



National Nuclear Security Administration

Sandia Site Office

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FEB 22 2011



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CERTIFIED MAIL-RETURN RECEIPT REQUESTED

James Bearzi, Chief  
New Mexico Environment Department  
Hazardous Waste Bureau  
2905 Rodeo Park Drive East, Bldg. 1  
Santa Fe, NM 87505



Subject: Responses to Comments in *Notice of Disapproval: Environmental Restoration Project Consolidated Quarterly Report, September 2010*

Dear Mr. Bearzi:

On behalf of the United States Department of Energy/National Nuclear Security Administration (DOE/NNSA) and Sandia Corporation, DOE/NNSA is submitting responses to the comments provided in your December 22, 2010, letter entitled, *Notice of Disapproval: Environmental Restoration Project Consolidated Quarterly Report, September 2010, Sandia National Laboratories, EPA ID # NM5890110518, HWB-SNL-10-016*.

Should you have any questions regarding this correspondence, please feel free to contact me at (505) 845-6036 or Joe Estrada of my staff at (505) 845-5326. For perchlorate or Chemical Waste Landfill groundwater-related items, please contact John Gould of my staff at (505) 845-6089.

Sincerely,

*Kimberly A. Davis*  
for

Patty Wagner  
Manager

Enclosure

cc w/enclosure:

W. Moats, NMED-HWB (via Certified Mail)  
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FEB 22 2011

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## CERTIFICATION STATEMENT FOR APPROVAL AND FINAL RELEASE OF DOCUMENTS

**Document title:** DOE/Sandia Responses to the NMED's Comments in "Notice of Disapproval: Environmental Restoration Project Consolidated Quarterly Report, September 2010"

**Document author:** John Cochran, Department 06234

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I certify under penalty of law that this document and all attachments were prepared under my direction or supervision according to a system designed to ensure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine or imprisonment for knowing violations.

Signature: \_\_\_\_\_

**S. Andrew Orréll, Director**

Nuclear Energy & Fuel Cycle Programs  
Center 6200  
Sandia National Laboratories/New Mexico  
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Operator

Date

2/15/2011

and

Signature: \_\_\_\_\_

**Ms. Patty Wagner, Manager**

U.S. Department of Energy  
National Nuclear Security Administration  
Sandia Site Office  
Owner and Co-Operator

Date

2/22/11

# February 2011

**U.S. Department of Energy/Sandia Corporation Responses  
to the New Mexico Environment Department's Comments  
in  
"Notice of Disapproval, Environmental Restoration Project  
Consolidated Quarterly Report, September 2010  
Sandia National Laboratories,  
EPA ID# NM5890110518, HWB-SNL-10-016"**

## INTRODUCTION

This document presents responses to the comments received from the New Mexico Environment Department (NMED) in the Notice of Disapproval (NOD) letter dated December 22, 2010, to the U.S. Department of Energy (DOE) and Sandia Corporation (Sandia) regarding the Environmental Restoration Project (ER) Consolidated Quarterly Report, May through July 2010, dated September 2010.

The NMED letter contains six comments. This NOD response document lists each NMED comment in boldface, followed by the DOE/Sandia response in normal font under "Response." Revised versions of text and the requested potentiometric surface map are provided as attachments to this response. The table that the NMED requested is provided at the end of the comment responses. This table cross-references each of the NMED's numbered comments to the attachments containing revisions for the ER Project Consolidated Quarterly Report (CQ Report), September 2010.

*Sandia National Laboratories is a multi-program laboratory managed and operated by Sandia Corporation, a wholly owned subsidiary of Lockheed Martin Corporation, for the U.S. Department of Energy's National Nuclear Security Administration under contract DE-AC04-94AL85000.*

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## LIST OF ATTACHMENTS

<b>Attachment</b>	<b>Title</b>
A	Documentation in Support of Notice of Disapproval Comment 1
B	Documentation in Support of Notice of Disapproval Comment 3
C	Documentation in Support of Notice of Disapproval Comment 4
D	Documentation in Support of Notice of Disapproval Comment 5
E	Documentation in Support of Notice of Disapproval Comment 6

## RESPONSES TO COMMENTS

- 1. Section I.3.1.1, CAMU Waste Management, discusses waste stored, generated, removed, and remaining during the period of the report. The third (filled) bullet lists waste removed on February 9, 2009 and February 9, 2010; neither of these dates are in the reporting period. Correct the information in the CQ Report as appropriate.**

Response: The quarterly CAMU (Corrective Action Management Unit) waste management activities were not updated in the September 2010 CQ Report. Waste management data recorded in Section I.3.1.1 were inadvertently carried over from the previous CQ Report. The correct data are provided in Attachment A of this response as Replacement Pages 7 and 8 for Section I.3.1.1 of the September CQ Report.

