NEW MEXICO ENVIRONMENT DEPARTMENT
RESPONSE TO PUBLIC COMMENT RECEIVED ON THE
DRAFT POST-CLOSURE CARE PERMIT, CORRECTIVE MEASURES STUDY, FINAL REMEDY, AND CLOSURE PLAN AMENDMENT FOR THE
SANDIA NATIONAL LABORATORIES
CHEMICAL WASTE LANDFILL

Public comment concerning the draft Chemical Waste Landfill (CWL) Post-Closure Care Permit (PCCP), the CWL Corrective Measures Study (CMS), Final Remedy, and the CWL Closure Plan Amendment (CPA) was accepted by the New Mexico Environment Department (NMED) from May 21, 2007, to July 20, 2007, and from July 24, 2007 to August 20, 2007. The following table identifies the names of those that submitted comments, the organization they represent (if any), and the comments hey submitted referenced by number. Some comments were the same or similar to others, and were thus grouped together to make it more efficient for the NMED to respond to them.

Commenter ID	Commenter/Organization	Comment #(s)
A	David B. McCoy /Citizen Action New Mexico	1-39, 118-128
B	Linda Lillow	1, 2, 5, 6, 7, 36-39
C	Joni Arends/Concerned Citizens For Nuclear Safety	1, 2, 6, 7, 10, 12, 13, 15, 16, 20, 36-41, 118-121
D	Robert Liberatore	1, 2, 5, 6, 7, 36-39
E	Janet Greenwald/Citizens for Alternatives to Radioactive Dumping	1, 2, 5, 7, 28, 37
F	Bob McCoy	1, 2, 5, 6, 7, 36-39
G	U. S. Department of Energy/Sandia Corporation (Permittees)	1, 42-117

During approximately 5 days beginning August 13, 2008 through June 2, 2009, the NMED met with the Permittees and some of the interested parties (Citizen Action and Citizens Against Radioactive Dumping) in accordance with 20.4.1.901.A NMAC in an attempt to resolve issues giving rise to opposition of the draft PCCP, CMS Report, Final Remedy, and CPA (the other interested parties requesting a hearing were invited to these discussions but chose not to participate). As a result of these discussions, NMED, the Permittees, and the other participating parties reached agreement on a revised PCCP, a revised CPA, and the Final Remedy. Those that did not participate were provided copies of the revised documents and given further opportunity to comment.

The NMED response to public comment includes a description of modifications that were made to the draft PCCP and the CPA as a result of public comment and the aforementioned meetings. The Final Remedy (soil cover combined with groundwater and soil-gas monitoring) was not modified.

NO.	COMMENTER ID	COMMENT	NMED RESPONSE
1	A, B, C, D, E, F, G	A public hearing is requested.	During the time period between August 13, 2008 through June 2, 2009, the NMED met with the Permittees and several other interested parties as provided in 20.4.1.901.A NMAC in an attempt to resolve issues giving rise to opposition of the draft PCCP. As a result of these discussions, NMED, the Permittees, and the other participating parties reached agreement on a revised PCCP, a revised CPA, and the CMS and final remedy. All of the parties requesting a hearing either withdrew their request for said hearing as a result of reaching these agreements, or by not responding to NMED correspondence (e-mail or letter), were presumed not to retain an interest in the PCCP, CPA, or final remedy. Permit and CPA Modifications: The PCCP and CPA were modified in order to reach agreement on the content of these documents. The details on these modifications are documented in the various responses to the comments that follow.

NO.	COMMENTER ID	COMMENT	NMED RESPONSE
2	A, B, C, D, E, F	The full Administrative Record was not available for review. NMED should extend the public comment period for the CWL for at least 90 days after provision is made for furnishing the full Administrative Record for the CWL.	The full Administrative Record was available at the Hazardous Waste Bureau in Santa Fe throughout the public comment period. The New Mexico Hazardous Waste Management Regulations at 20.4.1.901(A) (3) stipulate that a minimum of 45 days shall be allowed for public review and comment on draft RCRA permits. For closure plan amendments, the regulations at 20.4.1.600 NMAC incorporating 40 CFR § 265.112(d)(4) allow for a 30-day public comment period from the date of notice. For a CMS, the NMED follows the public participation requirements applicable to remedy selection under 20.4.1.900 NMAC incorporating 40 CFR § 270.41 and 20.4.1.901 NMAC which allow for a 45-day public comment period (this is discussed in more detail in the Sandia Order on Consent, April 29, 2004, page 59). The initial comment period was from May 21, 2007 to July 20, 2007, 16 days longer than that required by the regulations regarding RCRA permits and CMS. After the initial 60-day comment period was completed, NMED provided additional time (28 days) for public comment from July 24, 2007, to August 20, 2007. Only two sets of comments, supplementing earlier sets of comments, were received on time during the second public comment period suggesting that anyone wanting to comment on the CWL documents had sufficient time to do so. Thus, the public comment period was not extended again. See also response to comment #3. Permit Modification: None. CPA Modification: None.

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3	A	The Administrative Record for the CWL is only available in Santa Fe and should be put in Albuquerque to facilitate its review by the public.	The Administrative Record must be kept at the Hazardous Waste Bureau's office in Santa Fe given that this is where the main office of the Bureau is based and where resources are available to store, maintain, and secure the official records. Copies of several key documents were available for public inspection in Albuquerque at the NMED's District 1 Office, and electronic files of the same documents were also posted on the NMED's web site for public access. The rest of the Administrative Record was available to the public by request at the Hazardous Waste Bureau's Santa Fe office. Anyone could have made arrangements with the Bureau to review the records in accordance with the procedures indicated in the public notice. Permit Modification: None. CPA Modification: None.
4	A	The website has not posted the 5 volumes of the CWL Landfill Excavation Voluntary Corrective Measures Final Report, April 2003.	Although an electronic copy of the cited document was not posted on the NMED's web site, it was available in hard copy in Santa Fe at the Hazardous Waste Bureau's Office as part of the Administrative Record. The key documents that are available on the NMED web site were placed there for the convenience of the public to facilitate review of the PCCP, CMS, and CPA. There are no regulatory or statutory requirements that mandate that such documents must be posted on a web site. Thus, NMED has actually gone beyond what is required by the law by posting the key documents for this matter on the Department's web site. The NMED is not required to, nor does it have the resources, to post on its web site all of the hundreds of documents related to the Administrative Record for the CWL. Additionally, the inclusion of hundreds of documents on the web site could cause confusion as to which few were the most important documents related to the draft PCCP, the CMS, and the CPA. Permit Modification: None. CPA Modification: None.

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5	A, B, D, E, F	The Fact Sheet lacks clarity on many issues.	The Fact Sheet is meant only to be a brief summary of the actions that are being contemplated by the NMED (in this case finalizing the draft PCCP, amending the Closure Plan (via the CPA), and selecting a remedy for the CWL based on the results of the CMS). The Fact Sheet also summarizes where the Facility is located, who owns and operates the Facility, the history of the hazardous waste management unit, the regulatory background for the unit, the basis for any permit conditions, and how the public can participate in the final decision process. Only one comment was received concerning the Fact Sheet that provided any details as to what caused the commenter to become confused. However, that person did not contact the NMED for clarification using the contact information provided in the Fact Sheet. Final decisions on the draft PCCP, the CPA, and the CMS must be made simultaneously as indicated in the Fact Sheet to ensure a smooth regulatory transition from completing closure of the CWL under an interim status closure plan to conducting post-closure care under a permit. Having to make final decisions on three complicated actions at once contributes to the necessarily complex nature of the Fact Sheet. Although NMED understands that many members of the public are not familiar with the myriad of RCRA terms and are not experts in the many scientific disciplines involved in the implementation of RCRA, the NMED believes that this particular Fact Sheet adequately conveys the most critical information needed by the public in regard to this matter. Although anyone could have use the contact information provided in the Fact Sheet to request clarification on any topic, NMED was not contacted by anyone needing such assistance. In all cases, it is apparent that those that submitted comments understood that NMED was taking action on three related matters with respect to the CWL.
	A	The changing terminology of the NMED May 21, 2007 Fact Sheet is confusing as to what the exact names are for the various documents, the precise correlation to the different names of the documents and exactly what are the precise documents that the public is being presented for review.	

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		On p. 8, Public Review is supposedly for the draft Permit, Closure Plan Amendment, and Corrective Measures Study Report. However, on p. 9, the Comment Period and NMED Contact it states "Any person who wishes to comment on the draft Permit or request a public hearing…" Thus, it would appear in going from p. 8 to the first paragraph of p. 9 that the number of documents the public may comment on or request a public hearing has gone from three documents to one document only.	NMED agrees that this part of the Fact Sheet could have been better worded (see also response to comment #5). However, the interested citizen letter and the Public Notice (07-05) that accompanied the letter (and was also published) give clear information concerning the public rights to submit comments on or request a hearing for the draft PCCP, CMS, and CPA. In any event, it is not required nor necessary to issue another Fact Sheet and conduct another public comment period for the draft Permit, the CMS, or the CPA. Permit Modification: None. CPA Modification: None.

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6	A, B, C, D, F	The commenters request that the NMED not issue any post-closure permit until a RCRA compliant well monitoring system has been installed at the CWL. One commenter further states that the distance of the monitoring wells from the official CWL boundary of the fenceline would appear not to meet the point of compliance requirement under 40 CFR § 265.95. The waste management area of the CWL would be the projected horizontal footprint of the CWL as shown in Figure 9. The monitoring wells are not positioned at the hydraulically down gradient limit of the waste management area extending into the uppermost aquifer underlying the regulated unit.	The Permittees originally proposed to use wells BW4A, MW4, MW5U, and MW6U for the groundwater monitoring network to be employed at the CWL during the post-closure care period. Pursuant to the regulations at 20.4.1.500 NMAC incorporating 40 CFR § 264.97(a), wells must be of sufficient numbers, must be installed at appropriate locations and depths to yield water samples that are representative of background conditions or yield representative samples of the water quality of groundwater passing the point of compliance, and allow for the detection of hazardous waste or hazardous constituents, as appropriate to the purpose of the well. The regulations are not specific as to how close the wells must be to the point of compliance. It is also necessary for the CWL to expedite the transition from closure to post-closure care to ensure that the landfill cover and monitoring systems will be properly maintained, and so that the monitoring of soil gas will commence as soon as possible. The NMED initially decided to allow the use of wells BW4A, MW4, MW5U and MW6U as the groundwater monitoring network because most of the contaminant sources have been removed from the landfill, and because the levels of contaminants in groundwater in the last 10 years have been below water quality standards. However, NMED did recognize that wells MW5U and MW6U are located too far from the landfill boundary and would eventually need to be replaced closer to the landfill boundary when dropping water levels had rendered them useless for sampling. During discussions with the Permittees and other interested parties (see response to comment #1), the Permittees agreed to replace wells BW4A, MW4, MW5U, and MW6U prior to the effective date of the PCCP. This required that all references to these wells in the PCCP be replaced with the names of the proposed new wells (BW5, MW9, MW10, and MW11). Additionally, the CPA had to be modified to include sampling and installation plans for the new wells, and to incorporate plugging and abandonment plans for the old wells they will replace. Chapter 12 of the CPA, which contains a description of the regulatory path to final closure of the CWL, also required revisions to bring this part of the CPA up to date. The new wells will be located on the northern and western boundaries of the landfill, at the point of compliance established for the CWL.

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			Permit Modification: Throughout the final Permit, all references to wells BW4A, MW4, MW5U, and MW6U have been replaced by those of wells BW5, MW9, MW10, and MW11, as appropriate. See also responses to comments #43, 48, and 75. CPA Amendment: The PCCP is written on the premise that proposed wells BW5, MW9, MW10, and MW11 are available for groundwater sampling on the effective date of the Permit. This required revision of the CPA by incorporating into the CPA changes to Appendix G of the CWL Closure Plan. The changes to Appendix G provide for the installations of wells BW5, MW9, MW10, and MW11, provide for the plugging and abandonment of wells BW4A, MW4, MW5U/L, and MW6U/L, and provide for changes to the groundwater sampling plan to convert the scope of sampling to what is to be conducted under the PCCP. The reader is referred to Appendix G (and its Enclosure 1) of the CPA for details on all of these provisions. In addition, Chapter 12 of the CPA was revised to bring this portion of the CPA up to date. In this light, significant revisions to the CPA are as follows. The first paragraph of Section 12.0, page 12-1, was revised to read: Since approval of the Chemical Waste Landfill (CWL) Closure Plan on February 22, 1993, the approach to closure of the CWL has been modified to include a Voluntary Corrective Measure (VCM) program~~. Figure 12-1 summarizes the CWL closure process, which has been updated to reflect the NMED rejection of the May 2003 submittal of the Corrective Measures Study (CMS) Report (Kieling December 2003). The May 2003 submittal also contained the Remedial Action Proposal (RAP) and Post-Closure Care Plan and Permit Application (PCCP/PA), which were not included in the NMED review (Kieling December 2003).~~ This chapter <u>of the Closure Plan</u> was revised in September 2002 and again in February 2003 to incorporate the VCM part of the Corrective Action program and to include an updated discussion of the Corrective Measure Study (CMS) process, including CMS planning and the CMS Report. Updated requirements associated with final site closure and post-closure care were also presented in these earlier revisions. This revision of Chapter 12 <u>was initiated in December 2004 (Wagner December 2004) in response to NMED direction (Kieling</u>

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			December 2003) and was included in the permit modification for final remedy selection and post-closure care conditions (Kieling May 2007). This revision documents the scope, submittal, and permitting requirements needed to complete remediation of, certify closure for, and establish post-closure conditions for the CWL consistent with NMED direction provided in February 2006 (Kieling February 2006) ~~consistent with NMED direction (Kieling December 2003)~~. Figure 12-1 summarizes the CWL closure process. The second paragraph of Section 12.2, page 12-3, was revised to read: The Site Operational Boundary Closure Addendum to the LE VCM Final Report was submitted to the NMED in August 2005 (SNL/NM August 2005) and approved by the NMED on October 25, 2005 (Bearzi October 2005). With the submittal of the Waste Management Addendum to the LE VCM Final Report in the February 22, 2006 CWL Quarterly Closure Progress Report (SNL/NM February 2006), as Appendix B, all LE VCM regulatory deliverables have been submitted. The following information was not previously submitted to the NMED, and will be included in the Final Closure Report. • analytical results for site operational boundary and backfill/cover materials that were not included in the LE VCM Final Report • an updated risk assessment integrating all relevant analytical results representing end state conditions of the CWL. ~~The following information shall be submitted to the NMED in addendums to the LE VCM Final Report or in the Final Closure Report: 1) information associated with final disposition of waste, 2) a description of site operational boundary sampling and scraping activities related to closure of the LE VCM site operational boundary, 3) analytical results for site operational boundary and backfill/cover materials that were not included in the LE VCM Final Report, and 4) an updated risk assessment integrating all relevant analytical results representing end state conditions of the CWL that were not included in the final risk assessment presented in the LE VCM Final Report.~~

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			The first two sentences of the 2nd paragraph of Section 12.3, page 12-4, were revised to read: The revised CMS Report was submitted to the NMED in December 2004 (SNL/NM December 2004). ~~Two main documents shall be submitted to the NMED as part of the closure process. They are the revised CMS Report (including the RAP as an annex) and the Final Closure Report.~~ The first paragraph of Section 12.3.3, page 12-7 was revised to read: The PCCP/PA (SNL/NM September 2005) was prepared for submittal under 20.1.4.900 NMAC incorporating 40 CFR 270.1(c). The PCCP/PA addresses the information requirements of 20.1.4.900 NMAC incorporating 40 CFR 270.28 and contains information required for the post-closure period. The NMED ~~will prepare~~has prepared a draft post-closure care permit (Kieling May 2007) from the PCCP/PA; ~~said~~ when final, the permit shall supersede the Closure Plan as the governing regulatory document for the CWL after NMED certifies closure of the CWL. Figure 12-1, Box with rounded corners, near right side of figure stating: "NMED initiates public comment period for CMS…" -- the citation "40 CFR 265.112(d)(4)" has been corrected to read "40 CFR 270.1(c)". Table 12-1 – Regulatory Driver (column 2) of first row for CMS Report changed to read "Closure Plan and 40 CFR 265.112"; Due Date (column 4) of first row for CMS Report changed to read: "Submitted. Public noticed May 21, 2007 (Kieling May 21, 20070)"; Due Date of second row for Post Closure Care Plan and Permit Application changed to read: "Submitted. Draft permit prepared by NMED and public noticed May 21, 2007 (Kieling May 2007)"; Due Date of third row for Final Closure Report changed to read: "Within 60 days of completion of closure activities". Table 12-2 – Due Date (column 4) of row 2 for 115 Notifications changed to read: Within 60 days of completion of closure activities and corrective measures; Regulatory Driver (2nd column) of last row, citation "40 CFR 265.120" corrected to read "40 CFR 264.120".

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7	A, B, C, D, E, F	Under the Post Closure provisions of 40 CFR 264 Subpart G the CWL is required to have a 40 CFR 265 Subpart F compliant well monitoring system to furnish reliable and representative water samples for the post-closure period.	The regulations at 40 CFR 264 subpart G do not apply to the CWL until the final PCCP is issued and becomes effective. Until such time, the CWL is an interim status unit subject to an approved Closure Plan and the regulations for closure under 20.4.1.600 incorporating 40 CFR Part 265. When the final PCCP becomes effective, the landfill will be subject to the groundwater monitoring requirements under 40 CFR 264 Subpart F. Groundwater monitoring requirements are included in the PCCP in Sections 3.2 and 3.4 of Permit Part 3; Sections 1.4, 1.8, 1.12 of Permit Attachment 1; and Attachment 2, and meet 40 CFR 264 Subpart F Requirements. Permit Modification: See comment #6. CPA Modification: See comment #6.
8	A	Well CWL-BW4A has a carbon steel well screen that may be corroded.	The well construction log for well CWL-BW4A in Appendix 2-1 of draft Permit Attachment 2 is incorrect. The well actually has a screen made of polyvinyl chloride (PVC) plastic, which will not corrode under the conditions present at the CWL. However, well BW4A will be replaced by well BW5, which will be constructed of PVC. See response to comment #6. Permit Modification: The well construction log for well CWL-BW4A, Appendix 2-1, Attachment 2, will be replaced by the well construction log for BW5 when it becomes available.
9	A	Well CWL-MW4 was drilled used mud rotary drilling methods that hide contaminants of concern and also has a 304 stainless steel well screen that may be corroded since it has shown chromium concentrations greater than the MCL.	Well MW4 will be replaced with well MW9, which is to be constructed with a PVC screen. The replacement well will be installed using the air rotary drilling method with casing advancement. See response to comment #6. After the new wells have been installed, all of the wells in the CWL groundwater monitoring network will have PVC screens. See also response to comment #119 concerning the issue of chromium contamination in groundwater at MW4. Permit Modification: Permit Modification: The well construction log for well CWL-MW4, Appendix 2-1, Attachment 2, will be replaced by the well construction log for MW9 when its becomes available. See also response to comment #6. CPA Modification: See response to comment #6.

