GW - 001

REPORTS

RCRA Group 7 Remedy Completion Report

2010 - Present

SUSANA MARTINEZ
Governor

JOHN A. SANCHEZ
Lieutenant Governor

NEW MEXICO
ENVIRONMENT DEPARTMENT

Hazardous Waste Bureau

2905 Rodeo Park Drive East, Building 1
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RYAN FLYNN
Cabinet Secretary-Designate

BUTCH TONGATE
Deputy Secretary

TOM BLAINE, P.E.
Director
Environmental Health Division

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

February 11, 2014

Randy Schmaltz
Health, Safety, Environmental, and
Regulatory Director
Western Refining, Southwest, Inc.
Bloomfield Refinery
P.O. Box 159
Bloomfield, New Mexico 87413

RE: APPROVAL
GROUP 7 – SWMU NO. 17 RIVER TERRACE AREA REMEDIATION
SYSTEM OPTIMIZATION REPORT
WESTERN REFINING SOUTHWEST INC., BLOOMFIELD REFINERY
EPA ID# NMD089416416
HWB-WRB-13-004

Dear Mr. Schmaltz:

The New Mexico Environment Department (NMED) has received Western Refining Southwest, Inc., Bloomfield Refinery's (Western) *Group 7 – SWMU No. 17 River Terrace Area Remediation System Optimization Report* (Report), dated May 3, 2013. NMED has reviewed the Report and hereby issues this Approval with the following comments.

Comment 1

In *Dewatering System Modifications*, page 4, paragraph 1, Western states that "[f]inal construction of the dewatering well [DW-3] has not been completed." Discuss the completion of DW-3 in the 2013 River Terrace Voluntary Corrective Measures Bioventing System Annual

Report (2013 RT Annual Report). In addition, discuss start-up and dewatering activities and report the analytical data collected from DW-3 in the annual report.

Comment 2

In *Dewatering System Modifications*, page 4, paragraph 2, Western states that they are "evaluating the possibility of proposing the use of DW-3 as a replacement for TP-1 because of its close proximity to where TP-1 was previously located. The potential replacement of TP-2 is shown on Figure 1 on the air sparging Line A which would place it almost exactly in the historical location of TP-2." State if it has been determined that DW-3 will replace TP-1 and if a replacement for TP-2 has been determined. Discuss the installation of the replacement for TP-2 and the DW-3 determination in the 2013 RT Annual Report. In addition, include a figure depicting these locations in the 2013 RT Annual Report.

Comment 3

In *Excavation Photos*, Western provides a sheet of photographs taken during the optimization activities. In future reports, provide a maximum of 2 photos per page and include a description of the subject in the photo and indicate the direction the photo was taken. In addition, use arrows and text to highlight the subject, if it is not clearly depicted in the photograph.

Western must address all comments in this Approval in the 2013 River Terrace Voluntary Corrective Measures Bioventing System Annual Report.

If you have any questions regarding this letter, please contact Leona Tsinnajinnie of my staff at (505) 476-6057.

Sincerely,

John E. Kieling
Chief
Hazardous Waste Bureau

cc: D. Cobrain, NMED HWB
N. Dhawan, NMED HWB
L. Tsinnajinnie, NMED HWB
C. Chavez, OCD
A. Hains, Western Refining Company, El Paso, Texas
K. Robinson, Western Refining Company, Bloomfield Refinery

File: HWB-WRB-13-004 and Reading 2014

SUSANA MARTINEZ
Governor

JOHN A. SANCHEZ
Lieutenant Governor

NEW MEXICO
ENVIRONMENT DEPARTMENT

Hazardous Waste Bureau

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DAVE MARTIN
Secretary

BUTCH TONGATE
Deputy Secretary

JAMES H. DAVIS, Ph.D.
Director
Resource Protection Division

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

October 12, 2012

Mr. Randy Schmaltz
Environmental Manager
Western Refining, Southwest, Inc.
Bloomfield Refinery
P.O. Box 159
Bloomfield, New Mexico 87413

RE: APPROVAL
GROUP 7 – SWMU NO. 17 RIVER TERRACE AREA REMEDIATION
SYSTEM OPTIMIZATION WORK PLAN
WESTERN REFINING SOUTHWEST INC., BLOOMFIELD REFINERY
EPA ID# NMD089416416
HWB-WRB-12-001

Dear Mr. Schmaltz:

The New Mexico Environment Department (NMED) has received Western Refining Southwest, Inc., Bloomfield Refinery's (Western) *Group 7 – SWMU No. 17 River Terrace Area Remediation System Optimization Work Plan*, dated October 9, 2012. NMED has reviewed the Report and hereby issues this Approval with the following comments.