The correct data for the September CQ Report reporting period (May through July 2010) were also included in the December CQ Report (August through October 2010). The data are presented in the December QC Report in a special section as follows: Section I.3.1.1, "Previous CAMU Waste Management Activities – Corrections for the May through July 2010 Reporting Period."

Due to the revisions to Pages 7 and 8 of the September CQ Report, Pages 9 and 10 were also affected. Therefore, Replacement Pages 7 through 10 are provided in Attachment A.

- 2. Section II, Appendix A, Page 1, first paragraph, discusses various graphs showing contaminants of concern (COCs) and groundwater elevations for each monitoring well where COCs are detected. However, NMED intended for COC concentrations and groundwater elevations to be plotted against time on the same graph (using different scales) to allow direct comparison of fluctuations of COC concentrations in relation to changes in water levels, if any. Doing so would have the added benefit of reducing the total number of pages in the report. In future reports, revise the graphs to show COC concentrations and groundwater elevations plotted against time on the same graph.**

**Bottom of well screen and MCLs, as currently shown on the graphs, would be helpful additions to the graphs. The Permittees are requested to make the addition in future reports.**

Response: Where applicable in future reports, DOE/Sandia will submit graphs with constituent of concern (COC) concentrations and groundwater elevations plotted (using different scales) against time on the same graph. These graphs will also include the elevation of the bottom of the well screen and the maximum contaminant level (MCL) of the COC shown in the plot.

## Responses to Comments

3. **Section II, Appendix A, Page 2, first paragraph, second sentence, states “...4 monitoring wells (CWL-MW2BL, CWL-MW4 and CWL-MW5U).” Correct either the number of monitoring wells, or add the missing well name quoted in the parentheses, as appropriate.**

Response: The number of monitoring wells was inaccurate, and the three wells listed parenthetically are correct. Replacement Page 2 for Section II, Appendix A, addresses this change and is provided in Attachment B.

4. **The Permittees must submit a potentiometric surface map for the Chemical Waste Landfill based on groundwater levels measured during the particular reporting period in the CQ Report and future reports.**

Response: The requested potentiometric surface map, showing groundwater elevation as of March 2010, addresses this change and is provided in Attachment C as Figure A-3. Updated potentiometric surface maps will be provided with future CQ Reports in Appendix A of Section II.

5. **Section II.2.2, Well Evacuation, discusses stability measurements of purge water. The stability target range for temperature was not obtained before the collection of samples commenced at wells CWL-MW2BL and CWL-MW6L. Explain why these wells were sampled prior to stabilization of groundwater temperature.**

Response: The additional information requested is provided as follows. There was a minor variance relative to the temperature stability requirement at monitoring wells CWL-MW2BL and CWL-MW6L during the purging process. The last two temperature measurements for both wells were within the stability target range of 0.2 degrees Celsius in accordance with Appendix G of the Closure Plan, but the previous measurements were slightly lower: approximately 0.4 degrees Celsius for CWL-MW6L and 0.25 degrees Celsius for CWL-MW2BL.

Additional purging was not performed prior to sample collection due to sampling team error. After review of the field data and recognition of the variance, corrective action was not deemed necessary because the maximum temperature variation between the final three measurements for both wells was minimal, the last two readings met the stabilization requirement, and all other purging requirements had been met. The field sampling team reviewed the CWL stability target range for temperature. In the future, the field team will continue purging until all groundwater stability targets for the CWL are met.

