

GW - 040

**PERMITS,
RENEWALS &
MODS**

2020

From: [Stuart Hyde](#)
To: [Chavez, Carl J. EMNRD](#)
Cc: [Devin Hencmann](#); [McCartney, Gregory J.](#)
Subject: [EXT] GW-040 Former Giant Bloomfield Refinery, Proof of Public Notice
Date: Thursday, July 16, 2020 1:06:27 PM
Attachments: [image004.png](#)
[image006.png](#)
[image008.png](#)
[2020-7-16_GW-040_Proof of Public Notice.pdf](#)

Carl,

Please find attached a letter with the proof of public notification for the Former Giant Bloomfield Refinery *Discharge Permit Application*. All public notice requirements were fulfilled by July 15, 2020. Please let me know if you have any questions or comments. Thanks much and talk to you soon.



Stuart Hyde, LG
Project Geologist
970.385.1096 *office*
970.903.1607 *cell*
848 East Second Avenue Durango, CO 81301
www.ltenv.com



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LT Environmental, Inc.
848 East Second Avenue
Durango, Colorado 81301
970.385.1096

July 16, 2020

Mr. Carl Chavez
New Mexico Oil Conservation Division
5200 Oakland Avenue NE
Albuquerque, NM 87113

**RE: Proof of Public Notice
Former Giant Bloomfield Refinery
Western Refining Southwest, Inc.
Bloomfield, New Mexico**

Dear Mr. Chavez:

On behalf of Western Refining Southwest, Inc. (Western), LT Environmental (LTE) is submitting this letter to submit proof of public notice for the Former Giant Bloomfield Refinery (Site) *Discharge Permit Application* submitted to the New Mexico Oil Conservation Division (NMOCD) in May 2020. Public notice was provided for the submittal of the *Discharge Permit Application* in accordance with Subsection B of 20.6.2.3108 of the New Mexico Administrative Code (NMAC).

Attachment 1 provides photo documentation of the 2 by 3 feet signs posted at and near the Site providing a synopsis of the public notice in English and Spanish. As previously discussed, two signs were posted at the Site: one posted near the west entrance of the facility on County Road 350 in an area visible to passing traffic and with a location to safely stop a vehicle to inspect the posting, and a second sign located on the southern Site boundary along US Highway 64 nearest the infiltration gallery. As discussed, the second sign at the facility was posted in lieu of an off-site posting due to COVID-19 and the closure of public facilities in the area (i.e., municipal buildings and libraries with public-notice boards).

Proof of mailings of the public notice to property owners within a 1/3-mile radius of the discharge area are included in Attachment 2. Lastly, proof of publication of the public notice is provided in Attachment 3.

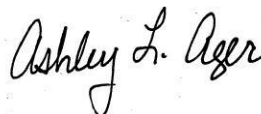
If you have any questions or comments regarding this corrigendum, please do not hesitate to contact LTE at (970) 385-1096 or via email at shyde@ltenv.com.

Sincerely,

LT ENVIRONMENTAL, INC.



Stuart Hyde, LG
Project Geologist



Ashley Ager, P.G.
Senior Geologist

cc: Greg McCartney, Western Refining Southwest, Inc.

Attachments:

Attachment 1	Photographic Log of Public Notice at the Site
Attachment 2	Proof of Mailings
Attachment 3	Proof of Publication



PHOTOGRAPHIC LOG



Photograph 1: View of sign from CR 3500 looking Northeast towards the GBR facility.



Photograph 2: View of sign from CR 350 looking Southeast towards the infiltration gallery.

PHOTOGRAPHIC LOG



Photograph 3: View of sign from HWY 64 looking Northwest towards the infiltration gallery.



Photograph 4: View of sign from HWY 64 looking West towards the intersection with CR 350





Name and Address of Sender

Caitlin McGinn
848 E 2nd Ave
Durango, CO 81301

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Postage

Addressee (Name, Street, City, State, & ZIP Code™)

- 20 Road 5470
Farmingington, NM 87401
- 20 Road 5490
Farmingington, NM 87401
- 2020 N 21st Place
Phoenix, AZ 85004
- 21 Road 5470
Farmingington, NM 87401-000
- 5801 US 64
Farmingington, NM 87401
- 4251 College Blvd Ste A
Farmingington, NM 87402
- 4711 Mulligans Rd
Farmingington, NM 87402
- 4043 Club Villa Rd
Durango, CO 81301

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1. 17th Road 5470
Farmington, NM 87401-1490
2. 17 Road 3332
Aztec, NM 87410
3. 17 Road 5470
Farmington, NM 87401
4. 18 Road 5470
Farmington, NM 87401-1443
5. 19 Road 5470
Farmington, NM 87401-1470
6. 19 Road 5472 N8W 3038
Farmington, NM 87401-1442
7. 1900 Dalrock Rd
Rowlett, TX 75088
8. 2 Road 5468
Farmington, NM 87401-0000

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1.	1214 Chaco	Featuring 17, NM 87401 - 7004
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2.	13 Road 5203 Bloomfield, NM 87413
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3. 13 Road 5468
Framingham, MA 01740

4. 13 Road 5481
Farmington, NM. 87401-5335

5.	13A Road 5481
	Farmingdale, N.Y. 11734

6. 14 Road 5464
Farmington, NM 87401

7.	14 Road 547a	Farming ton, N.M 87401-1493
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8. 16 Road 5470
Durango CO 81301
Farmington, NM 87401

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FARMINGTON, NM 87402

2.

22 Road 5472
FARMINGTON, NM 87401

3.

201 HWY 172
DURANGO, CO 81303

4.

224 Road 3950
FARMINGTON, NM 87401

5.

228 Road 4800
Bloomfield, NM 87413

6.

23 Road 5468
FARMINGTON, NM 87401

7.

24819 CR 43
Greely, CO 80631

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25 Road 5467
FARMINGTON, NM 87401-0000

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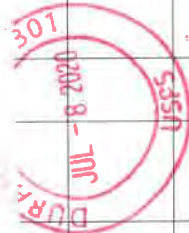
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- 53 Road 5490
Farmington, NM 87401
- 5740 Los Arboles Dr
Farmington, NM 87402
- 16 Road 5468
Farmington, NM 87401-0000
- 5764 US 64
Farmington, NM 87401
- 5765 US 64
Farmington, NM 87401
- 5762 US 64
Farmington, NM 87401
- 5795 US 64
Farmington, NM 87401
- 20 Box 614
Ranchester, WY 82837

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Addressee (Name, Street, City, State, & ZIP Code™)

- 8 Road 5407
Farmington, NM 87401
- 8 Road 5472
Farmington, NM 87401
- 800 Municipal Dr
Farmington, NM 87401-2003
- 9 Road 5470 NBU 3037
Farmington, NM 87401
- 9405 Amberglen Blvd
Austin, TX 78727
- PO Box 1837
Farmington, NM 87401-1837
- PO Box 331
Farmington, NM 87401
- PO Box 3408
Farmington, NM 87401

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1. **PO Box 6734**
Farmington, NM 87499
2. **10 Road 5470**
Farmington, NM 87401-1443
3. **10 Road 5500 NBU 3054 B 10**
Farmington, NM, 87401
4. **100 S Oliver Dr**
Artes, NM 87410-2400
5. **10600 Holly NE Ave**
Albuquerque, NM 87122
6. **11 Road 5468**
Farmington, NM 87401-1477
7. **12 Road 5467**
Farmington, NM 87401-1420
8. **12 Road 5467 NBU 3041A**
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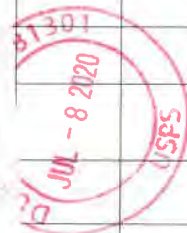
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1. PO Box 1072
Flora Vista, NM 87415
2. PO Box 1775
Farmington, NM 87491
3. PO Box 331
Farmington, NM 87499
4. PO Box 3468
Farmington, NM 87451
5. PO Box 5073
Farmington, NM, 87499-5073
6. PO Box 52
Bloomfield, NM 87413
7. PO Box 5444
Farmington, NM 87499
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TABLE 1
PROPERTY OWNERS WITHIN 1/3 MILE RADIUS
FORMER GIANT BLOOMFIELD REFINERY
BLOOMFIELD, NEW MEXICO
WESTERN REFINING SOUTHWEST, INC.

Parcel Number	Owner Address	Owner City, State, Zip Code	Owner Name	Physical Address	Property Type
2069169453340	10 ROAD 5468	FARMINGTON, NM 87401-0000	DELGADO OTONIEL A ET AL	10 ROAD 5468	RESIDENTIAL
2069169458305	10 ROAD 5470	FARMINGTON, NM 874011443	CHARLEY ANDY	10 ROAD 5470	RESIDENTIAL
2069169508379	10 ROAD 5500 NBU 3054 B 10	FARMINGTON, NM 87401	REYNOLDS LINDA M ET AL	5 ROAD 5466	RESIDENTIAL
2069169498379	10 ROAD 5500 NBU 3054 B 10	FARMINGTON, NM 87401	REYNOLDS LINDA M ET AL	7 ROAD 5466	RESIDENTIAL
2069169520373	10 ROAD 5500 NBU 3054 B 10	FARMINGTON, NM 87401	REYNOLDS LINDA	10 ROAD 5500	RESIDENTIAL
2069169523355	10 ROAD 5500 NBU 3054 B 10	FARMINGTON, NM 87401	BENTON DOROTHY	18 ROAD 5500	RESIDENTIAL
2069169520373	10 ROAD 5500 NBU 3054 B 10	FARMINGTON, NM 87401	REYNOLDS LINDA	10 ROAD 5500	RESIDENTIAL
2069169520387	100 S OLIVER DR	AZTEC, NM 87410-2400	SAN JUAN COUNTY	ROAD 5500	EXEMPT
2070169133362	100 S OLIVER DR	AZTEC, NM 87410-2400	SAN JUAN COUNTY BOARD OF COUNTY COMMISSION	17 ROAD 5500	EXEMPT
2070169152362	100 S OLIVER DR	AZTEC, NM 87410-2400	SAN JUAN COUNTY	38 ROAD 5468 #1 - 16	EXEMPT
2069169520387	100 S OLIVER DR	AZTEC, NM 87410-2400	SAN JUAN COUNTY	ROAD 5500	EXEMPT
2070169114482	10600 HOLLY NE AVE	ALBUQUERQUE, NM 87122	PASCETTI INVESTMENTS LLC	5734 US 64	COMMERCIAL
2069169441320	11 ROAD 5468	FARMINGTON, NM 87401-1477	GARCIA ERASTO AND LIDIA	11 ROAD 5468	RESIDENTIAL
2069169388340	12 ROAD 5467	FARMINGTON, NM 87401-1420	STARK ALFRED E	12 ROAD 5467	RESIDENTIAL
2069169431320	12 ROAD 5467 NBU 3041A	FARMINGTON, NM 87401-1420	STARK ALFRED E AND ALBERTA M	9 ROAD 5468	RESIDENTIAL
2069169458272	1216 CHACO	FARMINGTON, NM 87401-7004	MONTOYA ROBERT AND TERESA C	12 ROAD 5472	RESIDENTIAL
2069169505406	13 ROAD 5203	BLOOMFIELD, NM 87413	CODDINGTON GAIL AND CODDINGTON TOMMY	US 64	VACANT LAND
2069169458320	13 ROAD 5468	FARMINGTON, NM 87401	ARREOLA JORGE R AND BERTHA M	13 ROAD 5468	RESIDENTIAL
2069169473272	13 ROAD 5481	FARMINGTON, NM 87401-5315	SANCHEZ SYLVIA SARA	13B ROAD 5481	RESIDENTIAL
2069169473286	13A ROAD 5481	FARMINGTON, NM 87401	SANCHEZ SYLVIA SARA	13 ROAD 5481	RESIDENTIAL
2069169463355	14 ROAD 5466	FARMINGTON, NM 87401	SEGOVIA JUAN AND LIDIA M	14 ROAD 5466	RESIDENTIAL
2069169503320	14 ROAD 5472	FARMINGTON, NM 87401-1493	BENCOMO JOE J AND DORA	21 ROAD 5468	RESIDENTIAL
2069169483272	14 ROAD 5472	FARMINGTON, NM 87401-1493	BENCOMO JOE J AND DORO	14 ROAD 5472	RESIDENTIAL
2069169493272	14 ROAD 5472	FARMINGTON, NM 87401-1493	BENCOMO JESUS J AND DORA	18 ROAD 5472	RESIDENTIAL
2069169483320	14 ROAD 5472	FARMINGTON, NM 87401-1493	BENCOMO JESUS J AND DORA	15 ROAD 5468	RESIDENTIAL
2069169493305	16 ROAD 5470	FARMINGTON, NM 87401	SEARCY CECIL E AND LINDA J	16 ROAD 5470	RESIDENTIAL
2069169493286	17 A ROAD 5470	FARMINGTON, NM 87401-1490	MUNOZ JOSE AND ARACELY	17 ROAD 5470 #A	RESIDENTIAL
2069170311124	17 ROAD 3332	AZTEC, NM 87410-0000	COOPER DALLAS	59 ROAD 5490	RESIDENTIAL
2069170279040	17 ROAD 3332	AZTEC, NM 87410	COOPER DALLAS AND HELEN	ROAD 5490	VACANT LAND
2069169483286	17 ROAD 5470	FARMINGTON, NM 87401	SINGLETON SHERMAN AND HELEN TRUST/WESTERBEEK DALE A AND GONZALEZ VARGAS CL	17 ROAD 5470	RESIDENTIAL
2069169503305	18 ROAD 5470	FARMINGTON, NM 87401-1443	CHACON ALFONSO J AND MARIA	18 ROAD 5470	RESIDENTIAL
2069169503286	19 ROAD 5470	FARMINGTON, NM 87401-1490	RUIZ JAIME AND MARTHA	19 ROAD 5470	RESIDENTIAL
2069169503272	19 ROAD 5472 NBU 3038	FARMINGTON, NM 87401-1442	BRADSHAW DANIEL AND DEBRA	20 ROAD 5472	RESIDENTIAL

TABLE 1
PROPERTY OWNERS WITHIN 1/3 MILE RADIUS

FORMER GIANT BLOOMFIELD REFINERY
BLOOMFIELD, NEW MEXICO
WESTERN REFINING SOUTHWEST, INC.

Parcel Number	Owner Address	Owner City, State, Zip Code	Owner Name	Physical Address	Property Type
2069169274436	1900 DALROCK RD	ROWLETT, TX 75088	NOBLE ENERGY PRODUCTION INC	5802 US 64 #A	COMMERCIAL
2069169416342	2 ROAD 5468	FARMINGTON, NM 87401-0000	WESTBROOK IRA KYRK AND VICKY L	2 ROAD 5468	RESIDENTIAL
2069169441305	20 RD 5470	FARMINGTON, NM 87401-1443	BUSTOS DANIEL	8 ROAD 5470	RESIDENTIAL
2069169483305	20 RD 5470	FARMINGTON, NM 87401-1443	BUSTOS DANIEL	14 ROAD 5470	RESIDENTIAL
2069169523320	20 RD 5470	FARMINGTON, NM 87401-1443	EGR INVESTMENTS	25 ROAD 5468	RESIDENTIAL
2069169523286	20 ROAD 5470	FARMINGTON, NM 87401-1443	BUSTOS DANIEL	ROAD 5470	VACANT LAND
2069169473305	20 ROAD 5470	FARMINGTON, NM 87401	BUSTOS DANIEL	12 ROAD 5470	RESIDENTIAL
2069169513305	20 ROAD 5470	FARMINGTON, NM 87401-1443	BUSTOS DANIEL	20 ROAD 5470	RESIDENTIAL
2069169523305	20 ROAD 5470	FARMINGTON, NM 87401	BUSTOS J DANIEL	ROAD 5470	VACANT LAND
2069169271509	20 ROAD 5490	FARMINGTON, NM 87401	RAMIREZ RAMON H AND CAROLINA	20 ROAD 5490	RESIDENTIAL
2069170284108	2020 N 21ST PLACE	PHOENIX, AZ 85006	COLE CHARLES P	56 ROAD 5490	VACANT LAND
2069170284093	2020 N 21ST PLACE	PHOENIX, AZ 85006	COLE NADINE M	54 ROAD 5490	VACANT LAND
2069170284124	2020 N 21ST PLACE	PHOENIX, AZ 85006	COLE CHARLES P AND NADINE M	60 ROAD 5490	VACANT LAND
2069169513286	21 ROAD 5470	FARMINGTON, NM 87401-0000	BUCHLA ANDREA MARIE	21 ROAD 5470	RESIDENTIAL
2069169525412	2102 N LEE AVE	FARMINGTON, NM 87402-4414	CLAYTON RICHARD F AND LAVEAN	US 64	VACANT LAND
2069169458286	2102 N LEE AVE	FARMINGTON, NM 87402-4414	CLAYTON RICHARD F AND LAVEAN	3 ROAD 5470	RESIDENTIAL
2069169523272	22 ROAD 5472	FARMINGTON, NM 87401	BUSTOS SHON	22 ROAD 5472	RESIDENTIAL
2069170313108	221 HWY 172	DURANGO, CO 81303	BROWN KEVIN	57 ROAD 5490	RESIDENTIAL
2069169351308	224 ROAD 3950	FARMINGTON, NM 87401	HUIISH ROBERT S	ROAD 5467	VACANT LAND
2069169427320	228 ROAD 4800	BLOOMFIELD, NM 87413	SLAVIN ROBERT L AND ANN L	7 ROAD 5468	RESIDENTIAL
2069169513320	23 ROAD 5468	FARMINGTON, NM 87401	MARTINEZ MIKE P AND HENRIETTA M	23 ROAD 5468	RESIDENTIAL
2069169405320	24819 CR 43	GREELY, CO 80631	KESTER MICHAEL E AND LAURETTE	17 ROAD 5467	RESIDENTIAL
2069169416320	24819 CR 43	GREELY, CO 80631	KESTER MICHAEL E AND LAURETTE	ROAD 5468	VACANT LAND
2069169405305	24819 CR 43	GREELY, CO 80631	KESTER MICHAEL E AND LAURETTE	19 ROAD 5467	RESIDENTIAL
2069169405272	25 ROAD 5467	FARMINGTON, NM 87401-0000	TALAMANTE JOAQUIN ET AL	25 ROAD 5467	RESIDENTIAL
2069170250019	28 ROAD 5490	FARMINGTON, NM 87401	PALOMINO RAMON JR AND MONTOYA MARIA JO A	19 ROAD 5488	RESIDENTIAL
2069169463340	371 ANGEL ROAD	CORRALES, NM 87048	ANDREW T AND ANNA M	12 ROAD 5468	RESIDENTIAL
2069169473340	371 ANGEL ROAD	CORRALES, NM 87048	ANNA ET AL	14 ROAD 5468	RESIDENTIAL
2069169513355	4 ROAD 5466	FARMINGTON, NM 87401	THOMASON WAYNE AND CINDY K ATTN CALKINS	4 ROAD 5466	RESIDENTIAL
2069169427305	4 ROAD 5470	FARMINGTON, NM 87401	MEDRANO ALONSO	4 ROAD 5470	RESIDENTIAL
2069169416272	4 ROAD 5472	FARMINGTON, NM 87401	LOPEZ SERVANDO AND FUENTES GALAN VERONIC	4 ROAD 5472	RESIDENTIAL
2069169493320	42 ROAD 5295	FARMINGTON, NM 87401-0000	MAHAN JOE C	19 ROAD 5468	RESIDENTIAL
2070169148508	446 ROAD 3000	AZTEC, NM 87410-9502	BASIN PROPERTIES INC	5726 US 64	COMMERCIAL
2069170313093	53 ROAD 5490	FARMINGTON, NM 87401	PIERCE DAN L AND TILYNN	53 ROAD 5490	RESIDENTIAL
2069169445392	5740 LOS ARCOS DR	FARMINGTON, NM 87402	WHITE HIGHWAY 64 LLC	5773 US 64	COMMERCIAL
2069169465398	5764 US 64	FARMINGTON, NM 87401	MOORE WAYLAND ETAL	5765 US 64	RESIDENTIAL
2069169455396	5765 US 64	FARMINGTON, NM 87401	MOORE WAYLAND ETAL	5769 US 64	COMMERCIAL
2069169338414	5792 US 64	FARMINGTON, NM 87401-0000	5792 HIGHWAY 64 LLC	5792 US 64	COMMERCIAL
2069169305495	5795 US 64	FARMINGTON, NM 87401	15 ROAD 5490 LLC ATTN MORRIS YOUNG	15 ROAD 5490	RESIDENTIAL

TABLE 1
PROPERTY OWNERS WITHIN 1/3 MILE RADIUS

FORMER GIANT BLOOMFIELD REFINERY
BLOOMFIELD, NEW MEXICO
WESTERN REFINING SOUTHWEST, INC.