Comment 1

During the conference call on September 25, 2012, NMED expressed their concerns with Western regarding the use of the blower to effectively inject air below the water table. Western must investigate the use of a compressor if monitoring does not indicate that the blower can

provide enough air pressure to effectively operate the air sparging system. NMED must be notified if the air sparging system requires additional modifications.

Comment 2

Western must submit a report by May 3, 2013 that summarizes the soil removal activities and the modifications to the remediation system, the baseline monitoring results, and provide the analytical data results from waste characterization. In addition, as-built drawing and figures depicting the locations of the air sparging system, TP-1 and TP-2 must be submitted with the report.

If you have any questions regarding this letter, please contact Leona Tsinnajinnie of my staff at (505) 476-6057.

Sincerely,

John E. Kieling
Chief
Hazardous Waste Bureau

cc: D. Cobrain, NMED HWB
L. Tsinnajinnie, NMED HWB
C. Chavez, OCD
A. Hains, Western Refining Company, El Paso, Texas
K. Robinson, Western Refining Company, Bloomfield Refinery

File: HWB-WRB-12-001 and Reading 2012

Western Refining
LOGISTICS

WNR LISTED NYSE

RECEIVED OCD

2012 OCT 12 A 10:53

October 9, 2012

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

Certified Mail #: 7009 0820 0000 0482 9245 (Addressed to NMED)
Certified Mail #: 7009 0820 0000 4082 9252 (Addressed to OCD)

Re: Group 7 – SWMU No. 17 River Terrace Area
Remediation System Optimization Work Plan
Western Refining Southwest, Inc., Bloomfield Refinery
EPA ID# NMD089416416

Dear Mr. Kieling:

Western Refining Southwest, Inc. ("Western")

Western Refining Southwest, Inc. ("Western") is requesting approval to implement modification to the existing biovent system located within the River Terrace Area at the Bloomfield Refinery. The enclosed Remediation System Optimization Work Plan outlines the proposed changes to the system.

If you have any questions or would like to discuss this Work Plan, please contact me at (505) 632-4171

Sincerely,

James R. Schmaltz
Health, Safety, Environmental, and Regulatory Director
Western Refining Southwest, Inc.
Bloomfield Refinery

cc: Dave Cobrain – NMED HWB
Leona Tsinnajinnie – NMED HWB
Carl Chavez - NMOCD
Allen Hains – Western Refining El Paso

Group 7 – SWMU No. 17 RIVER TERRACE AREA
REMEDIATION SYSTEM OPTIMIZATION WORK PLAN

Introduction

The Bloomfield Refinery is located immediately south of Bloomfield, New Mexico in San Juan County (Figure 1). The physical address is #50 Road 4990, Bloomfield, New Mexico 87413. The Bloomfield Refinery is located on approximately 263 acres. Bordering the facility is a combination of federal and private properties. Public property managed by the Bureau of Land Management lies to the south. The majority of undeveloped land in the vicinity of the facility is used extensively for oil and gas production and, in some instances, grazing. U.S. Highway 550 is located approximately one-half mile west of the facility. The topography of the main portion of the site is generally flat with steep bluffs to the north where the San Juan River intersects Tertiary terrace deposits.

The Bloomfield Refinery is a crude oil refinery currently owned by San Juan Refining Company, and it is operated by Western Refining Southwest, Inc. – Bloomfield Refinery. The Bloomfield Refinery has an approximate refining capacity of 18,000 barrels per day; however, the refinery suspended petroleum refining operations in November 2009 but continues to operate as a petroleum storage terminal. Various process units operated at the facility, including crude distillation, reforming, fluidized catalytic cracking, sulfur recovery, merox treater, catalytic polymerization, and diesel hydrotreating. Products produced at the refinery included gasoline, diesel fuels, jet fuels, kerosene, propane, butane, naphtha, residual fuel, fuel oils, and LPG.

