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ABBREVIATIONS AND ACRONYMS

BSG	Burn Site Groundwater
BW	background well
CAC	Corrective Action Complete
CFR	Code of Federal Regulations
CME	Corrective Measures Evaluation
COC	Contaminants of Concern
CWL	Chemical Waste Landfill
EB	equipment blank
EPA	U.S. Environmental Protection Agency
ER	Environmental Restoration Project
ET	evapotranspirative
FB	field blank
FOP	Field Operating Procedure
FY09	Fiscal Year 2009
LTES	Long Term Environmental Stewardship
MCL	maximum contaminant level
MDL	method detection limit
NOD	Notice of Deficiency
µg/L	microgram per liter
mg/L	milligram per liter
MW	monitoring well
MWL	Mixed Waste Landfill
NMED	New Mexico Environment Department
pH	potential of hydrogen
QC	quality control
RCRA	Resource Conservation and Recovery Act
RPD	relative percent difference
Sandia	Sandia Corporation
SC	specific conductance
SNL/NM	Sandia National Laboratories/New Mexico
SWMU	Solid Waste Management Unit
TAG	Tijeras Arroyo Groundwater
TB	trip blank
TCE	trichloroethene
VCM	Voluntary Corrective Measure
VE	Vapor Extraction
VOC	volatile organic compound

1.0 Introduction

This Environmental Restoration Consolidated Quarterly Report (ER Quarterly Report) discusses ongoing corrective actions being implemented by the Sandia National Laboratories (SNL) Environmental Restoration (ER) Project. The status of regulatory closure activities is outlined below. In this Section, the Quarter refers to the November 2009 through January 2010 quarterly reporting period.

2.0 ER Work Completed this Quarter

2.1 Mixed Waste Landfill (MWL)

- Activities completed during this reporting period consisted of final preparation of the MWL Corrective Measures Implementation (CMI) Report, which was submitted to the NMED on January 26, 2010. This report follows completion of the MWL Evapotranspirative (ET) Cover Construction project in September 2009.
- The DOE/Sandia response to the October 29, 2009 NMED Notice of Disapproval for the “MWL Groundwater Monitoring Report Calendar Year 2008” was submitted to the NMED on December 23, 2009.
- Mixed Waste Landfill groundwater monitoring activities for the second quarter of Fiscal Year 2010 were completed in January 2010. Results will be presented in the MWL Annual Groundwater Monitoring Report for Calendar Year 2010 (anticipated delivery to NMED in the spring of 2011).

2.1.1 MWL Documents Submitted to NMED Pending Regulatory Review and Approval

- The MWL CMI Report was submitted for NMED review and approval on January 26, 2010.

2.2 Project Management and Site Closure

ER Sites undergoing regulatory and administrative closure activities are presently addressed under project management. Two permit modification requests are currently in progress with the New Mexico Environment Department (NMED) and are outlined below. The sites, summarized below, were discussed with NMED and public stakeholders in June 2009 as part of comment resolution process for the renewal of the SNL Resource Conservation and Recovery Amendment (RCRA Permit). NMED indicated verbally at the meeting that some of the sites included in the March 2006 and January 2008 permit modification requests may require further groundwater

characterization and/or additional soil characterization; official written communication regarding these requirements is anticipated.

2.2.1 Permit Modification Request Submitted in March 2006

- Twenty-six sites were submitted to NMED for the final determination of Corrective Action Complete (CAC) in March 2006. The sites included nineteen SWMUs, and seven AOCs. The NMED issued a Notice of Public Comment Period and Intent to Approve a Class 3 Permit Modification of the RCRA Permit for Sandia National Laboratories for these 26 sites on December 10, 2007. The NMED public review and comment period ended on February 8, 2008. The SWMUs and AOCs included in this permit modification request are listed below.

SWMUs – 4, 5, 46, 49, 52, 68, 91, 101, 116, 138, 140, 147, 149, 150, 154, 161, 196, 233, 234

AOCs – 1090, 1094, 1095, 1114, 1115, 1116, and 1117.

2.2.2 Permit Modification Request Submitted in January 2008

- Five sites were submitted for the final regulatory determination of CAC in a permit modification request in January 2008. This permit modification included all remaining SNL ER sites with the exception of the three active sites (SWMUs 83, 84, and 240), three Groundwater Investigation sites (Tijeras Arroyo, Technical Area V, and Burn Site), and the MWL (SWMU 76). Final reporting of the Corrective Measure Implementation for the MWL is pending. The MWL is addressed separately in section 2.1 of this Section of this ER Quarterly Report. The four SWMUs and one AOC included in the January 2008 permit modification request are listed below.