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10	A, C	Given that chromium is a contaminant of concern at the CWL, all monitoring wells should have PVC well screens.	NMED agrees with the comment. The proposed wells (BW5, MW9, MW10, and MW11) and any new wells installed for the monitoring well network in the future will be constructed with PVC screens. All of the old wells now included in the monitoring well network have PVC screens. See also response to comment #6. Permit Modification: see response to comment #6. CPA Modification: see response to comment #6.
11	A	The placement of the four monitoring wells with respect to the groundwater flow may be incorrect given that a more northerly direction of groundwater flow may exist locally for the CWL than is indicated by the general groundwater flow direction.	Water levels indicate that the horizontal component of groundwater flow has been directed to the west and northwest. Groundwater is shown to flow northwesterly at the CWL on current, larger-scale water-level maps of the Kirtland Air Force Base area. In Figure 1-24 of the CWL CME, the flow direction based on the potentiometric surface illustrated on the map varies from west to northwest. Proposed wells MW9, MW10, and MW11 are to be located on the northern and western boundaries of the landfill, which are appropriate locations to monitor the westerly to northwesterly ground flow direction. See also response to comment #6 Permit Modification: See response to comment #6. CPA Modification: See response to comment #6.
12	A, C	Well screen intervals are 20 ft at each of the four wells. The EPA and NMED recommend a maximum length of 10 feet for monitoring well screens because a longer length will dilute the concentrations of contamination in the water produced from the well.	NMED has commonly allowed 20 ft screen lengths at sites where the water table is dropping significantly on an annual basis. At the CWL, the water table falls approximately 0.8 ft/year, justifying the 20 ft screen lengths in order to have a reasonable well life. The screen of each proposed new monitoring well (see response to comment #6) will straddle the water table, with initially about 15 feet of saturated screen below the water table and 5 feet of unsaturated screen above the water table. Permit Modification: None. CPA Modification: None.

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13	A, C	There are no monitoring wells for the vadose zone beneath the CWL for the early detection of contaminants.	Vadose-zone monitoring for volatile organic compounds (VOCs) will be conducted during the post-closure care period for the CWL. See Section 3.5 of the Permit Part 3, Sections 1.4.2 and 1.8.2 of Permit Attachment 1, and Permit Attachment 3 for details. Permit Modification: None. CPA Modification: None.
14	A	Chromium detection and evaluation should be set below the MCL for early detection of releases from the CWL and should be examined as a trend over time.	The concentration limit for chromium was established as prescribed by the regulations at 20.4.1.500 incorporating 40 CFR § 264.94(a) and is one-half the MCL concentration. NMED does examine data for trends over time, but will require in the final Permit that data be plotted on control charts for easier assessment of trends by both the NMED and the public. Permit Modification: The following text was added after the second sentence of Section 2.21.3 of Permit Attachment 2 to require data to be plotted on control charts, and the control charts to be submitted in the annual reports for the CWL: <u>The reports shall also include control charts for each hazardous constituent for every well in the monitoring well network. The control charts shall show laboratory analytical results for each hazardous constituent (TCE, chromium, and nickel) plotted against the times the samples were collected. Additionally, after the first six sampling events have been completed for a well, the concentration limit, and the upper and lower confidence limits about the mean (at a 95% confidence level) shall also be shown on the control chart for each hazardous constituent.</u> <u>Additional reporting requirements are found in Section 1.12 of Permit Attachment 1.</u> CPA Modification: None.
15	A, C	The well screens for monitoring wells CWL-BW4A, MW4, MW5U and MW6U should be presented graphically to show the relationship of their well screens to the uppermost aquifer (Ancestral Rio Grande) and the fine-grained sediments of the Alluvial Fan.	The Ancestral Rio Grande facies is not known to be present at the CWL. All CWL wells have been completed in undifferentiated alluvial-fan sediments. Permit Modification: None. CPA Modification: None.

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16	A, C	Purging of monitoring wells at the CW should follow the recommended EPA rate. "Purging should be accomplished by removing groundwater from the well at low flow rates using a pump. The rate at which groundwater is removed from the well during purging ideally should be less than approximately 0.2 to 0.3 L/min." [From pp. 7-8 of the RCRA Draft Technical Enforcement Guidance Document, November 1992.]	The suggested purge rate cannot be reliably achieved because of the large depth to groundwater and practical limitations associated with the operation of gas-driven pumps. At the CWL, the Permittees use Bennett sampling pumps which are among the best pumps available for the sampling of deep groundwater. In addition, because the wells are 5.5 inches in diameter, the suggested purge rate is not practical given that it would take approximately 24 hours per well to evacuate the appropriate volume of stagnant water. Wells at CWL are currently purged at a flow rate of about 0.5 gallons (2 liters) per minute or less, which is an acceptable purging rate. In the past, the flow rate used during sampling has been reduced to about half of that for purging. Nonetheless, during discussions on the draft PCCP (see response to comment #1), the Permittees agreed to modify sampling equipment and make best faith efforts to reduce pumping rates to 0.3 L/minute or less. Because none of the required analytes are semi-volatile compounds (SVOCs), the requirement to sample groundwater for SVOCs were removed from the Permit. See also response to comment #106. Permit Modification: Starting at the fourth sentence of the first paragraph, Section 2.12 of Attachment 2 of the PCCP was revised to read: <u>In an effort to lower the rate of discharge for wells that purge dry, the existing Bennett pump system used at the CWL shall be equipped with a flow meter valve located along the water discharge line, and with small-diameter tubing (no less than 0.25 inches inside diameter) for both the water discharge and air (or other drive gas) intake lines. These actions represent best faith efforts that shall be employed by the Permittees to attain a pumping rate of 0.3 liters per minute or less. If the desired pumping rate of 0.3 liters per minute is not achieved during a particular sampling event for a particular well that purges dry, the Permittees will document in the annual reports submitted pursuant to Section 1.12 of Permit Attachment 1 their attempts to achieve the desired pumping rate that failed.</u> CPA Modification: None.

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17	A	Residual contamination outside the boundaries of the excavation has not been analyzed.	Soil contamination outside the boundaries of the CWL was investigated by conducting soil sampling in all areas outside of the landfill boundary where there was temporary storage and processing of excavated waste and contaminated soil. These areas were purposely established as the CWL Site Operational Boundary (what is referred to under RCRA as an Area of Contamination). Results of the soil sampling are documented in the CWL Site Operational Boundary (SOB) Closure Addendum to the Landfill Excavation (LE) Voluntary Corrective Measure (VCM) Final Report (August 2005), which includes the associated risk assessment. Permit Modification: None. CPA Modification: None.
18	A	Elevated tritium levels are in soil piles in the Southwest Area, Southeast Area and Northern Area.	There are no piles of contaminated soil left on the surface at the CWL or within the former Site Operational Boundary surrounding the CWL. Regardless of where soil piles were staged, only soils that met the risk-based criteria for replaceable soil were placed back into the landfill. Soils not meeting these criteria, including some containing tritium, were transported to the Corrective Action Management Unit (CAMU) for treatment (if necessary) and placement into the CAMU containment cell. Additionally, NMED notes that tritium is not a hazardous waste or hazardous constituent regulated under RCRA. Permit Modification: None. CPA Modification: None.
19	A	The risk associated with potential VOC vapor plume migration to the surface is a concern.	The levels of VOCs that remain at the CWL are low, and passive venting and natural dispersion of soil gas continues. As time passes, residual VOC levels are expected to fall to even lower levels. Additionally, there are no existing or proposed structures on the surface of the landfill to trap and concentrate VOC vapors, so dissipation of VOC vapors that reach the surface of the landfill will be rapid and unimpeded, and will not allow VOC levels to increase to levels that are a threat to human health and the environment. Permit Modification: None. CPA Modification: None.

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20	A, C	The nature and extent of the remaining VOC vapor phase plume in the vadose zone extending all the way to groundwater at 500 feet is a concern. .	The nature and extent of the soil gas plume, including data for the most current conditions, is discussed and illustrated in the CWL CMS Report (Section 1.6.2.1, Figure 1-10, Figure 1-15, Section 1.7, and Annexes D and E), dated December 2004. Section 1.2.2 and Figure 4 of Permit Attachment 1 of the Permit also provides a summary of current soil-vapor conditions. Concentrations of soil gas in the plume are believed to be sufficiently low that groundwater will not be contaminated at levels exceeding water quality standards. However, the vadose zone and groundwater will be monitored for VOCs to ensure that groundwater is protected. See also response to comment #13. During discussions on the draft Permit (see response to comment #1), concern was raised by some members of the public that certain language in the PCCP was confusing as to the location of the vapor wells to be used for post-closure care monitoring and the location of the vapor plume. To resolve this issue, it was agreed to revise and remove some text within the PCCP that was the cause of the confusion. None of the text deleted contained requirements to be imposed on the Permittees. Permit Modification: The last sentence of Section 1.4 of Permit Attachment 1 was revised to read: VOC soil-gas plume monitoring shall include monitoring of the approximately 500-foot-thick vadose zone ~~beneath the general vicinity of the former liquid organic disposal areas (southern portion of the CWL) and shall utilize existing vapor extraction (VE) wells~~in accordance with Permit Attachment 3. The second sentence of Section 3.5.1 of Permit Attachment 3 was deleted: ~~The plume core is currently located 150 to 250 feet below ground surface beneath the southern half of the CWL.~~ CPA Modification: None.

NO.	COMMENTER ID	COMMENT	NMED RESPONSE
21	A	PCB concentrations have not been analyzed in the risk assessment.	In accordance with U. S. Environmental Protection Agency (EPA) guidance, risk assessments for PCBs are done independent of other chemical contaminants. In October 2001, the Permittees requested authorization from the EPA to manage PCB wastes and PCB-contaminated soil under the Toxic Substances Control Act. This request was approved by the EPA in June 2002. The request covered all aspects of PCB management, including excavation techniques, temporary storage, and acceptable concentration limits for PCBs in replaceable soils. Concentration limits for PCBs were established based on acceptable risk levels: < 1 part per million (ppm)for the top five feet of backfill, and up to 100 ppm PCBs for deeper replaceable soils. The same criteria applying to total PCB concentrations in replaceable soil were approved by the NMED on October 11, 2000. Following excavation of the CWL, the maximum concentration for total PCBs detected in replaceable soil was 24.69 mg/kg; the maximum concentration of PCBs in unexcavated soil was 11.45 mg/kg. These maximum concentrations are representative of soils located within the landfill at depths greater than five feet below ground surface (see Table 1-8 of the CWL CMS Report). In summary, the Permittees have met the risk-based criteria for PCB-contaminated soil at the CWL. The level of risk associated with PCB-contaminated soil is acceptable under an industrial land-use scenario. Permit Modification: None. CPA Modification: None.
22	A	Uncertainty over contaminants of concern (COCs) as risk drivers for the risk assessment is a concern. .	Uncertainty is specifically addressed in the risk assessment, and is presented in Section 6.4.11 and Section VI.12 of Annex A of the *Chemical Waste Landfill Landfill Excavation Voluntary Corrective Measure Final Report* (April 2003). Given the specified uncertainty in this report, the NMED believes that the level of clean up achieved at the CWL is acceptable for industrial land use, the current and reasonably foreseeable future land use of the site. Permit Modification: None. CPA Modification: None.

NO.	COMMENTER ID	COMMENT	NMED RESPONSE
23	A	Cleanup of cobalt-60 is a concern.	Coblat-60 is not a hazardous waste or hazardous constituent regulated under RCRA. NMED can not mandate the clean up of cobalt-60 at a DOE-owned facility. However, according to the CWL CMS Report, only one verification soil sample analyzed for cobalt-60 exceeded the threshold activity level for replaceable soil (the threshold activity level was set at 0.215 pCi/g). This sample, exhibiting an activity level of 0.46 pCi/g, was obtained from the excavation floor of the southeast area. The soil containing this cobalt-60 remains in the landfill as unexcavated soil. An activity level of 0.46 pCi/g is about one-third of the local background level for U-238, a naturally occurring radioisotope of uranium. Given the low levels of cobalt-60 that have been detected, and taking into account that the floor of the excavation has been covered with at least 12 feet of soil, including 4.5 feet of clean cover, adequate shielding from gamma radiation has been achieved. Thus, no further cleanup of cobalt-60 is necessary. Permit Modification: None. CPA Modification: None.
24	A	Soil to air volatilization of substances such as aniline, arsenic, chromium, mercury, and 1,2,3 Trichloropropane is a concern.	Aniline and 1, 2, 3- trichloropropane were each detected in only 3 soil samples of replaceable and unexcavated soil at maximum concentrations of 0.312 mg/kg and 0.0928 mg/kg, respectively. Soil vapors from either compound do not pose a significant risk to human health and the environment. See also response to comment #19. Arsenic and chromium will not transform to a gaseous state at the temperature and pressure conditions that occur at the CWL. Mercury is only slightly volatile at room temperatures (e.g. the vapor pressure for mercury is 0.002 mmHg at 25 ^{o}C). Residual levels of mercury at the CWL are very low, and the actual average vapor pressure will be even lower than stated above because the average ambient air temperature at the CWL is less than room temperature. Thus, mercury vapor does not pose a significant risk at the CWL. Permit Modification: None. CPA Modification: None.

NO.	COMMENTER ID	COMMENT	NMED RESPONSE
25	A	Levels of contamination in the fill soil are a concern. .	All in-situ and fill materials (including replaceable soils) were evaluated according to the approved risk-based criteria as documented in Section 1.6.2.2 of the CWL CMS Report. Risk-based criteria were developed to allow soil to be returned to the excavation (as replaceable soil) based upon analytical results of soil samples taken from staging piles. Risk criteria were defined separately for the 0- to 5-feet depths, and for depths greater than 5 feet below ground surface (this does not include the cover). Some soil piles containing low levels of contaminants were returned to the CWL due to achieving the overall cumulative risk criteria. Soils containing high levels of contaminants, and soils with lower concentrations of contaminants but not meeting the risk-based criteria for replaceable soil were treated, if necessary, at the CAMU and placed into the CAMU containment cell for permanent storage. Levels of residual contaminants in soils left within or placed back into the CWL are discussed in the document *Chemical Waste Landfill Landfill Excavation Voluntary Corrective Measure Final Report*, dated April 2003. This 5 volume report also contains the risk assessment results for these soils, which indicate that the risk is acceptable under an industrial land-use scenario. A summary of sampling results for replaceable soils and unexcavated (in-situ) soils is now found in Table 3-1 of Permit Part 3. The upper five feet of soil at the CWL is clean soil obtained from a nearby borrow pit. Permit Modification: Table 3-1 of Permit Part 3 was revised to contain a summary of sampling results for replaceable and unexcavated soils. See also response to comment #63. CPA Modification: None.

NO.	COMMENTER ID	COMMENT	NMED RESPONSE
26	A	Chromic acid levels in soil are a concern. .	Chromic acid will be largely neutralized by clasts of carbonate rocks that are abundant constituents of the sediments beneath the landfill. Furthermore, contaminated soil associated with the chromic acid disposal pits was removed during the Landfill Excavation Voluntary Corrective Measure. Verification soil sampling results of the excavation floor and sidewall demonstrate that cleanup levels for chromium were met. Sections 1.6.1.1.1 and 1.6.2.2 of the CMS Report summarizes information on the characterization and cleanup of the chromic acid disposal pits. More detailed information on chromium concentrations detected during verification sampling is presented in the *Chemical Waste Landfill Landfill Excavation Voluntary Corrective Measure Final Report*, dated April 2003, and in the risk assessment, Annex A, of this same report. Permit Modification: None. CPA Modification: None.
27	A	Failure to sample a portion of the East-Central Area is a concern.	The floor and sidewalls of the East-Central Area of the CWL excavation were sampled in accordance with the sampling and analysis plan. A discussion of this sampling effort and the corresponding results are provided in Sections 4.2 and 5.1.of the report *Chemical Waste Landfill Landfill Excavation Voluntary Corrective Measure Final Report*, dated April 2003. This 5 volume report also contains the risk assessment results for these soils, which indicate that the risk is acceptable under an industrial land-use scenario. Permit Modification: None. CPA Modification: None.
28	A, E	Of 13 samples collected of backfill sampling for the excavated areas, RCRA metals VOCs, SVOCs PCBs and radionuclides were detected above background level.	See response to comment #25. Permit Modification: None. CPA Modification: None.

NO.	COMMENTER ID	COMMENT	NMED RESPONSE
29	A	Ten contaminants did not pass background screening procedure. The Subpart S screening procedure was not performed for these contaminants. Subpart S screening was not performed for radionuclides.	The proposed Subpart S rules with respect to Corrective Action were withdrawn by EPA, including those that dealt with the use of action levels. The Permittees used the standard EPA risk assessment methods to evaluate the level of risk of residual contamination at the CWL for chemicals. Radionuclides are not hazardous wastes or hazardous constituents regulated under RCRA, and thus, and were not covered under the proposed Subpart S rules. Permit Modification: None. CPA Modification: None.
30	A	No pathways to the groundwater were considered for contaminants.	Both vapor-phase and aqueous-phase transport of contaminants to the groundwater have been considered and investigated. The primary concern for the CWL is vapor transport of VOCs to groundwater at migration rates and concentration levels that can cause groundwater contamination to exceed New Mexico Water Quality Control Commission standards or EPA Maximum Contaminant Levels (which has happened in the past at the CWL). Modeling and monitoring results suggest the amount of residual vapor beneath the landfill will not cause groundwater contamination that exceeds a standard or EPA Maximum Contaminant Level. Groundwater and vadose-zone monitoring will be conducted to ensure protection of the groundwater. See also response to comment #13. Permit Modification: None. CPA Modification: None.

NO.	COMMENTER ID	COMMENT	NMED RESPONSE
31	A	Movement in the vadose zone was only modeled one dimensionally for TCE and no other contaminants.	NMED believes this comment refers to the VLEACH modeling included as an attachment to the *Risk-Based Approach for Excavation and Backfilling of the Chemical Waste Landfill*, dated August 2000 and submitted to the NMED by the Permittees on September 8, 2000. The main purpose of the modeling was to determine the concentration of TCE that could be allowed in replaceable soil such that groundwater would still be protected. Because the landfill has been excavated, the only remaining significant source for any VOC species is the residual vapor plume in the vadose zone. TCE is the most significant contaminant detected in the groundwater at the CWL, and TCE previously migrated to groundwater in the vapor phase. TCE is by far the most significant component of the residual VOC vapor plume in the vadose zone. Thus, TCE was modeled as an indicator for the migration of all organic contaminants. The one-dimensional model is considered conservative, as any TCE vapor that spreads laterally would be subject to more attenuation and dilution, making less vapor available to reach groundwater. Permit Modification: None. CPA Modification: None.
32	A	The surface runoff pathway and potential for dermal contact were not analyzed.	The surface-water runoff and dermal contact pathways do not exist, as the upper 4.5 feet of backfill used to construct the cover over the CWL is clean soil. Permit Modification: None. CPA Modification: None.

NO.	COMMENTER ID	COMMENT	NMED RESPONSE
33	A	Estimated cancer risk was initially above the NMED guidelines when maximum concentrations were used in the risk calculations. SNL subsequent estimates were goal driven and residential usage for a growing metropolis should have been more fully considered.	Using maximum concentrations, the calculated level of risk was unacceptable under an industrial land-use scenario (HI = 2, excess cancer = 7E-5). Given the amount of verification sampling, it is reasonable for the Permittees in this case to substitute the upper confidence limits (UCLs) of the means for the maximum concentrations for the risk drivers in the risk assessment. The UCLs of the means provide better estimates of the average concentrations of the residual contaminants at the landfill. If this substitution is made, the risk assessment indicates that residual contamination at the CWL poses acceptable risk under an industrial land use scenario (HI = 0.25 and excess cancer = 8E-6). Residential land use is not considered to be a likely reasonable foreseeable future use of the land. Permit Modification: None. CPA Modification: None.
34	A	Ecological risks at the CWL have not been adequately characterized particularly for contaminants such as tritium, thorium-232, U-235, U-238, arsenic, barium, chromium and mercury.	The cover is constructed of a minimum of approximately five feet of clean soil. For ecological risk assessments, it is generally accepted that significant pathways to ecological receptors do not exist for any contaminants located at depths greater than 5 feet. However, NMED recognizes that burrowing animals can cause migration of contaminants to the ground surface. In the case of the CWL, bio-intrusion is not expected to play a major role in the migration of contaminants because the levels of residual soil contamination are small, and once on the surface, such contaminants will be diluted to even lower levels by dispersion from wind and surface water. Additionally, NMED notes that radiological constituents (thorium-232, U-235, and U-238) are not hazardous wastes or hazardous constituents regulated under RCRA.. Permit Modification: None. CPA Modification: None.