On July 27, 2007, the New Mexico Environment Department (NMED) issued an Order to San Juan Refining Company and Giant Industries Arizona, Inc. ("Western") requiring investigation and corrective action at the Bloomfield Refinery. This Work Plan has been prepared for the Solid Waste Management Unit (SWMU) designated as Group 7 in the Order, which includes SWMU No. 17 (River Terrace Area). The location of SWMU No. 17 is shown on Figure 1. This Work Plan includes activities intended to optimize remedial activity at the River Terrace area.

Background

The River Terrace Area is located north of the Hammond Ditch, approximately 120 feet lower in elevation than the Refinery process and Tank Farm areas. In 1999, a bentonite slurry and sheet pile barrier wall was installed adjacent to the San Juan River along the west and north side of the River Terrace Area. The barrier extends approximately 35 feet below the ground surface, and extends around the perimeter of the riverbank from the bluff opposite the west end of the process area to the river inlet station. The bentonite slurry and sheet pile barrier wall was installed to prevent hydrocarbons from migrating into the San Juan River.

Since 2006, Western has operated a bioventing system for the purpose of providing oxygen to the subsurface and support aerobic biodegradation of petroleum hydrocarbons that were identified in soil

along the western portion of the River Terrace to a depth of approximately 8 feet below existing grade surface (bgs). The biovent system includes a dewatering system, which consists of two dewatering wells and a collection gallery. The dewatering wells are equipped with variable-speed submersible pumps, which were installed and operational in January 2006. The collection gallery, consisting of a 4-inch perforated pipe with an 8-inch diameter vertical riser pipe and submersible pump, was installed and placed into operation by early October 2009. The dewatering system is used to enhance the effectiveness of the biovent system by dewatering the influenced area.

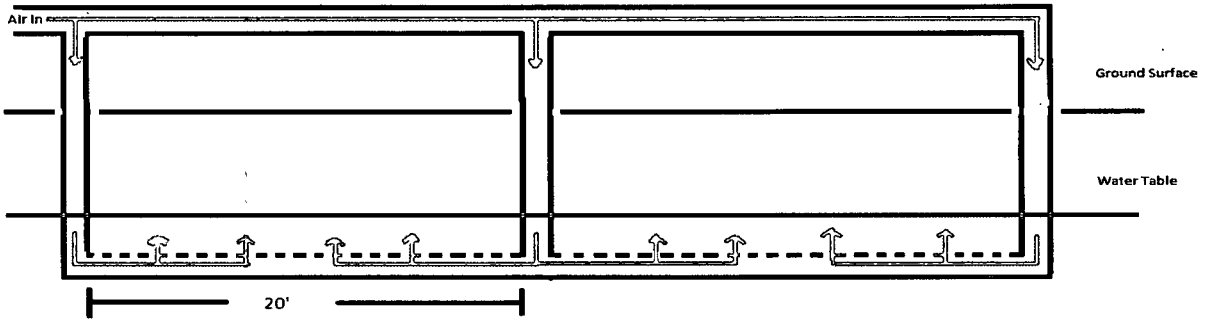
During installation of the collection gallery, Western uncovered a hydrocarbon contaminated clay layer approximately 4-5 inches thick and between 3-6 feet below the ground surface. Based on field observations made during installation of the collection gallery, the impacted clay layer is believed to be acting as a source to groundwater during high river flow conditions and is also serving as a "cap" over the aeration area and thus deterring progress of aerating the vadose zone.

Scope of Activities

This scope of activities has been developed for the purpose of optimizing the remedial progress of the soils and groundwater at the River Terrace area. To accomplish this objective, a large portion of the impacted clay layer will be removed to eliminate the leaching of hydrocarbons to groundwater. In addition, a portion of the biovent system will be converted to an air sparging system to help target the most impacted groundwater area, which is located within the southwest corner if the River Terrace area. The following is a summary of activities to be conducted as part of this Work Plan.

- Soil overburden will be removed from above the contaminated clay layers.
- The contaminated clay layer will be removed and staged on appropriate secondary containment. Excavation of the clay layer will begin with the area indicated as "Area A" and Area B" in Figure 2. If time and weather permits, any extent of the impacted clay layer located in "Area C" will also be removed.
- The remaining soil layers will be mixed in-place to create optimum conditions for bacterial consumption of hydrocarbons.
- BV-10, BV-12, BV-13, TP-1, and TP-2 will be removed during excavation activities conducted with Area A and Area B because they are located in the excavation zone where the highest concentrations are located. The two temporary piezometers will be re-install at the completion of project in approximately the same location. The BV wells will be replaced with a horizontal PVC perforated pipe for air sparging. The air sparge piping will consist of perforated PVC piping and will run approximate 70 feet, extending through "Area A" and "Area B" as indicated on Figure 2. The sparge line will be placed approximately 2 feet below the water table and will include riser pipes evenly spaced along the length of the sparge pipeline to ensure even distribution of air across the entire trench area.

