NEW MEXICO ENVIRONMENT DEPARTMENT

Hazardous Waste Bureau

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CERTIFIED MAIL - RETURN RECEIPT REQUESTED

February 9, 2009

Mr. Ed Riege
Environmental Superintendent
Western Refining, Southwest Inc., Gallup Refinery
Route 3, Box 7
Gallup, New Mexico 87301

RE: FACILITY WIDE GROUNDWATER MONITORING WORK PLAN
WESTERN REFINING COMPANY, SOUTHWEST, INC., GALLUP REFINERY
EPA ID # NMD000333211
HWB-GRCC-09-001

Dear Mr. Riege:

The New Mexico Environment Department (NMED) requires Western Refining Company, Southwest Inc., Gallup Refinery (Permittee) to submit a Facility Wide Groundwater Monitoring Plan (Monitoring Plan). The purpose of this Monitoring Plan is to characterize the nature and extent of groundwater contamination at, and migrating from the facility and provide one plan that contains all groundwater monitoring activities that will satisfy both NMED and the New Mexico Energy Minerals and Natural Resource Department Oil Conservation Division (OCD) requirements. The Monitoring Plan must be revised on an annual basis to accommodate monitoring changes at the facility and to alleviate the need to update NMED and OCD permits.

Currently, the groundwater monitoring requirements are established in the OCD Discharge Plan dated August 23, 2007, specifically items 16 (the Sampling Schedule Resulting from historical New API Separator Spills), 19, 20 (A & B), and 25.

The Permittee must use Attachment 1 of this letter as a general guide for preparing the Monitoring Plan. The Monitoring Plan must include, but is not limited to the following:

a. A general description of the hydrogeologic system beneath the facility.

b. A section or table to include, but not limited to, a description of all existing monitoring wells, recovery wells, and any other required sampling locations specifying their exact location, date the wells were installed including ground elevation, top of casing elevation, well casing stick up length, well depth, well casing diameter, screened interval, screen length, and stratigraphic unit(s) intersected by the well screen.

c. The initial submittal must include a section or appendix that includes all well construction diagrams.

d. A facility map showing all monitoring well locations. This map must be revised as necessary to reflect any well additions and well abandonments that occur during the year.

e. The current groundwater monitoring/sampling requirements found in the OCD Discharge Plan (items 16 (the Sampling Schedule Resulting from historical New API Separator Spills), 19, 20 (A & B), and 25).

f. The sampling requirements must include the proposed frequency of sampling, sampling methodology, field water quality parameters to be measured, and chemical analytical methods.

g. A description of all sampling methods and procedures that will be applied during each monitoring event.

h. Identification of all field instruments proposed for use as well as calibration procedures.

The Permittee must continue to submit their Annual Groundwater Monitoring Report to NMED and the OCD by September 1 of each subsequent year to include the specified items found in the OCD Discharge Permit and describe all groundwater monitoring activities. The annual updates to this Monitoring Plan must be submitted by April 1 of each year beginning in 2010, so that any changes will be implemented prior to the groundwater monitoring summaries provided in the Annual Groundwater Monitoring Report.

Once this Monitoring Plan is approved, this plan will include and replace the requirements of the OCD Discharge Plan. The information gathered per the Monitoring Plan will then be included in the Annual Groundwater Monitoring Report. The Annual Groundwater Monitoring Report is considered a Periodic Monitoring Report for the purpose of compliance with NMED requirements and the OCD Discharge Plan items 20 (A and B) and 25. Attachment 2 provides general guidance for the preparation of Periodic Monitoring Reports.

The Permittee must submit the Monitoring Plan to NMED and the OCD on or before May 11, 2009. If you have questions regarding this letter please contact Hope Monzeglio of my staff at 505-476-6045.

Sincerely,

John E. Kieling
Program Manager
Permits Management Program
Hazardous Waste Bureau

cc: D. Cobrain NMED HWB
H. Monzeglio, NMED HWB
W. Price, OCD
B. Jones, OCD
G. Rajen, Gallup
File: Reading File and GRCC 2009 File
HWB-GRCC-09-001

ATTACHMENT 1
GENERAL GUIDE FOR COMPOSING THE MONITORING PLAN

- An Executive Summary (Abstract) must be included to provide a brief summary of the purpose and scope of the Monitoring Plan. This section must include the facility name and portions of the facility including any areas of concern (AOCs), Solid Waste Management Units (SWMUs) or other locations that the Monitoring Plan will be addressing.

- A Table of Contents must be included that lists all text sections, subsections, tables, figures, and appendices or attachments included in the Monitoring Plan.

- An Introduction must be included in the Monitoring Plan to include general information on the current facility and a brief description of the purpose of the proposed groundwater monitoring and the types of activities that will be conducted.