NO.	COMMENTER ID	COMMENT	NMED RESPONSE
35	A	The surface level backfill of the excavations is not compliant with RCRA cover requirements.	Final cover requirements are identified in 20.4.1.500 NMAC incorporating 40 CFR § 264.310. The design requirements are as follows: (1) Provide long-term minimization of migration of liquids through the closed landfill; (2) Function with minimum maintenance; (3) Promote drainage and minimize erosion or abrasion of the cover; (4) Accommodate settling and subsidence so that the cover's integrity is maintained; and (5) Have a permeability less than or equal to the permeability of any bottom liner system or natural subsoils present. The cover for the CWL meets these requirements. Permit Modification: None. CPA Modification: None.
36	A, B, C, D, F	The relationship between the full Sandia site wide Resource Conservation and Recovery Act Permit and the closure of the Chemical Waste landfill needs to be clarified.	The CWL, an interim status hazardous waste management unit, is currently regulated under the approved CP and via the regulations for interim status units under 20.4.1.600 NMAC incorporating 40 CFR Part 265. Thus, the CWL is not covered under and never was covered under the Sandia National Laboratories Facility RCRA Permit. Upon the effective date of the final CWL PCCP, the CWL will be for the first time regulated under a RCRA permit. However, this permit (the PCCP) will be a stand-alone permit separate from that for the rest of the SNL Facility. Permit Modification: None. CPA Modification: None.

NO.	COMMENTER ID	COMMENT	NMED RESPONSE
37	A, B, C, D, E, F	There is a cumulative risk from disposal operations such as the Mixed Waste Landfill (MWL), the Chemical Waste Landfill and other sites at Sandia that should be considered.	Sites are evaluated for human and ecological risk on an individual basis in accordance with NMED and EPA guidance. There are no unacceptable levels of risk beyond the boundaries of the CWL (and the Mixed Waste Landfill) as a result of residual contaminants in the landfills. There are no unacceptable levels of risk beyond the boundaries at other solid waste management units located at SNL. Monitoring will be conducted at the CWL (and the Mixed Waste Landfill) to ensure continued protection of human health and the environment. Permit Modification: None. CPA Modification: None.
38	A, B, C, D, F	The closure of the Chemical Waste Landfill should be consistent with the closure of other interim status landfills such as the Mixed Waste Landfill. For example, the MWL requires an evapotranspiration cover that may be more protective than the at grade cover proposed for the CWL.	The Mixed Waste Landfill (MWL) is a solid waste management unit being addressed under the corrective action requirements of the April 29, 2004 Consent Order. It is not an interim status landfill under the provisions of the New Mexico Hazardous Waste Management Regulations, 20.4.1 NMAC. The at-grade cover that was installed at the CWL is an evapotranspiration cover similar to that proposed for the MWL. The CWL has been excavated to remove all wastes and the associated contaminated soil above risk-based criteria. The landfills, being located near one another, share similar climatic and geologic conditions, and the covers will be constructed of similar soil. Each cover is expected to limit the amount of moisture that can infiltrate and percolate through the cover to less than 2.5-3.0 mm/year. Given the above facts, the CWL cover will be as effective as that as the MWL for limiting the infiltration of water into the landfill. Permit Modification: None. CPA Modification: None.
39	A, B, C, D, F	Wind and water erosion that can affect the cover of the CWL and release backfill that is contaminated with heavy metals, radionuclides and solvents.	See response to comment #32. The cover is specifically designed to require little maintenance. However, maintenance of the landfill cover, including needed repairs of the cover due to erosion, is required during the post-closure care period. See Section 3.2.3 of Part 3 and Section 1.9 of Attachment 1of the Permit. Permit Modification: None. CPA Modification: None.

NO.	COMMENTER ID	COMMENT	NMED RESPONSE
40	C	The current groundwater well monitoring system is not adequate to meet Department of Energy orders for a reliable well monitoring network	The NMED does not enforce DOE Orders. The NMED enforces the State regulations for hazardous waste management at 20.4.1.NMAC. Permit Modification: None. CPA Modification: None.
41	C	The draft RCRA Facility permit is scheduled to be released for public comment next month. In order to make informed comments, the public should be allowed to simultaneously review and make comment about both.	The public was given the opportunity to review and comment on the draft RCRA Facility Permit in a separate public notice. The draft RCRA Facility Permit and the CWL PCCP are intended by the NMED to be independent of one another. The NMED expects the draft RCRA Facility Permit to take considerably more time to finalize due its complexity and large size (the Facility Permit involves 10 hazardous and mixed waste management units and Facility-wide corrective action). The CWL PCCP was designed to be a *stand alone* permit because of the need to expedite the transition from closure to post-closure care. This is necessary to ensure that the landfill cover and monitoring systems will be properly maintained and that the monitoring of soil gas will commence as soon as possible. Permit Modification: None. CPA Modification: None.

NO.	COMMENTER ID	COMMENT	NMED RESPONSE
42	G	(General Comment 1) Based on the completion of two voluntary corrective measures (VCMs) and the existence of many years of groundwater monitoring data, a flexible set of groundwater monitoring requirements should be developed for the Chemical Waste Landfill (CWL). The draft Permit issued by the New Mexico Environment Department (NMED) adopts the groundwater compliance monitoring program of 20.4.1.500 NMAC, incorporating 40 CFR 264 Subpart F. Subpart F establishes a set of requirements for monitoring, imposing elements that are not suited to a landfill that has undergone extensive corrective action such as the CWL.	Because the CWL is a regulated unit, the draft Permit incorporates the groundwater monitoring requirements of 20.4.1.500 NMAC incorporating 40 CFR §§ 264.91-264.100, as mandated by 40 CFR § 264.90(a)(2) for regulated units. A compliance monitoring program under 40 CFR § 264.99 is required by 40 CFR § 264.91(a)(1) because hazardous constituents have been detected at a compliance point. The CWL is not eligible for any exemptions from the groundwater monitoring requirements of 40 CFR Part 264 Subpart F (such as the exemptions under 40 CFR §§ 264.90(b)(1-4), 264.90(c)(1), or 264.90(f)). See responses to comments #43-47. The Permittees argue that the groundwater monitoring requirements of 40 CFR 264 Subpart F are too strict for application at the CWL because the landfill has undergone corrective action to reduce the risk of contaminant releases. Although NMED agrees that there has been a reduction in the risk of contaminant releases, the risk to groundwater has not been completely eliminated as trichloroethene (TCE) vapor concentrations remain at levels in the vadose zone that warrant long-term monitoring of the vapor and groundwater. Regardless of the corrective action and risk reduction that has been achieved, the regulations controlling the scope of groundwater monitoring for regulated units are prescriptive in nature and compliance is mandatory. In particular, the regulations mandate the frequency of sampling, how many samples must be collected per sampling event per well, the analytes that must be sampled for, including Appendix IX constituents, the locations and performance standards of wells, how groundwater data must be evaluated, when additional constituents must be added to the list of analytes, and when corrective action must be implemented. Since the draft Permit was released for public comment, the Environmental Improvement Board has adopted new regulations that give the NMED more discretion as to the scope of a groundwater monitoring program under 40 CFR 264 Subpart F, although the groundwater monitoring requirements remain prescriptive and similar to the mandated elements mentioned above . In consideration of the new rules, and because the landfill has been excavated to remove much of the source of contamination, the NMED has made extensive revisions to the groundwater monitoring requirements in the final version of the Permit, which are discussed chiefly in NMED's responses to comments #6, 43, 48, and 75. These revisions meet the requirements of the new rules under 40 CFR 264 Subpart F, are protective of human health and the environment, and are more reasonable for a landfill that has been excavated and has undergone vapor extraction to reduce contaminant and risk levels.

NO.	COMMENTER ID	COMMENT	NMED RESPONSE
			Permit Modification: See responses to comments # comments #6, 43, 48, and 7. Additionally, Section 3.4 of Permit Part 3 has been revised for clarity to read: The Permittees shall conduct groundwater sampling and analysis following the procedures and requirements described in Attachments 1 and 2 of this Permit. CPA Modification: see response to comment #6.

NO.	COMMENTER ID	COMMENT	NMED RESPONSE
43	G	(General Comment 1) Application of Subpart F, without credit for source removal, is questionable. Examples of monitoring requirements under Subpart F that would appear questionable due to this source removal include the following: (1) a 45-year compliance period; (2) semi-annual sampling, consisting of one event for specified contaminants, and one event for Appendix IX constituents; (3) the automatic addition of any detected Appendix IX contaminants to the specified contaminants list, resulting in a growing list of analytes; and, (4) the automatic activation of corrective action when a trigger level is exceeded and confirmed.	See response #44. Subpart F applies regardless of the current or past need for corrective action. The 45-year compliance period is calculated as mandated by the regulations at 20.4.1.500 incorporating 40 CFR § 264.96; the landfill was first operated in 1962. Every year that post-closure is delayed causes an additional year to be added to the compliance period. Note that the compliance period is longer than the 30-year post-closure care period under 40 CFR § 264.117(a)(1). As a practical matter, notwithstanding the duration of the compliance period, the groundwater monitoring requirements under the Permit will cease when the post-closure care period terminates. This will occur no later than 30 years after the effective date of the permit, unless the post-closure care period is extended, and could occur earlier if the post-cost care period is shortened. The provisions for extending or shortening the post-closure care period are contained in 40 CFR § 264.117(a)(2) and Permit Part 3, Section 3.2.1. NMED has retained in the final Permit the requirement to conduct semi-annual sampling. Semi-annual sampling, at a minimum, is necessary to ensure that sufficient data are available to do the statistical analyses required under 40 CFR § 264.97. The requirement for sampling *all* Appendix IX constituents has been revised in the final Permit. The new rules at 40 CFR § 264.99(g) allow the NMED discretion to require instead an enhanced list of analytes for sampling and analysis. Under the new rules, NMED has selected an additional 5 volatile organic compounds (VOCs) to be included in the enhanced list of analytes. These compounds were selected because they are the most significant of the VOCs remaining in the soil vapor plume, and have the most potential of any residual contaminants of any type to migrate to and contaminate the groundwater. The stipulation to add any newly confirmed Appendix IX constituents to the monitoring list was required under 40 CFR § 264.99(g). However, under the new rules, the Permit has been revised to state that the Permittees must add any newly confirmed constituents to the monitoring list based on the enhanced list of analytes (which does not include most Appendix IX constituents). With regard to corrective action, the regulations at 40 CFR § 264.100(a) compel the Permittees to take corrective action to ensure that regulated units, such as the CWL, are in compliance with the groundwater protection standard under 40 CFR § 264.92.

NO.	COMMENTER ID	COMMENT	NMED RESPONSE
			The NMED has revised the Permit to incorporate statistical procedures that will be used to determine if a trigger level has been exceeded, and thus, whether corrective action must be initiated. This will ensure that a single data value, which could be erroneous, is not used to trigger corrective action. NMED believes that the above mentioned revisions meet the requirements of the new rules under 40 CFR 264 Subpart F, are protective of human health and the environment, and are more reasonable for a landfill that has been excavated and has undergone vapor extraction to reduce contaminant and risk levels. Permit Modification: See responses to comments #6, 43, 48, and 75. CPA Modification: See response to comment #6.
44	G	(General Comment 1) The Department of Energy (DOE) and Sandia Corporation (Sandia) acknowledge that groundwater monitoring during the CWL post-closure period is warranted, provided that the monitoring program incorporates the CWL current state: the source has been removed (original waste was the source of the VOC soil gas plume), much of the soil gas plume has been extracted (source of the groundwater contamination), both vadose zone and groundwater monitoring systems are in place, and all monitoring results to date demonstrate the effectiveness of the corrective actions.	See responses to comments # comments #6, 43, 48, and 75 Permit Modification: See responses to comments # comments #6, 43, 48, and 75. CPA Modification: see response to comment #6.

NO.	COMMENTER ID	COMMENT	NMED RESPONSE
45	G	(General Comment 1 – Method 1) The CWL cleanup was subject to Subtitle C regulation and NMED oversight throughout the lengthy remediation process. The result was the same as would be expected for a permitted unit. Because the measure of success of the cleanup is dependent upon continued monitoring, the corrective action may be viewed as ongoing. As the CWL corrective action continues into the post-closure phase, the corrective action may be regulated under 40 CFR § 264.100. Under these provisions, the NMED can authorize "…a groundwater monitoring program to demonstrate the effectiveness of the corrective action program. Such a monitoring program may be based on the requirements for a compliance monitoring program under 264.99 and must be as effective as that program in determining compliance with the groundwater protection standard under 264.92 and in determining the success of a corrective action program…[defined in 264.100(e)]." (See 40 CFR § 264.100(d)) Thus, the provisions of 40 CFR § 264.100 appear to offer flexibility in defining a CWL-specific groundwater monitoring program that is based on the results of the corrective action program.	The CWL is not undergoing corrective action at this time. The Permittees recommend that the interim cover be approved as the final remedy for the CWL (along with physical and institutional controls, see the CMS Report), in part, because groundwater contamination no longer exceeds EPA Maximum Contaminant Levels. Monitoring of soil gas and groundwater to ensure the effectiveness of a completed corrective action does not constitute a continuance of corrective action. Such monitoring is done to ensure that the remedy performs as expected. Furthermore, the scope of groundwater monitoring for the purpose of conducting corrective action in general requires the installation of many more wells, and conducting much more sampling, and laboratory analytical work in comparison to that done under compliance monitoring. Because corrective action is not ongoing at the CWL, the regulations cited by the Permittees are not applicable to this particular situation. Notwithstanding the above, revisions to the groundwater monitoring program have been made to the Permit based on recent changes to the rules at 40 CFR 264 Subpart F. See responses to comments #6, 43, 48, and 75. Permit Modification: None. CPA Modification: None.

NO.	COMMENTER ID	COMMENT	NMED RESPONSE
46	G	(General Comment 1- Method 2) Based on the success of the two source removal VCMs, the CWL may qualify for an exemption contained in the applicability section of Subpart F, 40 CFR § 264.90(c)(1). This section states: "After closure of the regulated unit, the regulations in this subpart do not apply if all waste, waste residues, contaminated containment system components, and contaminated subsoils are removed or decontaminated at closure." (20.4.1.500 NMAC incorporating 40 CFR § 264.90(c)(1)) Existing documentation demonstrates that the source of contamination has been removed and that "contaminated subsoils" exist only at a level that do not pose a risk. (SNL/NM August 2000, Lewis October 2000, SNL/NM April 2003, and Moats December 2003) A determination by the NMED that the CWL qualifies for this exemption would allow the development of monitoring provisions tailored to the post-remediation state of the CWL.	Soil beneath the CWL contains TCE vapors at concentrations that must be monitored to ensure future protection of the groundwater beneath the landfill. Thus, not all contaminated subsoils have been removed, and the CWL can not be clean closed. Therefore, the exemption from groundwater monitoring pursuant to 20.4.1.500 NMAC incorporating 40 CFR § 264.90(c)(1) does not apply. Notwithstanding the above, revisions to the groundwater monitoring program have been made to the Permit based on recent changes to the rules at 40 CFR 264 Subpart F. See responses to comments #6, 43, 48, and 75. Permit Modification: None. CPA Modification: None.

NO.	COMMENTER ID	COMMENT	NMED RESPONSE
47	G	(General Comment 1 – Method 3) Based on the success of the VCMs, the collection of many years of monitoring data, and the development (and continued confirmation) of a conceptual hydrologic model, the CWL also may qualify for an exemption under the applicability section of Subpart F, 40 CFR § 264.90(b)(4). Under 20.4.1.500 NMAC incorporating 40 CFR § 264.90(b)(4), the regulated unit "is not subject to regulation for releases into the uppermost aquifer" under this subpart, provided "…that there is no potential for migration of liquid from a regulated unit to the uppermost aquifer during the active life of the regulated unit…and the post-closure care period." This demonstration must be certified by a qualified geologist or geotechnical engineer and must use assumptions that maximize the rate of liquid migration. The hydrologic analysis in the CWL Corrective Measures Study (CMS) Report supports this demonstration; if NMED is amenable to consideration of this exemption, DOE and Sandia will prepare and submit a certified demonstration using the maximum rate of liquid migration.	The regulations at 20.4.1.500 NMAC incorporating 40 CFR § 264.90(b)(4) require the demonstration to use assumptions that **maximize** the rate of liquid migration. Based on this requirement, NMED has determined that one should assume a unit gradient and unit area of flow, that saturated flow occurs, that the saturated hydraulic conductivity is 10^{-5} cm/s, and the porosity is 25%. The depth to the water table from the bottom of the landfill is about 460 feet. Based on these assumptions, the NMED does not believe that the Permittees can demonstrate that there is no potential for the migration of liquid from the CWL to the uppermost aquifer during the post-closure care period for the CWL. Therefore, the exemption from groundwater monitoring under 40 CFR § 264.90(b)(4) does not apply. Notwithstanding the above, revisions to the groundwater monitoring program have been made to the Permit based on recent changes to the rules at 40 CFR 264 Subpart F. See responses to comments #6, 43, 48, and 75 Permit Modification: None. CPA Modification: None.

NO.	COMMENTER ID	COMMENT	NMED RESPONSE
48	G	(General Comment 2) The draft Permit does not include the conceptual corrective measures evaluation process (CCMEP) that defined the process for confirming and evaluating any exceedance of a "trigger level." The CCMEP was developed in response to NMED comments on the CMS Report and was the subject of numerous discussions with NMED staff. The CCMEP was approved when NMED concurred with the CWL CMS Comment Response Document in December 2004 (Bearzi December 2004). Instead of the CCMEP, the draft Permit contains the following language (from Section 1.8.2.2): "If the results [soil gas verification sample] confirm that the trigger level of 20 ppmv has been exceeded, the Permittees shall conduct corrective action." Although DOE and Sandia recognize that this requirement of automatic corrective action is an artifact of Subpart F (see Major Comment 1), the CCMEP is the product of previous discussion and agreement with the NMED, and it reflects a reasonable approach given the extensive corrective actions already completed.	The Department is not obligated to include the CCMEP in the CWL PCCP, even if the CCMEP was a topic within the CMS Report and was discussed numerous times with NMED staff. Furthermore, the CMS Report was not approved by the Department; instead, the CMS Report was deemed complete when the Department felt that sufficient information was available for the purpose of selecting a remedy. The CMS Report was deemed complete by letter on May 21, 2007; the letter stated: "The New Mexico Environment Department (NMED) has determined that the Chemical Waste Landfill (CWL) Corrective Measures Study (CMS) Report (dated December 2004) is complete. The NMED will solicit public comment on the CMS Report and the final remedy for the CWL." The NMED has selected the interim cover as the final remedy for the CWL. Monitoring and maintenance will also be conducted to ensure that the remedy is and remains effective. The CCMEP has flaws that make it unacceptable for inclusion in the Permit. For example, Step 3 of the process indicates that should it be confirmed that a trigger level has been exceeded, the Department (if it should even know of the situation) must wait for more than two years while SNL accumulates more data. In that timeframe, only four samples would be collected via a semi-annual frequency. In the case of a trigger level for groundwater (concentration limit), the regulations at 20.4.1.500 NMAC incorporating 40 CFR § 264.100(c) require the owner/operator to begin corrective action within a reasonable time after a groundwater protection standard is exceeded. Doing nothing but monitoring the groundwater for two years does not meet the intent of these regulations to ensure compliance with the groundwater protection standard. Step 5 suggests that the Permittees believe that corrective measures taken at the landfill *should be expected to fail* for the short term (1-3 years); if so, this contrasts with the Department's position that a final remedy should be expected to succeed at all times. The CCMEP in steps 4 and 6 also indicates that any additional corrective measures are to be considered presumptive based on past experience, which would be contrary to RCRA regulations that require public participation in the remedy selection process.