Conceptual Design of Air Sparge System



- Once the trench is in place, it will remain open for a period of time in order to remove contaminated ground water. This water will be delivered to the on-site WWTP via the facility's vacuum truck.
- The trench will be backfilled with the stock piled overburden.

System Start-Up and Baseline Monitoring

Upon completion of the excavation activities and installation of the air sparging piping, the system blower will be re-started and additional base-line data will be collected as follows:

- Air pressures will be monitored at the BV wells and the air sparge piping injection points to evaluate the distribution of air within the remediation area.
- Groundwater samples will be collected at TP-1 and TP-2 four weeks after completion of construction establish new base line. The samples will be submitted to Hall Analytical and analyzed for benzene, ethyl benzene, toluene, xylenes (BTEX), TPH-GRO, and TPH-DRO.
- An as-build drawing reflecting the system modifications made as part of this Work Plan will be included in the Annual River Terrace Report, which is submitted to NMED-Hazardous Waste Bureau in March of each year.

Collection and Management of Investigation Derived Waste

The excavated impacted clay layer will be stockpiled on secondary containment during investigation field activities. A composite sample will be collected and submitted to the laboratory for waste characterization. The impacted material will be properly disposed of off-site.

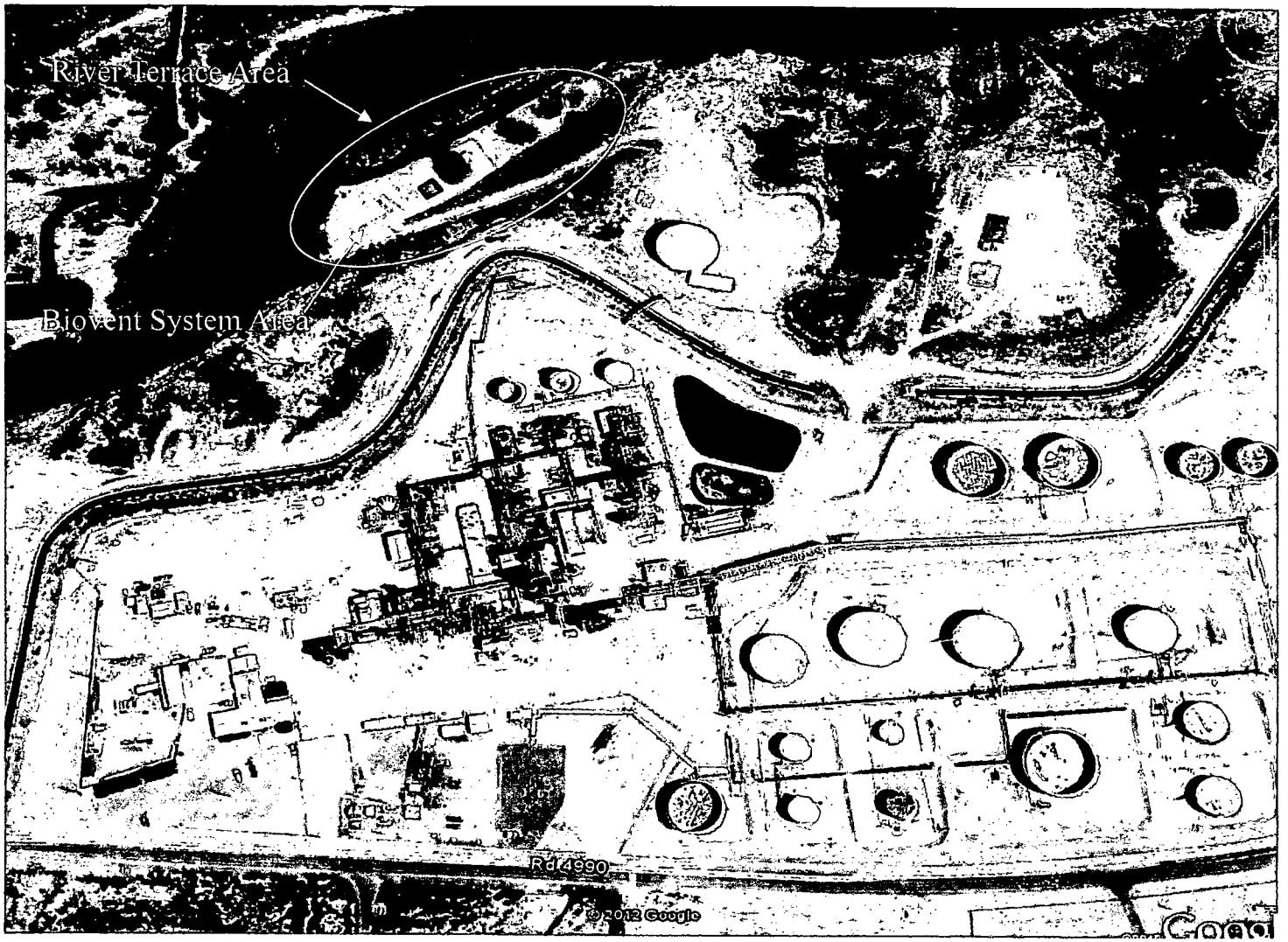
Schedule

Western would prefer to commence field activities in October 2012 due to likely favorable weather conditions. The estimated timeframes for the planned activities is as sown below:

- Excavation of the clay layer - three days;
- Trench excavation – two days;
- Installation of air sparging equipment (including backfill) – two weeks; and
- New baseline groundwater sample collection – four weeks after system re-start.