Parcel Number	Owner Address	Owner City, State, Zip Code	Owner Name	Physical Address	Property Type
20691693319452	5795 US 64	FARMINGTON, NM 87401	15 ROAD 5490 LLC ATTN MORRIS YOUNG	ROAD 5490	VACANT LAND
20691693319452	5795 US 64	FARMINGTON, NM 87401	15 ROAD 5490 LLC ATTN MORRIS YOUNG	ROAD 5490	VACANT LAND
20691693306417	5796 US 64	FARMINGTON, NM 87401-0000	5796 US 64 LLC ATTN MORRIS YOUNG	5796 US 64	COMMERCIAL
2069169287353	5801 US 64	FARMINGTON, NM 87401	OFFERLE TYLER W AND ELIZABETH L	5803 US 64	RESIDENTIAL
2069169289301	5801 US 64	FARMINGTON, NM 87401	OFFERLE TYLER W AND ELIZABETH L	5801 US 64	RESIDENTIAL
2070170132066	6251 COLLEGE BLVD STE A	FARMINGTON, NM 87402	UNITED STATES OF AMERICA US DEPT OF INTERIOR	ROAD 5569	EXEMPT
20691693339438	6411 MULLIGANS RD	FARMINGTON, NM 87402	ALDRICH CARL DAVID JR	5790 US 64	COMMERCIAL
2069170274003	6635 CLUB VILLA RD	PARKER , CO 80134	ARCHULETA TRUJILLO ROSE TRUST	ROAD 5490	VACANT LAND
2069169357355	8 ROAD 5467	FARMINGTON, NM 87401	STARK JEANNE A	4 ROAD 5467	RESIDENTIAL
2069169406342	8 ROAD 5467	FARMINGTON, NM 87401	STARK JEANNE A	9A ROAD 5467	RESIDENTIAL
2069169431272	8 ROAD 5472	FARMINGTON, NM 87401	BARRERA CRISTINA ORTEGA ET UX ET AL	8 ROAD 5472	RESIDENTIAL
2070169114511	800 MUNICIPAL DR	FARMINGTON, NM 87401-2663	CITY OF FARMINGTON	5734 US 64 #A	EXEMPT
2069169431305	9 ROAD 5470 NBU 3037	FARMINGTON, NM 87401	HAMILL CHARLIE C AND LORROLLEE C	6 ROAD 5470	RESIDENTIAL
2069169441286	9 ROAD 5470 NBU 3037	FARMINGTON, NM 87401	HAMILL CHARLIE C AND LORROLLEE	9 ROAD 5470	RESIDENTIAL
2070169082508	9400 AMBERGLEN BLVD	AUSTIN, TX 78729	FLINT ENERGY SERVICES INC ATTN AECOM ACC	5736 US 64	COMMERCIAL
2069169274483	P O BOX 1837	FARMINGTON, NM 87499-1837	MAURER CAREY AND CONNY	14 ROAD 5490	RESIDENTIAL
2069169423388	P O BOX 331	FARMINGTON, NM 87499	RHAMES CARL TRUST	5775 US 64	COMMERCIAL
2069169483355	P O BOX 3468	FARMINGTON, NM 87499	MONTOYA BENNIE R AND SUSIE B	10 ROAD 5466	RESIDENTIAL
2069169502355	PO BOX 1072	FLORA VISTA, NM 87415	DELGADO ADRIAN AND MARISOL	6 ROAD 5466	RESIDENTIAL
2070169016508	PO BOX 1775	FARMINGTON, NM 87499	LIBBY S MAX ETAL	US 64	VACANT LAND
2069169411379	PO BOX 331	FARMINGTON, NM 87499-0331	RHAMES CARL TRUSTEES	1 ROAD 5467	COMMERCIAL MIX
2069169485401	PO BOX 331	FARMINGTON, NM 87499	RHAMES CARL AND DONNA L REVOCABLE TRUST	5761 US 64	VACANT LAND
2069169354377	PO BOX 331	FARMINGTON, NM 87499-0331	RHAMES CARL TRUSTEES	5785 US 64	COMMERCIAL
2069169475400	PO BOX 331	FARMINGTON, NM 87499-0331	RHAMES CARL TRUSTEES	5763 US 64	COMMERCIAL MIX
2069169445371	PO BOX 331	FARMINGTON, NM 87499-0331	RHAMES CARL TRUSTEES	23 ROAD 5466	RESIDENTIAL
2069169483340	PO BOX 3468	FARMINGTON, NM 87499-3468	MONTOYA BENNIE R AND SUSIE J	16 ROAD 5468	RESIDENTIAL
2069169493340	PO BOX 3468	FARMINGTON, NM 87499	MONTOYA BENNIE R AND SUSIE	18 ROAD 5468	RESIDENTIAL
2069169493355	PO BOX 3468	FARMINGTON, NM 87499	MONTOYA BENNIE R	8 ROAD 5466	RESIDENTIAL
2069169523340	PO BOX 3468	FARMINGTON, NM 87499	MONTOYA BENNIE R AND SUSIE B	24 ROAD 5468	RESIDENTIAL
2069169503340	PO BOX 3468	FARMINGTON, NM 87499-3468	MONTOYA BENNIE R AND SUSIE J	20 ROAD 5468	RESIDENTIAL
2069169513340	PO BOX 3468	FARMINGTON, NM 87499	MONTOYA BENNIE R AND SUSIE	22 ROAD 5468	RESIDENTIAL
2069169305453	PO BOX 5073	FARMINGTON, NM 874995073	VILLALOBOS JESUS	11 ROAD 5490	RESIDENTIAL MIX
2069169450352	PO BOX 5073	FARMINGTON, NM 874995073	VILLALOBOS JESUS ET AL	20 ROAD 5466	MH_PARK
2069169422342	PO BOX 52	BLOOMFIELD, NM 87413	DEGARCIA EMETERIA RIOS	4 ROAD 5468	RESIDENTIAL
2069169473355	PO BOX 5444	FARMINGTON, NM 87499	BORJA JOSE L AND HERCILIA	12 ROAD 5466	RESIDENTIAL
2069170304057	PO BOX 614	RANCHESTER, WY 82839	DEROMEDI ROCKY J		VACANT LAND
2069169432340	PO BOX 6724	FARMINGTON, NM 87499	VILLALOBOS ARACELY	6 ROAD 5468	RESIDENTIAL



Timestamp
7/9/2020 16:56:35 (CDT)

City
Durango

Final Pub Date
7/12/2020 0:00:00 (CDT)

State
CO

Ad Number
GCI0449414

ZIP Code
81301

Publication
FARMINGTON DAILY TIMES

Your Name
KEVIN PERROTTI

Market
EL PASO

Email Address
kperrotti@localiq.com

Delivery Method
Both

Number of Affidavits Needed
1

Customer Email
ccook@ltenv.com

Customer Name
LT Environmental

Customer Phone Number
9703851096

Customer Address
see next page

Account Number (If Known)
174502

Name
LT Environmental

Street
845 E. 2nd Ave.

THE DAILY TIMES

AFFIDAVIT OF PUBLICATION

Ad No.
GCI0449414

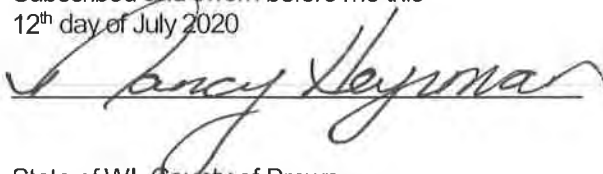
LT ENVIRONMENTAL
845 E 2ND AVE
DURANGO CO 81310

I, being duly sworn say: **THE DAILY TIMES**, a daily newspaper of general circulation published in English at Farmington, said county and state, and that the hereto attached Legal Notice was published in a regular and entire issue of the said **DAILY TIMES**, a daily newspaper duly qualified for the purpose within the State of New Mexico for publication and appeared in the internet at The Daily Times web site on the following days(s):

7/12/2020



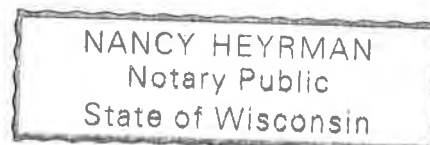
Legal Clerk
Subscribed and sworn before me this
12th day of July 2020



State of WI, County of Brown
NOTARY PUBLIC

5.15.23

My Commission Expires



Ad#: GCI0449414
PO: DISCHARGE PLAN APPLICATION
of Affidavits: 1

Western Refining Southwest, Inc. (Western), 111 County Road 4990, Bloomfield, NM 87413, Mr. Greg McCartney (419-421-2338, gjmccartney@marathonpetroleum.com) announces the submittal of a new Discharge Plan application for the Former Giant Bloomfield Refinery (Site) located in the NW/4 of Section 27 and the SW/4 of Section 22, Township 29 North, Range 12 West, San Juan County, New Mexico. The Site is located at the northeast corner of United States Highway 64 and County Road 3500, approximately five miles west of Bloomfield, New Mexico.

Groundwater remediation activities have been ongoing at this Site since 1988. Limited areas of impacted groundwater remain at the Site and will be addressed with this Discharge Plan and an updated Stage 2 Abatement Plan. The Discharge Plan addresses how contaminated groundwater will be abated and potentially discharged to the subsurface. Groundwater may be collected in recovery wells at the Site, then discharged after treatment. The existing remediation system at the Site can process up to 5,000,000 gallons of water per year. Abatement of recovered water will be completed with activated carbon prior to discharge. Additionally, the Discharge Plan discusses the risk and management of potential spills, leaks, and other accidental discharges to the surface during groundwater abatement so that freshwater is protected. Water-quality standards listed in 20.6.2.3103 of the New Mexico Administrative Code (NMAC) will not be exceeded in groundwater or surface water as a result of the discharge of abated groundwater originating from the Site.

Groundwater most likely to be affected by the discharge is at an average depth of approximately 40 feet below the land surface with total dissolved solids concentrations of approximately 1,500 milligrams per liter (mg/L). Water quality of this shallow groundwater is generally poor, with naturally occurring elevated concentrations of sulfate and several metals. Groundwater in the area was also affected by the Former Lee Acres Landfill, a Superfund Site administered by the United States Environmental Protection Agency (EPA) and Bureau of Land Management (BLM).

The New Mexico Oil Conservation Division (NMOCD) shall post notice on its website and distribute notice of the submittal of the Discharge Plan Application to affected local, state, federal, tribal, or pueblo government agency, political subdivisions, ditch associations, and land grants as identified by the department, and persons on a general and facility-specific list maintained by the department who have requested notice of discharge permit applications. Interested persons may obtain information, submit comments, and request to be placed on a facility-specific mailing list for future notices. The NMOCD will also accept comments and statements of interest regarding the application and will create a facility-specific mailing list for persons who wish to receive future notices.

Additional information can be obtained from the NMOCD project contact:

Mr. Carl Chavez
New Mexico Oil Conservation Division
Energy Minerals and Natural Resources Division
5200 Oakland Avenue NE
Albuquerque, NM 87113
(505) 660-7923

Western Refining Southwest, Inc. (Western), 111 County Road 4990, Bloomfield, NM 87413, El Sr. Greg McCartney (419-421-2338, gjmccartney@marathonpetroleum.com) anuncia la entrega de una nueva solicitud de Plan de Descarga para el sitio de la antigua refinería Giant Bloomfield Refinery (Sitio) ubicada en el cuarto noroeste de la Sección 27 y el cuarto suroeste de la Sección 22, Township 29 North, Range 12 West, Condado San Juan, Nuevo México. El Sitio está ubicado en la esquina noreste de la carretera US Highway 64 y County Road 3500, aproximadamente cinco millas al oeste de Bloomfield, Nuevo México.

Las actividades de remediación de agua subterránea han sido continuas en este Sitio desde 1988. Aún quedan áreas limitadas de agua subterránea afectada en el Sitio y serán abordadas con este Plan de Descarga y un Plan de Reducción Etapa 2 actualizado. El Plan de Descarga aborda cómo el agua subterránea contaminada será reducida y potencialmente descargada a la subsuperficie. El agua subterránea puede ser recolectada en pozos de recuperación en el Sitio, y luego descargada después de ser tratada. El sistema de remediación existente en el Sitio puede procesar hasta 5,000,000 galones de agua por año. La disminución del agua recuperada será completada con carbón activado antes de ser descargada. Adicionalmente, el Plan de Descarga discute el riesgo y el manejo de derrames y fugas potenciales, y otras descargas accidentales a la superficie durante la disminución del agua subterránea para proteger el agua dulce. Los estándares de calidad del agua listados en 20.6.2.3103 del Código Administrativo de Nuevo México (NMAC, por su sigla en inglés) no serán excedidos en agua subterránea o agua superficial como resultado de la descarga del agua subterránea disminuida que origina del Sitio.

El agua subterránea con mayor probabilidad de ser afectada por la descarga se encuentra a una profundidad promedio de aproximadamente 40 pies bajo la superficie del suelo con una concentración total de sólidos disueltos de aproximadamente 1,500 miligramos por litro (mg/L). La calidad de esta agua subterránea poco profunda generalmente no es buena, con concentraciones naturales elevadas de sulfato y varios metales. El agua subterránea del área también fue afectada por el antiguo basurero Lee Acres Landfill, un Sitio Superfund administrado por la Agencia de Protección Ambiental de EU (EPA, por su sigla en inglés) y la Oficina de Administración de Tierras (BLM, por su sigla en inglés).

El New Mexico Oil Conservation Division (NMOCD) colocará un aviso en su sitio web y distribuirá aviso de la entrega de la Solicitud para el Plan de Descarga a las entidades y las personas afectadas: agencias gubernamentales locales, estatales, federales, tribales, o de pueblo, subdivisiones políticas, asociaciones de zanjas, y concesiones de tierras según sean identificadas por el departamento, y personas en una lista general y específica a las instalaciones, mantenida por el departamento, que han pedido ser notificadas de las solicitudes de permisos para descarga. Las personas interesadas pueden obtener información, entregar comentarios, y pedir ser colocados en una lista de correo específica a las instalaciones para futuros avisos. El NMOCD también aceptará comentarios y declaraciones de interés con respecto a la solicitud y creará una lista de correo específica a las instalaciones para las personas que deseen recibir futuros avisos.

Puede obtener información adicional del contacto del proyecto NMOCD:

Mr. Carl Chavez
New Mexico Oil Conservation Division
Energy Minerals and Natural Resources Division
5200 Oakland Avenue NE
Albuquerque, NM 87113
(505) 660-7923

From: [Chavez, Carl J. EMNRD](#)
To: : "Sandoval, Alexandra J., DGF"; Wunder, Matthew, DGF; "Shije, Suzette, IAD"; ddapr@nmda.nmsu.edu; James_Amos@blm.gov; psisneros@nmag.gov; r@rthicksconsult.com; src.chris@earthlink.net; nmparks@state.nm.us; Blaine, Tom, OSE; marieg@nmoga.org; Fetner, William, NMENV; lazarus@glorietageo.com; perry@glorietageo.com; cjoyner@fs.fed.us; Pierard, Kevin, NMENV; bsg@garbhall.com; Hunter, Michelle, NMENV; claudette.horn@pnm.com; ekendrick@montand.com; pam@ipanm.org; Bratcher, Mike, EMNRD; Kelly, Jonathan, EMNRD; Powell, Brandon, EMNRD; Torres, Susan, EMNRD; Polak, Tiffany, EMNRD; sgarcia-richard@slo.state.nm.us
Cc: Tulk, Laura, EMNRD; Lujan, Elizabeth, EMNRD; gjmccartney@marathonpetroleum.com; Devin Hencmann; Stuart Hyde
Subject: Marathon Petroleum Company, L.P. Former Giant Bloomfield Refinery (GW-40) in San Juan County: WQCC Application Administratively Complete
Date: Monday, June 22, 2020 4:03:00 PM

Ladies and Gentlemen:

The New Mexico Oil Conservation Division (OCD) recently deemed the Water Quality Control Commission- WQCC Former Giant Bloomfield Refinery Discharge Permit Abatement Application for Marathon Petroleum Company, L.P. application to be “**administratively complete**” under 20.6.2.3108 NMAC.