NO.	COMMENTER ID	COMMENT	NMED RESPONSE
			However, NMED does understand the Permittees' concern that corrective action only be implemented if truly necessary. A single case of a trigger level being exceeded should not be considered sufficient evidence that corrective action is again needed for the CWL, as the single data value could be erroneous or otherwise not representative of the average condition. Thus, the NMED has revised the Permit to incorporate statistical procedures that will be used to determine if a trigger level has been exceeded based on larger data sets. The NMED has also added into the Permit statistical procedures that will apply to soil-gas trigger levels. Again, this is to avoid initiating corrective action based on a single or too few data values. Permit Modification: See responses to comments #43, 48, 75, and 83. CPA Modification: None.

NO.	COMMENTER ID	COMMENT	NMED RESPONSE
49	G	(General Comment 3) Section 2.9 (and Subsection 2.18.1 [sic]) of the draft Permit contains a requirement that Sandia maintain liability coverage for the post-closure period of the CWL. Please delete this section. Sandia is exempt from all financial responsibility requirements under Subpart H for post-closure care. (See Sec. 127 of Publ. L 108-199: "Funds appropriated in this, or any other Act hereafter, may not be obligated to pay, on behalf of the United States or a contractor or subcontractor of the United States, to post a bond or fulfill any other financial responsibility requirement relating to closure or post-closure care and monitoring of Sandia National Laboratories and properties held or managed by Sandia National Laboratories prior to implementation of closure or post-closure monitoring. The State of New Mexico or any other entity may not enforce against the United States or a contractor or subcontractor of the United States, in this year or any other fiscal year, a requirement to post bond or any other financial responsibility requirement relating to closure or post-closure care and monitoring of Sandia National Laboratories in New Mexico and properties held or managed by Sandia National Laboratories in New Mexico.").	NMED has revised the Permit to remove the requirements that SNL must maintain liability coverage for sudden and nonsudden accidental occurrences, and to fully fund all obligations arising under the Permit. These requirements apply Facility-wide and thus are more appropriately addressed under the new operating Permit for the Facility to be issued at a later date. Permit Modification: All text under Section 2.8 of Permit Part 2 has been deleted and replaced with the word "Reserved" as a place holder. All text concerning this issue under Section 2.9 of Permit Part 2 (including incorrectly numbered subsections 2.18.1 and 2.18.2 under Section 2.9) has been deleted. Section 2.10 of Permit Part 2 has become the new Section 2.9 of Permit Part 2. **2.8 FINANCIAL RESPONSIBILITY** ~~All obligations of the Permittees arising under this Permit shall be fully funded. The Department reserves the right to take appropriate enforcement action if the requirements of this Permit are not fulfilled.~~ Reserved. ~~**2.9 LIABILITY REQUIREMENTS**~~ ~~**2.18.1 Coverage by Sandia Corporation**~~ ~~Sandia Corporation shall have and maintain liability coverage for sudden accidental occurrences in the amount of at least $1 million per occurrence with an annual aggregate of at least $2 million, exclusive of legal defense costs. 40 CFR § 264.147(a). Sandia Corporation shall have and maintain liability coverage for nonsudden accidental occurrences in the amount of at least $3 million per occurrence with an annual aggregate of at least $6 million, exclusive of legal defense costs. 40 CFR § 264.147(b). Sandia Corporation may combine the required per-occurrence coverage levels for sudden and nonsudden accidental occurrences into a single per-occurrence level, and combine the required annual aggregate coverage levels for sudden and nonsudden accidental occurrences into a single annual aggregate level. 40 CFR § 264.147(b).~~ ~~**2.18.2 Exemption from Coverage for DOE**~~ ~~Pursuant 40 CFR § 264.140(c), DOE as an agency of the Federal government is exempt from the requirement to have and to maintain liability coverage for sudden and nonsudden accidental occurrences as required by 40 CFR § 264.147(a) & (b).~~ CPA Modification: None.

NO.	COMMENTER ID	COMMENT	NMED RESPONSE
50	G	1. Part 1, Section 1.4, Page 2: The definition of area of concern includes the phrases "where a release of hazardous waste…is suspected to have occurred, or may occur." Inclusion of this phrase expands the historical regulatory definition of area of concern for releases and attempts to regulate areas outside the authority of RCRA. Please incorporate the definition contained in the Compliance Order on Consent: Area of Concern or "AOC" means any area that may have had a release of a hazardous waste or hazardous constituent, which is not a Solid Waste Management Unit.	The definition for Area of Concern (AOC) is not needed in the Permit. Corrective action for solid waste management units and AOCs will be addressed through the Consent Order and the Facility-wide operating Permit, not this Permit covering only post-closure care for the CWL. Permit Modification: The definition for AOC has been deleted from Section 1.4 of Permit Part 1. The abbreviation for AOC has also been deleted from the List of Abbreviations/Acronyms. ~~**"Area of Concern" (AOC)** means any area of the Facility under the control or ownership of the Permittees which is not a solid waste management unit, where a release of a hazardous waste or hazardous constituent has occurred, is suspected to have occurred, or may occur, regardless of the frequency or duration. An area of concern includes areas and structures at which releases of hazardous waste or hazardous constituents were not remediated, including one-time and accidental events.~~ The first paragraph of Section 1.8.3 of Permit Attachment 1 was revised to read: Pursuant to Section 3004(u) and (v) of RCRA, 42 U.S.C. § 6924(u) and (v); NMSA 1978, § 74-4-4.2(B) and 40 C.F.R. Part 264, Subparts F and G, the Permittees shall implement corrective action as necessary to protect human health and the environment from any releases of hazardous wastes or hazardous constituents ~~from any SWMU or AOC~~ at the CWL. CPA Modification: None.

NO.	COMMENTER ID	COMMENT	NMED RESPONSE
51	G	2. Part 1, Section 1.4, Page 3: Please replace this definition with the definition of hazardous waste as it appears in the Compliance Order on Consent: "Hazardous Waste" means any solid waste or combination of solid wastes which because of its quantity, concentration, or physical, chemical, or infectious characteristics meets the description set forth in NMSA 1978, § 74-4-3(K), and is listed as a hazardous waste or exhibits a hazardous waste characteristic under 40 C.F.R. Part 261 (incorporated by 20.4.1.200 NMAC).	The definition of "Hazardous Waste" in the draft Permit is similar to that in the Consent Order. However, NMED will revise the definition to incorporate by reference the definitions found in the regulations under the Hazardous Waste Management Regulations, 20.4.1 NMAC, and the Hazardous Waste Act. Permit Modification: The definition for "Hazardous Waste" in Section 1.4 of Permit Part 1 was revised to read: "Hazardous waste" shall have the meaning set forth in the HWA, Section 74-4-3(K) and the HWMR, 20.4.1 NMAC." ~~means a solid waste that is not excluded from regulation under 40 C.F.R. § 261.4(b) and that either is listed in 40 C.F.R. Part 261 Subpart D, exhibits any of the characteristics identified in 40 C.F.R. Part 261 Subpart C, or is a mixture of solid waste and one or more wastes listed in 40 C.F.R. Part 261 Subpart D. However, for purposes of corrective action for solid waste management units and areas of concern conducted pursuant to 40 C.F.R. § 264.101, 40 C.F.R. Part 264 and 40 C.F.R. § 270.32(b)(2), "hazardous waste" shall have the meaning set forth in the HWA, Section 74-4-3(K).~~ CPA Modification: None.

NO.	COMMENTER ID	COMMENT	NMED RESPONSE
52	G	3. Part 1, Section 1.4, Page 4: The definition leaves out the necessary function by the Department to determine if there may be a risk from release. Therefore, DOE/Sandia recommend adoption of the Compliance Order on Consent definition: Solid Waste Management Unit or "SWMU" means any discernible unit at which solid waste has been placed at any time, and from which the Department determines there may be a risk of a release of hazardous waste or hazardous constituents, irrespective of whether the unit was intended for the management of solid or hazardous waste. Such units include any area at the Facility at which solid wastes have been routinely and systematically released.	The definition for Solid Waste Management Unit (SWMU) is not needed in the Permit. Corrective action for SWMUs and Areas of Concern will be addressed through the Consent Order and the Facility-wide operating Permit, not this Permit covering only post-closure care for the CWL. Additionally, the CWL was incorrectly identified as a SWMU in its definition under Section 1.4 of Permit Part 1. Permit Modification: The definition for SWMU has been deleted from Section 1.4 of Permit Part 1. The abbreviation for SWMU has also been deleted from the List of Abbreviations/Acronyms. ~~**"Solid Waste Management Unit" (SWMU**) means any discernible unit at which solid wastes have been placed at any time, irrespective of whether the unit was intended for the management of solid or hazardous waste. Such units include any area at the Facility at which solid wastes have been routinely and systematically released.~~ The last sentence of the definition for the CWL in Section 1.4 of Permit Part 1 was revised to read: It is the ~~Solid Waste Management Unit~~ regulated unit subject to this Permit. See also the Permit modification for response to comment #50 concerning the last sentence of the first paragraph of Section 1.8.3 of Permit Attachment 1. CPA Modification: None.
53	G	4. Part 1, Section 1.6.3, Page 5: This sentence should be revised to specify that applications for permit renewal are due 180 days before expiration of the current permit, in accordance with 40 CFR § 270.10(h). Note that 40 CFR § 270.10 is referenced in Section 1.6.4 which discusses continuation of expiring permit.	NMED agrees that the subject sentence requires correction. Permit Modification: Section 1.6.3 in Permit Part 1 has been revised as follows: 1.6.3. Permit Renewal/Duty to Reapply The Permittees shall renew this Permit by submitting an application for a new permit at least ~~two hundred forty (240)~~ one hundred eighty (180) days before the expiration date of this Permit, as required by 40 CFR § 270.10(h) and 40 CFR § 270.30(b). CPA Modification: None.

NO.	COMMENTER ID	COMMENT	NMED RESPONSE
54	G	5. Part 1, Section 1.7, Page 6: Please revise the contact information as follows: The DOE contact person is: Site Office Manager U.S. Department of Energy P.O. Box 5400, M/S 0184 Albuquerque, NM 87185-0184 The Sandia contact person is: Vice President Waste Management Operations Sandia National Laboratories P.O. Box 5800 Albuquerque, NM 87185-5800 For purposes of implementing the Permit, use of position/title is more efficient and is consistent with the NMED contact information provided in Section 1.9.1 of the draft Permit. In accordance with 40 CFR § 270.11, the names of responsible corporate officers and their delegated representatives will be provided to NMED by letter transmittal.	NMED replaced the contact information with the new information provided in the comment. However, NMED also added additional language in Section 1.7 of Permit Part 1 to clarify that all reports required by the permit shall be signed by a responsible corporate officer or principal executive officer or duly authorized representative in accordance with 20.4.1.900 NMAC incorporating 40 CFR § 270.11(b). Additionally, the last sentence of Section 1.7 was deleted because it conflicts with language in Section 2.6.4 of Permit Part 2 and is inconsistent with regulatory requirements. Permit Modification: The contact information in Part 1, Section 1.7 has been revised as follows. The DOE contact person is: ~~Ms. Patty Wagner Manager~~ ~~U.S. Department of Energy National Nuclear Security Administration Sandia Site Office~~ ~~P.O. Box 5400, M/S 0184 Albuquerque, NM 87185-0184~~ Site Office Manager U.S. Department of Energy P.O. Box 5400, M/S 0184 Albuquerque, NM 87185-0184 The Sandia contact person is: ~~Mr. Francisco A. Figueroa Vice President Department 10000 Sandia National Laboratories~~ ~~P.O. Box 5800, MS 0112 Albuquerque, NM 87185-5800~~ Vice President Waste Management Operations Sandia National Laboratories P.O. Box 5800 Albuquerque, NM 87185-5800

NO.	COMMENTER ID	COMMENT	NMED RESPONSE
			All reports required by the permit shall be signed by a responsible corporate officer or principal executive officer or their duly authorized representatives in accordance with 40 CFR § 270.11(b).The Permittees shall provide written notification to the Department within thirty days of any changes ~~related to any of the contact persons listed above~~ concerning the names of and contact information for the responsible corporate and principal executive officers or their duly authorized representatives. ~~This latter notification shall constitute a Class I modification to this Permit that does not require prior approval by the Department.~~ CPA Modification: None.
55	G	6. Part 1, Section 1.8.10, Page 9: Please clarify or delete this sentence. The CWL permit is not authorizing any active management of hazardous waste and the reference to Section 1.6.3 should be "Section 1.6.2 and 1.6.3."	The language in Section 1.8.10 of Permit Part 1 contains conditions that are required for *all* RCRA permits (see 20.4.1.900 NMAC incorporating 40 CFR § 270.30) and must be incorporated into each permit expressly or by reference. NMED does agree that the reference to Section 1.6.3 should have also included reference to 1.6.2 of Permit Part 1, as this part of the permit addresses permit modifications that are proposed by the Permittees in accordance with 40 CFR § 270.42. NMED will also clarify that Sections 1.6.2 and 1.6.3 are located in Permit Part 1. Finally, NMED will revise the text to better correspond with the language in 40 CFR § 270.30(l)(2). Permit Modification: The text in the first paragraph of Section 1.8.10 of Permit Part 1 was revised as follows. In accordance with 40 C.F.R. § 270.30(1)(2), if the CWL is modified, the Permittees shall not treat, ~~or~~ store, or dispose of hazardous~~, mixed, or energetic~~ waste in the modified portion of the CWL, except as provided in Sections 1.6.2 and 1.6.3 of this Permit Part 1 and 40 C.F.R. § 270.42, unless the following conditions have been satisfied: CPA Modification: None.

NO.	COMMENTER ID	COMMENT	NMED RESPONSE
56	G	7. Part 1, Section 1.9.1, Page 11: Courier/delivery services such as Federal Express may meet the requirements (timeliness and documentation of delivery/receipt), yet these services are currently excluded from the list of delivery options available to the Permittees. The choices should be updated to explicitly include any courier/delivery service that provides documentation of delivery equivalent to certified mail. In addition, the NMED locations for hand delivery should include: Hazardous Waste Bureau 5500 San Antonio NE Albuquerque NM 87109	The NMED agrees that any courier/delivery service that provides documentation of delivery equivalent to certified mail may be used by the Permittees. NMED will not accept hand deliveries of original official documents at the Hazardous Waste Bureau's office at the District 1 Office located at 5500 San Antonio, NE, in Albuquerque. Original documents must be delivered to the Hazardous Waste Bureau's office in Santa Fe where all original official records are kept. Permit Modification: The first paragraph of Section 1.9.1 was revised as follows. The Permittees shall submit by certified mail, courier/delivery service or hand delivery all reports, notifications, or other submittals that are required by this Permit to be sent or given to the Department. The last sentence of the last paragraph of Section 1.9.1 was revised to read: Two (2) copies each of these plans, reports, notifications or other submissions shall be submitted to the Department by certified mail, courier/delivery service, or hand delivered to: New Mexico Environment Department Hazardous Waste Bureau 2905 Rodeo Park Drive East, Building 1 Santa Fe, New Mexico 87505-6303 Telephone Number: (505) 476-6000 Facsimile Number: (505) 476-6030 CPA Modification: None.

NO.	COMMENTER ID	COMMENT	NMED RESPONSE
57	G	8. Part 2, Section 2.5.2, Page 14: Reference to the "CAMU" should be "CAMU administration office." In addition, please delete the sentence, "Any person working at the CWL shall have a copy of the current Contingency Plan in their possession while at the CWL." The only workers associated with CWL activities are monitoring and maintenance personnel. The requirement for such personnel to have a copy of the plan in their possession is unwieldy. The Contingency Plan will be available and readily accessible in the nearby CAMU administration office.	NMED made the change that a copy of the Contingency Plan is to be maintained at the CAMU Administration Office, which is more specific than stating that the plan is to be maintained at the CAMU. The requirement that "any person working at the CWL shall have a copy of the current Contingency Plan in their possession while at the CWL" was not deleted as the requirement is intended to protect human health. However, NMED added language allowing CWL workers the option of possessing a copy while working at the CWL or having ready access to and being aware that the CWL contingency plan is available at the CAMU Administrative Office should it be needed. Permit Modification: Section 2.5.2 of Permit Part 2 was revised as follows. 1.1.1 Copies of the Contingency Plan The Permittees shall maintain copies of the Contingency Plan and all revisions and amendments to the Plan at the CAMU Administration Office, the Facility EOC and the Facility Records Center, in accordance with 40 C.F.R. § 264.53 and Section 6-1 of Attachment 6 of this Permit. Any person working at the CWL shall have a copy of the current Contingency Plan in their possession while at the CWL, or shall have ready access and be aware that a copy of the CWL Contingency Plan is available at the CAMU Administration Office. The Permittees shall provide copies of the current Contingency Plan and all revisions of the Plan to the Department and all entities with which the Permittees have emergency MOUs or MAAs in accordance with 40 C.F.R. § 264.53. CPA Modification: None.

NO.	COMMENTER ID	COMMENT	NMED RESPONSE
58	G	9. Part 2, Section 2.5.4, Page 15: Please delete this sentence. The current Table 6-5 adequately addresses the requirements for emergency coordinator information. 40 CFR § 264.52(d) states "The plan must list names, addresses, and phone numbers (office and home) of all persons qualified to act as emergency coordinator"; the home address is not required. The "office and home" qualifier in the regulations applies only to the phone numbers, not to names or addresses. Including home addresses in the plan is not necessary or relevant to SNL/NM emergency preparedness or emergency response activities.	NMED deleted the requirement to include home addresses, as this requirement is ambiguous in the regulations. The Permittees submitted a revision to the Table 6-5 of Permit Attachment 6 during discussions held on the PCCP (see response to comment #1). This revision satisfied the requirement in the last paragraph of Section 2.5.4 of Permit Part 2. Permit Modification: The last paragraph of Section 2.5.4 of Permit Part 2 has been deleted: ~~Within 30 days of the issuance of this Permit, the Permittees shall submit to the Department a revision of Table 6-5 of Permit Attachment 6 that includes the office (specific office locations, not mailing addresses) and home addresses of the Emergency Coordinators in addition to the information already presented in the table.~~ CPA Modification: None.
59	G	10. Part 2, Section 2.6.4, Page 15: Please revise to more fully distinguish between Emergency Coordinators and management personnel. Changes in Emergency Coordinators are Class 1 permit modifications under 40 CFR § 270.42, Appendix I. Changes in DOE and Sandia personnel serving as responsible corporate officers are addressed in specific comment #5.	NMED made the suggested changes to clarify the Permit requirements for responsible corporate officer and principle executive officer (or their duly authorized representatives) and Emergency Coordinators. Permit Modification: Section 2.6.4 of Part 2 was revised as follows. 2.6.4 Personnel and Telephone Number Changes The Permittees shall inform the Department in writing of changes in ~~its management personnel~~ <u>their responsible corporate and principal executive officers (or their duly authorized representatives) within 30 days of the changes,</u> and Emergency Coordinators and their telephone numbers and addresses within fifteen (15) calendar days of the changes. <u>Changes to responsible corporate officers and principal executive officers (or their duly authorized representatives) are not permit modifications. Changes in name, address, or phone number for Emergency Coordinators are Class 1 permit modifications under 40 CFR § 270.42.</u> CPA Modification: None.

NO.	COMMENTER ID	COMMENT	NMED RESPONSE
60	G	11. Part 2, Section 2.8, Page 17: Please modify this language as follows to be consistent with the Compliance Order on Consent: "It is the expectation of the Pemittees that all obligations arising under this Permit will be fully funded. The Permittees shall take all necessary steps and make efforts to obtain timely funding to meet its obligations under this Permit. No provision of this Permit shall be interpreted as, or constitute, a commitment or requirement that the United States shall obligate or pay funds in contravention of the Anti-Deficiency Act, 31 U.S.C. § 1341. Payment or obligation of funds by the United States is subject to the availability of appropriated funds."	See response to comment #49. Permit Modification: See response to comment #49. CPA Modification: None.