## Responses to Comments

Replacement Pages 4 and 9 for Section II, Appendix A, include this additional information and are provided in Attachment D. Due to the changes on Page 9, Page 10 was also affected, and an additional page (Page 11) was required; these replacement and additional pages are also provided in Attachment D.

- 6. The List of Tables in Section III shows Table 3 as being on Page 8 and Table 4 as being on Page 13. The correct page numbers are 7 and 9, respectively. Correct the List of Tables to indicate the appropriate page numbers.**

Response: The corrections to the List of Tables in Section III have been made and a replacement page is provided in Attachment E.

## Responses to Comments

### Cross-Reference Table

#### Revisions to September 2010 ER Project Consolidated Quarterly Report in Response to the NOD Comments from the NMED

Attachment Designation	Applies to Comment(s)	Description of Supporting Documentation
A	1	Replacement Pages 7 and 8 for Section I.3.1.1, CAMU Waste Management Activities: All of Section 3.1.1 has been modified to include data that should have been updated for this reporting period. Pages 9 and 10 were affected, and replacement pages for these are also provided.
NA	2	Attachment with revision not required. See response to Comment #2.
B	3	Replacement Page 2 is provided for Section II, Appendix A: Section 1.0, Page 2, first paragraph, second sentence has been modified, correcting the number of monitoring wells.
C	4	The Potentiometric Surface Map for the CWL (March 2010) is provided as a new figure.
D	5	Replacement Pages 4 and 9 for Section II, Appendix A: Both Sections 2.2, second paragraph, and Section 4.3, 5th bullet, have been modified to provide additional discussion related to temperature stability requirements. Page 10 was affected, which resulted in an additional page (Page 11). Replacement pages for these are also provided.
E	6	A replacement page is provided for the List of Tables, Section III: The List of Tables has been modified to reflect correct page numbers for Tables 3 and 4, and a replacement page is provided.

CAMU = Corrective Action Management Unit.  
 CWL = Chemical Waste Landfill.  
 ER = Environmental Restoration Project.  
 NA = Not Applicable.  
 NMED = New Mexico Environment Department.  
 NOD = Notice of Disapproval.

**February 2011**

**U.S. Department of Energy/Sandia Corporation Responses  
to the New Mexico Environment Department's Comments**

**in**

**“Notice of Disapproval, Environmental Restoration Project  
Consolidated Quarterly Report, September 2010**

**Sandia National Laboratories,**

**EPA ID# NM5890110518, HWB-SNL-10-016”**

**Attachments**

# **Attachment A**

## **Documentation in Response to Comment 1**

Replacement Pages 7 through 10 for Section I.3.1.1,  
CAMU Waste Management Activities

### 3.0 **LTES/ER Work Completed this Quarter**

#### 3.1 **Corrective Action Management Unit (CAMU)**

CAMU Post-closure Care operations consist of vadose-zone monitoring, leachate removal, and post-closure inspections, as required in the permit. Activities for this reporting period include the following:

- Weekly pumping of leachate from the leachate collection and removal system.
- Weekly inspection of the less-than-90-day area.
- Follow-up activities in response to findings indentified in the March 9, 2010 quarterly inspection:
  - Replacement of electrical outlet on south side of containment cell completed on May 10, 2010.
  - Repainting of the Primary Subliner's (PSL) protective steel casings completed on May 19, 2010.
- Quarterly inspection of the site (June 17, 2010), including containment cell cover, storm water diversion structures, security fences, gates, signs, and benchmarks:
  - Twenty four-wing saltbush plants were identified growing on the cover. Because these plants can develop extensive root systems that could damage the high-density polyethylene cover, they were removed on July 16, 2010.
  - Tumbleweeds removed from sump on north-west site of containment cell on July 7, 2010.
- Quarterly monitoring of the Vadose Zone Monitoring System (VZMS) was conducted in June 2010. Results will be posted in the annual CAMU report.
- Waste management associated with leachate collection was conducted and is outlined below, in this section.
- Composite leachate sampling for waste characterization was conducted on June 24, 2010.