The OCD public notice is scheduled to post in the Sunday, July 12, 2020 editions of the Farmington Daily Times and Albuquerque Journal. OCD will allow at least 30-days from the date of the newspaper postings for the public comment period to be completed. The OCD draft permit will be posted on or before the post date. The final discharge permit, if issued, is subject to completion of the technical review process with additional notice to stakeholders. If there are any changes made by OCD to the original draft permit, if issued, OCD will allow for an additional 30-days for the appeal period to elapse under 20.6.2.3112 NMAC before permit issuance.

New Discharge Permit Marathon Petroleum Company LP (GW-40) Former Giant Bloomfield Refinery (6/22/2020)

Western Refining Southwest, Inc.: **Abatement of Groundwater and Vadose Zone Contamination** under Water Quality Control Commission- WQCC 20.6.2.3114 NMAC Discharge Permit Application

The former Giant Bloomfield Refinery (GBR) Facility is located in the NW/4 of Section 27, and SW/4 of Section 22, Township 29 North, Range 12 West, NMPM, San Juan County, New Mexico. The facility may be found driving toward the northeast corner of United States Highway 64 and County Road 3500, approximately five miles west of Bloomfield, New Mexico.

[Administratively Complete \(6/19/2020\)](#)

[Description \(6/22/2020\)](#)

[Application \(5/13/2020\)](#)

Discharge Permit (Draft to be posted soon)

[Public Notice \(Estimated OCD date: Sunday 7/12/2020\)](#)

Please click on the OCD draft discharge permit web link at <http://www.emnrd.state.nm.us/OCD/env-draftpublicetc.html> to keep apprised of updates and for access to OCD Online Web based information resources.

Please contact me at (505) 660-7923 or E-mail: CarlJ.Chavez@state.nm.us if you have questions or require further assistance.

Thank you.

Mr. Carl J. Chavez, CHMM (#13099)
New Mexico Oil Conservation Division (Albuquerque Office)
Energy Minerals and Natural Resources Department
5200 Oakland Avenue, NE
Albuquerque, New Mexico 87113
Ph. (505) 660-7923
E-mail: CarlJ.Chavez@state.nm.us

“Why not prevent pollution, minimize waste to reduce operating costs, reuse or recycle, and move forward with the rest of the Nation?” (To see how, go to: <http://www.emnrd.state.nm.us/OCD> and see “Publications”)

State of New Mexico
Energy, Minerals and Natural Resources Department

Michelle Lujan Grisham
Governor

Sarah Cottrell Propst
Cabinet Secretary

Todd E. Leahy, JD, PhD
Deputy Secretary

Adrienne Sandoval
Director, Oil Conservation Division



Sent via e-mail only

June 19, 2020

Gregory McCartney
Senior Environmental Professional
Marathon Petroleum Company LP
539 South Main Street, Room M-7081
Findlay, OH 45840

**RE: New Discharge Permit
Former Giant Bloomfield Refinery (GW-40) NW/4 of Section 27, and SW/4 of Section
22, Township 29 North, Range 12 West, NMPM, San Juan County, New Mexico**

Dear Mr. McCartney:

The New Mexico Oil Conservation Division (OCD) has received Marathon Petroleum Company LP's (Western) application and initial filing fee dated May11, 2020, for a new discharge permit (GW-40) for the former Giant Bloomfield Refinery (GBR) located on the northeast corner of United States Highway 64 and County Road 3500, approximately five miles west of Bloomfield, New Mexico.

The initial submittal for an Abatement of Groundwater and Vadose Zone Contamination under 20.6.2.3114 NMAC Discharge Permit provided the required information in order to deem the application "**administratively complete.**"

Therefore, the New Mexico Water Quality Control Commission regulations (WQCC) notice requirements of 20.6.2.3108 NMAC must be satisfied and demonstrated to the OCD. OCD will provide public notice pursuant to the WQCC notice requirements of 20.6.2.3108 NMAC to determine if there is any public interest.

If you have any questions or comments in this regard, please contact me at (505) 660-7923 or by email at carlj.chavez@state.nm.us. Thank you.

Respectfully,

Carl J. Chavez
Environmental Engineer



LT Environmental, Inc.

848 East Second Avenue
Durango, Colorado 81301
970.385.1096

May 11, 2020

Mr. Carl Chavez
New Mexico Oil Conservation Division
Energy Minerals and Natural Resources Division
1220 South Saint Francis Drive
Santa Fe, NM 87505

**RE: Proposed Public Notice and Participation Plan for Discharge Permit
Western Refining Southwest, Inc.
Former Giant Bloomfield Refinery
Discharge Permit GW-040
Bloomfield, New Mexico**

Dear Mr. Chavez:

LT Environmental, Inc. (LTE), on behalf of Western Refining Southwest, Inc. (Western), proposes the following plan to meet the requirements of 20.6.2.3108 of the New Mexico Administrative Code (NMAC) for public notice and participation associated with a new Discharge Permit application for the Former Giant Bloomfield Refinery (the Site). The public notice will be implemented within 30 days of the New Mexico Oil Conservation Division (NMOCD) determining that the Discharge Permit application is administratively complete.

PUBLIC NOTICE

Western will provide written notice of the Discharge Permit Application by the following methods per Subsection B of 20.6.2.3108 NMAC.

- One sign measuring at least 2 feet by 3 feet will be displayed at the Site in a place conspicuous to the public. One additional 2 feet by 3 feet sign will be displayed at a location off of the Site in a location conspicuous to the public. Both signs will be in both English and Spanish languages.
- Written notice will be given by mail or electronic mail in English and Spanish to owners of all properties within 1/3-mile distance from the property boundary of the Site. A list of surrounding property owners is included in Table 1.
- A synopsis of the notice will be given in English and Spanish languages in a display ad at least 3 inches by 4 inches in a newspaper of general circulation (not in a classified or legal advertisements section) in the Bloomfield, New Mexico area. Western proposes to publish the NMOCD approved notice in the *Farmington Daily Times*, a newspaper of general circulation in San Juan County, New Mexico.

SCHEDULE

Western will issue public notice within 30 days after the NMOCD determines the Discharge Permit application is administratively complete. This includes public notice to the newspapers and mailings to the appropriate surface owners identified for distribution. The newspaper publication will run for 1 business day.

Within 15 days of completion of the public notice requirements, Western will submit proof of notice to the NMOCD that includes an affidavit of mailings and a list of property owners, proof of publication in a newspaper, and an affidavit of posting.

PROPOSED NOTICE

The proposed public notice is presented below and includes the items specified in Subsection F of 20.6.2.3108.

Western Refining Southwest, Inc. (Western), 111 County Road 4990, Bloomfield, NM 87413, announces the submittal of a new Discharge Plan application for the Former Giant Bloomfield Refinery (Site) located in the NW/4 of Section 27 and the SW/4 of Section 22, Township 29 North, Range 12 West, San Juan County, New Mexico. The Site is located at the northeast corner of United States Highway 64 and County Road 3500, approximately five miles west of Bloomfield, New Mexico.

The Discharge Plan addresses how contaminated groundwater will be abated and potentially discharged to the subsurface. Groundwater may be collected in recovery wells at the Site, then discharged after treatment. The existing remediation system at the Site can process up to 5,000,000 gallons of water per year. Abatement of recovered water will be completed with activated carbon prior to discharge. Additionally, the Discharge Plan discusses the risk and management of potential spills, leaks, and other accidental discharges to the surface during groundwater abatement so that freshwater is protected. Water-quality standards listed in 20.6.2.3103 of the New Mexico Administrative Code (NMAC) will not be exceeded in groundwater or surface water as a result of the discharge of abated groundwater originating from the Site.

Groundwater most likely to be affected by the discharge is at a depth of approximately 30 to 70 feet below the land surface with total dissolved solids concentrations ranging from 1,990 to 3,450 milligrams per Liter (mg/L). Water quality of this shallow groundwater is generally poor, with naturally occurring elevated concentrations of sulfate and several metals. Groundwater in the area was also affected by the Former Lee Acres Landfill, a Superfund Site administered by the United States Environmental Protection Agency (EPA) and Bureau of Land Management (BLM).

The NMOCD shall post notice on its website and distribute notice of the submittal of the Discharge Plan Application to affected local, state, federal,

tribal, or pueblo government agency, political subdivisions, ditch associations, and land grants as identified by the department, and persons on a general and facility-specific list maintained by the department who have requested notice of discharge permit applications. Interested persons may obtain information, submit comments, and request to be placed on a facility-specific mailing list for future notices. The NMOCD will also accept comments and statements of interest regarding the application and will created a facility-specific mailing list for persons who wish to receive future notices.

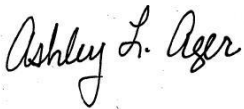
Additional information can be obtained from the NMOCD project contact:

Mr. Carl Chavez
New Mexico Oil Conservation Division
Energy Minerals and Natural Resources Division
1220 South Saint Francis Drive
Santa Fe, NM 87505
(505) 660-7923

LTE appreciates your review and comment on this proposed public notice and participation plan.

Sincerely,

LT ENVIRONMENTAL, INC.



Ashley L. Ager, M.S., P.G.
Senior Geologist



Stuart Hyde, LG
Project Geologist

cc: Greg McCartney, Western Refining Southwest, Inc.

Attachments:

Table 1 List of Surrounding Property Owners

TABLE 1
PROPERTY OWNERS WITHIN 1/3 MILE RADIUS

**FORMER GIANT BLOOMFIELD REFINERY
BLOOMFIELD, NEW MEXICO
WESTERN REFINING SOUTHWEST, INC.**

Parcel Number	Owner Name	Physical Address	Property Type	Owner Address	Owner City, State, Zip Code
2069169405320	KESTER MICHAEL E AND LAURETTE	17 ROAD 5467	RESIDENTIAL	24819 CR 43	GREELY, CO 80631
2069169441305	BUSTOS DANIEL	8 ROAD 5470	RESIDENTIAL	20 RD 5470	FARMINGTON, NM 87401-1443
2069169503320	BENCOMIO JOE J AND DORA	21 ROAD 5468	RESIDENTIAL	14 ROAD 5472	FARMINGTON, NM 87401-1493
2069169505406	CODDINGTON GAIL AND CODDINGTON TOMMY	US 64	VACANT LAND	13 ROAD 5203	BLOOMFIELD, NM 87413
2069169523286	BUSTOS DANIEL	ROAD 5470	VACANT LAND	20 ROAD 5470	FARMINGTON, NM 87401-1443
2069170313093	PIERCE DAN L AND TILYNN	53 ROAD 5490	RESIDENTIAL	53 ROAD 5490	FARMINGTON, NM 87401
2069169357355	STARK JEANNE A	4 ROAD 5467	RESIDENTIAL	8 ROAD 5467	FARMINGTON, NM 87401
2069169458320	ARREOLA JORGE R AND BERTHA M	13 ROAD 5468	RESIDENTIAL	13 ROAD 5468	FARMINGTON, NM 87401
2069169463340	ATENCIO ANDREW T AND ANNA M	12 ROAD 5468	RESIDENTIAL	371 ANGEL ROAD	CORRALES, NM 87048
2069169483272	BENCOMIO JOE J AND DORO	14 ROAD 5472	RESIDENTIAL	14 ROAD 5472	FARMINGTON, NM 87401-1493
2069169483286	SINGLETON SHERMAN AND HELEN TRUST/WESTERBEEK DALE A AND GONZALEZ VARGAS CL	17 ROAD 5470	RESIDENTIAL	17 ROAD 5470	FARMINGTON, NM 87401
2069169513320	MARTINEZ MIKE P AND HENRIETTA M	23 ROAD 5468	RESIDENTIAL	23 ROAD 5468	FARMINGTON, NM 87401
2069169520387	SAN JUAN COUNTY	ROAD 5500	EXEMPT	100 S OLIVER DR	AZTEC, NM 87410-2400
2069170362105	GIANT INDUSTRIES INC ATTN WESTERN REFINI	ROAD 350	VACANT LAND	1250 W WASHINGTON ST STE 101	TEMPE, AZ 85281
2069169271509	RAMIREZ RAMON H AND CAROLINA	20 ROAD 5490	RESIDENTIAL	20 ROAD 5490	FARMINGTON, NM 87401
2069169473286	SANCHEZ SYLVIA SARA	13 ROAD 5481	RESIDENTIAL	13A ROAD 5481	FARMINGTON, NM 87401
2070169114511	FARMINGTON CITY OF	5734 US 64 #A	EXEMPT	800 MUNICIPAL DR	FARMINGTON, NM 87401-2663
2070169133362	SAN JUAN COUNTY BOARD OF COUNTY COMMISSI	17 ROAD 5500	EXEMPT	100 S OLIVER DR	AZTEC, NM 87410-2400
2069169406342	STARK JEANNE A	9A ROAD 5467	RESIDENTIAL	8 ROAD 5467	FARMINGTON, NM 87401
2069169411379	RHAMES CARL TRUSTEES	1 ROAD 5467	COMMERCIAL MIX	PO BOX 331	FARMINGTON, NM 87499-0331
2069169422342	DEGARCIA EMETERIA RIOS	4 ROAD 5468	RESIDENTIAL	PO BOX 52	BLOOMFIELD, NM 87413
2069169427305	MEDRANO ALONSO	4 ROAD 5470	RESIDENTIAL	4 ROAD 5470	FARMINGTON, NM 87401
2069169473305	BUSTOS DANIEL	12 ROAD 5470	RESIDENTIAL	20 ROAD 5470	FARMINGTON, NM 87401
2069169493286	MUNOZ JOSE AND ARACELY	17 ROAD 5470 #A	RESIDENTIAL	17 A ROAD 5470	FARMINGTON, NM 87401-1490
2069170274003	ARCHULETA TRUJILLO ROSE TRUST	ROAD 5490	VACANT LAND	6635 CLUB VILLA RD	PARKER, CO 80134
2069169305453	VILLALOBOS JESUS	11 ROAD 5490	RESIDENTIAL MIX	PO BOX 5073	FARMINGTON, NM 874995073
2069169431272	BARRERA CRISTINA ORTEGA ET UX ET AL	8 ROAD 5472	RESIDENTIAL	8 ROAD 5472	FARMINGTON, NM 87401
2069169432340	VILLALOBOS ARACELY	6 ROAD 5468	RESIDENTIAL	PO BOX 6724	FARMINGTON, NM 87499
2070169114482	PASCETTI INVESTMENTS LLC	5734 US 64	COMMERCIAL	10600 HOLLY NE AVE	ALBUQUERQUE, NM 87122
2069169463355	SEGOVIA JUAN AND LIDIA M	14 ROAD 5466	RESIDENTIAL	14 ROAD 5466	FARMINGTON, NM 87401
2069169463502	WESTERN REFINING SOUTHWEST INC	748 ROAD 350	COMMERCIAL	1250 W WASHINGTON ST STE 101	TEMPE, AZ 85281
2069169463502	WESTERN REFINING SOUTHWEST INC	748 ROAD 350	COMMERCIAL	1250 W WASHINGTON ST STE 101	TEMPE, AZ 85281
2069169475400	RHAMES CARL TRUSTEES	5763 US 64	COMMERCIAL MIX	PO BOX 331	FARMINGTON, NM 87499-0331
2069169503305	CHACON ALFONSO J AND MARIA	18 ROAD 5470	RESIDENTIAL	18 ROAD 5470	FARMINGTON, NM 87401-1443
2069169508379	REYNOLDS LINDA M ET AL	5 ROAD 5466	RESIDENTIAL	10 ROAD 5500 NBU 3054 B 10	FARMINGTON, NM 87401
2069169441320	GARCIA ERASO AND LIDIA	11 ROAD 5468	RESIDENTIAL	11 ROAD 5468	FARMINGTON, NM 87401-1477
2069169483340	MONTOYA BENNIE R AND SUSIE J	16 ROAD 5468	RESIDENTIAL	PO BOX 3468	FARMINGTON, NM 87499-3468
2069169485401	RHAMES CARL AND DONNA L REVOCABLE TRUST	5761 US 64	VACANT LAND	PO BOX 331	FARMINGTON, NM 87499
2069169274483	MAURER CAREY AND CONNY	14 ROAD 5490	RESIDENTIAL	P O BOX 1837	FARMINGTON, NM 87499-1837