NO.	COMMENTER ID	COMMENT	NMED RESPONSE
61	G	12. Part 2, Sections 2.9.1 and 2.18.1 (sic), Page 17: Please see major comment #3 in Enclosure 1 as Sandia is exempt from all financial responsibility requirements. COMMENT #3: Liability Coverage Requirement for Sandia Corporation Section 2.9 (and Subsection 2.18.1 [sic]) of the draft Permit contains a requirement that Sandia maintain liability coverage for the post-closure period of the CWL. Please delete this section. Sandia is exempt from all financial responsibility requirements under Subpart H for post-closure care. (See Sec. 127 of Publ. L 108-199). The intention of Congress for this exemption was due to the fact that this would involve setting aside public monies for any such effort. Furthermore, it is clear that the regulation specifies demonstrating "financial responsibility." As this Permit is relating to the post-closure care at the CWL, this is a financial responsibility in which Sandia remains exempt.	See response to comment #49. Permit Modification: See response to comment #49. CPA Modification: None.

NO.	COMMENTER ID	COMMENT	NMED RESPONSE
62	G	13. Part 3, Section 3.0, Page 19: DOE/Sandia request that the NMED authorize a groundwater monitoring program that is tailored to the current, post-remediation condition of the CWL. Two voluntary corrective measures (VCMs) [vapor extraction (VE) followed by landfill excavation (LE)] were completed from 1997 through 2002 under the CWL Closure Plan. The success of these VCMs has been documented in the CWL CMS Report (SNL/NM December 2004) and demonstrated with groundwater and soil gas monitoring results covering over 9 years since completion of the VE VCM and 4 years since completion of the LE VCM. Based upon current conditions, the requirements of Subpart F for a 45-year compliance period and associated specific groundwater monitoring requirements appear questionable. Please refer to major comment #1 in Enclosure 1.	See response to comments #6, 43, 48, and 75. Permit Modification: See response to comments #6, 43, 48, and 75. CPA Modification: see response to comment #6.

NO.	COMMENTER ID	COMMENT	NMED RESPONSE
63	G	14. Part 3, Section 3.1, Page 19: The requested information (quantities and levels of contaminants of replaceable soils) will be included in the Final RCRA Closure Report. Consistent with the timeframe for submittal of the Closure Report, please change the wording to "Within 60 days from issuance…." Also please note that much of the replaceable soil information was previously provided in the LE VCM Final Report (SNL/NM April 2003).	The NMED has replaced Tables 3-1 and 3-2 with information in a completely new Table 3-1 describing what was returned to the CWL as replaceable soil and what levels of contaminants were left in unexcavated soils. Table 3-2 has been deleted. The original intent behind the requirement to provide information on replaceable soils was to include in the Permit what is left at the CWL, not what was taken out of the landfill. During negotiations (see response to comment #1), the Permittees provided the information to replace the old Table 3-1 with the new table. Also, to better summarize corrective action activities completed at the CWL in the past, NMED has added text to Section 3.0 of Permit Part 3 and Sections 1.2.2 and 1.4.1 of Permit Attachment 1. Permit Modifications: The first sentence of Section 3.0 of Part 3 was moved to become the first sentence of paragraph 3 and revised to read: This Permit Part includes information on the requirements for the ~~types of waste disposed of in the Chemical Waste Landfill (CWL) and~~ length of post-closure care, planned monitoring and maintenance activities, and other requirements for post-closure care. Section 3.1 of Part 3 (including the section title) has been deleted in its entirety. ~~**3.1 TYPES OF WASTE**~~ ~~A maximum of 31,800 cubic yards of hazardous and solid waste were disposed of in the CWL. Tables 3-1 and 3-2 contain lists of waste numbers associated with contaminated soil and wastes that were excavated and removed from the CWL and managed at the Corrective Action Management Unit (CAMU).~~ ~~Within 30 days from the issuance of this Permit, the Permittees shall submit to the Department a description of the quantities of replaceable soils placed back into the CWL as part of the Landfill Excavation Voluntary Corrective Measures. The description shall indicate the concentration or levels of the contaminants contained in the replaceable soils.~~

NO.	COMMENTER ID	COMMENT	NMED RESPONSE
			Section 3.1 of Part 3 (including the section title) has been replaced with text that reads: **3.1 RESIDUAL SOIL CONTAMINATION AT RISK BASED LEVELS** Residual soil contamination that remains at the landfill currently meets risk-based levels for industrial land use. Table 3-1 summarizes the maximum concentrations of contaminants detected in replaceable soil and unexcavated soil. As noted above, replaceable soils are soils placed back into the landfill following completion of the Landfill Excavation VCM. Unexcavated soils are soils that were not removed during the LE VCM, but may contain low levels of hazardous constituents meeting risk-based criteria. Additionally, the following text was added to the beginning of Section 3.0 of Permit Part 3. The CWL Closure Plan, which contained mandatory closure requirements for the CWL, was approved by the NMED in February 1993. A few years earlier, in 1990, trichloroethene (TCE) was detected in groundwater at a concentration exceeding the U.S. Environmental Protection Agency (EPA) Maximum Contaminant Level (MCL) of 0.005 mg/L. This finding led to the development and incorporation of a corrective action program into the approved Closure Plan (as Appendix S). Groundwater and subsurface soil and soil-gas investigations, as well as two Voluntary Corrective Measures (VCMs) were subsequently conducted according to Closure Plan requirements and related documents.

NO.	COMMENTER ID	COMMENT	NMED RESPONSE
			The CWL was excavated from September 1998 through February 2002 to remove the contents of the landfill and contaminated soil (the Landfill Excavation VCM). Soil-vapor extraction was conducted prior to the Landfill Excavation VCM and removed a portion of the VOC soil-gas plume in the vadose zone (the Vapor Extraction VCM). Numerous intact containers of waste were removed as a result of excavation of the landfill; the wastes within these containers were treated and disposed of off-site. Soil having the highest levels of contaminants was treated as necessary and placed permanently into the containment cell at the nearby Corrective Action Management Unit. After excavation was completed, the CWL was backfilled with soil to a uniform depth of four feet below ground surface. Some of the soil used as backfill was originally excavated from the landfill (this soil is referred to as replaceable soil). Concentrations of contaminants in the replaceable soil meet industrial risk levels, consistent with the projected future land use for the CWL site. Since completing the Landfill Excavation and Vapor Extraction VCMs, levels of contaminants in the groundwater have dropped to concentrations below applicable EPA MCLs and New Mexico Water Quality Control Commission water quality standards. Construction of the at-grade cover for the CWL was completed in September 2005, originally as an interim measure. The second sentence of Section 1.2.2 of Permit Attachment 1 has been revised to read: Soil-vapor extraction was also conducted as a VCM from 1997 through 1998 prior to landfill excavation to reduce the concentrations of volatile organic compound (VOC) soil vapor in the vadose zone and to reduce groundwater TCE concentrations below the MCL of 5 micrograms per liter (µg/L). A sentence was added to the 5th paragraph from the end of Section 1.4.1 of Permit Attachment 1 that reads: In response to the detection of TCE in groundwater in 1990 exceeding the MCL of 5 µg/L, the Permittees conducted a corrective action program through two interrelated VCMs from 1997 through 2002 as briefly described in Part 3, Section 3.0 of this Permit and Section 1.2.2 of this Permit Attachment. CPA Modification: None.

NO.	COMMENTER ID	COMMENT	NMED RESPONSE
64	G	15. Part 3, Section 3.1 and Table 3-1, Pages 19-20: The maximum waste inventory should be revised to 52,000 cubic yards. 52,000 cubic yards of soil and debris were removed during the Landfill Excavation voluntary corrective measure. 31,800 cubic yards of treated soil were placed in the CAMU containment cell. This will then be consistent with the language contained in Attachment 1, Section 1.2.2.	See response to comment #63. Permit Modification: See response to comment #63. CPA Modification: None.
65	G	16. Part 3 Table 3-2, Pages 21-25: does not reflect the final information related to hazardous constituents excavated from the CWL. Please reformat and revise the table to reflect the final information as contained in the CAMU permit application (Word file is included in a CD attached to the last page of these specific comments).	See response to comment #63. . Permit Modification: Table 3-2 will be deleted. CPA Modification: None.
66	G	17. Part 3 Table 3-2, Pages 23-25: Please modify the title of Table 3-2 to "Detailed Information on Hazardous Waste Types Removed From the CWL" to indicate that Table 3-2 contains more details of the information contained in Table 3-1, not additional waste types.	See response to comment #63. Permit Modification: Table 3-2 will be deleted. CPA Modification: None.

NO.	COMMENTER ID	COMMENT	NMED RESPONSE
67	G	18. Part 3, Section 3.2.1, Page 26: Please add to either Section 3.2.1 or 3.2.2 or 3.2.3 the following language explaining the rationale for shortened and flexible post-closure care groundwater and soil gas monitoring as discussed in specific comment #13 and major comment #1 in Enclosure 1: "A decision to shorten the post-closure care period may consider factors such as the successful completion of the Corrective Action Program (CAP) and the continued demonstration of the effectiveness of the CAP as verified by monitoring results."	The NMED did not add the proposed language, but instead, added examples taken from the regulations at 20.4.1.500 NMAC incorporating 40 CFR §§ 264.117(a)(2)(i and ii) to clarify when the post-closure period may be shorten or extended. The examples were revised from those listed in the regulations by removing those that do not or are not likely to apply to the CWL. Permit Modification: The permit language at Section 3.2.1, Part 3, was revised as follows. 3.2.1 Duration of Post-Closure Care The Permittees shall conduct post-closure care for the CWL to begin after certification of closure of the unit by the Department and continue for 30 years after that date, except that the 30-year post-closure care period may be shortened or extended, as follows: 1. In accordance with 40 C.F.R. § 264.117(a)(2)(i), the Department may, in accordance with the permit modification procedures in 40 C.F.R. Part 270 and 20.4.1.901 NMAC, shorten the post-closure care period if it finds that human health and the environment will be protected sufficiently (e.g., groundwater and soil-gas monitoring results indicate that the CWL is secure). 2. In accordance with 40 C.F.R. § 264.117(a)(2)(ii), the Department may, in accordance with the permit modification procedures in 40 C.F.R. Part 270 and 20.4.1.901 NMAC, extend the post-closure care period if it finds that this is necessary to protect human health or the environment (e.g., groundwater or soil-gas monitoring results indicate a potential for migration of hazardous wastes at levels which may be harmful to human health and the environment). CPA Modification: None.
68	G	19. Part 3, Section 3.2.2, Page 26: Please refer to specific comment #13 and major comment #1 in Enclosure 1.	See responses to comments #6, 43, 48, and 75. Permit Modification: See responses to comments #6, 43, 48, and 75. CPA Modification: see response to comment #6.

NO.	COMMENTER ID	COMMENT	NMED RESPONSE
69	G	20. Attachment 1, Section 1.1, Page 28: Please revise the EPA Identification Number to the number for Sandia National Laboratories: NM5890110518	NMED has corrected the typo throughout the entire Permit, including the page headings. Permit Modification: the EPA Identification Number previously erroneously written as NM5890110518-CWL has been corrected to the number for Sandia National Laboratories: NM5890110518. CPA Modification: None.
70	G	21. Attachment 1, Section 1.2.1, Page 28: Please modify and add the following clarifying text: "Disposal of liquid waste in unlined pits and trenches ended in 1981, and after 1982 all liquid waste disposal was terminated. From 1982 through 1985, only solid waste was disposed of at the CWL, and after 1985 all waste disposal ended. After 1989, the CWL was no longer used as a hazardous waste storage unit."	NMED revised the text similar to, but not exactly as proposed. Solid waste disposed of after 1982 included hazardous waste. Permit Modification: The last paragraph of Section 1.2.1 of Permit Attachment 1 was revised as follows: From 1962 until 1981, the CWL was used for the disposal of chemical, radioactive, and solid waste generated by research activities at the Facility. The CWL was used as a hazardous waste storage unit from 1981 to 1989. ~~From 1981 through 1985, only solid waste, including hazardous waste, was disposed of at the CWL. After 1985, all waste disposals ended, and after 1989, the CWL was no longer used as a hazardous waste storage unit.~~ Disposal of liquid waste in unlined pits and trenches ended in 1981, and after 1982 all liquid waste disposal was terminated. From 1982 through 1985, only solid waste was disposed of at the CWL. Waste disposal at the landfill after 1982 included the disposal of hazardous waste. After 1985 all waste disposal ended. After 1989, the CWL was no longer used as a hazardous waste storage unit. CPA Modification: None.

NO.	COMMENTER ID	COMMENT	NMED RESPONSE
71	G	22. Attachment 1, Section 1.4.1, Page 31: DOE/Sandia request that the NMED authorize a groundwater monitoring program that is tailored to the current, post-remediation condition of the CWL. Please delete the reference to "compliance period", and refer to specific comment #13 and major comment #1 in Enclosure 1.	See responses to comments #6, 43, 48, and 75. NMED will not delete the reference to "compliance period" as the compliance period (duration) for groundwater monitoring is different from the duration of post-closure care. Post-closure care will last for a minimum of 30 years as required by 20.4.1.500 NMAC incorporating 40 CFR § 264.117(a)(1), unless the post-closure care period is shortened as discussed in response to comment #67. The compliance period for groundwater monitoring will last a minimum of 45 years as required by 20.4.1.500 NMAC incorporating 40 CFR § 264.96. However, as noted in NMED's response to comment #43, groundwater monitoring requirements under the Permit will cease when the Permit terminates. Thus, it is possible that groundwater monitoring will cease before the end of the 45-year compliance period. NMED will correct text in Section 1.4.1 of Attachment 1 stating erroneously that the southern boundary of the landfill is a part of the point of compliance as required under in 40 CFR § 264.95. Permit Modification: See response to comments #6, 43, 48, and 75. The first sentence of the fifth paragraph of Section 1.4.1 of Attachment 1 has been revised to read: In accordance with 40 C.F.R. § 264.95, the point of compliance at which the groundwater protection standard at 40 C.F.R. § 264.92 applies and at which monitoring must be conducted is hereby established as the western~~,~~ and northern~~, and southern~~ boundaries of the landfill. (The point of compliance is a vertical surface located at the hydraulically down gradient limit of the waste management area that extends down into the uppermost aquifer.) CPA Modification: See response to comment #6.

NO.	COMMENTER ID	COMMENT	NMED RESPONSE
72	G	23. Attachment 1, Section 1.4.1, Page 31: Please delete or modify this sentence. If a monitoring well can no longer be sampled for any reason, a Permit Modification will be requested as required. At that time it will be determined by NMED whether or not a replacement well is required based upon current conditions.	NMED has modified the sentence to allow the Agency to determine on an individual basis whether a monitor well should be replaced. NMED also included additional discussion on the submittal of plans for replacement wells. Permit modification: The last sentence of the second paragraph of Section 1.4.1 of Permit Attachment 1 has been revised to read: Any well that is part of the monitoring network that cannot be sampled shall be replaced, if at the time, the Department determines that a replacement well is necessary. If a replacement well is deemed necessary by the Department, the Permittees shall submit to the Department for approval a plan to replace the well, and to plug and abandon the well that is to be replaced in accordance with the Office of State Engineer's requirements. The plan shall include a schedule to implement the work and shall be submitted to the Department within 90 days of written notification by the Department that the well must be replaced. CPA Modification: None.
73	G	24. Attachment 1, Section 1.4.1, Page 32: Please add to this discussion that in response to TCE being present in groundwater at levels exceeding the regulatory standard, the Permittees have already conducted an extensive and successful (based upon monitoring results) CAP under the CWL Closure Plan from 1997 through 2002 (VE and LE VCMs). Also, please refer to specific comment #13 and major comment #1 in Enclosure 1.	NMED has added text to the final Permit that describes the events that triggered corrective action and subsequent investigation and clean up of landfill in the past. See also responses to comments #6, 43, 48, and 75. Permit Modification: See responses to comments #6, 43, 48, and 75. CPA Modification: See response to comment #6.

NO.	COMMENTER ID	COMMENT	NMED RESPONSE
74	G	25. Attachment 1, Section 1.4.2, Page 35: Please change the word "shall" to "may". Baroballs™ were not intended for use over extended time periods (i.e., 30 year post-closure care period), as they only allow a monitoring well to "exhale" during periods of low barometric pressure, and prevent "inhaling" during periods of high barometric pressure. This could potentially cause a "pulling downward effect" (i.e. suction effect) of volatile organic compound (VOC) soil gas within and immediately surrounding the monitoring well screened intervals over longer periods of time, which are located at the bottom of the wells. Although the Baroballs™ have been used successfully up to this point since the completion of the VE VCM in 1998, flexibility should be included in the permit language to allow for periods of time where they can be removed from wells to prevent low concentrations of remaining VOC soil gas in the vadose zone from being pulled downward, closer to the water table.	NMED made the proposed change. NMED also included text that the BaroBalls may be maintained on any soil-gas or groundwater monitoring well. Permit Modification: The second sentence of the last paragraph of Section 1.4.2 of Attachment 1 was revised as follows: BaroBalls™ ~~shall~~ may be maintained on all soil-gas and groundwater monitoring wells. ~~except for CWL-D3, to facilitate passive venting during the post-closure care period. CWL-D3 is being used to field-test various organic sensors and is equipped with wiring that prohibits the installation of a BaroBall™.~~ CPA Modification: None.

NO.	COMMENTER ID	COMMENT	NMED RESPONSE
75	G	26. Attachment 1, Sections 1.7 and 1.8, Pages 36-41: As DOE/Sandia request in specific comment #13, the NMED should authorize a groundwater monitoring program that is tailored to the current, post-remediation condition of the CWL that takes into account the extensive groundwater monitoring program implemented at the CWL since 1985. For post-closure care groundwater monitoring, please eliminate the requirement for Appendix IX sampling/analysis, include only identified CWL constituents of concern (COCs), and change the required frequency to annual. Sufficient historic and post-remediation groundwater monitoring has been completed to narrow the list of potential contaminants of concern to EPA method 8260 VOCs (including TCE) and metals (including chromium and nickel) as specified in Table 1-4. Please change these sections to address a more flexible groundwater and soil gas monitoring approach consistent with major comment #1 (for groundwater monitoring) and major comment #2 (for soil gas monitoring) in Enclosure 1. Also, please refer to specific comment #13	See responses to comments #6, 43, 48, and 75. Under the new rules at 40 C.F.R. 264 Subpart F, the NMED can require enhanced sampling in lieu of sampling for all Appendix IX constituents. Also, under these rules, the NMED can specify the frequency of sampling. Because the frequency of sampling was reduced from four to one sample per well per semi-annual event in the final Permit, the NMED also changed the statistical procedure that is to be used to evaluate groundwater data. Permit Modification: The last paragraph of Section 1.8 of Permit Attachment 1 has been revised to read: Additionally, in accordance with 40 C.F.R. § 264.99(g), the Permittees shall collect water samples at least annually from wells located at the point of compliance and analyze them ~~for all constituents contained in Appendix IX of 40 C.F.R. Part 264~~ for an enhanced list of constituents (see Section 1.8.1.1 of Permit Attachment 1 for the enhanced list of constituents). Footnote "C" of Table 1-4 of Permit Attachment 1 has been revised to: [c]Semi-annually: ~~All 40 C.F.R. Part 264 Appendix IX constituents must be analayzed on an annual basis~~ An enhanced list of constituents must be analyzed on an annual basis (see Section 1.8.1.1 of Permit Attachment 1). The last sentence of Section 1.8.1.1 of Permit Attachment 1 has been revised to: The Permittees shall also collect groundwater samples at least annually from wells located at the point of compliance and analyze them for ~~all constituents contained in Appendix IX of 40 C.F.R. Part 264~~ an enhanced list of constituents pursuant to 40 C.F.R. § 264.99(g). The enhanced list of constituents is comprised of TCE; chromium; nickel; 1,1,2-trichloro-1,2,2-trifluoroethane (Freon 113); tetrachloroethene (PCE); 1,1-dichloroethene (1,1-DCE); chloroform; and trichlorofluoromethane (Freon 11).