##### 3.1.1 **CAMU Waste Management Activities**

- Waste stored on site at the beginning of this period:
  - 131 gallons of leachate
  - 2 gallons of rinsate
  - 2 pounds (lbs) personal protective equipment (PPE)

- Waste generated on-site during the period:
  - 114 gallons of leachate
  - 2 gallons of rinsate
  - 5 lbs PPE, paper wipes, plastic drum pump
  
- Waste removed from the site by the Hazardous Waste Management Facility (HWMF):
  - 109 gallons of leachate on May 3, 2010
  - 93 gallons of leachate on June 30, 2010
  - 4 gallons of rinsate on June 30, 2010
  - 5 lbs PPE, paper wipes, plastic drum pump on June 30, 2010
  
- Waste remaining on site at the end of this period:
  - 43 gallons of leachate
  - 0 gallons of rinsate
  - 2 lbs PPE

### 3.1.2 **CAMU Regulatory Activities**

- An audit of the CAMU was conducted by NMED on May 10, 2010. There were no findings reported by NMED.

### 3.2 **Solid Waste Management Unit: Long Term Environmental Stewardship (LTES) Site 1, Cable Debris Site**

- A “Notice of Termination for Storm Water Discharge Associated with Construction Activity under the National Pollution Discharge Elimination System (NPDES) – Construction General Permit (CPG) for the Cable Debris Project” was submitted to the USEPA and the NMED Surface Water Quality Bureau on July 7, 2010.

### 3.3 **LTES Documents Submitted to NMED Pending Regulatory Review and Approval**

- Investigation Report and Proposal for Corrective Action Complete for LTES Site 1/Cable Debris Site, was delivered to NMED in March 2009 (SNL/NM March 2009).

## 4.0 **References**

Kieling, J. E. (New Mexico Environment Department), October 2009. “Notice of Approval, Final Remedy and Closure Plan Amendment, Chemical Waste Landfill Sandia National Laboratories, EPA ID No. NM5890110518, NMED-HWB-05-016.” New Mexico Environment Department Hazardous Waste Bureau, Santa Fe, New Mexico. October 16, 2009.

Kieling, J. E. (New Mexico Environment Department), February 2010. Letter to Ms. Wagner (U.S. Department of Energy) and Dr. Walck (Sandia Corporation). "Notice of Conditional Approval Burn Site Groundwater Characterization Work Plan, November 2009." New Mexico Environment Department Hazardous Waste Bureau, Santa Fe, New Mexico. February 12, 2010.

New Mexico Environment Department (NMED), April 2004. "Compliance Order on Consent, Pursuant to the New Mexico Hazardous Waste Act, § 74-4-10," New Mexico Environment Department, Santa Fe, New Mexico. April 29, 2004.

New Mexico Environment Department (NMED), December 2007. "Notice of Public Comment Period and Intent to Approve a Class 3 Permit Modification of the RCRA Permit for Sandia National Laboratories." New Mexico Environment Department Hazardous Waste Bureau, Santa Fe, New Mexico. December 10, 2007.

New Mexico Environment Department (NMED), April 2010. Letter to Ms. Davis (U.S. Department of Energy) and Dr. Walck (Sandia Corporation). "Class 3 Permit Modification Requests for Granting Corrective Action Complete Status for 26 SWMUs/AOCs (Request of March 1, 2006) and 5 Other SWMUs/AOCs (Request of January 7, 2008), Sandia National Laboratories, EPA ID# NM5890110518, HWB-SNL-06-007 and HWB-SNL-08-001." New Mexico Environment Department Hazardous Waste Bureau, Santa Fe, New Mexico. April 8, 2010.

New Mexico Environment Department (NMED), April 2010. Letter to Ms. Wagner (U.S. Department of Energy) and Dr. Walck (Sandia Corporation). "Toluene Detections in Groundwater, Sandia National Laboratories Mixed Waste Landfill." New Mexico Environment Department Hazardous Waste Bureau, Santa Fe, New Mexico. April 30, 2010.

NMED, see New Mexico Environment Department.

Sandia National Laboratories/New Mexico (SNL/NM), April 2004. "Corrective Measures Evaluation Work Plan Technical Area V Groundwater," Sandia National Laboratories, Albuquerque, New Mexico. May 11, 2004.

Sandia National Laboratories/New Mexico (SNL/NM), July 2005. "Corrective Measures Evaluation Report for Technical Area-V Groundwater." Sandia National Laboratories, Albuquerque, New Mexico. July 21, 2005.