TABLE 1
PROPERTY OWNERS WITHIN 1/3 MILE RADIUS

**FORMER GIANT BLOOMFIELD REFINERY
BLOOMFIELD, NEW MEXICO
WESTERN REFINING SOUTHWEST, INC.**

Parcel Number	Owner Name	Physical Address	Property Type	Owner Address	Owner City, State, Zip Code
2069169306417	5796 US 64 LLC ATTN MORRIS YOUNG	5796 US 64	COMMERCIAL	5796 US 64	FARMINGTON, NM 87401-0000
2069169354377	RHAMES CARL TRUSTEES	5785 US 64	COMMERCIAL	PO BOX 331	FARMINGTON, NM 87499-0331
2069169378450	GIANT INDUSTRIES INC ATTN WESTERN REFINI	748 ROAD 350	COMMERCIAL	1250 W WASHINGTON ST STE 101	TEMPE, AZ 85281
2069169450352	VILLALOBOS JESUS ET AL	20 ROAD 5466	MH_PARK	PO BOX 5073	FARMINGTON, NM 874995073
2069169473355	BORIA JOSE L AND HERCILIA	12 ROAD 5466	RESIDENTIAL	PO BOX 5444	FARMINGTON, NM 87499
2069169493272	BENCOMO JESUS J AND DORA	18 ROAD 5472	RESIDENTIAL	14 ROAD 5472	FARMINGTON, NM 87401-1493
2069169338414	5792 HIGHWAY 64 LLC	5792 US 64	COMMERCIAL	5792 US 64	FARMINGTON, NM 87401-0000
2069169416272	LOPEZ SERVANDO AND FUENTES GALAN VERONIC	4 ROAD 5472	RESIDENTIAL	4 ROAD 5472	FARMINGTON, NM 87401
2069169445392	WHITE HIGHWAY 64 LLC	5773 US 64	COMMERCIAL	5740 LOS ARCOS DR	FARMINGTON, NM 87402
2069169458305	CHARLEY ANDY	10 ROAD 5470	RESIDENTIAL	10 ROAD 5470	FARMINGTON, NM 874011443
2069169473272	SANCHEZ SYLVIA SARA	138 ROAD 5481	RESIDENTIAL	13 ROAD 5481	FARMINGTON, NM 87401-5315
2069169483305	BUSTOS DANIEL	14 ROAD 5470	RESIDENTIAL	20 RD 5470	FARMINGTON, NM 87401-1443
2069169493340	MONTOKA BENNIE R AND SUSIE	18 ROAD 5468	RESIDENTIAL	PO BOX 3468	FARMINGTON, NM 87499
2069169493355	MONTOKA BENNIE R	8 ROAD 5466	RESIDENTIAL	PO BOX 3468	FARMINGTON, NM 87499
2069169498379	REYNOLDS LINDA M ET AL	7 ROAD 5466	RESIDENTIAL	10 ROAD 5500 NBU 3054 B 10	FARMINGTON, NM 87401
2069169503272	BRADSHAW DANIEL AND DEBRA	20 ROAD 5472	RESIDENTIAL	19 ROAD 5472 NBU 3038	FARMINGTON, NM 87401-1442
2069169287353	OFFERLE TYLER W AND ELIZABETH L	5803 US 64	RESIDENTIAL	5801 US 64	FARMINGTON, NM 87401
2069169339438	ALDRICH CARL DAVID JR	5790 US 64	COMMERCIAL	6411 MULLIGANS RD	FARMINGTON, NM 87402
2069169513355	THOMASON WAYNE AND CINDY K ATTN CALKINS	4 ROAD 5466	RESIDENTIAL	4 ROAD 5466	FARMINGTON, NM 87401
2069169520373	REYNOLDS LINDA	10 ROAD 5500	RESIDENTIAL	10 ROAD 5500 NBU 3054 B 10	FARMINGTON, NM 87401
2069169453340	DELGADO OTONIEL A ET AL	10 ROAD 5468	RESIDENTIAL	10 ROAD 5468	FARMINGTON, NM 87401-0000
2069169525412	CLAYTON RICHARD F AND LAVEAN	US 64	VACANT LAND	2102 N LEE AVE	FARMINGTON, NM 87402-4414
2069169416320	KESTER MICHAEL E AND LAURETTE	ROAD 5468	VACANT LAND	24819 CR 43	GREELY, CO 80631
2069170311124	COOPER DALLAS	59 ROAD 5490	RESIDENTIAL	17 ROAD 3332	AZTEC, NM 87410-0000
2069169458272	MONTOKA ROBERT AND TERESA C	12 ROAD 5472	RESIDENTIAL	1216 CHACO	FARMINGTON, NM 87401-7004
2069169465398	MOORE WAYLAND ETAL	5765 US 64	RESIDENTIAL	5764 US 64	FARMINGTON, NM 87401
2069169523272	BUSTOS SHON	22 ROAD 5472	RESIDENTIAL	22 ROAD 5472	FARMINGTON, NM 87401
2069169523355	BENTON DOROTHY	18 ROAD 5500	RESIDENTIAL	10 ROAD 5500 NBU 3054 B 10	FARMINGTON, NM 87401
2069170284108	COLE CHARLES P	56 ROAD 5490	VACANT LAND	2020 N 21ST PLACE	PHOENIX, AZ 85006
2069170362046	GIANT INDUSTRIES INC ATTN WESTERN REFINI	748 ROAD 350	VACANT LAND	1250 W WASHINGTON ST STE 101	TEMPE, AZ 85281
2069169340464	GIANT INDUSTRIES INC ATTN WESTERN REFINI	5788 US 64	COMMERCIAL	1250 W WASHINGTON ST STE 101	TEMPE, AZ 85281
2069169416342	WESTBROOK IRA KYRK AND VICKY L	2 ROAD 5468	RESIDENTIAL	2 ROAD 5468	FARMINGTON, NM 87401-0000
2069169483355	MONTOKA BENNIE R AND SUSIE B	10 ROAD 5466	RESIDENTIAL	P O BOX 3468	FARMINGTON, NM 87499
2069169523320	EGR INVESTMENTS	25 ROAD 5468	RESIDENTIAL	20 RD 5470	FARMINGTON, NM 87401-1443
2069169523340	MONTOKA BENNIE R AND SUSIE B	24 ROAD 5468	RESIDENTIAL	PO BOX 3468	FARMINGTON, NM 87499
2069170279040	COOPER DALLAS AND HELEN	ROAD 5490	VACANT LAND	17 ROAD 3332	AZTEC, NM 87410
2070169148508	BASIN PROPERTIES INC	5726 US 64	COMMERCIAL	446 ROAD 3000	AZTEC, NM 87410-9502
2069169305495	15 ROAD 5490 LLC ATTN MORRIS YOUNG	15 ROAD 5490	RESIDENTIAL	5795 US 64	FARMINGTON, NM 87401
2069169388340	STARK ALFRED E	12 ROAD 5467	RESIDENTIAL	12 ROAD 5467	FARMINGTON, NM 87401-1420
2069169423388	RHAMES CARL TRUST	5775 US 64	COMMERCIAL	P O BOX 331	FARMINGTON, NM 87499

TABLE 1
PROPERTY OWNERS WITHIN 1/3 MILE RADIUS

**FORMER GIANT BLOOMFIELD REFINERY
BLOOMFIELD, NEW MEXICO
WESTERN REFINING SOUTHWEST, INC.**

Parcel Number	Owner Name	Physical Address	Property Type	Owner Address	Owner City, State, Zip Code
2069169427320	SLAVIN ROBERT L AND ANN L	7 ROAD 5468	RESIDENTIAL	228 ROAD 4800	BLOOMFIELD, NM 87413
2069169503286	RUIZ JAIME AND MARTHA	19 ROAD 5470	RESIDENTIAL	19 ROAD 5470	FARMINGTON, NM 87401-1490
2069169503340	MONTOYA BENNIE R AND SUSIE J	20 ROAD 5468	RESIDENTIAL	PO BOX 3468	FARMINGTON, NM 87499-3468
2069169319452	15 ROAD 5490 LLC ATTN MORRIS YOUNG	ROAD 5490	VACANT LAND	5795 US 64	FARMINGTON, NM 87401
2069169319452	15 ROAD 5490 LLC ATTN MORRIS YOUNG	ROAD 5490	VACANT LAND	5795 US 64	FARMINGTON, NM 87401
2069169351308	HUIJSH ROBERT S	ROAD 5467	VACANT LAND	224 ROAD 3950	FARMINGTON, NM 87401
2069169274436	NOBLE ENERGY PRODUCTION INC ATTN KE ANDR	5802 US 64 #A	COMMERCIAL	1900 DALROCK RD	ROWLETT, TX 75088
2069169289301	OFFERLE TYLER W AND ELIZABETH L	5801 US 64	RESIDENTIAL	5801 US 64	FARMINGTON, NM 87401
2069169361500	GIANT INDUSTRIES INC ATTN WESTERN REFINI	748 ROAD 350	VACANT LAND	1250 W WASHINGTON ST STE 101	TEMPE, AZ 85281
2069169431305	HAMILL CHARLIE C AND LORROLLEE C	6 ROAD 5470	RESIDENTIAL	9 ROAD 5470 NBU 3037	FARMINGTON, NM 87401
2069169455396	MOORE WAYLAND ETAL	5769 US 64	COMMERCIAL	5765 US 64	FARMINGTON, NM 87401
2069169513305	BUSTOS DANIEL	20 ROAD 5470	RESIDENTIAL	20 ROAD 5470	FARMINGTON, NM 87401-1443
2069169513340	MONTOYA BENNIE R AND SUSIE	22 ROAD 5468	RESIDENTIAL	PO BOX 3468	FARMINGTON, NM 87499
2069170250019	PALOMINO RAMON JR AND MONTOYA MARIA JO A	19 ROAD 5488	RESIDENTIAL	28 ROAD 5490	FARMINGTON, NM 87401
2069169405272	TALAMANTE JOAQUIN ET AL	25 ROAD 5467	RESIDENTIAL	25 ROAD 5467	FARMINGTON, NM 87401-0000
20691694441286	HAMILL CHARLIE C AND LORROLLEE	9 ROAD 5470	RESIDENTIAL	9 ROAD 5470 NBU 3037	FARMINGTON, NM 87401
2069169431320	STARK ALFRED E AND ALBERTA M	9 ROAD 5468	RESIDENTIAL	12 ROAD 5467 NBU 3041A	FARMINGTON, NM 87401-1420
2069169523305	BUSTOS J DANIEL	ROAD 5470	VACANT LAND	20 ROAD 5470	FARMINGTON, NM 87401
2069170313108	BROWN KEVIN	57 ROAD 5490	RESIDENTIAL	221 HWY 172	DURANGO, CO 81303
2069169445371	RHAMES CARL TRUSTEES	23 ROAD 5466	RESIDENTIAL	PO BOX 331	FARMINGTON, NM 87499-0331
2069170284093	COLE NADINE M	54 ROAD 5490	VACANT LAND	2020 N 21ST PLACE	PHOENIX, AZ 85006
2069170284124	COLE CHARLES P AND NADINE M	60 ROAD 5490	VACANT LAND	2020 N 21ST PLACE	PHOENIX, AZ 85006
2069170304057	DEROMEDI ROCKY J		VACANT LAND	PO BOX 614	RANCHESTER, WY 82839
2069170462066	WESTERN REFINING SOUTHWEST INC	748 ROAD 350	VACANT LAND	1250 W WASHINGTON ST STE 101	TEMPE, AZ 85281
2070169016508	LIBBY S MAX ETAL	US 64	VACANT LAND	PO BOX 1775	FARMINGTON, NM 87499
2069169473340	ATENCIO ANNA ET AL	14 ROAD 5468	RESIDENTIAL	371 ANGEL ROAD	CORRALES, NM 87048
2069169483320	BENCOMO JESUS J AND DORA	15 ROAD 5468	RESIDENTIAL	14 ROAD 5472	FARMINGTON, NM 87401-1493
2069169493305	SEARCY CECIL E AND LINDA J	16 ROAD 5470	RESIDENTIAL	16 ROAD 5470	FARMINGTON, NM 87401
2069169502355	DELGADO ADRIAN AND MARISOL	6 ROAD 5466	RESIDENTIAL	PO BOX 1072	FLORA VISTA, NM 87415
2069170462066	WESTERN REFINING SOUTHWEST INC	748 ROAD 350	VACANT LAND	1250 W WASHINGTON ST STE 101	TEMPE, AZ 85281
2070169082508	FLINT ENERGY SERVICES INC ATTN AECOM ACC	5736 US 64	COMMERCIAL	9400 AMBERGLEN BLVD	AUSTIN, TX 78729
2070169152362	SAN JUAN COUNTY	38 ROAD 5468 #1 - 16	EXEMPT	100 S OLIVER DR	AZTEC, NM 87410-2400
2070170132066	UNITED STATES OF AMERICA US DEPT OF INTE	ROAD 5569	EXEMPT	6251 COLLEGE BLVD STE A	FARMINGTON, NM 87402
2099199900900	FEDERAL	70 ROAD 3536	EXEMPT	---	---
2069169405305	KESTER MICHAEL E AND LAURETTE	19 ROAD 5467	RESIDENTIAL	24819 CR 43	GREELY, CO 80631
2069169458286	CLAYTON RICHARD F AND LAVEAN	3 ROAD 5470	RESIDENTIAL	2102 N LEE AVE	FARMINGTON, NM 87402-4414
2069169493320	MAHAN JOE C	19 ROAD 5468	RESIDENTIAL	42 ROAD 5295	FARMINGTON, NM 87401-0000
2069169513286	BUCHLA ANDREA MARIE	21 ROAD 5470	RESIDENTIAL	21 ROAD 5470	FARMINGTON, NM 87401-0000
2069169520387	SAN JUAN COUNTY	ROAD 5500	EXEMPT	100 S OLIVER DR	AZTEC, NM 87410-2400
2069169520373	REYNOLDS LINDA	10 ROAD 5500	RESIDENTIAL	10 ROAD 5500 NBU 3054 B 10	FARMINGTON, NM 87401



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of WSP

DISCHARGE PERMIT APPLICATION

**FORMER GIANT BLOOMFIELD
REFINERY
BLOOMFIELD, NEW MEXICO**

MAY 2020

Prepared for:

**WESTERN REFINING SOUTHWEST, INC.
111 COUNTY ROAD 4990
BLOOMFIELD, NEW MEXICO 87413**

Prepared by:

**LT ENVIRONMENTAL, INC.
848 East Second Avenue
Durango, Colorado 81301
970.385.1096**

DISCHARGE PERMIT APPLICATION

FORMER GIANT BLOOMFIELD REFINERY
BLOOMFIELD, NEW MEXICO

Project Number: 095820002

Prepared by:

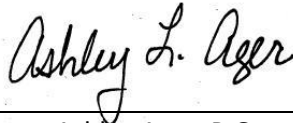


Stuart Hyde, LG
LTE Project Geologist

May 11, 2020

Date

Reviewed by:



Ashley Ager, P.G.
LTE Senior Geologist

May 11, 2020

Date

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FIGURES

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TABLE 2	GROUNDWATER ELEVATIONS AND THICKNESS OF PHASE-SEPARATED HYDROCARBONS
TABLE 3	2010 TO 2018 – ANNUAL COMPLIANCE GROUNDWATER LABORATORY ANALYTICAL RESULTS
TABLE 4	CLOSURE AND POST CLOSURE COST ESTIMATES

APPENDICES

APPENDIX A	BACKGROUND CONCENTRATIONS IN UPGRADIENT WELLS
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1.0 DISCHARGE PERMIT TYPE

Western Refining Southwest, Inc. (Western) proposes the potential discharge of water derived from wells at the inactive former Giant Bloomfield Refinery (GBR) in San Juan County, New Mexico. Monitoring and recovery wells were installed as part of site characterization activities and as a remedial action (groundwater recovery and treatment) to address groundwater contamination associated with historical releases of diesel fuel on the GBR property. For the purposes of this document, the “Site” is considered to be the lateral and vertical extents of contamination related to historical diesel-fuel releases originating from the GBR property. The “Facility” is considered the groundwater recovery and treatment system, as well as the existing water-discharge infrastructure, located on the GBR property.

Since 2015, no water has been discharged at the Facility. However, additional groundwater sampling is planned as part of additional characterization proposed for the Site per the *Stage 1 Abatement Plan* prepared by LT Environmental (LTE). Depending on the results of the additional sampling, the groundwater recovery and treatment system may be reactivated and require the discharge of treated effluent into the existing infiltration trenches located at the Site.

2.0 OPERATOR INFORMATION

The landowner, operator and legally responsible party is as follows:

Western Refining Southwest, Inc.
539 South Main Street, Room M-7081
Findlay, OH 45840
Phone: (419) 421-2338

Correspondence regarding this discharge plan should be directed to the local representative:

Gregory McCartney
Senior Environmental Professional
Marathon Petroleum Company LP
539 South Main Street, Room M-7081
Findlay, OH 45840
Phone: (419) 310-4888

3.0 LOCATION

The Facility is located on the northeast corner of United States Highway 64 and County Road 3500, approximately five miles west of Bloomfield, New Mexico, in the southwest quarter of Section 22 and the northwest quarter of Section 27, Township 29 North, Range 12 West in San Juan County, New Mexico (Figure 1).

4.0 LANDOWNER INFORMATION

The landowner, operator and legally responsible party is as follows:

Western Refining Southwest, Inc.
539 South Main Street, Room M-7081
Findlay, OH 45840
Phone: (419) 421-2338

5.0 FACILITY DESCRIPTION

The Facility consists of the former Giant Bloomfield Refinery storage tanks and equipment, as well as the remedial equipment installed for recovery, treatment, and discharge of groundwater from the Site (pumps, piping, and treatment system). The refinery operated from 1974 to 1982 and is presently inactive. A remediation system was installed in stages beginning in 1988 and has gradually been simplified over time. The remediation system was designed to treat groundwater affected by various releases during operation of the former refinery and periodic spills at the truck unloading facility. The remediation system consists of a series of groundwater monitoring wells, groundwater recovery wells, water treatment equipment, and treated-water infiltration trenches. During operation, the treatment system could process up to 5,000,000 gallons of water per year. Currently, the Facility and associated equipment is located within the GBR property boundary. The location of the current Facility equipment is shown on Figure 2.

6.0 STORED MATERIALS

The refinery is no longer in operation and there are no stored materials located at the Facility.

7.0 EFFLUENT SOURCES

The effluent will be derived from groundwater pumped from a series of recovery wells at the Site. Groundwater in several areas of the Site is impacted by petroleum hydrocarbons. However, the recovered water will be treated prior to discharge (see Section 8.0). Table 1 presents the analytical results of the influent and effluent water in 2015 prior to shut-down of the remediation system. Up to 420,000 gallons of water was previously treated and discharged per month.

8.0 WATER COLLECTION, TREATMENT, AND DISPOSAL

8.1 WATER COLLECTION

At the Facility, petroleum hydrocarbon-impacted groundwater and phase-separated hydrocarbons (PSH) may be pumped from the shallow aquifer through a series of recovery wells located within the formerly defined contaminant plume associated with the Site. Locations of previously used recovery wells are shown in Figure 2 and are identified by the acronym GRW (Giant Recovery Well), followed by a numerical designation. There may be solid filters in each recovery well enclosure to control deposition of solid contaminants in the system. Flow meters will be installed to monitor volumes of groundwater recovered.

