response:

Appendix K contains Operating Procedures for transferring wastes from containers to the treatment system utilizing the drum pumps. This appendix also gives procedures for selection of the appropriate pump and pump tube combination. See Section 4.3.

Comment 47.

Page 4-11. LANL needs to discuss where the small containers will be stored in the metal storage building.

Response:

The small containers will be stored adjacent to the 55-gallon drums on the metal grates. The small containers will eventually be placed in lab-packs and placed in a 55-gallon drum. See Section 4.3 for discussion.

Comment 48.

Page 4-11. LANL needs to describe how the second layer of drums will be stacked.

Response:

The drums will be stored on wooden pallets; the pallets are moved, positioned, and stacked at the roofed storage pad by use of a forklift. See Section 4.3.

Comment 49.

Page 4-11. LANL needs to discuss the compatibility of the epoxy paint to be used on the floor at the new storage building with the hazardous wastes to be stored at this location.

Response:

The epoxy paint used on the concrete floor is Plasite, which was chosen for its resistance to a wide range of acids, alkalis, solvents, and water solutions. Vendor information on Plasite is located in Appendix I-1. See Section 4.3.2 for discussion.

Comment 50.

Page 4-11. LANL needs to demonstrate that the vermiculite is compatible with the hazardous waste being packaged for disposal.

Response:

The compatibility of vermiculite with most wastes and the absorbents used for vermiculite-noncompatible wastes are discussed in Section 4.3.1.

Comment 51.

Page 4-14. LANL needs to delete the reference made to "Section 4.5.1". This section does not describe packaging of hazardous waste.

Response:

The appropriate editorial correction has been made.

Comment 52.

Page 4-15. LANL needs to identify what hazardous waste classification is applicable to the materials to be recycled, and where this material is stored prior to being recycled.

Response:

Materials to be recycled that require greater than 90 day storage are stored at Area L storage facilities. Hazardous waste numbers and a discussion of storage is presented in Section 4.3.3.2.

Comment 53.

Page 4-15, Appendix M. LANL needs to describe the hand-pump that will be used to transfer hazardous wastes. This description to include information on compatibility and decontamination.

Response:

Vendor information on the hand pump is presented in Appendix K.

Comment 54.

Page 4-15, Appendix M. LANL needs to discuss cleanup procedures when spillage occurs during transfer of hazardous waste.

Response:

During normal drum transfer operations, only small quantities of hazardous waste are spilled. Any spilled material resulting from transfer operations will be absorbed with an absorbent material such as vermiculite, collected and placed in 55-gallon drums, and stored at one of the on-site container storage areas or transported to an off-site disposal facility. See Section 4.3.3.2 for discussion.

[Section 302.A.4.b(2)(b)]

Comment 55.

Page 4-16. LANL needs to provide the design standard of the treatment tanks at TA-54. This is to include: tank dimensions, shell thickness, piping and instrumentation, structural support, load-bearing capacity, specific gravity of the hazardous wastes to be treated, and information on corrosion protection.

Response:

The design standard for the tanks has been added to Section 4.4.

Comment 56.

Page 4-16. LANL needs to provide information on the concrete pad to include the integrity of the concrete, the load-bearing capacity of the concrete, height of the berm, and if a berm exists between each tank.

Response:

Additional information on the concrete pad and berm has been added to Section 4.4.1. A drawing of this pad is supplied as Figure 2-9.

Comment 57.

Page 4-16. LANL needs to provide information on the compatibility of the hazardous waste to be treated with the polyethylene liner and the tank shell.

Response:

Information on the polyethylene liner, its method of use and its disposition has been added to Section 4.4.2.

Comment 58.

Page 4-16. LANL needs to discuss how the liner is tied in place, and the disposition of the liner when it is replaced.

Response:

Information on the polyethylene liner, its method of use and its disposition has been added to Section 4.4.2.

Comment 59.

Page 4-16. LANL needs to discuss how the hazardous waste is going to be introduced into the tanks for treatment.

Response:

The method of waste introduction has been added to Section 4.4.2.

Comment 60.

Page 4-16. LANL needs to provide information on the portable pumps used for drawdown to include: size, pumping capacity, type of tubing, compatibility, number of pumps, decontamination of the pumps after use, and where the pumps will be stored.

Response:

Pump information is supplied in Appendix K.

Comment 61.

Page 4-16. LANL needs to discuss where the hazardous waste will be stored if

it becomes necessary to draw down or empty the tanks, and the number of containers available for such storage.

Response:

Information on supplemental containers for waste storage has been added to Section 4.4.2.

Comment 62.