- A Background section must be added that briefly describes relevant general background information, including historical site uses, potential receptors, the type and characteristics of the waste or contaminants and any known and possible source(s), and a summary of the history of contaminant releases which could be contributing to groundwater contamination.

- The Permittee must include a Site Conditions section to provide a detailed description of current site topography and locations of natural features and manmade structures. This section must include a description of drainages, vegetation types, erosional features, and current site uses, in addition to, descriptions of features located in surrounding sites (i.e. SWMUs, AOCs) that may have an impact on the subject site regarding recharge sediment transport, surface water runoff, or contaminant fate and transport. A description of subsurface conditions must also be included that provides a discussion of the conditions observed during previous subsurface investigations, including but not limited to soil types and associations, stratigraphy, and the presence and flow direction of groundwater.

- A Scope of Activities section must include a list of all anticipated activities to be performed during the facility-wide groundwater monitoring sampling events.

- A section must be included that provides a description of all anticipated locations to be sampled and methods for conducting the activities during the facility wide groundwater monitoring events. This section must include, but is not limited to, descriptions of: sampling methods, sample handling procedures, procedures for collecting field water quality measurements, any field equipment and calibration procedures, water level measurement, purging activities, and decontamination procedures. This section must also address Investigation Derived Waste (IDW).

- The Permittee must include a Schedule section that proposes a schedule for the groundwater monitoring.

- Tables, Figures, and Appendices must be included.

ATTACHMENT 2
GENERAL OUTLINE FOR THE PERIODIC MONITORING REPORT
(For the Facility Wide Groundwater Monitoring Report)

Periodic monitoring Report

The Permittee shall use the following guidance for preparing periodic monitoring reports. The reports shall present the reporting of periodic groundwater, vapor, and remediation system monitoring at the Facility. The following sections provide a general outline for monitoring reports, and also provide the minimum requirements for reporting within each subsection when preparing periodic monitoring reports for groundwater monitoring. All data collected during each monitoring and sampling event in the reporting period shall be included in the reports. In general, interpretation of data shall be presented only in the Background, Conclusions, and Recommendations sections of the reports. The other text sections of the reports shall be reserved for presentation of facts and data without interpretation or qualifications. The general report outline is provided below.

Title Page

The title page shall include the type of document: Facility name and the submittal date. A signature block providing spaces for the name, title, and organization of the preparer and the responsible Permittee representative shall be provided on the title page in accordance with 20.4.1.900 NMAC incorporating 40 CFR 270.11(d)(1).

Executive Summary

The executive summary shall provide a brief summary of the purpose, scope, and results of the monitoring conducted at the subject site during the reporting period. The Facility, unit, SWMU, and AOC names and location shall be included in the executive summary. In addition, this section shall include a brief summary of conclusions based on the monitoring data collected.

Table of Contents

The table of contents shall list all text sections, subsections, tables, figures, and appendices or attachments included in the report. The corresponding page numbers for the titles of each section of the report shall be included in the table of contents.

Introduction

The introduction section shall include the Facility name, unit name and location and unit status (e.g. active operations, closed, corrective action). General information on the site usage and status shall be included in this section. A brief description of the purpose of the monitoring, type of monitoring conducted, and the type of results presented in the report also shall be provided in this section.

Scope of Activities

A section on the scope of activities shall briefly describe all activities performed during the monitoring event or reporting period including field data collection, analytical testing, remediation system monitoring, if applicable, and purge/decontamination water storage and disposal.

Regulatory Criteria

A section on regulatory criteria shall provide information regarding applicable cleanup standards, risk-based screening levels, and risk-based cleanup goals for the site. A table summarizing the applicable cleanup standards or inclusion of applicable cleanup standards in the data tables can be substituted for this section. The appropriate cleanup levels for each site shall be included, if site-specific levels have been established at separate sites. Risk-based evaluation procedures, if used to calculate cleanup levels, must either be included as an attachment or referenced. The specific document and page numbers must be included for all referenced materials.

Monitoring Results

A section shall provide a summary of the results of monitoring conducted at the site. This section shall include the dates and times that monitoring was conducted, the measured depths to groundwater/product, directions of groundwater flow, field air and water quality measurements, static pressures, field measurements, and a comparison to previous monitoring results. Field observations or conditions that may influence the results of monitoring shall be reported in this section. Tables summarizing vapor-monitoring parameters, groundwater elevations, depths to groundwater measurements, and other field measurements can be substituted for this section.

Chemical Analytical Data Results

A section shall discuss the results of the chemical analyses. It shall provide the dates of vapor or groundwater sampling, the vapor or groundwater analytical methods, and the analytical results. It shall also provide a comparison of the data to previous results and to any cleanup standards or established cleanup levels for the site. The rationale or purpose for altering or modifying the sampling program shall be provided in this section. A table summarizing the laboratory analytical data, QA/QC data, applicable cleanup levels, and modifications to the vapor and groundwater sampling program can be substituted for this section.