8.2 WATER TREATMENT

Recovered water exhibiting dissolved phase contaminants and/or PSH above New Mexico Water Quality Control Commission (NMWQCC) regulatory standards require treatment to within applicable guidelines prior to discharge. A carbon adsorption process formerly was utilized for water treatment prior to discharge and is available for future use, if appropriate. This process removes contaminants from the groundwater by forcing it through tanks containing activated carbon treated to attract the contaminants. Figure 3 presents a simplified representation of the groundwater recovery and treatment system at the Site. Figure 4 details the carbon adsorption tank and associated piping used at the refinery.

8.2.1 Tank 102

Depending on the volume recovered, Tank 102 (capacity of 500 barrels, or 21,000 gallons) may be used as an intermediate storage tank for the water treatment system. The tank can store water before it is treated.

8.3 WATER DISCHARGE

Once treated, water can be discharged to an infiltration trench located within the Site boundary. Infiltration trenches consist of subsurface distribution systems placed within gravel packs. Water infiltrates into the surrounding strata and eventually makes its way to the shallow aquifer. Figure 5 illustrates a typical infiltration gallery. The return of treated water to the aquifer serves to recharge the aquifer.

9.0 PROPOSED MODIFICATION OF EXISTING COLLECTION, TREATMENT, AND DISPOSAL SYSTEMS

No modifications of the existing collection, treatment, and/or disposal systems are requested at this time. Following completion of a *Stage 1 Abatement Plan*, changes may be proposed in a *Stage 2 Abatement Plan*.

10.0 INSPECTION AND MAINTENANCE PLAN

When in operation, inspection and maintenance are an integral part of the remediation system. Inspection provides information critical to the safe and efficient operation of the system. Maintenance is key in the prevention of undesirable events and excessive downtime. Regular inspections are performed to assure safe and efficient operation. During operation, the system will be monitored on a regular basis during the work week. Observations will be recorded in a bound field logbook with the date, time, and person recording the information noted.

During operation, an inspection will be made weekly in the control building, at the storage tank, and each recovery well. All equipment will be inspected for leaks and malfunctions. The operator will be familiar with the location of underground lines and note any surface indication of underground leaks. Leaks of any size will be noted and repaired. Readings from all water meters will be observed and recorded in the logbook regularly, and comparisons to previous readings will be made. Abnormal meter readings can indicate problems within the system. On a semi-annual basis, the level of water and product is determined for each monitoring and recovery well. An electronic water/oil detection tape is used to determine levels. The data will be recorded in a logbook.

Maintenance of the Facility will include replacement of filters in well houses, lubrication of rotating equipment, air compressor oil changes, addition of nutrients as necessary, observations of unusual pump and motor noise, inspection of the carbon pre-filter, and repair of any equipment as required. Water volumes removed from each recovery well will be metered. Metered water volumes, as well as water levels, indicate the effectiveness of the well pump and controls. Efforts will be made to maintain consistent pumping rates.

An inspection and maintenance schedule and checklist will be provided with the *Stage 2 Abatement Plan*.

11.0 SPILLS AND RELEASE CONTINGENCY PLAN

In the event of an unplanned release of water or hydrocarbon at the Facility, the Western Project Manager should be notified and act as the response coordinator. If the Project Manager is not available, the next person noted in the following list of alternates should be notified.

INTERNAL EMERGENCY NOTIFICATIONS

- **24-hour Emergency Line:** 1-888-658-8006
- **Tommy D. Roberts – Facility Supervisor**
Mobile: 505-801-0421
Office: 505-632-4195
- **Frank Dooling - Operations**
Mobile: 505-634-6138
Office: 505-632-4142

EMERGENCY RESPONSE CONTRACTORS

- **EnviroTech Inc. / Emergency Spill Response Contractor**
5796 U.S. Highway 64
Farmington, New Mexico 87401
24 Hour Emergency Response: 1-800-362-1879
- **H2O Environmental / Emergency Spill Response Contractor**
2634 S Airport Blvd #2
Chandler, Arizona 85286
24 Hour Emergency Response: 480-855-5676

If it is determined that the release is 5 barrels or greater, the OCD will be notified and a written report submitted. Leaks occurring outside of tank containment berms should be contained or redirected so that they can be picked up by pumps or vacuum trucks and placed back in storage. In the event of a broken pipe, the leaking section should be isolated by closing necessary valves and shutting down pumps.

11.1 SPILL AND LEAK PREVENTION AND MONITORING

Leaks and spills are not likely; however, the potential does exist for these events. Tanks and piping are the most likely locations for leak and/or spills. Safeguards in place in the refinery include choice of construction materials, safety and shutdown devices, secondary containment, inspection and security.

11.1.1 Construction Materials

All piping is and will be constructed of PVC or other hydrocarbon and corrosion resistant plastic. Material choices for valves and controls include plastic, stainless steel, bronze and cast iron. All are suitable for water and hydrocarbon service. Storage Tank 102 is constructed of steel.

11.1.2 Safety and Shutdown Devices

All storage tanks are equipped with high- and low-level liquid sensors to detect breaches or overfills. Any treatment system installed may be equipped with an emergency shutoff.

11.1.3 Secondary Containment

Tank 102 has viable earthen secondary containment berms in place. The bermed area has a minimum liquid capacity of 1.5 times the total capacity of the tank contained within it. Berms are monitored and maintained to ensure effectiveness.

11.1.4 Inspection

During system operation, regular inspections will be performed during the work week. These inspections include looking for visual indications of leaks, checking tank levels, recording and comparing meter readings and checking the condition of pump seals and motors. Unusual conditions are noted in the logbook and reported to the Project Manager.

11.1.5 Security

The facility is entirely fenced with chain link or barbed wire. Gates are locked and access is limited to facility personnel and supervised visitors and contractors.

12.0 GEOLOGICAL/HYDROLOGICAL INFORMATION

The Facility and Site are located on weathered outcrops of Nacimiento Formation, which is comprised of shales, sandstones and siltstones of Cretaceous-Tertiary age. Immediately to the west of the Facility and on Western's property is a large unnamed arroyo, which is underlain by 30 to 60 feet of Quaternary alluvial sediments. Older Quaternary terrace deposits of cobbles and boulders are observed on the interfluvial ridges adjacent to the arroyo. These terrace deposits may have been utilized as fill on the refinery site. The San Juan River Valley is located south of the site and contains up to several hundred feet of alluvial fill.

The uppermost zone of ground water in the refinery area is unconfined to partially confined water table unit, which is hosted by the weathered, locally porous sandstones and shales of the Nacimiento Formation and arroyo alluvium. These units merge hydrologically with the San Juan River alluvium to the south. Figures 6 and 7 present generalized cross sections through the refinery site showing the relationship of the arroyo alluvium to bedrock. Major hydrogeologic features of the site are:

- An interconnected water table aquifer hosted by both valley and arroyo fill and the upper parts of the Nacimiento Formation;
- Ground water at a depth of 30 to 70 feet beneath the land surface;
- An upper water table surface generally conforming to topography, with ground water flow from north or northeast to south (towards the San Juan River) through the refinery area;
- Minor, local zones of perched ground water lying 5 to 10 feet above the water table.

Water levels and floating product thicknesses were measured in all wells at the Site during 2019. A record of these measurements is shown in Table 2. A groundwater contour map was prepared based on the static water levels of all the wells at the Site in November 2019 (Figure 8). This map is representative of static conditions of the aquifer because pumping currently is not being performed on wells at the Site. Where floating product was encountered, the product thickness has been multiplied by 0.8 and added to the measured water elevation. This calculation corrects for the difference in density between floating product and water.

12.1 BACKGROUND CONCENTRATIONS

As discussed in the *Stage 1 Abatement Plan* prepared for the Site (LTE, 2020), several constituents are present at the Site at concentrations exceeding NMWQCC standards. However, based on concentrations detected in wells hydrogeologically upgradient of the Site, elevated concentrations of several constituents are present due to the offsite migration of contaminants originating from the Lee Acres Landfill Superfund site. Specifically, chloride, chromium, iron, sulfate, and TDS concentrations are present in groundwater at and downgradient of the Lee Acres Landfill at concentrations above NMWQCC standards; however, these constituents were not considered during the remediation-selection process outlined in the *Record of Decision* for the Superfund site (EPA, 2004). In addition to these constituents, manganese (considered a COC for the Lee Acres Landfill Superfund site) also is found at concentrations above NMWQCC standards. These constituents have long been detected at the Site in upgradient wells GBR-32, GBR-48, GBR-49, and

GBR-50, located hydrogeologically upgradient of the source areas at the Site (identified on Figure 2) and downgradient of the Lee Acres Landfill Superfund site.

In June 2019, LTE performed a statistical analysis using ProUCL software (developed by the United States Environmental Protection Agency, or EPA) to develop “background” concentrations for the following constituents migrating onto the Site: chloride, chromium, iron, manganese, sulfate, and TDS. Table 3 presents the results of the statistical analysis and groundwater analytical results for these constituents detected between 2010 and 2018. Table 3 also presents the cleanup standards (or “remedial goals”) established for the Lee Acres Landfill Superfund site in their *Remedial Investigation Report* (BLM, 1992) and *Record of Decision* (EPA, 2004). Appendix B presents the assumptions and inputs used for the statistical analysis. Appendix B also includes a letter prepared by LTE summarizing our findings that was provided to the EPA for their five-year review of the Lee Acres Landfill Superfund site (conducted in 2019).

12.2 FLOODING POTENTIAL

The greatest threat to flooding of the Facility are the San Juan River (located less than one mile south of the site) and the unnamed arroyo located within the Site itself. History suggests flooding potential of the San Juan River is small. From 1904 until 1976, only 23 flood events (on individual streams, not concurrent on all streams) have been recorded. According to a study conducted by the New Mexico Floodplain Managers Association (2003), previous floods of the San Juan River resulted from general rainstorms, snowmelt augmented by rain, and from cloudburst storms. Rain floods usually occur during the months of September and October. This type of flood results from prolonged heavy rainfall over tributary areas and is characterized by high peak flows of moderate duration. Major floods (recurrence interval of 100 or more years) result from excessive snowmelt runoff generated in the watershed upstream from Bloomfield. Flood flows generated by snowmelt generally occur during the period from May through July. Snowmelt flooding is characterized by moderate peak flows, large volume and long duration, and marked diurnal fluctuation in flow. The refinery is elevated above the floodplain of the San Juan River, decreasing the chance of a river flood, such as the ones described above, from reaching the Facility.

The flooding potential of the arroyo is predicted to be low as well. Similar arroyos have been studied in detail near Farmington and are described as ephemeral in character, flowing only during periods of heavy rainfall (New Mexico Floodplain Managers Association, 2003). Furthermore, the arroyo’s influence on the Site and Facility has been decreased due to the construction of a new highway located between the arroyo and the refinery.

13.0 MONITORING AND REPORTING

When the Facility is in operation, influent/effluent and water samples will be collected on a monthly basis. Per the *Stage 1 Abatement Plan* (LTE, 2020) prepared for the Site, groundwater conditions also will be monitored through sampling of the existing Site monitoring wells. Based on the results of the Stage 1 sampling, a *Stage 2 Abatement Plan* and/or *Groundwater Monitoring Plan* will be prepared for the Site. At a minimum, appropriate wells will be gauged quarterly, with groundwater sampled for chemical analysis annually when the Facility is in operation. Constituents to be analyzed will be based on the results of the *Stage 1* and *Stage 2 Abatement Plans*.

A report of activities performed at the Facility will be prepared annually. The report will include an update of operations, analytical results, water levels, a potentiometric surface map, and discharge volume history. Reports and associated data will be retained by Western for a period of at least five years.

14.0 FACILITY CLOSURE AND POST CLOSURE PLAN

As described in Section 13.0 above, specific monitoring wells will be gauged quarterly, with groundwater sampled for chemical analysis annually when the Facility is in operation. Constituents to be analyzed will be based on the results of the *Stage 1* and *Stage 2 Abatement Plans*.

After completing abatement of groundwater contaminants originating from the Site to the standards proposed in the *Stage 2 Abatement Plan*, Western will cease active remedial actions and perform appropriate quarterly groundwater monitoring for at least two years (eight quarters) based on results at the time of proposed closure. During this period of monitoring, no maintenance activities are anticipated for the existing remediation system. Western will submit annual reports to the NMOCD documenting monitoring results. Once eight consecutive quarters with groundwater contaminants below applicable standards is documented, facility closure will be requested from the NMOCD that will include the following activities:

- Remove or plug all lines leading to and from groundwater recovery wells and injection lines so that a discharge can no longer occur at the Site.
- Remove all remediation system components from the Site, if applicable.
- Plug and abandon all monitoring wells associated with the Site.

Estimated costs for closure and post-closure activities are presented in Table 4.

15.0 PERMIT RENEWAL

The Facility discharge permit will expire five years after NMOCD approval and notification of this application. Western will prepare and submit an application for discharge permit renewal at least 120 days before the discharge permit expires. If the renewal application is submitted at least 120 day prior to expiration, then the existing discharge permit for the same activity shall not expire until the application for renewal has been approved or disapproved by NMOCD.

16.0 PERMIT MODIFICATIONS

In the case of Facility expansion, increase in discharge, and/or other significant modifications to the discharge of water, Western will notify NMOCD in writing for review and approval prior to implementing the modification. An application and a description of the requested modifications will be included in the written notice.

Modifications to abatement or monitoring plans prepared to address pre-existing contaminants associated with the Site (as of March 2020) also will be submitted to NMOCD in writing for review and approval. These modifications will not require an application and will not be subject to permit fees as described in Table 1 of 20.6.2.3114 NMAC. However, filing and/or review fees may be applied as presented in Table 2 of 20.6.2.3114 NMAC.

17.0 REFERENCES

New Mexico Floodplain Managers Association, 2003, A History of Floods and Flood Problems in New Mexico, LA Bond Associates, High Rolls, New Mexico, 144 p.

United States Bureau of Land Management (BLM). (1992). Remedial Investigation Report for the Lee Acres Landfill. Albuquerque: US Bureau of Land Management.

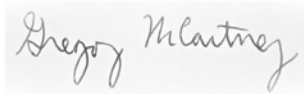
United States Environmental Protection Agency (EPA). (2004). Record of Decision for the Lee Acres Landfill Superfund Site, Farmington, New Mexico.

18.0 CERTIFICATION

WESTERN REFINING SOUTHWEST, INC.
GIANT BLOOMFIELD REFINERY
BLOOMFIELD, NEW MEXICO

I certify that the information provided in the application is true, accurate, and complete to the best of my knowledge, after reasonable inquiry.

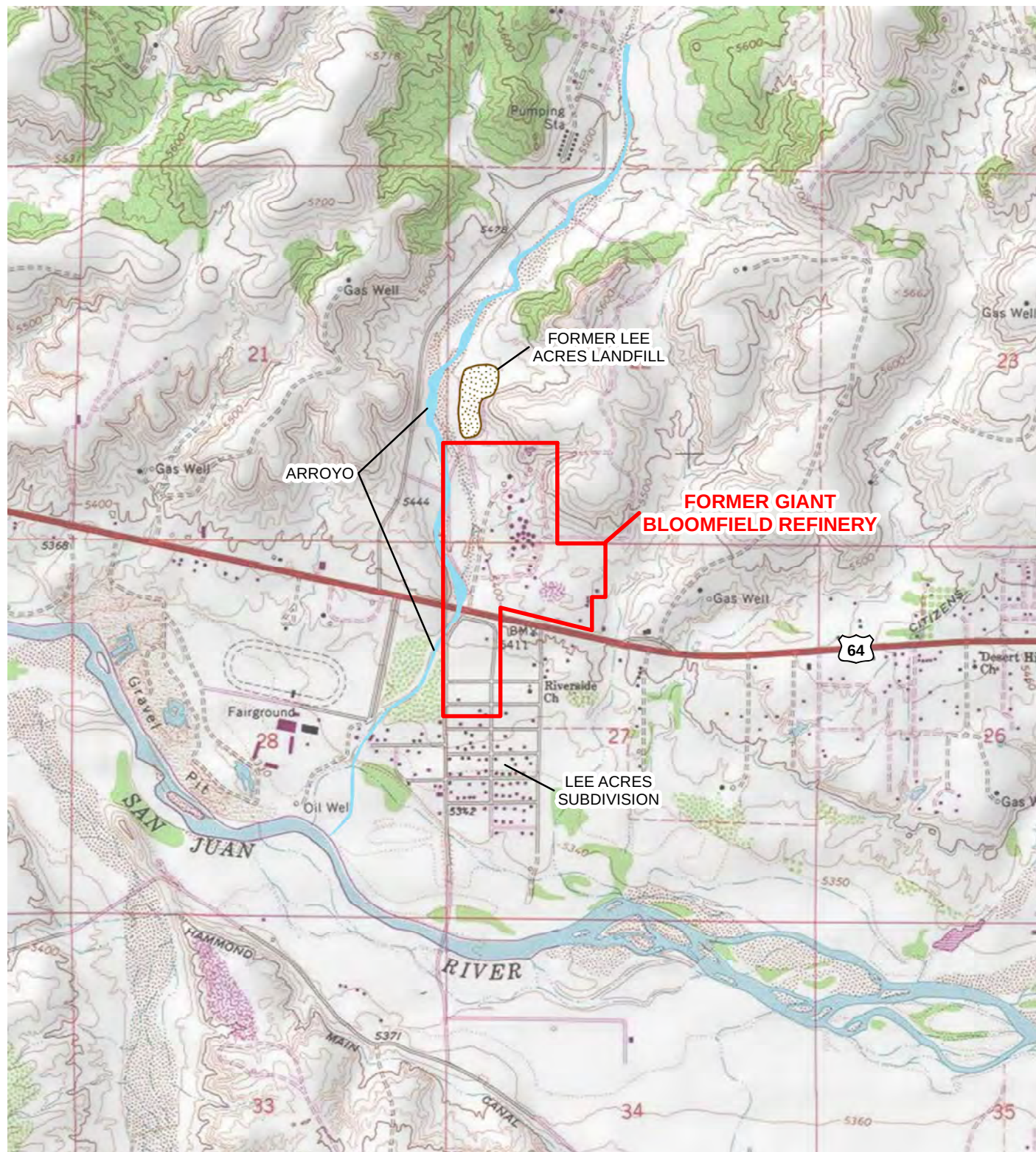
Signature:



Gregory McCartney
Senior Environmental Professional
gjmccartney@marathonpetroleum.com

May 11, 2020

Date



LEGEND

- SITE LOCATION
- ARROYO
- FORMER LEE ACRES LANDFILL

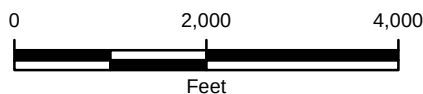


IMAGE COURTESY OF ESRI/USGS

FIGURE 1
SITE LOCATION MAP
 FORMER GIANT BLOOMFIELD REFINERY
 SW SEC 22 & NW SEC 27 T29N R12W
 SAN JUAN COUNTY, NEW MEXICO
 WESTERN REFINING SOUTHWEST, INC.