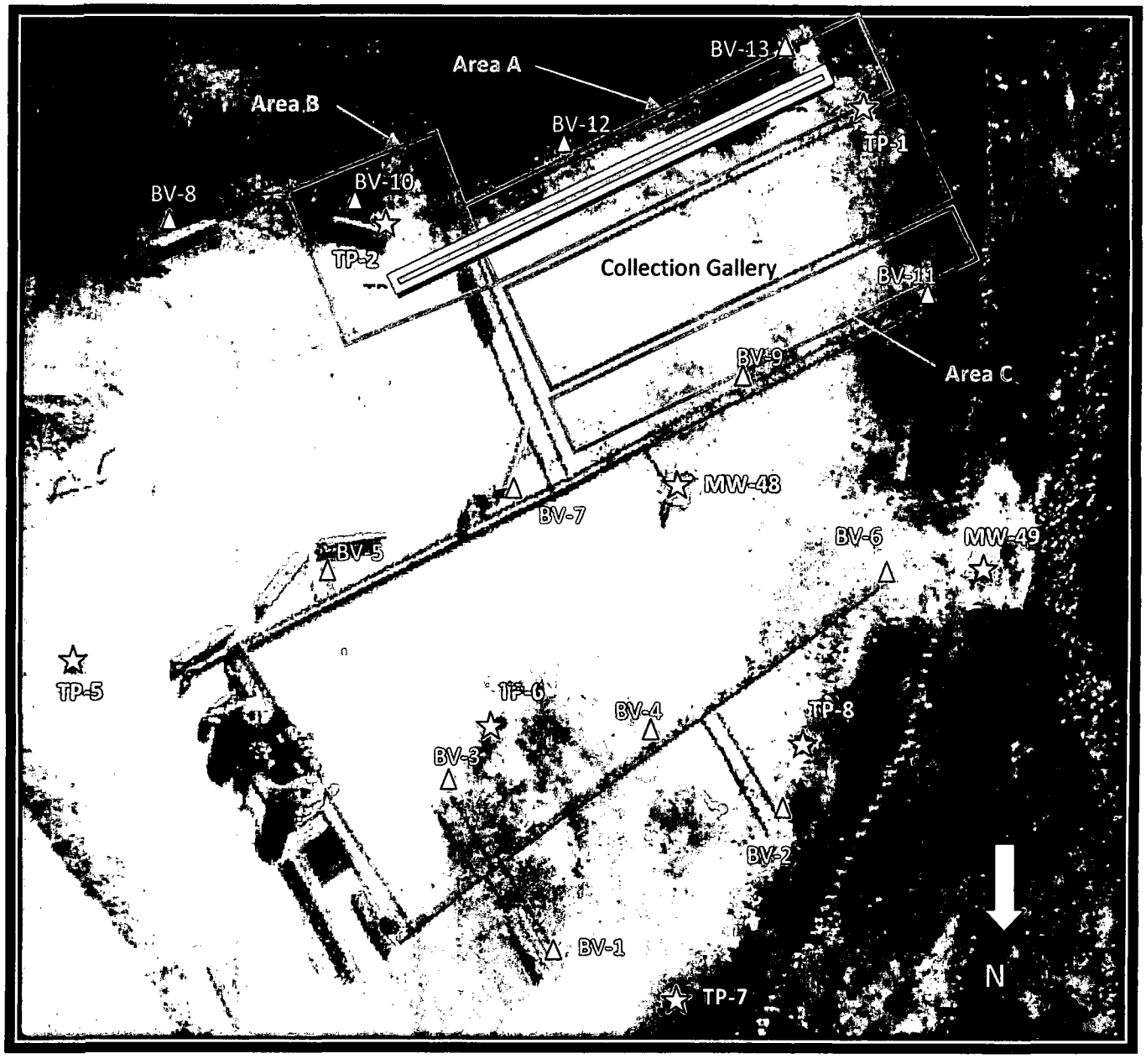
FIGURES

FIGURE 1—Location Map



Western Refining Southwest, Inc.—Bloomfield Refinery

FIGURE 2 – Proposed Areas of Excavation



Green Boxes – Proposed Excavation sites.

Red Box – Collection Gallery Location (Clay layer already removed)

- Proposed horizontal air sparging pipeline

Chavez, Carl J, EMNRD

From: Monzeglio, Hope, NMENV
Sent: Monday, August 16, 2010 10:54 AM
To: Schmaltz, Randy
Cc: Kieling, John, NMENV; Cobrain, Dave, NMENV; Chavez, Carl J, EMNRD; Hains, Allen; Martinez, Cynthia, NMENV
Subject: Group 7
Attachments: WRB 10-003 NMED response to Grp 7 letter.pdf

Randy

The hard copy will go out in the mail today.

Hope

Hope Monzeglio
Environmental Specialist
New Mexico Environment Department
Hazardous Waste Bureau
2905 Rodeo Park Drive East, BLDG 1
Santa Fe NM 87505
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Websites:
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RON CURRY
Secretary

SARAH COTTRELL
Deputy Secretary

CERTIFIED MAIL - RETURN RECEIPT REQUESTED

August 16, 2010

Mr. Randy Schmaltz
Environmental Manager
Western Refining, Southwest, Inc.
Bloomfield Refinery
P.O. Box 159
Bloomfield, New Mexico 87413

RE: RESPONSE TO GROUP 7 REMEDY COMPLETION REPORT
WESTERN REFINING SOUTHWEST, INC., BLOOMFIELD REFINERY
EPA ID # NMD089416416
HWB-WRB-10-003

Dear Mr. Schmaltz:

The New Mexico Environment Department (NMED) received Western Refining Southwest, Inc., Bloomfield Refinery (Western) *Submittal of Group 7 Remedy Completion Report* letter dated June 29, 2010. This letter was submitted in place of the Remedy Completion Report required by the July 27, 2007 Order (Order) for SWMU 17 River Terrace Area. In the letter, Western explains that the remedy has not been completed at the River Terrace Area and the current bioventing system is still in operation.

As stated in the letter, Western must continue to operate, monitor, and submit the annual reports on the bioventing activities at SWMU No. 17 River Terrace Area. NMED hereby grants an extension for the submittal of the remedy completion report to be re-evaluated on a yearly basis. Western must assess the River Terrace Area annually to determine if the remedy is complete and include the status of completion in the annual monitoring reports. Western must inform NMED within fifteen days after verification of the completion of the remedy at the River Terrace Area. Upon receipt of the notification, NMED will determine a schedule for the submittal of the Remedy Completion Report.

If you have any questions regarding this letter, please contact Hope Monzeglio of my staff at (505) 476-6045.

Sincerely,

John Kieling
Program Manager
Permits Management Program
Hazardous Waste Bureau

JEK:hm

cc: D. Cobrain, NMED HWB
C. Chavez, OCD
A. Hains, Western
File: HWB-WRB-10-003 and Reading 2010