Remediation System Monitoring

A section shall discuss the remediation system monitoring. It shall summarize the remediation system's capabilities and performance. It shall also provide monitoring data, treatment system discharge sampling requirements, and system influent and effluent sample analytical results. The dates of operation, system failures, and modifications made to the remediation system during the

reporting period shall also be included in this section. A summary table may be substituted for this section.

Summary

A summary section shall provide a discussion and conclusions of the monitoring conducted at the site. In addition, this section shall provide a comparison of the results to applicable cleanup levels, and to relevant historical monitoring and chemical analytical data. An explanation shall be provided with regard to data gaps. A discussion of remediation system performance, monitoring results, modifications if applicable, and compliance with discharge requirements shall be provided in this section. Recommendations and explanations regarding future monitoring, remedial actions, or site closure shall also be included in this section.

Tables

With prior approval from the NMED, the Permittee may combine one or more of the tables. Data presented in the tables shall include the current data plus data from the three previous monitoring events or, if data from fewer than three monitoring events is available, data acquired during previous investigations and vapor, groundwater, and remediation system monitoring. The dates of data collection shall be included in the tables. Summary tables may be substituted for portions of the text. All data tables shall include only detected analytes and data quality exceptions that could potentially mask detections. A section shall provide the following summary tables:

1. A table summarizing the regulatory criteria (a Regulatory Criteria text section may be substituted for this table or the applicable cleanup levels may be included in the analytical data tables),

2. A table summarizing groundwater elevations, SPH thickness, and depths to groundwater data. The table shall include the monitoring well depths, SPH thickness, casing elevations, the screened intervals in each well, and the dates and times of measurements,

3. A table summarizing field measurements of surface water quality data, if applicable,

4. A table summarizing field measurements of vapor monitoring data (including historical vapor monitoring data as described above),

5. A table summarizing field measurements of groundwater quality data (including historical water quality data as described above),

6. A table summarizing vapor sample chemical analytical data, if applicable (including historical vapor sample analytical data as described above),

7. A table summarizing surface water chemical analytical data, if applicable (including historical surface water analytical data as described above),

8. A table summarizing groundwater chemical analytical data (including historical groundwater analytical data as described above), and

9. A table summarizing remediation system monitoring data, if applicable (including historical remediation system monitoring data as described above).

Figures

The section shall include the following figures. All figures shall include a scale and north arrow. An explanation shall be provided on each figure for all abbreviations, symbols, acronyms, and qualifiers. All figures shall have a date.

1. A vicinity map showing topography and the general location of the site relative to surrounding features or properties,

2. A Facility site plan that presents pertinent site features and structures, well and piezometer locations, and remediation system location(s) and features. Off-site well locations and pertinent features shall be included on the site plan, if practical. Additional site plans may be required to present the locations of relevant off-site well locations, structures, and features,

3. Figures presenting the locations of piezometer, monitoring and other well locations, groundwater elevation data, and groundwater flow directions,

4. Figures presenting groundwater analytical data for the current monitoring event. The analytical data corresponding to each sampling location may be presented in tabular form on the figure or as an isoconcentration map,

5. Figures presenting SPH thickness data for the current monitoring event. The SPH thickness data corresponding to each sampling location may be presented in tabular form on the figure or as an isoconcentration map,

6. Figures presenting surface water sampling locations and analytical data for the current monitoring period,

7. Figures presenting vapor sampling locations and analytical data for the current monitoring event. The analytical data corresponding to each sampling location may be presented in table form on the figure or as an isoconcentration map, and

8. Figures presenting geologic cross-sections based on outcrop and borehole data, if applicable.

Appendices

Each monitoring report shall include the following appendices. Additional appendices may be necessary to present data or documentation not listed below.

Field Methods

An appendix shall include the methods used to acquire field measurements of groundwater elevations, SPH thickness, vapor and water quality data, and vapor and groundwater samples. It shall include 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 techniques, well sampling techniques, and sample handling procedures shall be provided in this appendix. Methods of measuring and sampling remediation systems shall be reported in this section, if applicable. Purge and decontamination water storage and disposal methods shall also be presented in this appendix. Copies of purge and decontamination water disposal documentation shall be provided in a separate appendix.

Chemical Analytical Program

An appendix shall discuss the analytical program. It shall include the analytical methods, a summary of data quality objectives, and data quality review procedures. A summary of data quality exceptions and their effect on the acceptability of the analytical data with regard to the monitoring event and the site status shall be included in this appendix along with references to case narratives provided in the laboratory reports.

Chemical Analytical Reports

This appendix shall include all laboratory chemical analytical data generated for the reporting period. The data may be submitted electronically on a compact disc in Microsoft Excel format. The reports shall include all chain-of-custody records and QA/QC results provided by the laboratory. Hard (paper) copies of all chain-of-custody records shall be submitted as part of this appendix.