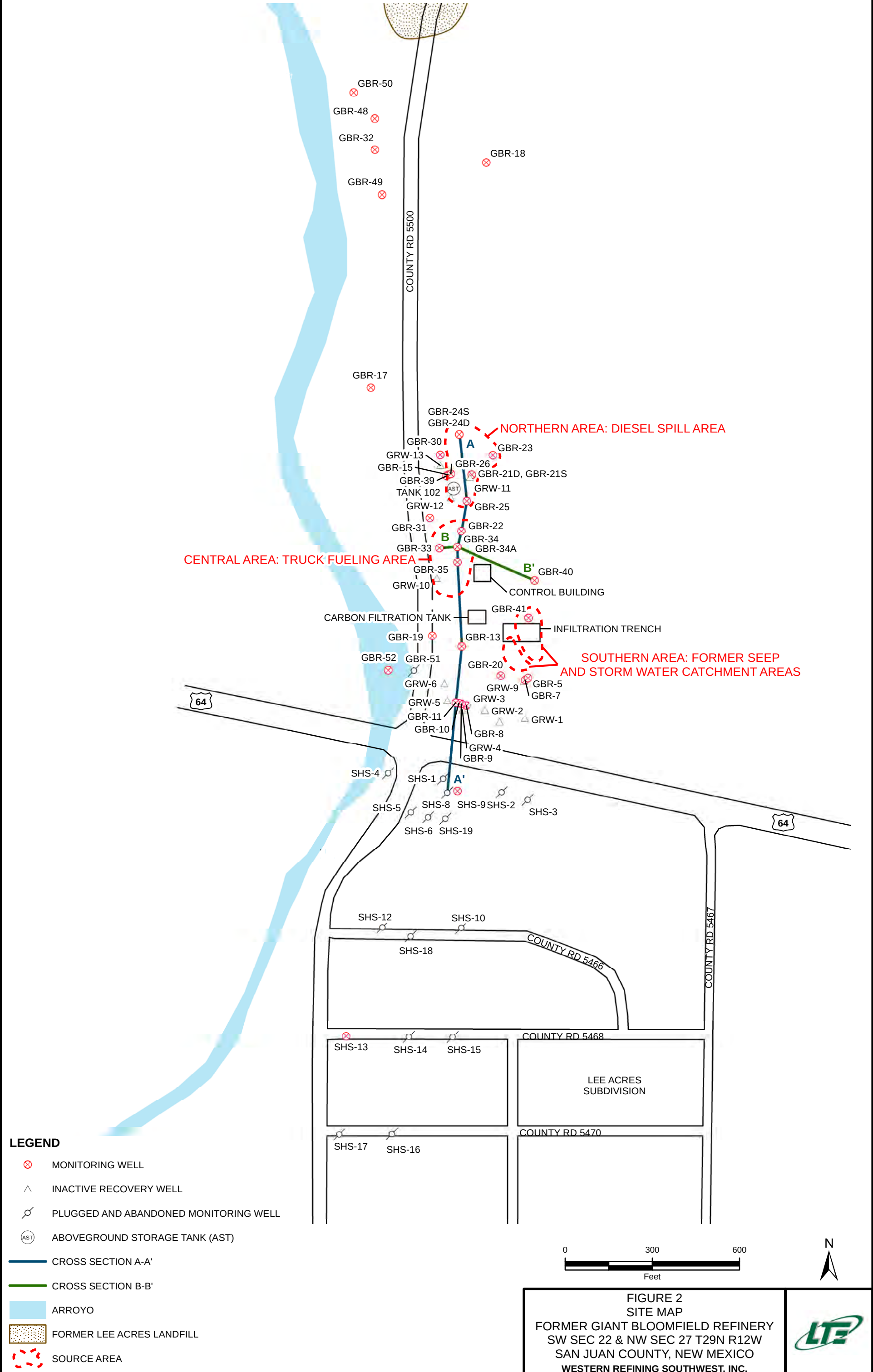


FIGURE 2
SITE MAP
FORMER GIANT BLOOMFIELD REFINERY
SW SEC 22 & NW SEC 27 T29N R12W
SAN JUAN COUNTY, NEW MEXICO
WESTERN REFINING SOUTHWEST, INC.



FIGURE 3

**SIMPLIFIED REPRESENTATION OF THE
GROUNDWATER RECOVERY, TREATMENT,
AND DISCHARGE SYSTEM**

FORMER GIANT BLOOMFIELD REFINERY
SW SEC 22 & NW SEC 27 T29N R12W
SAN JUAN COUNTY, NEW MEXICO
WESTERN REFINING SOUTHWEST, INC.

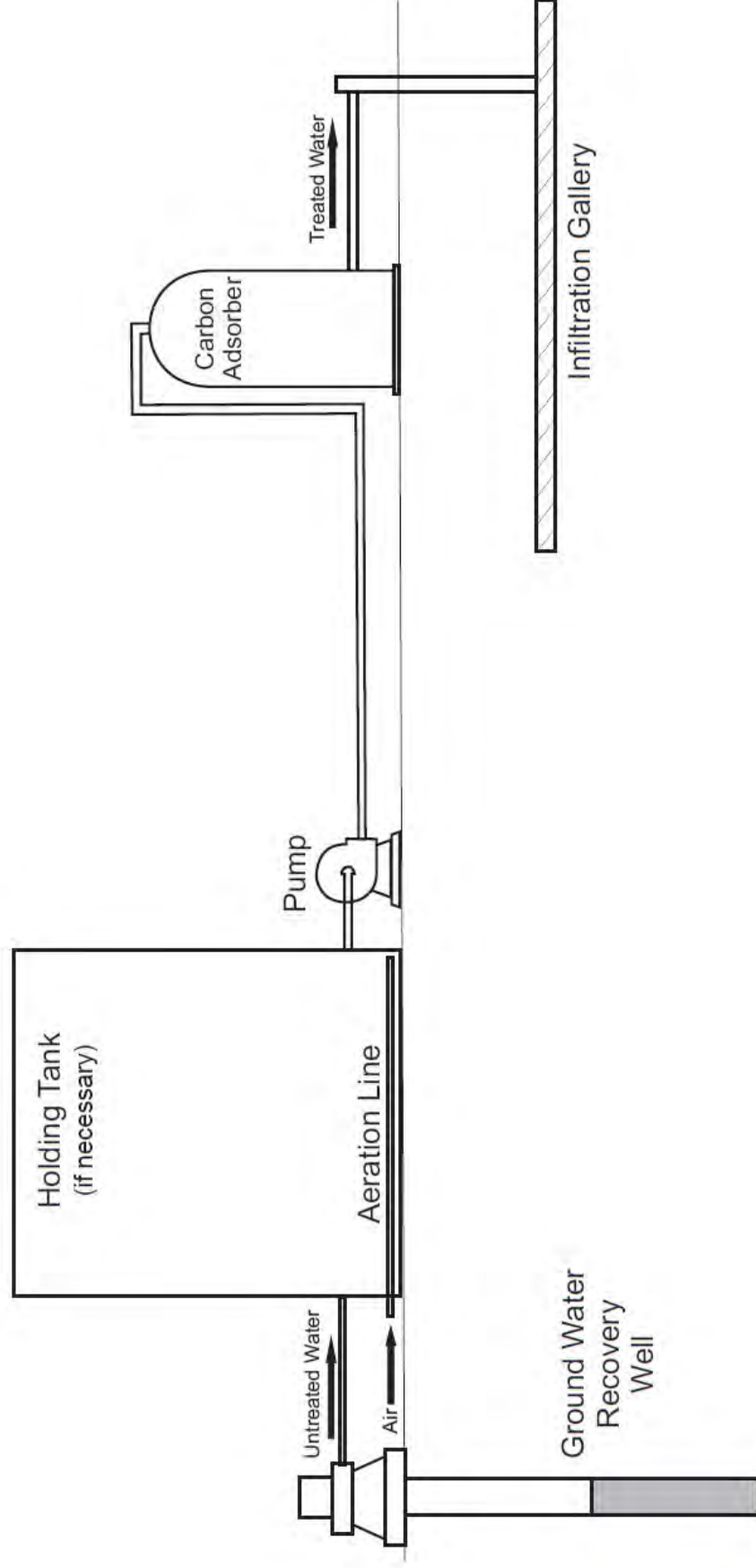


FIGURE 4

THE CARBON ADSORPTION SYSTEM
 FORMER GIANT BLOOMFIELD REFINERY
 SW SEC 22 & NW SEC 27 T29N R12W
 SAN JUAN COUNTY, NEW MEXICO
 WESTERN REFINING SOUTHWEST, INC.

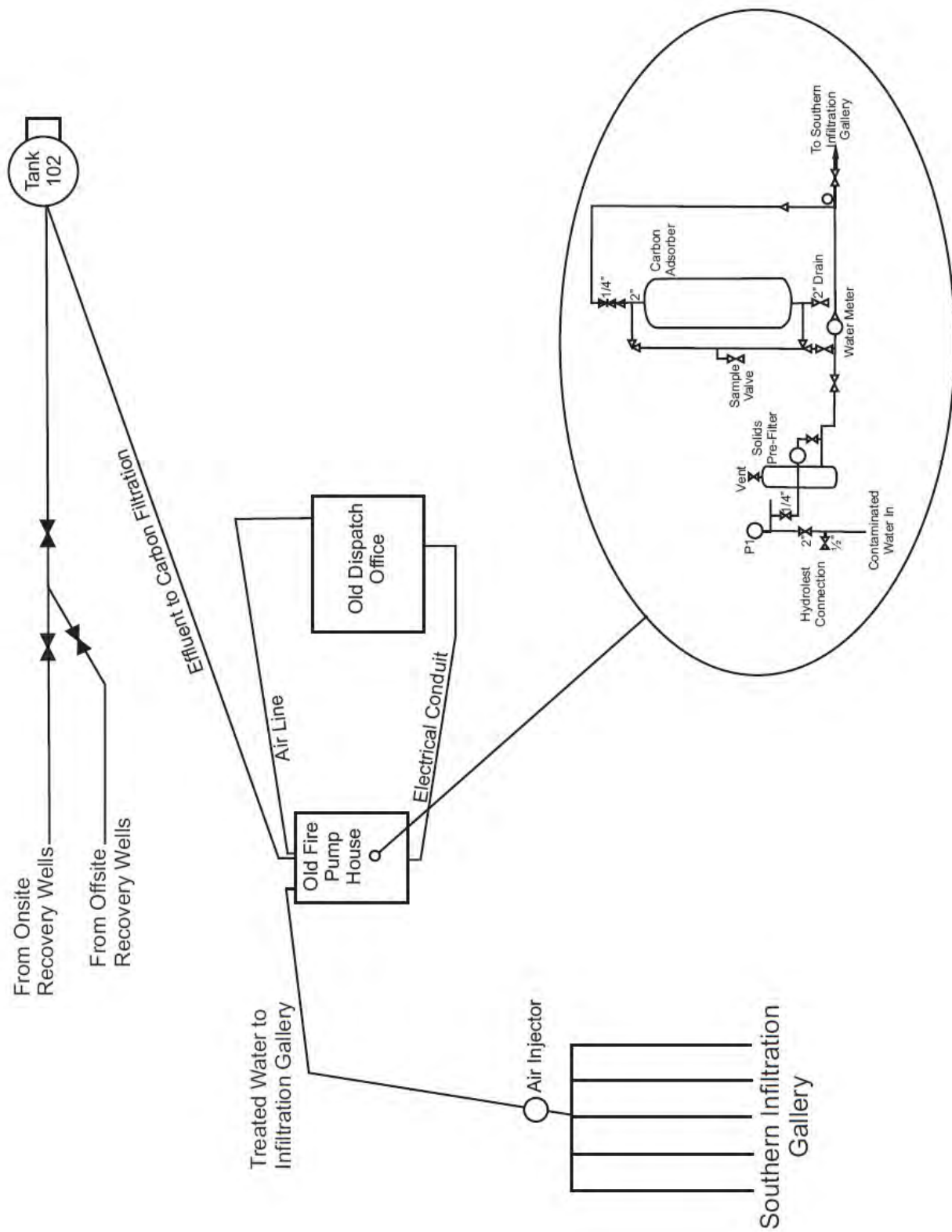
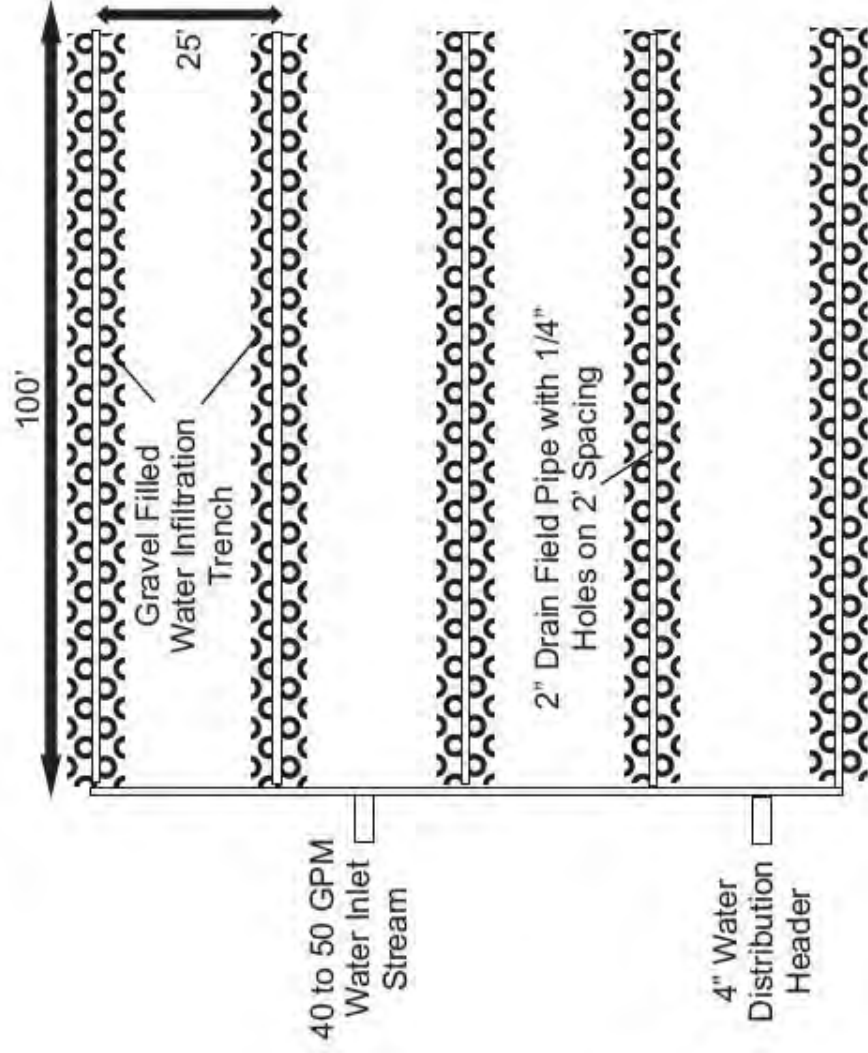


FIGURE 5

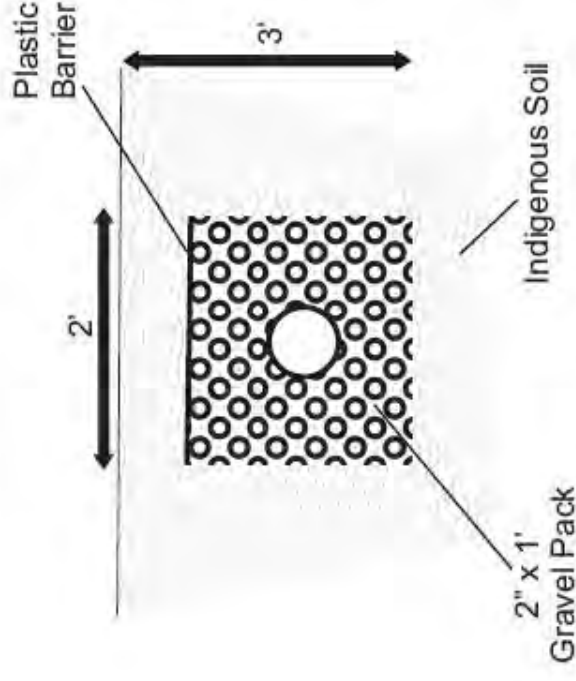
INFILTRATION TRENCH DESIGN AND
CONSTRUCTION SPECIFICATIONS
FORMER GIANT BLOOMFIELD REFINERY
SW SEC 22 & NW SEC 27 T29N R12W
SAN JUAN COUNTY, NEW MEXICO
WESTERN REFINING SOUTHWEST, INC.



