



DEPARTMENT OF THE ARMY  
FORT WINGATE DEPOT ACTIVITY  
P.O. BOX 268  
FORT WINGATE, NM 87316

May 14, 2012

Mr. John Kieling  
Chief, Hazardous Waste Bureau  
New Mexico Environment Department  
2905 Rodeo Park Drive East, Building 1  
Santa Fe, New Mexico 87505-6303

Dear Mr. Kieling:

The purpose of this letter is to notify you that Facility-Wide Ground Water Monitoring activities authorized under RCRA Permit EPA ID No. NM6213820974 were executed in 2011. The enclosed report covers a period from April 2011 through October 2011. The Albuquerque Corps of Engineers will send the report to you under separate cover.

Please note that the New Mexico Environment Department – Hazardous Waste Bureau commented on the April 2010 Facility-Wide Ground Water Monitoring Report in the Approval-with-Modifications letter dated August 8, 2011. The following are responses to comments provided in this letter. The 2011 Facility-Wide Groundwater Periodic Monitoring Report incorporated the changes required to address these comments. Each response references sections in the report where changes were made as a result of these comments.

**NMED Comment 1:** In section E.S.1.1 (Purpose) and section E.S.1.2 (Investigation) the Permittee refers to the reporting period as being between April 2009 and July 2010. The reporting period discussed is from April 2010 through July 2010.

**Army Response 1:** This was a cut and paste error. We have ensured that no cut and paste errors are in this current submittal.

**NMED Comment 2:** In section E.S.1.2.2 (Groundwater Sampling), Table 2-1, the Permittee lists wells and the analyses conducted but does not identify the well locations by constituents/constituent groups. The lists were included in the executive summary in previous monitoring reports, but were omitted from this report. The Permittee must modify Table 2-1 to distinguish between wells located in the OB/OD and the Northern Area wells (or other subgroups). The Permittee must also modify the table to distinguish between alluvial and bedrock monitoring wells.

**Army Response 2:** Table 2-1 has been updated to segregate OB/OD area monitoring wells, Northern Area alluvial monitoring wells, and Northern Area bedrock monitoring wells. No other modification was made to this section. The reader is referred to Table



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2-1 to obtain information on constituents/constituent groups sample requirements for each monitoring well.

**NMED Comment 3:** In section E.S.1.1 (Purpose) and section E.S.1.2 (Investigation) the Permittee refers to the reporting period as being between April 2009 and July 2010. The reporting period discussed is from April 2010 through July 2010.

**Army Response 3:** This was a cut and paste error. We have ensured that there are no editorial errors in this document.

**NMED Comment 4:** Section E.S.1.3 (Results), last paragraph, describes perchlorate impacts to groundwater in the OB/OD area. The Permittee must identify this, and any other new information, as a new findings in future Reports.

**Army Response 4:** A new section was added to the Executive Summary (E.S.1.4 New Findings). In this section, we discuss new findings associated with this reporting period.

**NMED Comment 5:** In section 2.0 (Scope of Services) the Permittee may reference the NMED approved work plan. The Scope of Services section must describe the field activities that were conducted during the monitoring events (e.g., well purging methods, field water quality measurement methods and instrumentation, sample management, method of water level measurement including instruments used, listing of the laboratory analytical methods). For example, the information provided in the first two paragraphs of Section 5.0 (Groundwater Chemical Analytical Data Results) describe a portion of the Scope of Services not analytical results. In addition, section 2.2.1 (Open Burn/Open Detonation Unit Groundwater Sampling) references Table 2-1 (April 2010 Planned Groundwater Sampling Analytical List), but section 2.2.2 (Northern Area FWDA Groundwater Sampling) does not reference this or any other table for the 50 existing monitoring wells in the Northern Area. Revise future reports to address these issues.

**Army Response 5:** To address this comment, USACE rearranged the report. Previous reports had the sampling method descriptions as part of Section 5.0. This section has been moved to the Scope of Services section. The Scope of Services section now contains well purging methods, water quality measurements and sample management, etc.

Appendix A contains information related to sampling equipment. Appendix A1 through A3 are manuals for calibration and use of sampling equipment. Appendix A4 through A8 contain information related to bailers, reusable pumps, and dedicated pumps.

The reference to the Table 2-1 applies to both areas of the installation. This is clarified in this report. Table 2-1 tabulates analytical tests requirements for samples collected at



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each monitoring well, and monitoring wells are segregated by area and water bearing strata.

**NMED Comment 6:** In section 4.0 (Groundwater Monitoring Results), Figure 4-3 and Figure 4-4 (April/July 2010 Northern Area Bedrock Groundwater Elevation Contour Map), the Permittee labeled monitoring well TMW02 as 'perched'. No groundwater elevations were provided for this well. The Permittee did not explain this conclusion in the text of the Report. Remove the "perched" designation or provide information supporting the conclusion that well TMW02 contains perched groundwater.

**NMED Response 6:** Perched has been replaced by discontinuous sandstone. More discussion of this water bearing strata and TMW02 is presented in sections 4.1.2 and 5.1.