Page 4-17. LANL needs to provide information on the compatibility of the tank covers with the hazardous waste being treated and the disposition of the tank covers after usage.

Response:

Information on the tank covers has been added to Section 4.4.2.

[Section 302.A.4.b(2)(g)]

Comment 63.

Page 4-17, Figure 2-5. LANL needs to provide the location of shafts 32, 33 and 34.

Response:

The shaft locations have been added to Figure 2-5.

Comment 64.

Page 4-17. LANL needs to provide the rated lift capacity of the crane used at the landfill, a description of the drum hooks, and safety procedures used while lowering the drums.

Response:

The drums are lowered into the shafts with a Lorraine crane (15, 18 or 22 ton). The shafts are protected by metal safety covers which have toe guards and a railing around the opening. This complies with the Health and Safety Manual and the Federal Register on safety over openings and shafts. See Appendix M-2 for crane information and Section 4.5.1 for discussions.

Comment 65.

Page 4-17. LANL needs to provide a list of the hazardous waste which has been placed in each cell, a list of the hazardous wastes to be placed in each

landfill cell, detailed plans and engineering reports describing the design, construction and operations of the landfill, information on the liner system, leachate collection system and removal system, how run-on and run-off will be controlled, and a description on how each landfill cell and liner will be inspected.

Response:

Available information on past waste disposal practices in TA-54 shafts is provided in Appendices M-3 and M-4.

**SECTION 5: GROUNDWATER MONITORING**

[Section 302.A.4.b(2)(g)]

Comment 66.

Page 5-0. LANL references HWMR 206.C.1.A(3) as allowing a waiver for ground water monitoring. This reference is applicable for interim status not for permit issuance.

Response:

The appropriate regulatory citation is given in Section 5.0.

**SECTION 6: PROCEDURES TO PREVENT HAZARDS**

[Section 302.A.4.b(1)(d)]

Comment 67.

Page 6-0. LANL needs to provide the height and type of fence surrounding TA-50.

Response:

The fence is an approximately eight-foot high chain link fence with three strands of barbed wire at the top. See Section 6.1.

Comment 68.

Page 6-2. LANL will need to post warning signs in English and Spanish at TA-50 that indicate only authorized personnel allowed at that entry may be dangerous.

Response:

These signs have been posted as discussed in Section 6.2.

[Section 302.A.4.b(1)(e)]

Comment 69.

Page 6-3, Appendix Q. LANL will need to maintain copies of the inspection logs for three (3) years.

Response:

Inspection logs will be maintained in the HSE-7 files for a minimum of three years as noted in Section 6.3.

Comment 70.

Page 6-3. LANL needs to provide a copy of the "daily inspection checklist" for TA-50.

Response:

The "daily inspection checklist" is given in Tables 6-1 and 6-2.

Comment 71.

Page 6-3. LANL needs to provide a description of how the tank at TA-50 will be emptied for entry and internal inspection.

Response:

The description of how the tanks at TA-50 will be emptied for entry and internal inspection is given in Section 6.3.1 under Frequency and Content of Inspection.

Comment 72.

Page 6-3. LANL needs to differentiate between the operative log and the inspection log.

Response:

The ambiguity regarding these logs is resolved in Section 6.3.1.

Comment 73.

Page 6-4. LANL needs to discuss the rationale for implementing the "Contingency Plan" only after the receipt of sampling results.

Response:

The conditions under which the "Contingency Plan" is implemented are discussed in Sections 6.3.1 and 7.0.

Comment 74.

Page 6-5. LANL needs to discuss what criteria the system operator will use to determine when to shut down the batch treatment tank.

Response:

The criteria the system operator will use to determine when to shut down the batch treatment tank are given in Section 6.3.1 under Remedial Action.

Comment 75.

Page 6-5. LANL needs to discuss the relationship of the inspection log identified as Table 6-5 to TA-50.

Response:

The appropriate editorial correction has been made.

Comment 76.

Page 6-8. LANL needs to provide an inspection schedule and identify potential problems to look for at the two storage tanks at TA-54.

Response:

The two 225-gallon storage containers (Tuff-Tank) were incorrectly identified as tanks when they are actually portable containers (see Section 4.0). The inspection schedule and potential problems are provided in Table 6-3.

Comment 77.

Page 6-8. LANL needs to provide an inspection schedule and identify potential problems to look for at the container storage areas at TA-54.

Response:

The inspection logs for the TA-54 container storage areas are given in Table 6-3.

Comment 78.

Page 6-8. LANL needs to discuss how the tanks at TA-54 will be emptied and internally inspected.