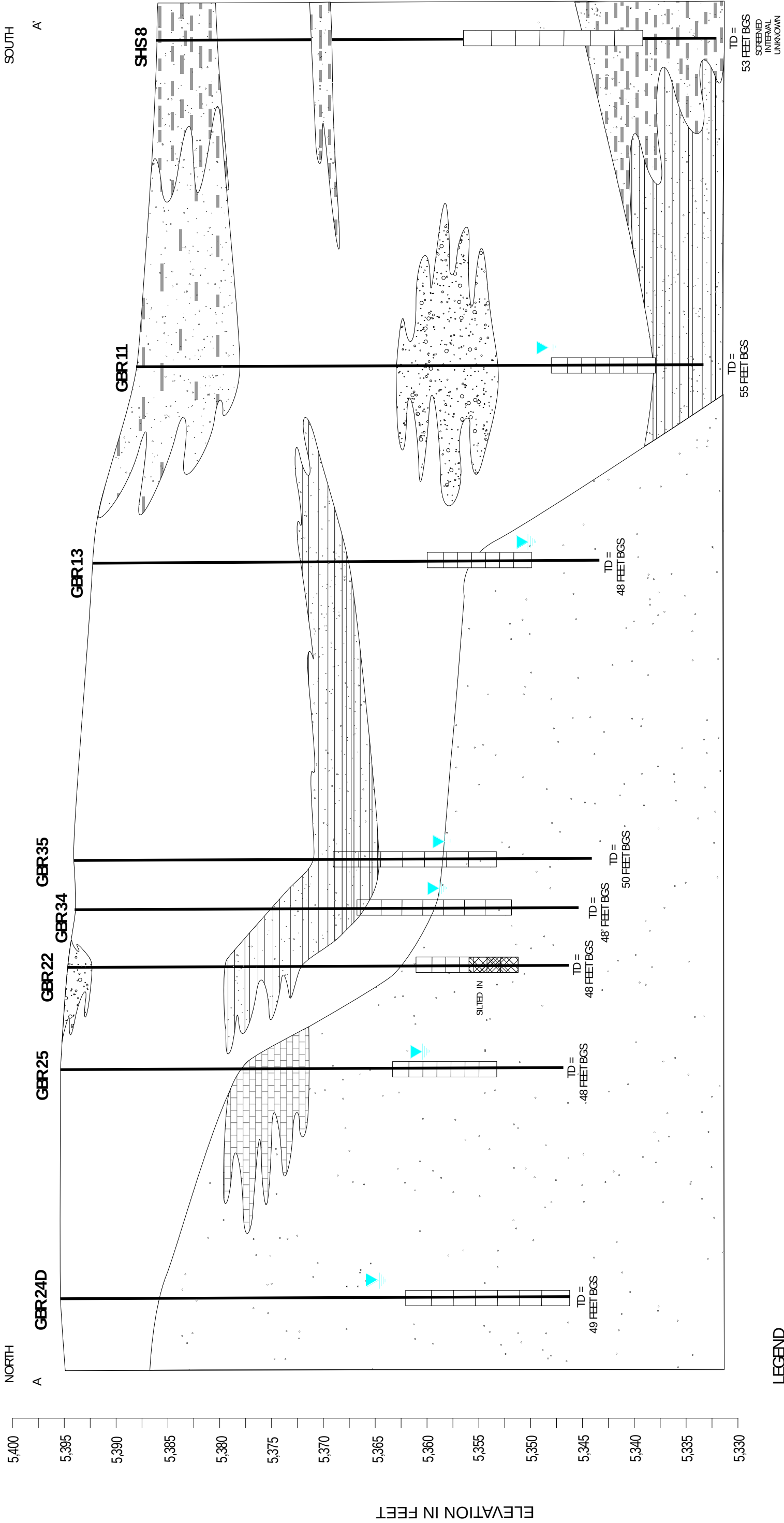
Trench Top View Cut Away
at the Infiltration Line Depth



Cross Section of a
Typical Infiltration Trench



2" infiltration lines are designed
to handle approximately 10 gal/min
each with a maximum length of 100'



LEGEND

- SANDY SILT
- CLAYEY SAND
- SILTY SAND
- SAND
- PEBBLES/GRAVEL
- NACIMIENTO SHALE
- NACIMIENTO SANDSTONE

- BOREHOLE
- SCREENED INTERVAL
- BGS
- TD
- BELOW GROUND SURFACE
- TOTAL DEPTH IN FEET
- GROUNDWATER ELEVATION FROM OCTOBER 2018

HORIZONTAL SCALE
1" = 10 FEET
VERTICAL SCALE
1" = 90 FEET

FIGURE 6
CROSS SECTION A-A
FORMER GIANT BLOOMFIELD REFINERY
SWSW SEC.22 &WNW SEC.27 T29N R12W
WESTERN REFINING SOUTHWEST, INC.



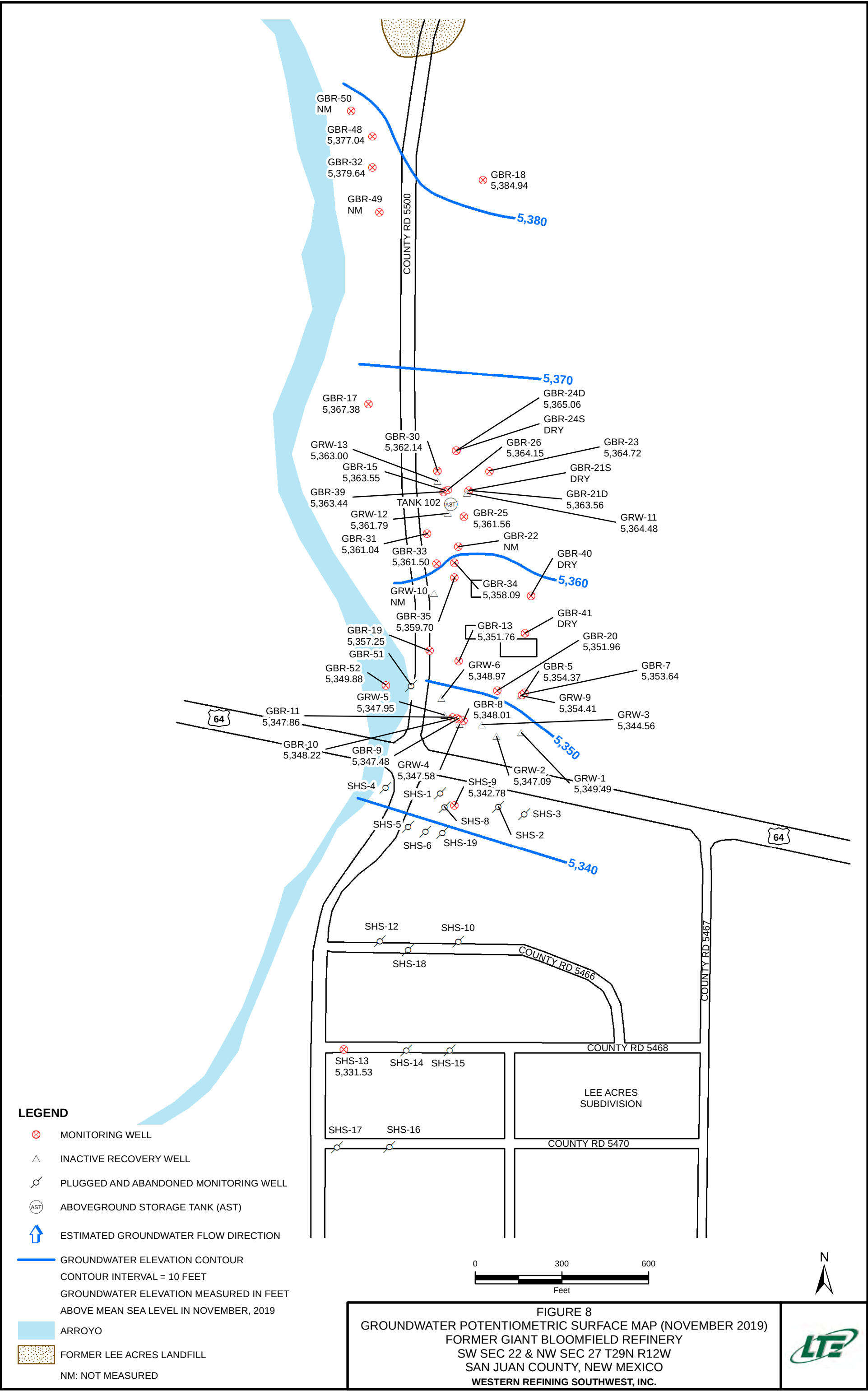


TABLE 1
2015 INFUENT AND EFFLUENT ANALYTICAL RESULTS

FORMER GIANT BLOOMFIELD REFINERY
WESTERN REFINING SOUTHWEST, INC.
SAN JUAN COUNTY, NEW MEXICO

Analyte	NMWQCC Standard	Unit	Influent	Effluent	Influent	Effluent	Influent	Effluent
			27-Jan	27-Jan	8-Apr	8-Apr	24-Jul	24-Jul
USEPA Method 8260B: Volatiles								
benzene	10	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
toluene	750	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
ethylbenzene	750	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
methyl tert-butyl ether (MTBE)	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2,4-trimethylbenzene	620	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,3,5-trimethylbenzene	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-dichloroethane (EDC)	10	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-dibromoethane (EDB)	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
naphthalene	NE	µg/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1-methylnaphthalene	NE	µg/L	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
2-methylnaphthalene	NE	µg/L	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
acetone	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
bromobenzene	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
bromodichloromethane	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
bromoform	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
bromomethane	NE	µg/L	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
2-butanone	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
carbon disulfide	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
carbon tetrachloride	10	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
chlorobenzene	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
chloroethane	NE	µg/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
chloroform	100	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
chloromethane	NE	µg/L	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
2-chlorotoluene	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
4-chlorotoluene	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
cis-1,2-DCE	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
cis-1,3-dichloropropene	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-dibromo-3-chloropropane	NE	µg/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
dibromochloromethane	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
dibromomethane	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-dichlorobenzene	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,3-dichlorobenzene	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,4-dichlorobenzene	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
dichlorodifluoromethane	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-dichloroethane	25	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-dichloroethene	5	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-dichloropropane	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,3-dichloropropane	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
2,2-dichloropropane	NE	µg/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,1-dichloropropene	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0



TABLE 1
2015 INFUENT AND EFFLUENT ANALYTICAL RESULTS

FORMER GIANT BLOOMFIELD REFINERY
WESTERN REFINING SOUTHWEST, INC.
SAN JUAN COUNTY, NEW MEXICO

Analyte	NMWQCC Standard	Unit	Influent	Effluent	Influent	Effluent	Influent	Effluent	Influent	Effluent
			27-Jan	27-Jan	8-Apr	8-Apr	24-Jul	24-Jul	3-Aug	3-Aug
hexachlorobutadiene	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
2-hexanone	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
isopropylbenzene	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
4-isopropyltoluene	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
4-methyl-2-pentanone	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
methylene chloride	100	µg/L	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
n-butylbenzene	NE	µg/L	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
n-propylbenzene	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
sec-butylbenzene	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
styrene	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
tert-butylbenzene	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,1,2-tetrachloroethane	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,2,2-tetrachloroethane	10	µg/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
tetrachloroethene (PCE)	20	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
trans-1,2-DCE	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
trans-1,3-dichloropropene	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2,3-trichlorobenzene	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2,4-trichlorobenzene	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,1-trichloroethane	60	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,2-trichloroethane	10	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
trichloroethene (TCE)	100	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
trichlorofluoromethane	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2,3-trichloropropane	NE	µg/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
vinyl chloride	1	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
xylenes, total	620	µg/L	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5

Notes:

BOLD - indicates concentration exceeds the NMWQCC standard
mg/L - milligrams per liter
NE - not established
NMWQCC - New Mexico Water Quality Control Commission
NT - not tested
µg/L - micrograms per liter
USEPA - United States Environmental Protection Agency



TABLE 2
GROUNDWATER ELEVATIONS AND THICKNESS OF PHASE-SEPARATED HYDROCARBONS

FORMER GIANT BLOOMFIELD REFINERY
WESTERN REFINING SOUTHWEST, INC.
SAN JUAN COUNTY, NEW MEXICO

Well Number	Wellhead Elevation (feet)	Total Depth (feet)	March 2019				November 2019			
			Depth to Water (feet BTOC)	Depth to Product (feet)	PSH Thickness (feet)	Adjusted GWEL (feet)	Depth to Water (feet BTOC)	Depth to Product (feet)	PSH Thickness (feet)	Adjusted GWEL (feet)
GRW-1	5,394.30	73.35	43.33	-	-	5,350.97	44.81	-	-	5,349.49
GRW-2	5,391.28	61.00	44.98	-	-	5,346.30	44.19	-	-	5,347.09
GRW-3	5,388.77	58.30	43.83	-	-	5,344.94	44.21	-	-	5,344.56
GRW-4	5,390.02	60.00	42.19	-	-	5,347.83	42.44	-	-	5,347.58
GRW-5	5,390.56	68.30	42.28	-	-	5,348.28	42.61	-	-	5,347.95
GRW-6	5,390.81	53.80	41.45	-	-	5,349.36	41.84	-	-	5,348.97
GRW-9	5,395.70	54.40	41.10	-	-	5,354.60	41.29	-	-	5,354.41
GRW-10	5,395.02	66.02	36.15	-	-	5,358.87	NM - Well blocked at 5 feet			
GRW-11	5,397.85	64.00	33.18	-	-	5,364.67	33.37	-	-	5,364.48
GRW-12	5,397.24	48.00	35.42	-	-	5,361.82	35.45	-	-	5,361.79
GRW-13	5,396.90	61.30	34.51	-	-	5,362.39	33.90	-	-	5,363.00
GBR-5	5,395.07	47.08	41.41	-	-	5,353.66	40.70	-	-	5,354.37
GBR-7	5,395.85	51.65	41.91	41.74	0.17	5,354.08	42.35	42.18	0.17	5,353.64
GBR-8	5,390.50	50.90	42.30	-	-	5,348.20	42.49	-	-	5,348.01
GBR-9	5,389.92	67.22	42.25	-	-	5,347.67	42.44	-	-	5,347.48
GBR-10	5,390.57	47.56	42.34	-	-	5,348.23	42.35	-	-	5,348.22
GBR-11	5,389.43	51.87	41.29	-	-	5,348.14	41.57	-	-	5,347.86
GBR-13	5,393.04	45.47	40.98	-	-	5,352.06	41.28	-	-	5,351.76
GBR-15	5,397.99	58.42	34.25	-	-	5,363.74	34.44	-	-	5,363.55
GBR-17	5,402.69	43.20	34.68	-	-	5,368.01	35.31	-	-	5,367.38
GBR-18	5,421.68	47.85	37.29	-	-	5,384.39	37.74	-	-	5,383.94
GBR-19 (1)	5,393.83	46.23	-	-	-	-	-	-	-	-
GBR-20	5,393.47	54.57	41.21	-	-	5,352.26	41.51	-	-	5,351.96
GBR-21D	5,400.19	49.77	36.38	-	-	5,363.81	36.63	-	-	5,363.56
GBR-21S	5,400.65	49.77	Dry				Dry			
GBR-22	5,395.91	38.73	37.60	-	-	5,358.31	NM - Cap glued onto well casing			
GBR-23 (2)	5,403.72	39.45	37.54	-	-	-	39.00	-	-	5,364.72
GBR-24D	5,396.77	51.40	30.66	-	-	5,366.11	31.71	-	-	5,365.06
GBR-24S	5,396.08	37.05	33.38	-	-	5,362.70	Dry			
GBR-25	5,397.03	37.12	35.05	-	-	5,361.98	35.47	-	-	5,361.56
GBR-26	5,396.72	41.29	33.57	-	-	5,363.15	32.57	-	-	5,364.15
GBR-30	5,395.59	41.66	33.04	-	-	5,362.55	33.45	-	-	5,362.14
GBR-31	5,396.58	43.50	Dry				35.54	-	-	5,361.04
GBR-32	5,414.86	47.83	34.56	-	-	5,380.30	35.22	-	-	5,379.64
GBR-33	5,396.28	45.72	-	-	-	-	34.78	-	-	5,361.50
GBR-34	5,394.00	42.20	34.54	-	-	5,359.46	35.91	-	-	5,358.09
GBR-35	5,393.66	42.35	34.57	-	-	5,359.09	34.96	-	-	5,358.70
GBR-39	5,397.55	41.42	34.86	-	-	5,362.69	34.11	-	-	5,363.44
GBR-40	5,400.76	39.38	Dry				Dry			
GBR-41	5,396.35	34.28	34.29	-	-	5,362.06	Dry			
GBR-48	5,413.90	43.54	32.04	-	-	5,381.86	36.86	-	-	5,377.04
GBR-49	(3)	40.30	32.96	-	-	-	33.34	-	-	-
GBR-50	(3)	44.37	32.12	-	-	-	32.59	-	-	-
GBR-51	5,389.68	57.07	39.76	-	-	-	P&A	-	-	-
GBR-52	5,387.74	52.73	37.88	-	-	-	37.86	-	-	5,349.88



TABLE 2
GROUNDWATER ELEVATIONS AND THICKNESS OF PHASE-SEPARATED HYDROCARBONS

FORMER GIANT BLOOMFIELD REFINERY
WESTERN REFINING SOUTHWEST, INC.
SAN JUAN COUNTY, NEW MEXICO

Well Number	Wellhead Elevation (feet)	Total Depth (feet)	March 2019				November 2019			
			Depth to Water (feet BTOC)	Depth to Product (feet)	PSH Thickness (feet)	Adjusted GWEL (feet)	Depth to Water (feet BTOC)	Depth to Product (feet)	PSH Thickness (feet)	Adjusted GWEL (feet)
SHS-1	5,383.54	50.40	P&A	-	-	-	P&A	-	-	-
SHS-2	5,381.66	44.56	P&A	-	-	-	P&A	-	-	-
SHS-3 (4)	5,383.33	-	P&A	-	-	-	P&A	-	-	-
SHS-4	5,383.62	52.16	P&A	-	-	-	P&A	-	-	-
SHS-5	5,378.36	47.85	P&A	-	-	-	P&A	-	-	-
SHS-6	5,378.17	52.78	38.05	-	-	5,340.12	P&A	-	-	-
SHS-8	5,380.25	50.92	38.52	-	-	5,341.73	P&A	-	-	-
SHS-9	5,380.79	46.25	Dry				38.01	-	-	5,342.78
SHS-10	5,373.80	45.80	Dry				P&A	-	-	-
SHS-12	5,373.94	52.41	Dry				P&A	-	-	-
SHS-13	5,367.81	47.51	36.03	-	-	5,331.78	36.28	-	-	5,331.53
SHS-14	5,367.07	52.71	34.36	-	-	5,332.71	P&A	-	-	-
SHS-15 (5)	5,366.21	47.78	34.02	-	-	5,332.19	P&A	-	-	-
SHS-16	5,362.58	42.20	31.25	-	-	5,331.33	P&A	-	-	-
SHS-17	5,364.35	46.21	33.87	-	-	5,330.48	P&A	-	-	-
SHS-18	5,373.64	47.36	39.51	-	-	5,334.13	P&A	-	-	-
SHS-19	5,378.89	52.40	37.76	-	-	5,341.13	P&A	-	-	-