NO.	COMMENTER ID	COMMENT	NMED RESPONSE
			The first sentence of Section 1.8.1.2 of Permit Attachment 1 has been revised to: The Permittees shall monitor the groundwater for the hazardous constituents listed in Table 1-2 of this Permit Attachment semi-annually (twice each year), ~~and annually for 40 CFR Part 264 appendix IX constituents,~~ with one of these events each year to include an enhanced list of constituents, (see Section 1.8.1.1 of Permit Attachment 1) to determine whether the groundwater beneath the CWL is in compliance with the groundwater protection standard under 40 C.F.R. § 264.92. The following four paragraphs of text were added after the first paragraph of Section 1.8.1.2 of Permit Attachment 1. In order to comply with 40 C.F.R. § 264.97(h) for the hazardous constituents specified above, on a well by well basis the Permittees shall statistically evaluate ground-water monitoring data using prediction and confidence intervals, and in accordance with the procedures discussed below. The analysis shall comply with the performance standards outlined in 40 C.F.R. § 264.97(i)(1-6), as appropriate. Data values below the level of detection shall be set equal to their corresponding detection limits for the purpose of calculating the statistics required by this Permit. Historical groundwater sampling results shall be used as described in this Section to augment the data sets for wells in order to increase the amount of data for statistical analysis. Such historical groundwater data shall be limited to data obtained after completion of the Landfill Vapor Extraction VCM.

NO.	COMMENTER ID	COMMENT	NMED RESPONSE
			The Permittees shall calculate via the use of prediction intervals the probability that each semi-annual sample result for a given hazardous constituent will fall within the range of previous sample results for the hazardous constituent. The Permittees shall also note whether each semi-annual sample result actually falls within, below, or above the range of previous sample results. Additionally, for each hazardous constituent, the Permittees shall calculate the confidence interval for the mean at a 95% confidence level, and compare the lower confidence limit to the concentration limit for the hazardous constituent. If the lower confidence limit exceeds the concentration limit, this finding shall be considered statistically significant evidence that the concentration limit for the particular hazardous constituent has been exceeded. If there is statistically significant evidence that a concentration limit has been exceeded, corrective action must be initiated in accordance with Section 1.8.3 of this Permit Attachment. In the event that a well must be replaced during the term of this Permit, the Permittees shall statistically evaluate groundwater monitoring data using sampling results obtained from the replacement well and historical sampling results from the well that was replaced (Replacement wells are wells located adjacent to the wells that they replace. Replacement wells are not new wells). New wells are wells placed at locations that are significantly different from those of other wells at the CWL, and are not intended to replace existing wells. For new wells, data sets representing fewer than six semi-annual sampling events will be typical for the first three years that the wells exist. Because too few data would be initially available for analysis, the Permittees are not required to statistically evaluate ground-water monitoring data for a new well until after the first 3 years of groundwater sampling has been conducted for the well. After the first 3 years of sampling has been conducted for a new well, the Permittees must statistically evaluate the groundwater monitoring data for the well in accordance with the requirements of this Permit. Regardless of whether a statistical evaluation is required, the Permittees must report timely all groundwater sampling results for all wells, including all new wells, in the annual reports required under Section 1.12 of this Permit Attachment.

NO.	COMMENTER ID	COMMENT	NMED RESPONSE
			The text above replaced the third last paragraph of Section 1.4.1 of Permit Attachment 1, which read: ~~In order to comply with 40 C.F.R. § 264.97(h) for the hazardous constituents specified above (TCE, Cr, Ni), the Permittees shall evaluate ground-water monitoring data by conducting an analysis of variance assuming that the distribution of each of the hazardous constituents are appropriately modeled as a normal or log-normal distribution. This analysis shall comply with the performance standards outlined in 40 C.F.R. § 264.97(i)(1-6), as appropriate. If it is later determined that any of the hazardous constituents are not found to be normally or log-normally distributed, the Permittees shall propose another statistical method by applying for a permit modification.~~ The first sentence of the second paragraph of Section 1.8.1.2 has been revised to: In accordance with 40 C.F.R. § 264.99(g), if the Permittees find ~~40 C.F.R. Part 264 Appendix IX~~ any constituents on the enhanced list (see Section 1.8.1.1 of Permit Attachment 1) in the groundwater that are not already identified in the Permit, the Permittees may resample within one month and repeat the ~~Appendix IX~~ analysis for the constituents. If the second analysis confirms the presence of new constituents, the Permittees must report the concentrations of the new constituents to the Department within seven days of receipt of the results of the second analysis and add them to the monitoring list (See Table 1-~~2~~4). If the Permittees choose not to resample, then the Permittees must report the concentrations of the new constituents to the Department within seven days of receipt of the results of the analysis and add them to the monitoring list (Table 1-~~2~~4).

NO.	COMMENTER ID	COMMENT	NMED RESPONSE
			Regarding soil-gas monitoring, Section 3.5 of Permit Part 3 has been revised to read: **3.5 SOIL GAS SAMPLING AND ANALYSIS** The Permittees shall conduct soil-gas sampling and analysis following the procedures and requirements described in Attachments 1 and 3 of this Permit. The last sentence of the first paragraph of Section 1.8.2.2 has been revised to: If the second analysis confirms that the trigger level has been exceeded, the Permittees must notify the Department in writing within seven days after receipt of the second analysis, confirming that the trigger level has been exceeded during the particular sampling event. The following three paragraphs of text were added at the end Section 1.8.1.2 of Permit Attachment 1. Annually, the Permittees shall calculate the upper and lower confidence limits about the mean at a 95 % confidence level using current data and all previous data obtained during the post-closure care period for the three deepest sampling ports (Port 1) of wells CWL-D1 through D3 and for each compound detected at a concentration greater than 0.5 ppmv listed in Table 1-5 of Permit Attachment 1. For the first 5 years after the effective date of this Permit, historical data shall be used whenever it is available and appropriate to augment data obtained during the post-closure care period for the purpose of calculating the upper and lower confidence limits. After the first five years after the effective date of this Permit, only data obtained during the post-closure care period shall be used for the purpose of calculating the upper and lower confidence limits.

NO.	COMMENTER ID	COMMENT	NMED RESPONSE
			For soil-gas samples collected from the deepest sampling ports (Port 1 from CWL-D1 through D3) , the Permittees shall compare the lower confidence limit for each compound listed on Table 1-5 of this Permit Attachment detected at a concentration of greater than 0.5 ppmv to the trigger level of 20 ppmv. If the lower confidence limit for any compound listed in Table 1-5 exceeds the trigger level of 20 ppmv at any of the deepest sampling ports, corrective action shall be initiated by the Permittees in accordance with Section 1.8.3 of this Permit Attachment. All soil-gas monitoring data for all wells and the 95% upper and lower confidence limits about the mean for each compound listed in Table 1-5 detected at a concentration greater than 0.5 ppmv for the three deepest sampling ports (Port1) of wells CWL-D1 through D3 shall be reported annually in the reports required under Section 1.12 of this Permit Attachment. The first sentence of the 2nd paragraph of Section 1.8 of Permit Attachment 1 has been revised to read: Soil-gas data, including that for TCE, shall be acquired ~~and evaluated~~ in a manner that is consistent with historic soil-gas monitoring data and so that results obtained during post-closure can be ~~compared with the historic data~~ evaluated to determine if any significant changes in soil-gas concentrations have occurred.

NO.	COMMENTER ID	COMMENT	NMED RESPONSE
			Concerning annual reporting, the following item numbers were changed under the next to last paragraph of Section 1.12 of Permit Attachment 1. 2. Provide groundwater ~~and VOC soil gas~~ monitoring results, <u>including control charts for groundwater monitoring results for each hazardous constituent (see Section 2.21.3 of Permit Attachment 2);</u> 3. <u>Provide soil-gas monitoring results, i.e., summary data tables showing TCE and total VOC results, organized by well and port as well as laboratory data sheets providing all TO-14 results, provide the upper and lower confidence limits for each compound listed in Table 1-5 detected at a concentration greater than 0.5 ppmv for the three deepest sampling ports (Port 1) of wells CWL-D1 through D3, and</u> indicate ~~whether trigger levels for soil gas were exceeded~~ if <u>the trigger level for soil gas was exceeded and for which compound</u>; 4. <u>For groundwater monitoring results</u>, indicate whether there has been any statistically significant increase in the concentration of a hazardous constituent in groundwater in any of the wells at the point of compliance, <u>and indicate the cumulative percentage of sampling results exceeding the median</u>; 5. <u>For groundwater monitoring results</u>, indicate whether any hazardous constituents exceeded their corresponding concentration limits<u>, provide the upper and lower confidence limits for each hazardous constituent, provide based on prediction intervals the probability that the semi-annual sample result for each hazardous constituent should fall within the range of previous results, and specify if the semi-annual result fell within, below, or above the range of previous results;</u> 6. <u>For groundwater monitoring results</u>, indicate whether any new hazardous constituents ~~(40 C.F.R. Part 261 Appendix VIII)~~ were identified <u>as a result of enhanced sampling (see Section 1.8.1.1 of Permit Attachment 1)</u> and whether they were added to the monitoring list; and Due to changes related to enhanced sampling, the last sentence of paragraph 2 of Section 2.0 of Permit Attachment 2 was revised to read: Additionally, in accordance with 40 C.F.R. § 264.99(g), the Permittees shall collect and analyze water samples for ~~all constituents contained in Appendix IX of 40 CFR Part 264~~ <u>an enhanced list of constituents (see Section 1.8.1.1 of Permit Attachment 1 for the enhanced list of constituents)</u> at least annually from wells located at the point of compliance and the background well.

NO.	COMMENTER ID	COMMENT	NMED RESPONSE
			Due to changes related to enhance sampling and sampling frequency, the second and third paragraphs of Section 2.7 of Permit Attachment 2 were revised to read: In accordance with 40 C.F.R. § 264.97(g)(2), ~~a sequence of at least four duplicate water samples~~ at least one sample shall be collected from each well (background and compliance wells) during each of two semi-annual sampling events and shall be analyzed for trichloroethene (TCE), chromium (Cr), and nickel (Ni). Additionally, in accordance with 40 C.F.R. § 264.99(g), the Permittees shall collect and analyze water samples at least annually from wells located at the point of compliance ~~for all constituents contained in Appendix IX of 40 C.F.R. Part 264~~ and analyze them for an enhanced list of constituents (see Section 1.8.1.1 of Permit Attachment 1 for the enhanced list of constituents). The Permittees shall conduct semi-annual (twice each year) groundwater sampling for the entire compliance and post-closure care-periods, with one of these events each year including the enhanced sampling list (see Section 1.8.1.1 of Permit Attachment 1 for the enhanced list of constituents). Aqueous samples shall be reported in units of milligrams per liter (mg/L) or micrograms (μg)/L. Finally, item #4 was changed under the last paragraph of Section 3.11 of Permit Attachment 3. 4. Compare detected VOC concentrations for the deepest sampling ports (Port 1) of CWL-D1 through D3 to the trigger level of 20 ppmv using the procedure discussed in Section 1.8.2.2 of Permit Attachment 1; See also responses to comments #6, 43, and 48. CPA Modification: see response to comment #6.

NO.	COMMENTER ID	COMMENT	NMED RESPONSE
76	G	27. Attachment 1, Section 1.8, Page 37: Consistent with specific comment #26, all references to the analyte list should identify only the CWL COCs, not Appendix IX constituents. In addition, references throughout the text to the analyte list should be to Table 2-3 (as revised to address only CWL COCs) to avoid internal inconsistency. Please refer to major comment #1 in Enclosure 1.	See responses to comments #6, 43, 48, and 75. Permit Modification: See responses to comments #6, 43, 48, and 75. CPA Modification: see response to comment #6.
77	G	28. Attachment 1, Section 1.8.1.1, Page 38: In addition to specific comment #26, please delete "groundwater flow rate;" a range of groundwater flow rate has already been determined for the CWL and is unlikely to change significantly over the post-closure care period. Please note that this requirement does not appear in corresponding Section 2.8 of Attachment 2.	The Permit condition is a requirement of the regulations at 20.4.1.500 NMAC incorporating 40 CFR § 264.99(e) and will not be deleted, even if the groundwater flow rate is not expected to change significantly during the compliance period. The requirement to determine the groundwater flow rate will be added to Section 2.8 of Permit Attachment 2. See also response to comment #75. Permit Modification: Section 2.8 of Permit Attachment 2 was revised as follows. **2.8. Field Operations** Groundwater sampling shall be conducted in accordance with this SAP and this Permit to ensure accurate, precise, representative, complete, and comparable groundwater sampling results. Other groundwater monitoring activities shall include the measurement of water levels and calculating the direction, flow rate, and gradient of groundwater flow, the decontamination of equipment, inspection of monitoring equipment, monitoring field water quality parameters, collecting and handling samples, and managing waste. See also response to comment #75. CPA Modification: None.

NO.	COMMENTER ID	COMMENT	NMED RESPONSE
78	G	29. Attachment 1, Section 1.8.1.1, Page 38: The cited wording appears to suggest DOE/Sandia must collect 4 samples per well per semi-annual monitoring event (i.e., quadruplicate sampling), which is not consistent with 40 C.F.R. 264.99(f), which states "A sequence of at least 4 samples from each well (background and compliance wells) must be collected at least semi-annually during the compliance period". In other words, different sampling events, not 4 samples from each well during each sampling event (i.e., quadruplicate sampling) as implied in the cited text. In addition, consistent with specific comments #26 and 27, all references to the analyte list should identify only the CWL COCs, not Appendix IX constituents. References throughout the text to the analyte list should be to Table 2-3 (as revised to address only CWL COCs) to avoid internal inconsistency.	See responses to comments #6, 43, 48, and 75. Permit Modification: The next to the last sentence of Section 1.8.1.1 of Permit Attachment 1 has become the beginning of the third paragraph and revised to read: In accordance with 40 C.F.R. § 264.99(f), the Permittees shall collect and analyze at least ~~four samples~~ one sample from each well (background and compliance wells) at least semi-annually during the compliance period. See also responses to comments #6, 43, 48, and 75. CPA Modification: see response to comment #6.
79	G	30. Attachment 1, Section 1.8.1.2, Page 38: Consistent with specific comments #26 and #27, all references to the analyte list should identify only the CWL COCs, not Appendix IX constituents. References throughout the text to the analyte list should be to Table 2-3 (as revised to address only CWL COCs) to avoid internal inconsistency.	See responses to comments #6, 43, 48, and 75. Permit Modification: See responses to comments #6, 43, 48, and 75. CPA Modification: See response to comments #6.

NO.	COMMENTER ID	COMMENT	NMED RESPONSE
80	G	31. Attachment 1, Section 1.8.1.2, Page 38: In addition to specific comment #26, data results should be compared to the regulatory standards presented in Table 1-2 only. Appendix IX sampling requirements and the analysis to indicate a statistically significant increase in concentration of a hazardous constituent should not apply to the CWL.	See responses to comments ##6, 43, 48, and 75. Permit Modification: The following paragraph of text was added to become the fourth paragraph of Section 1.8.1.2 of Permit Attachment 1. Furthermore, in order to comply with 40 C.F.R. § 264.99(d), on a well by well basis and for each hazardous constituent, the Permitttees shall calculate and summarize the cumulative percentage of sample results that are greater than the median. Such a cumulative percentage at a value of 80% or greater shall be considered statistically significant evidence of increased contamination. No action by the Permittees is required due to statistically significant evidence of increasing contamination unless a concentration limit is exceeded as described in the previous paragraph of this Section of this Permit Attachment. See also responses to comments #6, 43, 48, and 75. CPA Modification: See response to comment #6.
81	G	32.Attachment 1, Section 1.8.1.2, Page 38: Please refer to specific comments #26 and #27. Appendix IX sampling requirements and the process of resampling and/or adding new constituents to the monitoring list according to the Appendix IX sampling results should not apply to the CWL.	See responses to comments #6, 43, 48, and 75. Permit Modification: See responses to #6, 43, 48, and 75. CPA Modification: See response to comment #6.
82	G	33. Attachment 1, Section 1.8.1.2, Page 38: Please refer to specific comment #26 and 31.	See responses to comments #6, 43, 48, and 75. Permit Modification: See also responses to comments #6, 43, 48, and 75. CPA Modification: See response to comment #6.

NO.	COMMENTER ID	COMMENT	NMED RESPONSE
83	G	34. Attachment 1, Section 1.8.1.2, Page 38: Please replace this text with the Conceptual Corrective Measures Evaluation Process (CCMEP) as previously agreed to and documented in the CWL CMS Report (SNL/NM December 2004) and CWL Post-Closure Care Plan (SNL/NM September 2005). Please refer to specific comment #26, and major comment #2 in Enclosure 1.	The CCMEP has been replaced with statistical procedures to determine if corrective action should be initiated (see responses to comments #43 and 48). Extensive revisions have been made to the final Permit to include these statistical procedures (see responses to comments #75 and 83). Permit Modification: The last sentence of the third paragraph of Section 1.8.1.2 has been revised to: The Permittees shall compare the data collected at the compliance points to the concentration limits specified in Table 1-2 using the method specified in ~~Table 1-4~~ this Section of this Permit Attachment. The next to last sentence of the first paragraph of Section 1.8.2.2 has been deleted: ~~If the results confirm that the trigger level of 20 ppmv has been exceeded, the Permittees shall conduct corrective action.~~ The following three paragraphs of text were added at the end Section 1.8.3 of Permit Attachment 1. Pursuant to 40 C.F.R. § 264.99(h), and Section 1.8.1.2 of this Permit Attachment, if there is statistically significant evidence that any concentration limits under 40 C.FR. § 264.94 are being exceeded at any groundwater monitoring well at or beyond the point of compliance the Permittees must notify the Department of this finding within seven days of receipt of the final results of the analysis, as a second analysis may be performed for confirmation prior to any notification to the Department. The notification must indicate what concentration limits have been exceeded. The Permittees must also submit to the Department an application for a permit modification to establish a corrective action program meeting the requirements of 40 C.F.R. § 264.100 within 180 days. The application must at a minimum include the

NO.	COMMENTER ID	COMMENT	NMED RESPONSE
			following information: a detailed description of corrective actions that will achieve compliance with the groundwater protection standard specified under 40 C.F.R. § 264.99(a), and a plan for a groundwater monitoring program that will demonstrate the effectiveness of the corrective action. Such a groundwater monitoring program may be based on compliance monitoring program developed to meet the requirements of 40 C.F.R. § 264.99. The plan shall also include a schedule for implementation of the corrective action. In accordance with 40 C.F.R. § 264.99(i), if the Permittees determine that a groundwater concentration limit is being exceeded at any monitoring well at the point of compliance, the Permittees may attempt to demonstrate to the Department that a source other than the CWL caused the contamination or that the detection is an artifact caused by error in sampling, analysis, statistical evaluation, or natural variation in groundwater. Pursuant to Section 1.8.2.2 of this Permit Attachment, if the lower confidence limit for any soil-gas compound listed in Table 1-5 exceeds the trigger level of 20 ppmv at any of the deepest sampling ports (Port 1 of CWL-D1 through D3), the Permittees shall submit, within 180 days of discovery of this fact, an application for a permit modification to establish a corrective action program. The application must at a minimum include the following information: a detailed description of corrective actions that will be taken by the Permittees to reduce the concentrations of soil gas to levels that do not exceed the trigger level of 20 ppmv at the deepest sampling ports, and a plan for a soil-gas monitoring program that will demonstrate the effectiveness of the corrective action. Such a soil-gas monitoring program may include existing soil-gas monitoring wells at and near the CWL, as appropriate. The plan shall also include a schedule for implementation of the corrective action.