Response:

The discussion of how the treatment tanks at TA-54 are emptied and internally inspected has been added to Section 6.3.3 under Potential Problems.

Comment 79.

Page 6-8. LANL needs to identify how many drums are available should a leak occur in any of the tanks at TA-54, and provide information on the pump(s) available for use in emptying the tanks. This information should include pumping capacity, compatibility, tubing, decontamination of the pump and location of the pump(s).

Response:

The number of drums available and information on the pumps available for use in emptying a treatment tank is provided in Section 6.3.3 under Remedial Action.

**[Section 302.A.4.b(1)(h)]**

Comment 80.

Page 6-12. LANL needs to demonstrate that there is adequate aisle space for movement of equipment and containers at TA-50 and TA-54. This demonstration to include a description of the size and lift capacity of all drum handling equipment.

Response:

Aisle space requirements and a description of drum handling equipment are presented in Section 6.4.2 and Appendix M-6.

Comment 81.

Page 6-12. LANL needs to discuss how the drums are moved into and out of the container storage area at TA-50 if surrounded by an eight inch high curb.

Response:

Drums are moved into and out of the TA-50 container storage area using forklift-mounted; hydraulically operated drum tongs as discussed in Section 6.4.2.

Comment 82.

Page 6-12. LANL needs to identify which storage areas are not ramped for use of equipment.

Response:

Ramping of storage cells at the TA-54 storage facilities is not required because drums may be accessed from the perimeters using equipment described in the Response to Comment 81.

Comment 83.

Page 6-14. LANL needs to provide additional information on the solvent recovery operation, and the cooling water discharged to the sewer system.

Response:

Mention of solvent recovery operations has been deleted. Cooling water is circulated through an enclosed jacket around the reactor tank, and hence, does not contact hazardous waste. See Section 6.5.1. and Appendix I for clarification.

Comment 84.

Page 6-17. LANL needs to provide a detailed description of the procedures used to landfill the drums. This is to include movement of the drums from the point of storage to the landfill cell, attaching the drum hooks, release of the books and the specification of the equipment.

Response:

Procedures used to emplace drummed wastes in Area L shafts are described in Section 6.5.3 and Appendices M-2 and M-4.

Comment 85.

Page 6-17. LANL needs to construct and operate a run-off collection system at TA-54.

Response:

A discussion of the need for a run-off collection system at TA-54 is presented in Section 6.5.3.

[Section 302.A.4.b(1)(g)]

Comment 86.

Table 6-1. LANL needs to: provide an entry space for the time of the inspection; identify all gauges to be inspected; inspect all gauges for operational status; inspect all overflow control equipment; inspect construction material of the tank weekly for corrosion and leakage; describe any remedial actions taken; discuss daily inspections of unloading areas when in use; identify security equipment, safety equipment, and spill control equipment to be inspected.

Response:

Revised inspection logs are provided in Table 6-1.

Comment 87.

LANL needs to provide an inspection checklist for the container storage at TA-50.

Response:

Revised inspection logs for TA-50 are provided in Table 6-1.

Comment 88.

Table 6-3. LANL needs to: inspect the containment system at both storage areas weekly; inspect the freeboard level of waste in each tank daily; inspect any overflow equipment or gauges daily; and, inspect unloading areas daily when in use. LANL also needs to provide a space for entering the date, time of inspection and inspectors name.

Response:

Revised inspection logs for TA-54 are provided in Table 6-3.

**SECTION 7: HAZARDOUS WASTE FACILITIES CONTINGENCY PLAN**

Comment 89.

Page 7-0. LANL needs to provide additional information on the dumpster tanks.

Response:

Section 7.1 has been modified.

Comment 90.

Page 7-7. LANL indicates that Area L consists of about two acres and six open waste disposal shafts whereas they indicate that Area L comprises about three acres and four open disposal shafts on Page 2-5. LANL needs to make the necessary correction.

Response:

The appropriate change has been made in Section 7.1.2.5.

**[Section 302.A.4.b(1)(g)]**

Comment 91.

LANL needs to provide a copy of the working Contingency Plan.

Response:

A working copy of the Contingency Plan has been provided in Appendix T.

Comment 92.

Page 7-17. LANL needs to identify what criteria exists for the HWEC to use in determining which response groups to contact.

Response:

Table 7-3 shows the assistance that each HSE group can provide during an emergency. The HWEC will use this list as the criterion to determine which groups to contact in an emergency. The appropriate change has been made in Section 7.4.2.2.

Comment 93.

Page 7-18. LANL needs to discuss the difference between the "Contingency Plan" and the "HWF Emergency Contingency Plan".