Sandia National Laboratories/New Mexico (SNL/NM), May 2005. "Burn Site Groundwater Interim Measures Work Plan," Sandia National Laboratories, Albuquerque, New Mexico. May 26, 2005.

Sandia National Laboratories/New Mexico (SNL/NM), August 2005. "Corrective Measures Evaluation Report for Tijeras Arroyo Groundwater." Sandia National Laboratories, Albuquerque, New Mexico. September 1, 2005.

Sandia National Laboratories/New Mexico (SNL/NM), March 2008. "Corrective Measures Evaluation Work Plan, Burn Site Groundwater." Sandia National Laboratories, Albuquerque, New Mexico. April 9, 2008.

Sandia National Laboratories/New Mexico (SNL/NM), March 2008. "Current Conceptual Model of Groundwater Flow and Contaminant Transport at Sandia National Laboratories/New Mexico Burn Site," Sandia National Laboratories, Albuquerque, New Mexico. April 9, 2008.

Sandia National Laboratories/New Mexico (SNL/NM), March 2009. "Investigation Report and Proposal for Corrective Action Complete for Long Term Environmental Stewardship (LTES) Site 1 Cable Debris Site." Sandia National Laboratories, Albuquerque, New Mexico. March 30, 2009.

Sandia National Laboratories/New Mexico (SNL/NM), January 2010. "Mixed Waste Landfill Corrective Measures Implementation Report." Sandia National Laboratories, Albuquerque, New Mexico. January 26, 2010.

Sandia National Laboratories/New Mexico (SNL/NM), June 2010. Sampling and Analysis Plans for Monitoring Wells CTF-MW2 and CTF-MW3 in "U.S. Department of Energy/Sandia Corporation Response to the New Mexico Environment Department letter of April 8, 2010 entitled, *Class 3 Permit Modification Requests for Granting Corrective Action Complete Status for 26 SWMUs/AOCs (Request of March 1, 2006) and 5 Other SWMUs/AOCs (Request of January 7, 2008)*," Sandia National Laboratories, Albuquerque, New Mexico. June 24, 2010.

Wagner, P. (U.S. Department of Energy), January 2008. Letter to J.P. Bearzi (New Mexico Environment Department) initiating a Class 3 Modification for the Designation of four (4) Solid Waste Management Units (SWMUs) and one (1) Area of Concern (AOC) as "approved for No Further Action". January 7, 2008.

## **Attachment B**

### **Documentation in Support of Notice of Disapproval Comment 3**

Replacement Page 2  
Revised Section II, Chemical Waste Landfill  
Quarterly Closure Progress Report, Appendix A

These samples were analyzed for the required 40 CFR 264 (Appendix IX) constituents: VOCs and total metals plus iron. The NMED DOE Oversight Bureau (OB) participated in the April 2010 sampling event and received split samples from three CWL monitoring wells (CWL-MW2BL, CWL-MW4, and CWL-MW5U). The split samples were sent to a different laboratory for analysis of Appendix IX VOCs and metals. Additional samples for total aluminum, calcium, magnesium, manganese, potassium, and sodium were requested by the NMED DOE OB at the three CWL wells. To ensure a consistent level of quality assurance for these analyses, SNL/NM also collected samples for these metals at these three CWL monitoring wells. These additional analyses are not required by Appendix G of the CWL Closure Plan (SNL/NM December 1992). The NMED DOE OB split sampling results are presented in a separate report and are not included in this report.

During April 2010, groundwater samples were not collected from background monitoring (BW) wells CWL-BW3 and CWL-BW4A, and monitoring wells CWL-MW1A, CWL-MW2BU, and CWL-MW3A. CWL-BW3, CWL-BW4A, and CWL-MW2BU could not be sampled due to insufficient volume of groundwater within the well screen interval. These three wells were purged to dryness prior to obtaining water quality measurements and appropriate representative sample volume. CWL-MW1A and CWL-MW3A were not sampled because these wells are dry and were partially filled with sediment during the Vapor Extraction (VE) Voluntary Corrective Measure (VCM) while being used as VE wells (1997-1998), and cannot be restored for the purpose of compliance groundwater monitoring.