NO.	COMMENTER ID	COMMENT	NMED RESPONSE
			The last two sentences of Section 3.2 of Permit Attachment 3 were revised to: This SAP is designed to ensure that post-closure care soil-gas monitoring procedures are consistent with past practices ~~and produce results that can be compared to historical results to establish long-term soil gas trends. The ability to evaluate and compare post-closure soil-gas results with historical data and rends is critical for addressing uncertainty regarding the potential future impacts of the remaining VOC soil-gas plume on groundwater.~~ and to ensure that soil-gas monitoring data obtained pursuant to the requirements of this Permit are of high quality. Soil-gas data will be used to evaluate whether the VOC soil-gas plume has a significant potential to contaminate groundwater. The last two sentences of Section 3.7 of Permit Attachment 3 have been deleted: ~~Each new set of soil-gas data shall be compared to historical soil-gas data presented in Annex D of the Corrective Measures Study Report (SNL/NM, December 2004). This evaluation process is intended to reveal long-term plume trends.~~ See also responses to comments #6, 43, 48, 75, and 83 CPA Modification: See response to comment #6.
84	G	35. Attachment 1, Section 1.8.2.2, Page 39: Please replace this text with the CCMEP as previously agreed to and documented in the CWL CMS Report (SNL/NM December 2004) and CWL Post-Closure Care Plan (SNL/NM September 2005). Please refer to specific comment #26, and major comment #2 in Enclosure 1.	See responses to comments #6, 43, 48, 75, and 83. Permit Modification: See responses to comments #6, 43, 48, 75, and 83. CPA Modification: See response to comment #6.
85	G	36. Attachment 1, Section 1.9, Page 41: Consistent with specific comment #13, only a post-closure care period should apply to the CWL based upon current conditions. Please refer to major comment #1 in Enclosure 1.	See responses to comments #6, 43, 48, and 75. Permit Modification: See responses to comments #6, 43, 48, and 75. CPA Modification: See response to comment #6.

NO.	COMMENTER ID	COMMENT	NMED RESPONSE
86	G	37. Attachment 1, Section 1.9.1.1, Page 42: Please delete the text "but shall not exceed 5 years." The revegetation process, and more specifically the transition from annual species to native perennial species, is dependant upon natural conditions and cannot be controlled by the Permittees. The inspection/monitoring program defined in this Permit documents a reasonable approach, based upon inspections by a qualified biologist and a list of potential corrective actions that can be implemented based upon the biologist recommendations, to ensure the criteria for "successful revegetation" are achieved. CWL annual post-closure care annual reports will document the biologist's inspections, observations, and recommendations, as well as the corrective actions initiated.	Vegetation is a key component with respect to the performance of evapotranspiration covers, such as that deployed at the CWL. NMED believes that 5 years is adequate time to establish vegetation on the cover, and that there should be a time limit to achieve this goal. If the vegetation can not be established in 5 years, the Permittees should be compelled to take a different approach to rectify the problem. The subject permit condition compels the Permittees to take such action should it become necessary. Inspections can be utilized to determine whether the goal has been achieved, but they do not ensure that the goal is achieved. However, NMED revised the text of the Permit requiring the Permitttees to submit a plan should efforts to establish vegetation on the landfill fail to accomplish the goal in five years. By means of this plan, the Permittees will be given the opportunity to propose a method to rectify the problem that prevents vegetation from properly being re-established on the landfill cover. Permit Modification: The third sentence of Section 1.9.1.1 was revised to read: This phase is anticipated to take from three to five years.~~, but shall not exceed 5 years~~. If the criteria for successful revegetation (per Section 1.9 of this Permit Attachment) are not met within five years of the effective date of this Permit, the Permittees shall submit a plan to the Department for approval that describes the work that will be done to rectify the problem. The next to last sentence of the last paragraph of Section 1.9.1.1 of Permit Attachment 1 has been revised to read: The Permittees shall implement corrective actions in consideration of the staff biologist's recommendations within 60 days of receipt of the recommendations, except as noted in Section 1.9.1.3 and Table 1-6 of this Permit Attachment. CPA Modification: None.

NO.	COMMENTER ID	COMMENT	NMED RESPONSE
87	G	38. Attachment 1, Section 1.9.1.1, Pages 42: Please change the text to be consistent with the stated criteria for successful revegetation as follows: "Normal succession processes should occur and continue once native flora have been established, which is when native perennials comprise 50% of the 25% foliar coverage."	NMED made the correction. During discussions with the Permittees (see response to comment #1), it was concluded that a target goal of 20% total foliar coverage is more reasonable than the 25% originally proposed. Permit Modification: The third sentence of Section 1.9.1.1 of Attachment 1 will become the fifth sentence and was revised as follows. Normal succession processes should occur and continue once native flora has been established, which is when native perennials comprise 50% of the 20% foliar coverage.~~over greater than 50% of the cover area.~~ The second sequence of bullets under Section 1.9 of Permit Attachment 1 has been revised to read: • Total percent foliar coverage equals ~~25~~20 percent (i.e., ~~25~~20 percent of the land surface is covered with living plants versus ~~75~~80 percent bare surface area); • Of the ~~25~~20 percent total foliar coverage, 50 percent or greater comprises native perennial species, and 50 percent or less comprises annual species; and CPA Modification: None.

NO.	COMMENTER ID	COMMENT	NMED RESPONSE
88	G	39. Attachment 1, Section 1.9.1.3, Page 42: Please change the text to "Cover damage or vegetation observations that exceed the above mentioned criteria……" as the text is referring to both potential erosional damage to the cover (i.e., cover damage) and vegetation coverage (i.e., vegetation observations) that do not meet specific criteria.	NMED has revised the text. During negotiations, NMED recognized that supplemental watering may be required to properly establish vegetation and has modified the first bullet under Section 1.9.1.3 of Permit Attachment 1 to include supplemental watering. Also, it was pointed out during negotiations that the Permit should allow the Permittees to wait for the appropriate growing season if it was necessary to repair areas lacking proper vegetation. Permit Modification: The second sentence of Section 1.9.1.3 of Attachment 1 was revised as follows. Cover damage ~~Damage to cover~~ shall be repaired within 60 days to a condition that meets or exceeds the original design. Corrective action to repair inadequate cover vegetation ~~that exceeds~~ as defined by the above mentioned criteria (Section 1.9 of Permit Attachment 1) shall be ~~repaired~~ implemented within 60 days ~~to a condition that meets the original design~~. However, repairs to fix inadequate cover vegetation may be delayed until the appropriate growing season if approved by the Department in advance, and if any necessary measures are taken by the Permittees to prevent excessive erosion of the cover during the delay period. In the case of delaying repair of inadequate cover vegetation, advanced Department approval can be gained in writing via electronic mail or formal letter request. The left column for Table 1-6 for the rows "Final Cover Surface" was revised to read: Within 60 days of discovery of needed repairs. May be delayed to await appropriate growing season if approved by the Department in advance. The first bullet under Section 1.9.1.3 of Permit Attachment 1was revised to read: • Soil augmentations, surface scarification, reseeding, supplemental watering, or other corrective actions for areas lacking vegetation in excess of 200 square feet and re-establishing the topsoil layer to provide a suitable seedbed; and CPA Modification: None.

NO.	COMMENTER ID	COMMENT	NMED RESPONSE
89	G	40. Attachment 1, Section 1.9.1.3, Page 43: For clarity, please replace "with properties identical to" with "meeting the same criteria as".	NMED made the change to reflect that similar, rather than identical, materials are used. NMED also did not intend for animal burrows of any size to require backfilling (for example, it would not be practical or reasonable to require tiny ant burrows to be backfilled and compacted). Thus, NMED also removed the phrase "animal intrusion burrows" from the requirement. Permit Modification: The last bullet of Section 1.9.1.3 has been revised as follows. Backfilling and compacting settlement areas, areas of ponding water, ~~animal intrusion burrows,~~ and areas of erosion in excess of 6 inches deep using either stockpiled clean soil from the cover installation or locally derived clean fill with properties meeting the same design criteria as ~~identical to~~ the soil used to construct the CWL cover." CPA Modification: None.
90	G	41. Attachment 1, Section 1.9.4.1, Page 44: Please delete this requirement related to inspection of the TA-III fence. Although the TA-III fence is an added security measure, it is not integral to the protection of the CWL for the post-closure care period. As required in the draft Permit, the CWL is surrounded by a perimeter fence and is posted with warning signs. Routine inspections and maintenance will ensure the continuing integrity of the cover and associated systems. Imposing a permit condition for the TA-III fence is unnecessary and overly burdensome.	NMED agrees that inspection of TA-III fence is not necessary as the CWL will be surrounded by its own fence with locked gates and warning signs. Permit Modification: The last sentence in Section 1.9.4.1 of Permit Attachment 1 was deleted. ~~Inspection of the TA-III perimeter fence shall be performed by routine security patrols.~~ CPA Modification: None.
91	G	42. Attachment 1, Section 1.9.4.2, Page 44: Please delete this requirement. See specific comment #41.	See response #92. Permit Modification: The last sentence in Section 1.9.4.2 of Permit Attachment 1 was deleted. ~~The Permittees shall also perform repair and maintenance of the TA-III perimeter fence.~~ CPA Modification: None.

NO.	COMMENTER ID	COMMENT	NMED RESPONSE
92	G	43. Attachment 1, Table 1-6, Page 46: Please refer to specific comment #26 and major comment #1 in Enclosure 1.	See responses to comments #6, 43, 48, and 75. Permit Modification: See responses to comments #6, 43, 48, and 75. CPA Modification: See response to comment #6.
93	G	44. Attachment 1, Section 1.12, Page 48: Consistent with specific comments #26, 32, and 33, the analysis to indicate a statistically significant increase in concentration of a hazardous constituent and the identification of new constituents according to Appendix IX sampling should not apply to the CWL. Please delete these requirements for the annual report. Also, please refer to major comment #1 in Enclosure 1.	See responses to comments #6, 43, 48, and 75. Permit Modification: See responses to comments #6, 43, 48, and 75. CPA Modification: See response to comment #6.
94	G	45. Attachment 1, Sections 1.12, Page 48: Please include that the Permittees may combine the CWL post-closure care annual report with other site annual reports.	The NMED agrees that the annual report may be submitted or combined with other annual reports. Permit Modification: The last sentence of Section 1.12 of Attachment 1 was revised as follows. The annual reports are due by March 31 of each calendar year, <u>and may be combined with other site annual reports.</u> CPA Modification: None.

NO.	COMMENTER ID	COMMENT	NMED RESPONSE
95	G	46. Attachment 2, Section 2.0, Page 53: Please modify this sentence. The requirement of an approval by the Department is inappropriate for SNL/NM internal documents; however, submittal to the Department for written concurrence that these internal procedures are in accordance with regulatory requirements is appropriate. Also, DOE/Sandia request that the following clarifying sentences be added: "Where no regulatory impact is at issue, the Permittees may implement updated versions of the internal procedures without prior written concurrence from the Department. Revisions to these internal procedures do not constitute a permit modification."	NMED has modified the language as suggested. Permit Modification: The last sentence of the last paragraph of Section 2.0 of Permit Attachment 2 has been revised to read: ~~All procedures contained within the FOPs and AOPs concerning sampling and analysis are subject to approval by the Department.~~ If any requirement or procedure in the FOPs or AOPs is found by the Department to be unacceptable for reasons including, but not limited to, the requirement or procedure will or could prevent the acquisition of representative and reliable groundwater sampling results, the requirement or procedure shall be replaced by the Permittees with a different requirement or procedure that is acceptable to the Department. CPA Modification: None.
96	G	47. Attachment 2, Table 2-1, Page 54: Please add a footnote to the title of this table to indicate these procedures/documents will be used "as revised and updated".	NMED has made the requested revision. Permit Modification: A footnote has been added to Table 2-1 of Permit Attachment 2 that reads: **Sandia National Lab's Documents** (procedures/documents will be used as revised and updated): CPA Modification: None.

NO.	COMMENTER ID	COMMENT	NMED RESPONSE
97	G	48. Attachment 2, Section 2.2, Page 55: Please change the text to refer to the Table 2-1 Reference Documentation, as the acceptable range for %R is defined in Section 3.5 of the SNL/NM Statement of Work for Analytical Laboratories for each individual compound and analytical method. In addition, compliance with the acceptable range for %R is a required element of the data review and validation procedures (SMO-05-03 and AOP 00-03, Table 2-1). This approach was developed using performance-based historical data and represents the most up-to-date approach for ensuring overall data quality, especially for organic constituents.	%R is vital measurement of accuracy, a major component of quality control. The acceptable ranges for %R are based upon EPA guidance for quality control targets. Given that these ranges are large, especially for organics, NMED believes that the Permittees should be able to readily achieve the listed ranges for %R through the use of any decent laboratory services. NMED believes that what constitutes acceptable accuracy should be documented in the Permit. As written in the draft Permit, failure to achieve the expected level of accuracy compels the Permittees to take action to ensure high quality and defensible data are obtained. Because SVOCs are no longer on the list of analytes (see response to comment #43), NMED will delete the acceptable range for %R for SVOCs. Permit Modification: The last sentence of Section 2.2 of Permit Attachment 2 was revised to: The acceptable range for %R shall be 50-130% for volatile organic compounds (VOCs)~~, 10-130% for semi-volatile organic compounds (SVOCs),~~ and 75-125% for metals. CPA Modification: None.

NO.	COMMENTER ID	COMMENT	NMED RESPONSE
98	G	49. Attachment 2, Section 2.3, Page 55: Please change the text to refer to the Table 2-1 Reference Documentation, as the acceptable range for RPD is defined in Section 3.5 of the SNL/NM Statement of Work for Analytical Laboratories for each individual compound and analytical method. Compliance with the acceptable range for RPD is a required element of the data review and validation procedures (SMO-05-03 and AOP 00-03, Table 2-1). This approach was developed using performance-based historical data and represents the most up-to-date approach for ensuring overall data quality, especially for organic constituents.	RPD is a vital measurement of precision, a major component of quality control. The acceptable ranges for RPD are based upon EPA guidance for quality control targets. NMED believes that the Permittees should be able to achieve the acceptable ranges for RPD through the use of any decent laboratory services. NMED believes that what constitutes acceptable precision should be required through the Permit. As written in the draft Permit, failure to achieve the expected level of precision compels the Permittees to take action to ensure high quality and defensible data are obtained. The last sentence of Section 2.3 of Attachment 2 contains an error, which is corrected as shown below to indicate ranges are "±" the indicated values. Also, because SVOCs are no longer on the list of analytes (see response to comment #43), NMED will delete the acceptable range for RPD for SVOCs. Permit Modification: The last sentence of Section 2.3 of Permit Attachment 2 was corrected as follows. The acceptable range for RPD is ±20% for VOCs~~, 25% for SVOCs,~~ and ±35% for metals. The last sentence of Section 2.20.2 of the second paragraph of Permit Attachment 2 has been revised to read: The laboratory shall also evaluate the precision of the data by analyzing twice either the environmental samples, LCSs, or MS samples and calculating the RPD between corresponding results. CPA Modification: None.

NO.	COMMENTER ID	COMMENT	NMED RESPONSE
99	G	50. Attachment 2, Section 2.3, Page 55: setting accuracy and precision requirements for inorganic analyses is a generally accepted practice, but setting rigid criteria for organic compounds, such as those included in Sections 2.2 and 2.3 of Attachment 2 of the draft Permit, is generally not an accepted practice. The analytical performance for the measurement of organic compounds varies significantly between compounds and for different methods. This variation is widely accepted and can be seen in the performance tables published in the methods and in the performance requirements for accreditation in programs such as the National Environmental Laboratory Accreditation Conference. The Sandia Sample Management Office (SMO) requires that analytical performance criteria be established using industry standard practices, be compared to generally accepted criteria, and not include specific requirements. Recognizing accepted industry practices allows Sandia to use criteria that represent significant improvements in analytical measurement techniques. This approach is incorporated into the Permit via referenced procedures and the SMO SOW for Analytical Laboratories (Table 2-1), and by changing the Permit text as requested in specific comments #48 and 49 above.	See responses to comments #97 and 98. Permit Modification: See responses to comments #97 and 98. CPA Modification: None.

NO.	COMMENTER ID	COMMENT	NMED RESPONSE
100	G	51. Attachment 2, Section 2.4, Page 55: Please change text to "Otherwise, the incomplete portion of the sampling shall be reviewed against historical data for that particular monitoring well. The sampling shall be made complete by repeating the sampling and analysis only if the incomplete portion of the sampling results is significant, considering the constituent, the history of results for that constituent, and regulatory status of the constituent."	NMED disagrees with the comment. If sampling is incomplete, the intent of the regulations can not be satisfied (for example, doing proper statistics and determining whether additional hazardous constituents should be added to the monitoring list). Permit Modification: None. CPA Modification: None.
101	G	52. Attachment 2, Section 2.5, Page 56: Please add the following sentence after the cited sentence: "Where inconsistencies exist between the requirements and/or procedures of this Permit and the guidance cited in Section IX of the Compliance Order on Consent (NMED April 2004), the requirements of this SAP and the CWL Post-Closure Care Permit shall take precedence."	NMED will not make the suggested change. Instead, the text will be changed to eliminate the reference to the Consent Order, which is not expected to survive the CWL post-closure care period. Other purging requirements are already included in Section 2.12 of Permit Attachment 2. Permit Modifications: The second sentence of Section 2.5, Attachment 2 was revised as follows: To help ensure that samples are representative of formation water, the Permittees shall implement the procedures in this Permit ~~and regulatory guidance~~ for groundwater purging and sampling.~~ found in Section IX of the Compliance Order on Consent (NMED April 2004).~~ CPA Modification: None.
102	G	53. Attachment 2, Section 2.7, Page 56: Please refer to specific comments #13 and major comment #1 in Enclosure 1.	See responses to comments #6, 43, 48, and 75. Permit Modification: See responses to comments #6, 43, 48, and 75. CPA Modification: See response to comment #6.

NO.	COMMENTER ID	COMMENT	NMED RESPONSE
103	G	54. Attachment 2, Section 2.7, Page 56: Please refer to specific comment #29. The cited wording appears to suggest DOE/Sandia must collect 4 samples per well per semi-annual monitoring event, which is not consistent with 40 C.F.R. 264.97(g)(l). The intent of 40 C.F.R. 264.97(g)(l) is similar to 40 C.F.R. § 264.99(f); which states "A sequence of at least 4 samples from each well (background and compliance wells) must be collected at least semi-annually during the compliance period" (i.e., different sampling events). Not 4 samples from each well during each sampling event (i.e., quadruplicate sampling) as implied in the cited text.	See responses to comments #6, 43, 48, and 75. Permit Modification: See responses to comments ##6, 43, 48, and 75. CPA Modification: See response to comment #6.
104	G	55. Attachment 2, Section 2.7, Page 56: Please refer to specific comments #13, 26, and 27; and major comment #1 in Enclosure 1.	See responses to comments #6, 43, 48, and 75. Permit Modification: See responses to comments #6, 43, 48, and 75. CPA Modification: See response to comment #6.
105	G	56. Attachment 2, Table 2-2, Page 56: Consistent with specific comments #13, 26, and 27, please change to reflect annual sampling for EPA method 8260 VOCs (including TCE) and metals (including chromium and nickel) as specified in Table 1-4. Please refer to specific comments #13, 26, and 27; and major comment #1 in Enclosure 1.	See responses to comments #6, 43, 48, and 75. Permit Modification: See responses to comments #6, 43, 48, and 75. CPA Modification: See response to comment #6.