Response:

There is no difference between the Contingency Plan and the HWF Emergency Contingency Plan. This has been clarified in Section 7.0.

Comment 94.

Page 7-18. LANL needs to discuss in detail how the HWEC will assess the hazards to human health and environment and what criteria will be used to determine when it is necessary to evacuate.

Response:

The appropriate changes have been made in Section 7.4.2.3.

Comment 95.

Page 7-19. LANL needs to discuss the procedures that will be used to monitor equipment during emergency shut down.

Response:

The appropriate changes have been made in Section 7.4.2.3 and Tables 7-6 and 7-7.

Comment 96.

Page 7-18. LANL needs to discuss how the HWEC will determine the extent of contamination, the chemicals involved and the characteristics of hazardous waste.

Response:

The appropriate changes have been made in Section 7.4.2.2.

Comment 97.

Page 7-20. LANL needs to provide the following information for hazardous spills: the type of absorbents to be used; the quantity of absorbent available for use; the compatibility of the absorbent with the hazardous wastes; the number, type, and size of drums available for use; the ultimate disposition of any contaminated absorbent or waste material; the type and compatibility of equipment to be used; how decontamination will be accomplished; where decontamination will be accomplished; how many samples will be collected for testing; methods that will be used to collect the samples; type of analyses that will be performed; and the analytical methods that will be used to perform the analyses.

Response:

The appropriate additions have been made in Section 7.5.1.1.

Comment 98.

Page 7-21. LANL needs to discuss why the HWEC is to remain near the disposal site during a fire or an explosion.

Response:

This has been clarified in Section 7.5.2.

Comment 99.

Page 7-25. LANL needs to provide a copy of the "Standard Operating Procedures" to be used for shut down at the TA-50 Batch Treatment Unit and the Waste Incinerator.

Response:

The Standard Operating Procedures for the Batch Treatment System and the incinerator have been provided in Appendix T. Section 7.6.2.1 and 7.6.2.2 reflect these additions.

Comment 100.

Page 7-26. LANL needs to discuss what type of survey will be made to determine if any hazardous conditions still exist.

Response:

The appropriate changes have been made in Section 7.7.

Comment 101.

Page 7-27. LANL needs to provide a copy of the "Laboratory Procedures" to be used to treat and/or dispose of hazardous waste.

Response:

Laboratory procedures for disposing of contaminated material have been clarified in Section 7.7.

Comment 102.

Page 7-27. A visual inspection is not adequate to assess the extent of contamination, or if decontamination procedures have been adequate.

Response:

Section 7.7 has been revised to show that visual inspections will be supplemented by sampling to determine the type and degree of contamination of emergency equipment.

Comment 103.

Page 7-27. LANL needs to identify the requirements of DOE Order 5484.1.

Response:

The requirements of DOE Order 5484.1 have been supplied in Appendix T.

Comment 104.

Table 7-1. LANL needs to change the reference from (m<sup>3</sup>) to a measurement as identified in the Part A.

Response:

Table 1 of Appendix T has been revised to reflect this change.

Comment 105.

Table 7-4. LANL needs to provide a description of the general capabilities of the emergency response equipment.

Response:

The appropriate changes have been made in Table 7-3.

Comment 106.

Table 7-5. Modifications to any process after a permit is issued will require EID notification and a permit modification.

Response:

Table 7-4 has been revised to reflect this provision.

Comment 107.

Table 7-6. LANL needs to identify the primary coordinator and each alternate coordinator to contact in succession.

Response:

Table 7-5 has been revised and lists the primary Hazardous Waste Emergency Coordinator and each alternate coordinator to contact in succession.

Comment 108.

Figure 7-7. LANL needs to identify where the liquid waste blowdown from the incinerator goes, and provide laboratory analyses of the blowdown.

Response:

The appropriate changes have been made in Section 7.1.2.4.

**SECTION 8: PERSONNEL TRAINING**

[Section 302.A.4.b(1)(1)]

Comment 109.

Page 8-3. LANL needs to reference Appendix U as providing the job description for each position related to hazardous waste management, and then demonstrate that the training provided is adequate for each of these job positions.

Response:

Appendix U has been referenced in Section 8.2.5. Each duty listed in the job descriptions (Appendix U) has a Los Alamos training course tied to it to demonstrate that the required courses are designed to ensure that all hazardous waste management and handling personnel are adequately trained for their job responsibilities.

Comment 110.

Page 8-4. LANL needs to identify who fills the position of "Laboratory Emergency Coordinator".