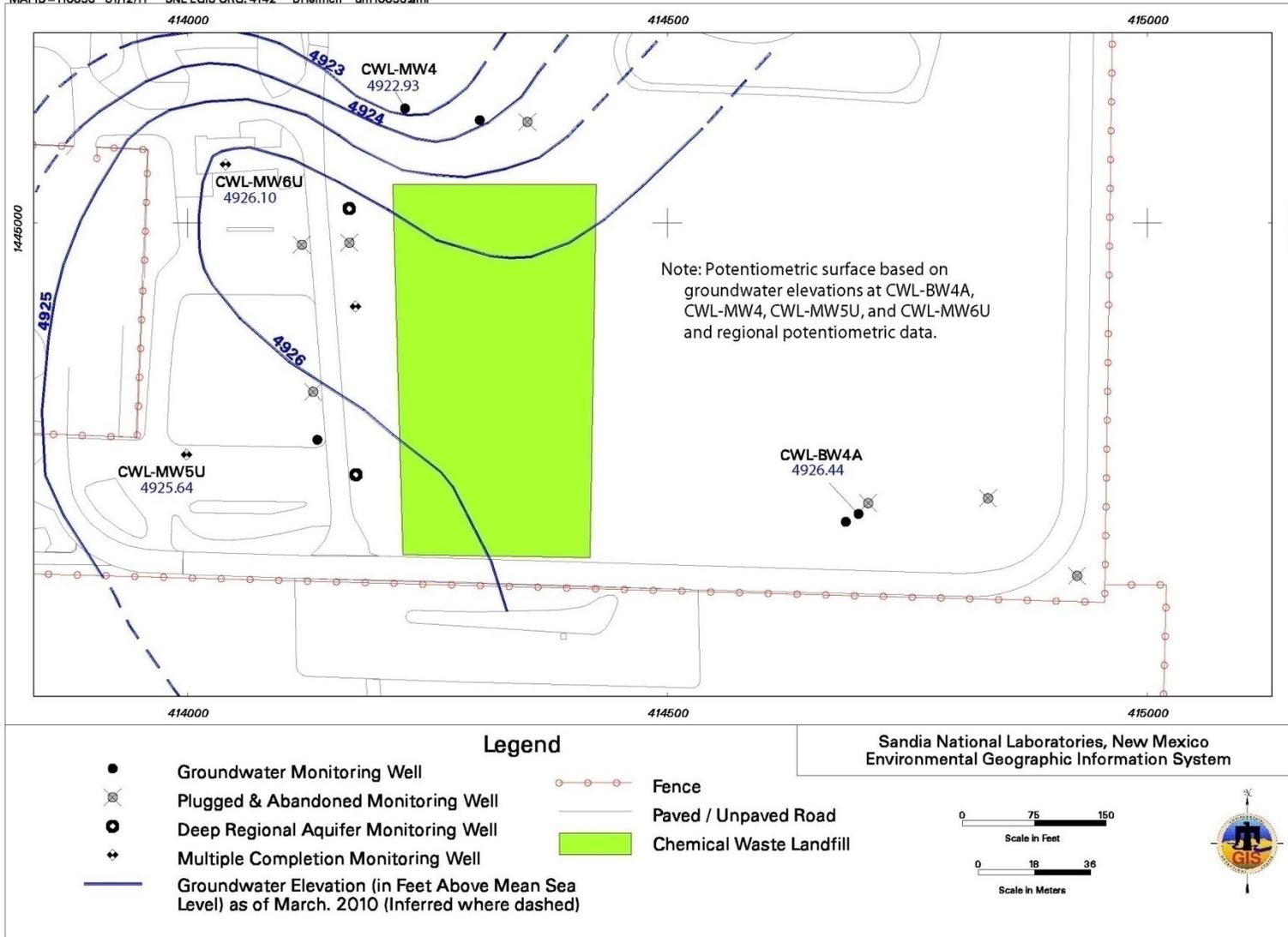
Three of the monitoring wells (CWL-MW2B, CWL-MW5, and CWL-MW6) are multi-completion wells with two separate polyvinyl chloride casing and screen intervals. One is screened across the water table, and the other is screened at an interval approximately 30 feet below the water table. The wells screened across the water table are designated as CWL-MW2BU, CWL-MW5U, and CWL-MW6U to indicate the upper (“U”) screened well completions. The wells screened below the first water-bearing zone are designated CWL-MW2BL, CWL-MW5L, and CWL-MW6L to indicate the lower (“L”) screened well completions. Further discussion of the completion of these wells is presented in the CWL Groundwater Assessment Report (SNL/NM October 1995). The following sections provide descriptions of the field methods used and a discussion of the analytical and quality control (QC) results.