**NMED Comment 7:** In section 5.0 (Groundwater Chemical Analytical Data Results) the Permittee discusses all analytical results for samples obtained during the reporting period. The Permittee should refer to previous findings when discussing results and indicate which findings are new. Discuss current results in comparison to past findings in future monitoring reports.

**Army Response 7:** A new section has been added to the report, section 5.3 *New Findings and Comparative Trends*. This section discusses any new findings relative to previously known conditions.

**NMED Comment 8:** In section 7.0 (Recommendations), the Permittee proposes the removal of dioxin/furan sample collection and analysis from future groundwater monitoring at FWDA. The proposal is based on the dioxin furan TEQ comparison presented in Appendix F. Based on the results of dioxin-furan analyses to date, NMED agrees that dioxin/furan analysis may be discontinued.

The Permittee should refer to Appendix F in section 5.0 (Groundwater Chemical Analytical Data Results) when discussing dioxin/furan results. For future submittals, refer to appropriate appendices when discussing special evaluations conducted to support recommendations for future monitoring.

**Army Response 8:** The Army concurs. Every attempt has been made to adequately reference appendices throughout the document in appropriate context.

**NMED Comment 9:** The Permittee responded to NMED's Notice of Disapproval comments for the last report, *Facility-Wide Ground Water Periodic Monitoring Report/or October 2009 to January 2010*, in two separate letters to NMED. Responses to the same comments were not always consistent between the documents. The Permittee



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must provide responses to NMED comments with the next submittal, if directed to address comments in future documents. The response must be in the form of a letter that cross-references NMED's numbered comments and references the related report.

**Army Response 9:** The Army concurs. This letter addresses each comment and cross references the appropriate sections of the report where corrections were made in response to comments.

**NMED Comment 10:** The Permittee includes New Monitoring Well Logs and Well Completion Diagrams in Appendix E. The Permittee must discuss the installation of these new wells in each of the RFI Reports corresponding to the Parcels where these wells are located.

**Army Response 10:** These wells were discussed in the Parcel 11 and Parcel 22 RFI Reports, which were submitted to NMED after the submittal of the April to July 2010 Facility-Wide Groundwater Monitoring Report.

New monitoring wells installed during 2011 will be discussed under a separate submittal and will relate monitoring well locations by Parcel number. These monitoring wells were not installed during an RFI. The drilling investigation was parcel independent with the objective of defining the lateral extents of the RDX, perchlorate, and nitrate plumes. The separate submittal describing these activities will reference new well locations by parcel number, contaminant relationships, water bearing strata

**NMED Comment 11:** The Permittee must include sections for Field Methods and Analytical Program in the Appendices. NMED has provided the Permittee with guidance in the past in a document titled, "General Reporting Requirements for Routine GW Monitoring" (NMED, 2003). The guidance document states that an appendix on field methods must include "[t]he methods used to acquire field measurements of groundwater elevations, water quality data and groundwater samples should be included in this section. Methods include, but are not limited to, the methods and types of instruments used to measure depths to water, air or headspace parameters, and water quality parameters. In addition, decontamination, well purging and well sampling techniques and sample handling procedures should be provided in this appendix. Methods of measuring and sampling remediation systems should be reported in this section, if applicable. Purge and decontamination water storage and disposal methods also should be presented in this appendix. Copies of purge and decontamination water disposal documentation should be provided in a separate appendix."

The above referenced guidance document also states that an appendix in any periodic monitoring report must also include discussions on the Permittee's chemical analytical program. The analytical program must include, "Chemical analytical methods, a





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summary of data quality objectives and data quality review procedures should be reported in this appendix. A summary of data quality exceptions and their effect on the acceptability of the chemical analytical data with regard to the monitoring event and the site status should be included in this appendix along with references to case narratives provided in the laboratory reports."

**Army Response 11:** Appendix A and Appendix C were added to this report to address this comment. Appendix A contains water quality instrument manuals, sampling equipments, and pump specifications. Section 2.0 was revised to describe the sampling procedures, and references applicable appendices and guidance documents.

Appendix C, *Use of Low-Flow and Other Non-Traditional Sampling Techniques for RCRA Compliant Groundwater Monitoring* was added and referenced.

Appendix E contains information related to our chemical analytical program. The Data Quality Summary Report (DQSR) is an independent evaluation of laboratory analytical results and contains the project description, laboratory quality control, quality assurance splits, sampling quality control, analytical procedures, chemical data quality assessment and completeness, and conclusions and recommendations. The DQSR is a total review of all laboratory operations, procedures, and results, and flags instrument errors and/or discrepancies, such as temperature exceeding thresholds during shipment and holding times exceeding limits. Flags are assigned to results during this assessment and each flag relates to the quality and usability of that individual result. All flags are then presented in the PMR in the chemical results tables. Laboratory results are also presented in tables at end of the DQSR.

If you have questions or require further information, please call me at (330) 358-7312.

Sincerely,

Mark Patterson  
BRAC Environmental Coordinator

Enclosures

CF:

Dave Cobrain, NMED, HWB

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