NO.	COMMENTER ID	COMMENT	NMED RESPONSE
106	G	57. Attachment 2, Section 2.12, Page 56: Please change the text to "The pump discharge rate shall be the minimum discharge rate reasonably achievable based upon the sampling method used and the depth of groundwater, which is approximately 500 feet below the surface at the CWL." The requested discharge rate from the sampling pump is not achievable using the Bennett™ pump, which is the sample collection method/equipment currently required by NMED, and considering the low-yield characteristics of the CWL wells.	The proposed text is unacceptable because the maximum rate of flow for the collection of water samples for VOC analyses would be undefined in the Permit. However, NMED agrees that pump discharge rates can not be readily lowered to 0.1 liters per minute under the conditions present at CWL. The cited sentence will be changed so that the Permittees can collect water samples for VOC analysis at an acceptable flow rate by, for example, installing a T-connector and valve to the sampling tubing, or by other acceptable means to modify the sampling system to lower the flow rate. Additionally, NMED notes that in the 6th sentence of the first paragraph of Section 2.12 of Permit Attachment 2 the phrase "unless the well is purged dry" is unnecessary and thus, the phrase has been deleted from the final Permit. In every case where a well purges dry at a low pumping rate, a wellbore volume of static groundwater has been evacuated from the well, and thus, the purging requirement has been met. Permit Modification: The fifth sentence of the first paragraph of Section 2.12, Attachment 2 will become the first sentence of paragraph 2 and was revised as follows. ~~The pump discharge rate shall not exceed 0.1 liter per minute during the collection of VOC and SVOC samples.~~ Regardless of the desired pumping rate mentioned above, the maximum pumping rate in any case shall not exceed 12 liters per minute, and groundwater samples collected for VOC analyses shall be collected by filling the sample containers at a flow rate not to exceed 0.1 liter per minute. The Permittees may modify the sampling system in order to split the flow of water, such that the flow of water through one side can be reduced to a rate of 0.1 liter per minute or less to facilitate the filling of sample containers. The flow rate through the other side shall be the minimum rate that is reasonably achievable. The sixth sentence of the first paragraph of Section 2.12 of Permit Attachment 2 will become the fourth sentence of paragraph 2 and was revised to read: Each monitoring well shall be purged a minimum of one borehole volume (a borehole volume is the volume of all static water in the well plus the volume of water in the primary and secondary filter packs).~~,~~ ~~unless the well is purged dry~~. CPA Modification: None.

NO.	COMMENTER ID	COMMENT	NMED RESPONSE
107	G	58. Attachment 2, Section 2.12, Page 58: Please delete the sentence. Sampling requirements should be changed to only EPA method 8260 VOCs (including TCE) and metals (including chromium and nickel) consistent with specific comment #26 (i.e., there should be no other analytical parameters to collect samples for besides VOCs and metals).	See responses to comments #6, 43, 48, and 75. Because the sampling for constituents other than VOCs and metals is no longer required, NMED will delete the third sentence of the last paragraph of Section 2.12 of Permit Attachment 2. Permit Modification: The third sentence of the last paragraph of Section 2.12 of Permit Attachment 2 was deleted and previously stated: ~~Samples collected for other analytical parameters shall be collected after those obtained for analysis of VOCs and metals.~~ See also responses to comments #6, 43, 48, and 75. CPA Modification: See response to comment #6.

NO.	COMMENTER ID	COMMENT	NMED RESPONSE
108	G	59. Attachment 2, Section 2.12, Page 58: Please change the sentence to "Only samples for inorganic analyses shall be filtered, all other samples shall not be filtered." Results from the CWL groundwater monitoring program have already demonstrated that unfiltered metals sample results are biased high due to turbidity and/or stainless steel well screen corrosion, and do not reflect actual dissolved-phase contamination in groundwater (refer to chromium investigation results in the CMS Report [SNL/NM December 2004]). Because CWL post-closure care groundwater monitoring results are directly compared to EPA and NMED drinking water standards (i.e., water coming from the tap in a home), filtering metals groundwater samples is an acceptable practice based upon both NMED and EPA guidance. Unfiltered samples from the CWL consistently exceed drinking water requirements without filtering. In addition, NMAC 20.6.2 states that groundwater standards shall apply to the dissolved portion of contaminants as specified in "Methods for Chemical Analysis of Water and Waste of the US EPA," except for mercury, organics, and non-aqueous phase liquids (refer to page 12 of NMAC 20.6.2).	NMED will not change the requirement as RCRA applies to the total concentrations of metals, not the dissolved concentrations. Permit Modification: None. CPA Modification: None.

NO.	COMMENTER ID	COMMENT	NMED RESPONSE
109	G	60. Attachment 2, Section 2.18, Page 59: DOE/Sandia request the permit language be generalized to require "the use of appropriate methods and technologies to meet the data quality requirements". This approach is consistent with guidance from the EPA Office of Solid Waste (Method Innovation Rule) and the EPA in general (performance approach initiatives). Not taking this approach has been identified as a major obstacle in obtaining the highest quality, most cost-effective data by both the EPA and the National Environmental Laboratory Accreditation Conference accreditation organization. DOE/Sandia recommend the Permit be modified to minimize the use of prescriptive methods and not require the use of specific revisions. Please modify Table 2-3 and associated text to clarify this approach (i.e., make the reference to the stated EPA methods more flexible through additional text and/or a footnote to the table).	NMED agrees that some flexibility should be allowed to take advantage of new and better methods and technologies, without having to modify the Permit. NMED also notes that the Section number referenced in the next to the last sentence is incorrect. NMED has corrected the Section number in the final Permit for the sake of accuracy. Permit Modification: The next to the last sentence of Section 2.18 of Attachment 2 has been revised to read: The analytical laboratory shall prepare and submit to the Permittees an analysis data report as described in Section ~~1.10.3~~4.0 of the SOW for Analytical Laboratories and as required by the conditions of this Permit. The last sentence of Section 2.18 of Attachment 2 was revised as follows. Table 2-3 summarizes EPA Methods (EPA, November 1986), container types and preservation methods applicable to groundwater sampling at the CWL; however, the Permittees may use other appropriate test methods, container types, and preservation methods that meet the data quality requirements of this Permit subject to the procedures in 40 C.F.R. § 270.42(a)(2). In addition, the following was added to footnote "a' of Table 2-3 of Attachment 2 The Permittees may use other appropriate test methods, container types, and preservation methods that meet the data quality requirements of this Permit subject to the procedures in 40 C.F.R. § 270.42(a)(2). CPA Modification: None.

NO.	COMMENTER ID	COMMENT	NMED RESPONSE
110	G	61. Attachment 2, Table 2-3, Page 60: Consistent with specific comment #26, Table 2-3 should include only the methods, container types, and preservatives relevant to monitoring for EPA method 8260 VOCs (including TCE) and metals (including chromium and nickel). Please refer to major comment #1 in Enclosure 1.	See responses to comments #6, 43, 48, and 75. Because analytes are now limited only to VOCs and metals (see response to comment #43), NMED agrees that all other analytes can be deleted from Table 2-3. Permit Modification: All analytes (and corresponding analytical methods and container/preservation methods) have been deleted from Table 2-3 of Permit Attachment 2, with the exception of those for VOCs and metals. The footnotes for the abbreviations "L", "NaOH", "PCBs", and "SVOCs" were deleted as they are no longer applicable to the table. See responses to comments #6, 43, 48, and 75. CPA Modification: See response to comment #6.
111	G	62. Attachment 3, Section 3.9, Page 72: Please modify this sentence per specific comment #46.	NMED has modified the language as suggested. Permit Modification: The next to the last sentence of the last paragraph of Section 3.9 of Permit Attachment 3 has been revised to read: ~~All FOPS and AOPs are subject to approval by the Department~~. If any requirement or procedure in the FOPs or AOPs is found by the Department to be unacceptable for reasons including, but not limited to, the requirement or procedure will or could prevent the acquisition of representative and reliable soil-gas sampling results, the requirement or procedure shall be replaced by the Permittees with a different requirement or procedure that is acceptable to the Department. CPA Modification: None.

NO.	COMMENTER ID	COMMENT	NMED RESPONSE
112	G	63. Attachment 3, Table 3-2, Page 73: Please add a footnote to the title of this table to indicate these procedures/documents will be used "as revised and updated".	NMED made the requested revision. Permit Modification: The first footnote of Table 3-2 of Permit Attachment 3 was revised to read: **Sandia National Lab's ~~Offices and~~ Documents** (procedures/documents will be used as revised and updated): The second footnote for "AOP" has been converted from bold to normal font. CPA Modification: None.
113	G	64. Attachment 5, Section 5.5, Page 91: Please clarify by changing "complete" to "review" with respect to the operating procedures.	NMED will change the text to indicate that the Training Director will review fully the procedures and refresher training. Permit Modification: The last sentence of the first paragraph of Section 5.5, Attachment 5 was revised as follows. The Training Director must ~~complete~~ review fully the CWL Operating Procedures and Refresher Training outlined in Table 5-1 before discharging his/her duties. CPA Modification: None.
114	G	65. Attachment 6, Section 6.0, Page 94: Please rewrite as follows to clarify that all of the steps in Section 6.4 will be followed, including the first step "Facility personnel shall clean up spills immediately, and shall notify the Emergency Coordinator (EC) of the incident as required by Section 6.4 of this Contingency Plan; the EC will determine if the incident is an emergency."	NMED made the recommended revision. Permit Modification: The first sentence of the second paragraph under the subtitle "Purge Water Management" of Section 6.0, Permit Attachment 6, was revised as follows. Facility personnel shall clean up spills immediately, and shall notify the Emergency Coordinator (EC) of the incident ~~make the notifications~~ as required by Section 6.4 of this Contingency Plan; the EC will determine if the incident is an emergency. CPA Modification: None.

NO.	COMMENTER ID	COMMENT	NMED RESPONSE
115	G	66. Attachment 6, Section 6.2.2, Page 96: Please remove KAFB from this sentence and include a separate sentence that refers to Section 6.2.4 of Draft Permit as the MOU between DOE/NNSA and KAFB 377th ABW addresses involvement by KAFB Fire Department. Also, please revise the final sentence of the cited text to add "except for holidays and facility closure" after "…….Monday through Friday".	"KAFB" was removed from the second sentence of the cited text as the Permittees can not ensure KAFB Fire Department personnel are available at all times. A sentence was added to refer to the MOU between the Permittees and KAFB for fire and other emergency support. The final sentence of the cited text was revised as proposed by the commenter, as EOC personnel will be on call at all times. Permit Modification: The first paragraph of Section 6.2.2 of Attachment 6 was revised as follows. The Facility ERO consists of two response groups that respond to an emergency situation: (1) a field response group led by an IC under the Incident Command System (**ICS**) and (2) an EOC cadre. The ICS also includes Facility Security, the KAFB Fire Department, and the Facility personnel with relevant technical skills. An IC shall be on site at the Facility at all times (24 hours per day, 7 days per week). Facility security ~~and the KAFB Fire Department~~ personnel shall also be available at all times. The Permittees shall maintain their MOU with the 377th Air Base Wing of KAFB for fire protection and other support as referenced in Section 6.2.4 of this Permit Attachment. Facility technical personnel are available on site from 8:00 am to 4:30 pm Monday through Friday and are on call the rest of the time. Facility EOC staff shall include an Emergency Director and a staff of Sandia Corporation and Department of Energy (DOE) personnel who are responsible for management decisions and notifications to outside parties that are required during an emergency response. EOC staff personnel shall be available on site at the Facility from 8:00 am to 4:30 pm, Monday through Friday, except for holidays and Facility closure, and shall be on call ~~the rest of the~~ at all times. CPA Modification: None.

NO.	COMMENTER ID	COMMENT	NMED RESPONSE
116	G	67. Attachment 6, Table 6-5, Page 106: Please change Table 6-5 "Emergency Coordinator List for the Chemical Waste Landfill" information for the Primary contact. Replace Franz Lauffer with: Primary: Donald P. Schofield P.O. Box 5800 Environmental Management MS-1089 Albuquerque, NM 87185 Home Phone: 268-6888 Office Phone: 844-4088 Cell or Pager: 259-7098 (Cell)	NMED made the recommended changes in the list. Permit Modification: In Table 6-5 of Attachment 6, Franz Lauffer has been replaced with Donald Schofield as follows: ~~Primary: Franz Lauffer~~ ~~P.O. Box 5800~~ ~~Environmental Management~~ ~~MS 1042~~ ~~Albuquerque, NM 87185~~ ~~Home Phone: 867 2043~~ ~~Office Phone: 845 7697~~ ~~Cell or Pager: 540 5513 (Pager)~~ Primary Contact: Donald P. Schofield Office Location: MO 203 P.O. Box 5800 Environmental Management MS-1089 Albuquerque, NM 87185 Home Phone: 268-6888 Office Phone: 844-4088 Cell or Pager: 259-7098 (Cell) CPA Modification: None.

NO.	COMMENTER ID	COMMENT	NMED RESPONSE
117	G	68. Attachment 6, Table 6-5, Page 106: Please change Table 6-5 "Emergency Coordinator List for the Chemical Waste Landfill" information for the 2nd Alternate. "Landfills and Test Areas" should be changed to "Environmental Management".	NMED corrected the text under 2nd Alternate EC in Table 6-5 of Attachment 6. Permit Modification: Table 6-5 of Attachment 6, 2nd Alternate, the text "Landfills and Test Areas " was replaced with the text "Environmental Management" as follows: 2nd Alternate: Robert Ziock Office Location: MO 202 P.O. Box 5800 ~~Landfills and Test Areas~~ Environmental Management MS-1088 Albuquerque, NM 87185 CPA Modification: None.
118	A, C	DOE should or must fund preparation of the Administrative Record.	The Administrative Record is held by the NMED. The U. S. Department of Energy (DOE) is not required to provide funds for the management of the Administrative Record. Permit Modification: None. CPA Modification: None.

NO.	COMMENTER ID	COMMENT	NMED RESPONSE
119	A, C	Monitoring wells BW4A, MW4, MW5U, and MW6U are proposed as meeting Subpart F requirements. These wells do not meet Subpart F requirements because they were drilled with mud rotary drilling methods which mask the detection of contaminants of interest, including chromium above the MCL in well MW4, and may have corroded carbon steel well screens.	Of the four wells that are mentioned in the comment, only MW4 was drilled using the mud rotary method. The other wells were drilled using the air rotary method. None of the wells has a carbon steel screen (see response to comment #8). Wells drilled using the mud rotary method are capable of yielding high quality water samples if properly developed. There is no evidence to suggest that MW4 has suffered any appreciable adverse effects from drilling fluids that "mask the detection of contaminants of interest". A graph of chromium concentrations in groundwater samples from MW4 is shown in Annex F of the CWL CMS Report. Of the 37 data points show on this graph, results indicate that chromium concentrations are at background levels. All four of the wells mentioned in the comment are to be replaced (see response to comment #6). Permit Modifications: See responses to comment #6. CPA Modifications: See response to comment #6.
120	A, C	Purge to dry sampling methods are being used at BW4A and other CWL monitoring wells. RCRA Draft Technical Guidance (1992) recommends against these methods.	Some wells at the CWL monitor groundwater in saturated sediments that have relatively low hydraulic conductivity, causing the wells to be of low yield and to purge dry at low pumping rates. This is a natural condition at the CWL, and nothing can be done to avoid or change the situation. EPA has issued guidance on how to sample wells that purge dry. The Permittees are making reasonable efforts to follow this guidance. See response to comment #16. Permit Modification: None. CPA Modification: None.
121	A, C	Requirements of the RCRA Technical Guidance are mandatory under the Consent Order.	The CWL is not covered under the Sandia Consent Order (April 29, 2004). Permit Modification: None. CPA Modification: None.

NO.	COMMENTER ID	COMMENT	NMED RESPONSE
122	A	The earliest entry for the CWL in the Administrative Record is 11/13/1980. However, the CWL began operations in 1962 and there is no listing in the Administrative Record for documents obtained by NMED prior to the 1980 date. Records prior to 1985 are apparently located in boxes and not listed in the Administrative Record index. The CWL record and index is incomplete.	Although the CWL began operations in 1962, RCRA and its record keeping and reporting obligations did not exist until 1976. Additionally, NMED did not obtain authorization from EPA for its base program under RCRA until January 25, 1985. Any records for the CWL that NMED has dating prior to January 1985 are "courtesy copies" given to the NMED, as the Permittees were not regulated under RCRA by the NMED at that time. Moreover, the first significant groundwater monitoring did not start until after installation and development of the wells installed in 1988 (to replace unacceptable wells installed in 1985). The official Administrative Record for the CWL begins for the NMED in 1985. See also response to comment #2. Permit Modification: None. CPA Modification: None.
123	A	No accurate inventory exists of the wastes that the CWL contains from 1962 to the cessation of operations in 1985.	The inventory, as best it was known at the time, was documented in the CWL Closure Plan. However, a more exact landfill inventory is not particularly important now because the CWL was excavated. The wastes in the landfill were removed, characterized, treated (if necessary), disposed of or recycled offsite. Permit Modification: None. CPA Modification: None.

NO.	COMMENTER ID	COMMENT	NMED RESPONSE
124	A	It is not clear if SNL has properly identified the hydraulic conductivity for both the saturated and unsaturated zones and determined flow direction, vertical gradient, and flow rate for the CWL.	The Permittees have estimated the saturated hydraulic conductivity, flow direction, vertical gradient, and flow rate of groundwater at the CWL. They have also estimated the range of hydraulic conductivity for the unsaturated zone, which would be expected to vary considerably as a function of soil moisture content. As discussed in the *CMS Report*, the groundwater flow direction is west to northwest with an average linear velocity (flow rate) of 2-17 ft/year. Saturated hydraulic conductivities range from 7.65 E-6 to 1.15 E-4 cm/s based on slug test results for wells MW1A, MW2A, MW3A, MW5U, MW6U, BW3, BW4, and BW4A (see Section 4.4.4.1 of the report *Chemical Waste Landfill Groundwater Assessment Repor*t, SNL, October 1995). Unsaturated hydraulic conductivities are addressed in Section 3.6.4 and Appendix B of the report *Chemical Waste Landfill Groundwater Assessment Repor*t, SNL, October 1995). Unsaturated hydraulic conductivities tend to range from about 3-4 orders of magnitude less than saturated hydraulic conductivities, depending on soil moisture content. Vertical gradients were measured for multi-screened wells MW2BU/L, MW5U/L, and MW6U/L, with values ranging from 0.054 to 0.074 ft/ft (see section 4.4.2 of the report *Chemical Waste Landfill Groundwater Assessment Repor*t, SNL, October 1995). Permit Modification: None. CPA Modification: None.
125	A	SNL may not have determined the rate and extent of migration of contaminant plumes at the CWL.	The Permittees have adequately characterized the extent of the contaminant plumes at the CWL. See the CWL CMS Report for details on the vadose zone and groundwater contaminant plumes. Permit Modification: None. CPA Modification: None.

NO.	COMMENTER ID	COMMENT	NMED RESPONSE
126	A	Sampling rates are claimed to not exceed 12 liters per minute in the draft Post-Closure Permit. This rate is unacceptable under RCRA and constitutes violation of the Consent Order.	The Permit actually states "The maximum purge rate shall not exceed 12 liters per minute". Pump discharge rates for purging and for sampling are often different. See also responses to comments #120 and 121. Permit Modification: None. CPA Modification: None.
127	A	Unlined surface impoundments used at the CWL should be considered for well monitoring locations.	A replacement well for MW6U is proposed to be installed along the west boundary of the CWL taking into account the adjacent unlined chromic acid pit. Former well MW3A is located near and downgradient of the unlined chromic acid pit. Chromium contamination was not detected in the groundwater at this well. See also response to comment #6. Permit Modification: See response to comment #6. CPA Modification: See response to comment #6.
128	A	Sandia should provide information on how it will comply with vadose zone monitoring requirements under DOE Order 5480.2	See responses to comments #13 and 40. Permit Modification: None. CPA Modification: None.