Shortly after the April sampling event monitoring wells CWL-BW4A, CWL-MW4, CWL-MW5U/L, and CWL-MW6U/L were decommissioned and new wells CWL-BW5, CWL-MW9, CWL-MW10, and CWL-MW11 were installed according to the NMED-approved CWL Closure Plan Appendix G amendment (Kieling October 2009). Future groundwater monitoring will only

## **Attachment C**

### **Documentation in Support of Notice of Disapproval Comment 4**

New Figure, Figure A-3  
Potentiometric Surface Map for the Chemical Waste Landfill, March 2010



**Figure A-3**  
**Potentiometric Surface Map for the**  
**Chemical Waste Landfill, March 2010**

## **Attachment D**

### **Documentation in Support of Notice of Disapproval Comment 5**

Replacement Pages 4 and 9–10 and an Additional Page (Page 11)  
Section II, Chemical Waste Landfill Quarterly Closure Progress Report,  
Appendix A, Section 2.2, Well Evacuation

low yield of these wells. CWL-MW2BL and CWL-MW4 were purged a minimum of three well-bore volumes prior to sampling. CWL-MW5L and CWL-MW6L were purged a minimum of two tubing water volumes prior to sampling.

Collection of field analytical measurements and groundwater samples was performed in accordance with procedures described in FOP 94-48, *Sampling Groundwater Monitoring Wells* (SNL/NM September 1996), consistent with the requirements of Appendix G of the CWL Closure Plan (SNL/NM December 1992). Groundwater temperature, specific conductance (SC), and potential of hydrogen (pH) were measured using a YSI™ Model 620 Water Quality Meter. Turbidity was measured with a Hach™ Model 2100P portable turbidity meter. Groundwater stability is considered acceptable when measurements are within 5 nephelometric turbidity units, 0.2 pH units, and 0.2 degrees Celsius, and SC is within 1 percent or 10 micromhos per centimeter (whichever is greater). Monitoring wells CWL-MW2BL, CWL-MW4, CWL-MW5L, and CWL-MW6L were purged until three stable measurements of turbidity, temperature, SC, and pH were obtained, except for CWL-MW2BL and CWL-MW6L. The last two temperature measurements for both wells were within the 0.2 degrees Celsius range, but the previous measurements were slightly lower than the 0.2 degrees Celsius specified in FOP 94-48 (approximately 0.4 degrees Celsius for CWL-MW6L and 0.25 degrees Celsius for CWL-MW2BL). Additional purging was not performed prior to sample collection. All purged water was placed into 55-gallon containers and stored at the Building 9925 waste accumulation area pending the results of the analyses. Table A-2 summarizes average pumping rates, pumping duration, and well discharge volumes for each well sampled. Table A-3 summarizes temperature, pH, SC, and turbidity measurements. Field Measurement Logs in Attachment A document well purging and water quality measurements.

### 2.3 Groundwater Sample Collection

All groundwater samples were collected directly from the sample discharge tube into laboratory-prepared sample containers. Chemical preservatives for samples intended for chemical analyses were added to the sample containers at the laboratory prior to shipment to SNL/NM.

Table A-4 presents the sample number assigned to each sample. Table A-5 summarizes the analyses performed, analytical methods, sample containers, preservatives, and holding time requirements. Section 3.0 of this report summarizes the analytical results. Analysis Request/Chain-of-Custody documentation for all samples submitted for analyses are presented in Attachment B and filed in the SNL/NM Customer Funded Records Center.