SWMUs – 8, 28-2, 58, and 105

AOC – 1101

2.3 Site-Wide Hydrogeologic Characterization

2.3.1 TA-3/5 Groundwater

- Groundwater sampling was completed in November and December 2009. Results of perchlorate analysis are discussed in Section III of this ER Quarterly Report, and other analytical results will be discussed in the Calendar Year 2009 Groundwater Protection

Program (GWPP) Annual Groundwater Monitoring Report (anticipated delivery to NMED in the summer of 2010).

- In August 2009, DOE/Sandia received a second Notice of Deficiency (NOD) from the NMED on the Technical Area V Corrective Measures Evaluation (CME) Report (submitted July 2005). A response to the second NOD was submitted in November 2009, and a third NOD was received in December 2009. DOE/Sandia will submit a response to the third NOD in February 2010.

2.3.2 Burn Site Groundwater (BSG)

- No groundwater sampling was performed during this reporting period.
- On April 30 2009, DOE/Sandia received a letter from NMED entitled “Perchlorate Contamination in Groundwater,” requiring, among other items, characterization of the nature and extent of perchlorate contamination at or near the Burn Site. A work plan to fulfill NMED’s characterization requirements was submitted to NMED in November 2009.

2.3.3 Tijeras Arroyo Groundwater (TAG)

- Groundwater sampling was completed in October and November 2009. Results of perchlorate analysis are discussed in Section III of this ER Quarterly Report, and other analytical results will be discussed in the Calendar Year 2009 GWPP Annual Groundwater Monitoring Report (anticipated delivery to NMED in the summer of 2010).
- On August 12, 2009, DOE/Sandia received a second NOD from the NMED on the TAG Continuing Investigation Report (submitted in November 2005). A response from DOE/Sandia was delivered in January 2010.

2.3.4 Mixed Waste Landfill Groundwater (MWL)

- Groundwater sampling was performed in October 2009. Results from these MWL sampling events will be discussed in the upcoming MWL Annual Groundwater Monitoring Report for Calendar Year 2009 (anticipated delivery to NMED in the spring of 2010).
- Groundwater sampling was performed in January 2010. Groundwater samples were collected from MWL groundwater monitoring wells MWL-BW2, MWL-MW7, MWL-MW8, and MWL-9. Results will be presented in the MWL Annual Groundwater Monitoring Report for Calendar Year 2010 (anticipated delivery to NMED in the spring of 2011).

2.3.5 Chemical Waste Landfill Groundwater (CWL)

- CWL semi-annual groundwater monitoring activities were performed in October 2009. Analytical results associated with the October 2009 sampling were not completed in time to be included in the December 2009 ER Quarterly Report and are summarized in Section II of this ER Quarterly Report.

2.3.5.1 Groundwater Documents Submitted to the NMED Pending Regulatory Review and Approval

- Technical Area V Groundwater Corrective Measure Evaluation (CME) Work Plan, submitted April 2004.
- CME Report for Tijeras Arroyo Groundwater, submitted August 2005.
- Burn Site Groundwater (BSG) Interim Measures Work Plan, submitted May 2005.
- BSG Current Conceptual Model of Groundwater Flow and Contaminant Transport, submitted April 2008.
- BSG CME Work Plan, submitted April 2008.
- BSG Characterization Work Plan, November 2009.

2.4 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.
- Quarterly inspection of the site (December 2009), including containment cell cover, storm water diversion structures, security fences, gates, signs, and benchmarks:
 - Approximately 10 four-wing saltbush plants were identified growing on the cover. These plants can develop extensive root systems that could damage the high-density polyethylene cover. They were removed on, January 8, 2010.
- Quarterly monitoring of the Vadose Zone Monitoring System (VZMS) was conducted in December 2009. Results will be posted in the annual CAMU report.
- Waste management associated with the leachate collection was conducted (see below).
- Composite leachate sampling for waste characterization was conducted on November 24, 2009.

2.4.1 CAMU Waste Management Activities

- Waste stored on site at the beginning of this period:
 - 60 gallons of leachate.
 - 2 lbs PPE.
- Waste generated on-site during the period:
 - 163 gallons of leachate.
 - 0 gallons of rinsate.
 - 5 lbs PPE, paper wipes, plastic drum pump.
- Waste removed from site by the Hazardous Waste Management Facility:
 - 100 gallons of leachate on December 12, 2009.
 - 0 gallons of rinsate.
 - 5 lbs PPE, paper wipes, plastic drum pump on December 12, 2009.
- Waste remaining on site at the end of this period:
 - 123 gallons of leachate.
 - 2 lbs PPE.

2.4.1.1 CAMU Regulatory Activities

- There were no regulatory activities during this quarter.

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

- Activities during this reporting period include preparation of responses to “Notice of Disapproval: Investigation Report and Proposal for LTES Site 1 –Cable Debris Site” dated September 21, 2009. The Responses will be submitted to NMED in February 2010.

2.5.1 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, delivered to NMED in March 2009.