Response:

The term "Laboratory Emergency Coordinator" was used as an alternative to Hazardous Waste Emergency Coordinator (HVEC) in Section 8.3. A list of primary and secondary HVECs is shown in Table 7-5.

Comment 111.

Page 8-4. LANL needs to demonstrate that the training received by the contractors is adequate for emergency response activities.

Response:

The training received by contractor personnel has been clarified in Section 8.3.

Comment 112.

Page 8-4. LANL needs to demonstrate that those individuals providing on the job training are trained in hazardous waste management procedures.

Response:

The appropriate change has been made in Section 8.2.2 and Table 8-1.

**SECTION 9: CLOSURE/POST-CLOSURE**

**[Section 302.A.4.b(1)(m)]**

Comment 113.

Page 9-0. LANL needs to address partial closure requirements in that each time a landfill cell at TA-54 is closed constitutes partial closure.

Response:

Partial closure at Los Alamos hazardous waste management facilities is discussed in Sections 9.1.2 and 9.4.1.3.

Comment 114.

Page 9-2. LANL needs to address groundwater monitoring in that a double liner system is not in use at the landfill.

Response:

Groundwater monitoring is discussed in Sections 9.1.4 and 9.4.6.1.

Comment 115.

Page 9-2. LANL needs to discuss how decontamination will be accomplished and verified, and that disposal will be pursuant to the HWMR-2.

Response:

That disposal of protective equipment and clothing will be pursuant to applicable regulations is noted in Section 9.1.5. Equipment that is easily decontaminated (e.g., rubber boots, respirators, etc.) will be thoroughly scrubbed with appropriate solvents and the solvents disposed of as hazardous waste. If items are thought to be contaminated after such cleaning, then they will be disposed of. These procedures represent standard industry practice for protective gear.

Comment 116.

Page 9-3. LANL needs to provide a copy of DOE security requirements to demonstrate that closure security will be pursuant to the HWMR-2.

Response:

Post-closure security plans are clarified in Section 9.1.8.

Comment 117.

Pages 9-8, 9-11, 9-13, and 9-14. LANL needs to change the maximum inventory measurement of hazardous waste to be similar to the unit of measurement identified in the Part A.

Response:

The appropriate measurement unit conversions have been made in Sections 9.2.1.5, 9.2.2.1, 9.3.1.1, 9.3.2.1 and 9.4.1.1.

Comment 118.

Pages 9-9, 9-10, 9-13. LANL needs to discuss, for any sampling, how many samples will be collected, how the samples will be collected, what the samples will be analyzed for, what testing and sampling methods will be used, and, demonstrate that the samples to be collected are representative.

Response:

Sampling and analysis programs to be performed during closure to determine the extent of contamination at waste management facilities are discussed in Sections 9.2.1.7, 9.2.2.3, 9.3.1.3, 9.3.2.2, 9.4.2.3, 9.4.2.4, 9.4.3 and 9.5.

Comment 119.

Page 9-9. LANL needs to identify where disassembled equipment will be taken if it requires additional decontamination.

Response:

The disassembly and decontamination of the TA-50 Batch Waste Treatment System during closure is clarified in Section 9.3.1.3.

Comment 120.

Pages 9-9, 9-13, 9-14, and 9-15. LANL needs to demonstrate that a visual observation is adequate to certify that an area is clean.

Response:

The methods used during closure to verify decontamination of hazardous waste management facilities are described in Sections 9.2.1.9, 9.2.2.5, 9.3.1.4, 9.3.2.2, 9.4.2.2, 9.4.2.3, 9.4.3 and 9.5.

Comment 121.

Pages 9-9, and 9-13. LANL needs to certify that the swipe test is an EPA approved procedure and reference the EPA test method number.

Response:

See response to Comment 120 above.

Comment 122.

Pages 9-10, 9-14, 9-15, and 9-16. LANL needs to provide the total time required to complete closure activities.

Response:

The closure schedules for Los Alamos hazardous management facilities are presented in Tables 9-6, 9-7 and 9-9.

Comment 123.

Excavation of additional shafts will require EIA approval and a permit modification.

Response:

No response required, as the comment paraphrases the regulations (NMHWMR-2).

Comment 124.

Page 9-15. LANL needs to provide a copy of the "standard shaft closure procedure".

Response:

The terminology "standard shaft closure procedure" was not intended as a reference to a stand-alone document, but refers to the information on waste shaft closure provided in Section 9.4.

Comment 125.

Page 9-16. LANL needs to identify the lateral extent for each shaft cover.

Response:

Information on the lateral extent of each shaft cover is provided in Sections 9.4.1 and 9.4.2.7, and Figure 9-11.