- CWL-MW5U and CWL-MW6U were purged to dryness, allowed to recover, and then sampled to collect the most representative groundwater sample possible given the low yield of these wells.
- CWL-MW5L and CWL-MW6L were sampled using dedicated sampling systems manufactured by QED Environmental Systems, Inc.
- There was a minor variance relative to the stability target range for temperature at monitoring wells CWL-MW2BL and CWL-MW6L during the purging process. The last two temperature measurements for both wells were within the stability target range of 0.2 degrees Celsius, but the previous measurements were slightly lower (approximately 0.4 degrees Celsius for CWL-MW6L and 0.25 degrees Celsius for CWL-MW2BL).

Additional purging was not performed prior to sample collection due to sampling team error. After review of the field data and recognition of the variance, corrective action was not deemed necessary because the maximum temperature variation between the final three measurements for both wells was minimal, the last two readings met the stabilization requirement, and all other purging requirements had been met. The field sampling team reviewed the CWL stability target range for temperature and in the future will continue purging until all groundwater stability targets for the CWL are met. These types of minor measurement variations can be caused by changes in radiant heat due to weather conditions affecting both the water tubing line and water quality instrument during the purging process.

- COCs detected above minimum detection limits, and water levels are presented in graphical form as requested by NMED (Bearzi January 2009).

## 5.0 Summary

In April 2010, samples were collected from CWL monitoring wells (CWL-MW2BL, CWL-MW4, CWL-MW5L, CWL-MW5U, CWL-MW6L, and CWL-MW6U) and were analyzed for 40 CFR 264 (Appendix IX) VOCs and total metals plus iron. Additional samples were collected for aluminum, calcium, magnesium, manganese, potassium, and sodium at selected well locations to duplicate NMED DOE OB analyses. No analytes were detected at concentrations exceeding the associated EPA MCLs from any CWL groundwater samples.

Shortly after the April sampling event monitoring wells CWL-BW4A, CWL-MW4, CWL-MW5U/L, and CWL-MW6U/L were decommissioned and new wells CWL-BW5, CWL-MW9, CWL-MW10, and CWL-MW11 were installed according to the NMED-approved CWL Closure Plan Appendix G amendment (Kieling October 2009). Future groundwater

monitoring will only be performed at the newly installed wells. After NMED-approval of the CWL Final RCRA Closure Report, the NMED-approved CWL Post-Closure Care Permit (NMED October 2009) will take effect and the other existing monitoring wells will be decommissioned as stipulated in the permit.

## 6.0 References

Bearzi, J.P. (New Mexico Environment Department), January 2009. Letter to K.A. Davis (U.S. Department of Energy) and F.B. Nimick (Sandia Corporation), "Environmental Restoration Project Consolidated Quarterly Report, August – September – October, December 2008," Sandia National Laboratories, EPA ID# NM5890110518 HWB-SNL-09-003. January 30, 2009.

Bearzi, J.P. (New Mexico Environment Department), May 2000. Letter to M.J. Zamorski (U.S. Department of Energy) and R.J. Eagan (Sandia Corporation), "Class 1 Permit Modification Approval and Notice of Administrative Completeness: Request for Chemical Waste Landfill Ground-Water Monitoring Schedule Change, Sandia National Laboratories, NM58901210518, Task HWB-SNL-02-008." May 5, 2000.

Dinwiddie, R.S. (New Mexico Environment Department), March 1998. Letter to M. Zamorski (U.S. Department of Energy), "Request for Supplemental Information: Appendix G, Sampling and Analysis Plan for Ground Water Assessment at the Chemical Waste Landfill, Revision 5.0, April 1997." March 31, 1998.

Kieling, J. E., October 2009. "Notice of Approval, Final Remedy and Closure Plan Amendment, Chemical Waste Landfill Sandia National Laboratories, EPA ID No. NM5890110518, NMED-HWB-05-016," New Mexico Environment Department Hazardous Waste Bureau, Santa Fe, New Mexico. October 16, 2009.

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# **Attachment E**

## **Documentation in Support of Notice of Disapproval Comment 6**

Replacement Page for List of Tables, Section III, Perchlorate Screening  
Quarterly Monitoring Report, Second Quarter of Calendar Year 2010

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## Appendices

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