Notes:

BTOC - below top of casing

D - designates that the well screen is deep

GWEL - groundwater elevation

NM - not measured

P&A - plugged and abandoned

PSH - phase-separated hydrocarbon

S - designates that the well screen is shallow

(1) Well was paved over in June 2010

(2) Well hit by a vehicle May 2014

(3) Top-of-casing elevation is unknown

(4) Well is damaged by a tree root

(5) Well visibly broken/buried January 2016

- indicates no GWEL or PSH measured

When PSH is detected, the GWEL is corrected using an estimated density correction factor of 0.8



TABLE 3
2010 to 2018 - ANNUAL COMPLIANCE GROUNDWATER LABORATORY ANALYTICAL RESULTS

FORMER GIANT BLOOMFIELD REFINERY
WESTERN REFINING SOUTHWEST, INC.
SAN JUAN COUNTRY, NEW MEXICO

Exploration Location	Wellhead		Well Depth (feet)	Screened Interval (depth in feet)	Well Diameter (inches)	Sample Date	Depth to Water (feet BTOC)	USEPA Method 300.0: Anions				USEPA Method 200.7: Total Metals				iron	manganese	USEPA Method SM2540C Modified:	
	Elevation (feet)							chloride	sulfate	chromium		chromium	iron	manganese				Total Dissolved Solids	Total Dissolved Solids
NMWQCC Standard								250	600	0.05	1.0	0.2	1,000						
GBR Background Threshold Values (1)								560	2,546	1.553	97.06	6.42	4,566						
Regional Background Levels (Stone, et al. 1983) (2)								2 - 34,000	1.9 - 14,000	0.001 - 0.06	0.01 - 16	0 - 2.6	NA						
Lee Acres RI Background Concentrations - Alluvial Aquifer (1992) (3)								6.4 - 404	420 - 2,120	0.0144 - 0.113	0 - 1.48	0.0161 - 0.423	760 - 3,600						
Lee Acres RI/ROD Remedial Goals (1992/2004) (4)								34,000	14,000	0.06	16	0.346	10,000						
Units								mg/L	mg/L	mg/L	mg/L	mg/L	mg/L						
Lee Acres Sampling, 1992 RI Report (5)																			
Lee Acres Site 1, Subarea 2, OU 2 - Alluvial Aquifer								8.8 - 730	195 - 4,370	0.0108 - 0.124	0.118 - 1.71	0.0161 - 8.62	943 - 6,560						
Lee Acres Site 1, Subarea 3, OU 2 - Southern Area - Alluvial Aquifer								19 - 2,110	830 - 2,610	0.0145 - 0.0406	0.148 - 23.9	0.0214 - 4.23	622 - 5,300						
Lee Acres Site 2, Subarea 4 - Alluvial Aquifer								3.5 - 604	310 - 3,220	0.043 - 0.110	0.0749 - 64.1	0.0131 - 3.4	616 - 6,370						
GBR Sampling, Upgradient Wells (6)																			
GBR-32	5,414.86	45	25 - 40	2		Oct 2018	33.95	200	1,700	0.074	2.7	1.9	3,110						
						Dec 2017		290	1,600	0.13	2.3	1.2	3,210						
						Jan 2017		320	2,000	0.33	11	1.2	3,500						
						Aug 2015		370	2,000	0.02	0.26	0.56	3,830						
						Nov 2014		380	1,900	1.4	5.9	0.70	3,800						
						Jan 2013		400	2,200	0.098	1.2	0.40	4,320						
						Jan 2012		500	2,800	0.030	0.88	0.50	4,290						
						Jan 2011		420	2,300	0.13	NT	NT	4,010						
						Jan 2010		NT	NT	NT	NT	NT	NT						
GBR-48	5,413.90	43.6	28.4 - 38.4	2		Oct 2018	35.62	300	1,800	0.036	18	0.49	3,580						
						Dec 2017		350	1,900	0.13	40	1.7	3,690						
						Jan 2017		340	2,000	0.42	89	4.8	3,360						
						Aug 2015		370	2,100	0.95	170	6.4	3,730						
						Nov 2014		420	2,100	0.92	52	2.0	4,030						
						Jan 2013		230	2,200	0.52	17	0.94	4,020						
						Jan 2012		200	1,700	0.63	15	0.83	2,940						
						Jan 2011		390	2,200	0.71	9.3	NT	3,510						
						Jan 2010		NT	NT	NT	NT	NT	NT						
GBR-49	*	38.5	25.9 - 36.3	2		Oct 2018	32.06	180	1,800	1.2	23	0.98	3,010						
						Dec 2017		150	1,300	0.018	0.44	0.30	2,720						
						Jan 2017		210	1,900	0.2	11	1.1	3,160						
						Aug 2015		180	1,500	0.38	7.1	0.54	2,840						
						Nov 2014		63	1,400	0.060	41	3.9	2,340						
						Jan 2013		240	1,600	0.041	4.6	1.3	3,290						
						Jan 2012		260	2,000	0.018	0.23	0.34	3,470						
						Jan 2011		310	2,000	0.48	NT	NT	3,390						
						Jan 2010		NT	NT	NT	NT	NT	NT						

Exploration Location	Wellhead Elevation (feet)	Well Depth (feet)	Screened Interval (depth in feet)	Well Diameter (inches)	Sample Date	Depth to Water (feet BTOC)	USEPA Method 300.0: Anions		USEPA Method 200.7: Total Metals		Iron	Manganese	USEPA Method SM2540C Modified: Total Dissolved Solids	Total Dissolved Solids
							Chloride	Sulfate	Chromium	Iron				
NMWQCC Standard							250	600	0.05	1.0	0.2		1,000	
GBR Background Threshold Values (1)							560	2,546	1.553	97.06	6.42		4,566	
Regional Background Levels (Stone, et al. 1983) (2)							2 - 34,000	1.9 - 14,000	0.001 - 0.06	0.01 - 16	0 - 2.6		NA	
Lee Acres RI Background Concentrations - Alluvial Aquifer (1992) (3)							6.4 - 404	420 - 2,120	0.0144 - 0.113	0 - 1.48	0.0161 - 0.423		760 - 3,600	
Lee Acres RI/ROD Remedial Goals (1992/2004) (4)							34,000	14,000	0.06	16	0.346		10,000	
Units							mg/L	mg/L	mg/L	mg/L	mg/L		mg/L	
GBR-50	*	42.5	26.91 - 37.26		Oct 2018	31.26	59	1,700	0.044	4.0	0.13		2,770	
					Dec 2017		54	1,500	0.16	5.8	0.32		2,590	
					Jan 2017		59	1,500	0.36	6.8	1.3		2,580	
					Aug 2015		44	1,700	0.073	2.2	0.19		2,760	
					Nov 2014		52	1,700	0.013	3.6	0.22		2,800	
					Jan 2013		49	1,600	<0.0060	1.3	0.12		2,830	
					Jan 2012		49	1,800	0.0069	0.72	0.041		2,730	
					Jan 2011		46	1,800	0.023	NT	NT		2,640	
					Jan 2010		NT	NT	NT	NT	NT		NT	

GBR Sampling, Source-Area Wells

GRW-3/GBR-29 or 43	5,388.77	58.3	34.5 - 50.2	6	Oct 2018	43.13	99	640	NT	18	0.80	2,190			2,190		
					Dec 2017		74	1,400	NT	54	1.9	2,920			2,920		
					Jan 2017		74	1,200	NT	150	2.9	2,730			2,730		
					Aug 2015		38	1,900	NT	0.89	0.69	3,320			3,320		
					Nov 2014		26	2,200	NT	0.86	0.44	3,680			3,680		
					Jan 2013		59	1,300	NT	2.8	0.54	2,620			2,620		
					Jan 2012		54	1,300	NT	2.8	0.67	2,660			2,660		
					Jan 2011		95	480	NT	NT	NT	1,810			1,810		
					Jan 2010		NT	NT	NT	NT	NT	NT			NT		
GRW-6/GBR-44	5,390.81	58.6	32.6 - 48.3	6	Oct 2018	40.89	100	1,300	NT	890	45	2,390			2,390		
					Dec 2017		120	1,200	NT	40	9.1	2,570			2,570		
					Jan 2017		89	1,500	NT	11	17	2,580			2,580		
					Aug 2015		88	1,400	NT	15	18	3,220			3,220		
					Nov 2014		86	1,600	NT	35	8.5	3,170			3,170		
					Jan 2013		100	1,500	NT	2.4	1.2	2,760			2,760		
					Apr 2012		80	1,900	NT	0.47	1.0	2,740			2,740		
					Jan 2011		110	1,400	NT	NT	NT	2,490			2,490		
					Jan 2010		NT	NT	NT	NT	NT	NT			NT		
GBR-17	5,402.69	51	31 - 51	2	Oct 2018	34.00	49	1,200	NT	100	3.0	2,180			2,180		
					Dec 2017		50	1,000	NT	9.3	0.25	2,110			2,110		
					Jan 2017		46	1,100	NT	15	0.35	1,890			1,890		
					Aug 2015		43	1,100	NT	3.6	<0.00200	1,960			1,960		
					Nov 2014		44	1,200	NT	3.7	0.13	1,980			1,980		
					Jan 2013		47	1,300	NT	1.2	0.045	2,700			2,700		
					Jan 2012		46	1,400	NT	3.9	0.15	2,150			2,150		
					Jan 2011		47	1,300	NT	NT	NT	2,140			2,140		
					Jan 2010		NT	NT	NT	NT	NT	NT			NT		

Exploration Location	Wellhead Elevation (feet)	Well Depth (feet)	Screened Interval (depth in feet)	Well Diameter (inches)	Sample Date	Depth to Water (feet BTOC)	USEPA Method 300.0: Anions			USEPA Method 200.7: Total Metals			Total dissolved solids	
							chloride	sulfate		chromium	iron	manganese	USEPA Method SM2540C Modified: Total Dissolved Solids	
NMWQCC Standard							250	600	0.05	1.0	0.2	1,000		
GBR Background Threshold Values (1)														
Regional Background Levels (Stone, et al. 1983) (2)							560	2,546	1.553	97.06	6.42	4,566		
Lee Acres RI Background Concentrations - Alluvial Aquifer (1992) (3)							2 - 34,000	1.9 - 14,000	0.001 - 0.06	0.01 - 16	0 - 2.6	NA		
Lee Acres RI/ROD Remedial Goals (1992/2004) (4)							6.4 - 404	420 - 2,120	0.0144 - 0.113	0 - 1.48	0.0161 - 0.423	760 - 3,600		
							34,000	14,000	0.06	16	0.346	10,000		
Units							mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	
GBR-24D	5,396.77	46.3	33 - 43	2	Oct 2018	30.92	130	2,300	NT	9.1	1.8	3,780		
					Dec 2017		140	1,800	NT	11	1.8	3,560		
					Jan 2017		130	1,900	NT	14	1.8	3,390		
					Aug 2015		160	2,100	NT	11	1.8	3,380		
					Nov 2014		210	1,800	NT	12	1.7	3,410		
					Jan 2013		200	1,700	NT	3.6	1.8	3,430		
					Jan 2012		200	2,000	NT	2.4	1.7	3,320		
					Jan 2011		170	2,400	NT	NT	NT	3,410		
					Jan 2010		NT	NT	NT	NT	NT	NT		
GBR-30	5,395.59	45	25 - 40	2	Oct 2018	32.31	250	1,500	NT	28	0.76	3,000		
					Dec 2017		220	1,300	NT	38	1.4	2,770		
					Jan 2017		220	1,400	NT	64	2.3	2,580		
					Aug 2015		310	1,600	NT	7.6	0.5	3,020		
					Nov 2014		270	1,400	NT	88	2.2	2,520		
					Jan 2013		310	1,500	NT	130	6.1	3,340		
					Jan 2012		390	1,700	NT	2.9	0.29	3,240		
					Jan 2011		320	1,600	NT	NT	NT	3,340		
					Jan 2010		NT	NT	NT	NT	NT	NT		
GBR-31	5,396.58	45	24.6 - 39.6	2	Oct 2018	32.27	220	1,400	NT	13	3.1	2,660		
					Dec 2017		93	1,700	NT	21	4.2	2,940		
					Jan 2017		84	1,700	NT	1.9	0.18	2,970		
					Aug 2015		250	1,700	NT	2.4	0.45	3,170		
					Nov 2014		230	1,500	NT	12	1.6	3,100		
					Jan 2013		79	1,600	NT	15	0.77	2,720		
					Jan 2012		74	1,700	NT	3.8	0.27	2,760		
					Jan 2011		97	1,800	NT	NT	NT	2,740		
					Jan 2010		NT	NT	NT	NT	NT	NT		
GBR-51	5,389.68	59.5	38.5 - 54.25	6	Oct 2018	NM	54	1,300	NT	0.059	<0.0020	2,330		
					Dec 2017		51	1,200	NT	0.080	<0.020	2,250		
					Jan 2017		45	990	NT	9.1	0.47	2,080		
					Aug 2015		54	1,600	NT	17	0.42	2,430		
					Nov 2014		54	1,400	NT	16	0.47	2,320		
					Jan 2013		56	1,500	NT	9.7	0.88	2,540		
					Jan 2012		53	1,600	NT	3.1	0.16	2,440		
					Jan 2011		53	1,600	NT	NT	NT	2,380		
					Jan 2010		NT	NT	NT	NT	NT	NT		

Exploration Location	Wellhead Elevation (feet)	Well Depth (feet)	Screened Interval (depth in feet)	Well Diameter (inches)	Sample Date	Depth to Water (feet BTOC)	USEPA Method 300.0: Anions			USEPA Method 200.7: Total Metals			Total Dissolved Solids		
							chloride	sulfate	chromium	iron	manganese	USEPA Method SM2540C Modified: Total Dissolved Solids			
NMWQCC Standard							250	600	0.05	1.0	0.2	1,000			
GBR Background Threshold Values (1)							560	2,546	1.553	97.06	6.42	4,566			
Regional Background Levels (Stone, et al. 1983) (2)							2 - 34,000	1.9 - 14,000	0.001 - 0.06	0.01 - 16	0 - 2.6	NA			
Lee Acres RI Background Concentrations - Alluvial Aquifer (1992) (3)							6.4 - 404	420 - 2,120	0.0144 - 0.113	0 - 1.48	0.0161 - 0.423	760 - 3,600			
Lee Acres RI/ROD Remedial Goals (1992/2004) (4)							34,000	14,000	0.06	16	0.346	10,000			
Units							mg/L	mg/L	mg/L	mg/L	mg/L	mg/L			
GBR-52	5,387.74	50.78	30.08 - 45.75	6	Oct 2018	NM	54	1,500	NT	0.12	0.0028	2,580			
					Dec 2017		54	1,500	NT	0.048	<0.0020	2,640			
					Jan 2017		58	1,400	NT	18	0.46	2,540			
					Aug 2015		65	1,400	NT	8.2	0.15	2,840			
					Nov 2014		65	1,700	NT	12	0.25	2,540			
					Jan 2013		63	1,700	NT	2.3	0.036	2,770			
					Jan 2012		60	1,800	NT	2.2	0.032	2,720			
					Jan 2011		62	1,900	NT	NT	NT	2,700			
					Jan 2010		NT	NT	NT	NT	NT	NT			
GBR Sampling, Downgradient Wells															
SHS-1	5,383.54	50.97	35.67 - 45.67	4	June 2017	P&A	100	1,300	NT	NT	NT	2,400			
					Jan 2011		NT	NT	NT	NT	NT	NT			
SHS-2	5,381.66	41.28	30.98 - 40.98	4	June 2017	P&A	310	2,200	NT	NT	NT	4,100			
					Jan 2011		NT	NT	NT	NT	NT	NT			
SHS-4	5,383.62	55	37 - 47	2	June 2017	P&A	59	1,600	NT	NT	NT	2,270			
SHS-5	5,378.36	53.33	37.62 - 48.0	4	June 2017	P&A	50	1,200	NT	NT	NT	2,030			
					Jan 2011		NT	NT	NT	NT	NT	NT			
SHS-6	5,378.17	47.88	32.48 - 42.85	4	Jan 2018	37.85	NT	NT	NT	NT	NT	NT			
SHS-8	5,380.25	52.5	30.83 - 46.60	4	Oct 2018	38.25	130	890	NT	50	3.1	2,730			
SHS-8					Dec 2017		110	1,200	NT	10	3.6	2,730			
SHS-8					Jan 2017		100	720	NT	66	3.0	2,210			
SHS-8					Aug 2015		120	47	NT	8.6	0.41	1,300			
SHS-8					Nov 2014		110	350	NT	260	5.0	1,400			
SHS-8					Jan 2013		120	770	0.099	100	4.7	1,800			
SHS-8					Jan 2012		170	430	NT	15	2.3	2,040			
SHS-8					Jan 2011		150	150	0.0063	NT	NT	1,440			
SHS-8					Jan 2010		NT	NT	NT	NT	NT	NT			
SHS-9	5,380.79	49.88	34.46 - 44.46	4	Jan 2018	37.43	NT	NT	NT	NT	NT	NT			
SHS-13	5,367.81	47.4	27 - 42	4	Jan 2018	35.85	NT	NT	NT	NT	NT	NT			
SHS-14	5,367.07	54	28.70 - 48.70	4	Jan 2018	34.18	NT	NT	NT	NT	NT	NT			
SHS-15	5,366.21	47.8	27.40 - 42.40	4	Jan 2018	33.00	NT	NT	NT	NT	NT	NT			

Exploration Location	Wellhead Elevation (feet)	Well Depth (feet)	Screened Interval (depth in feet)	Well Diameter (inches)	Sample Date	Depth to Water (feet BTOC)	USEPA Method 300.0: Anions		USEPA Method 200.7: Total Metals		Chromium	Iron	Manganese	USEPA Method SM7540C Modified: Total Dissolved Solids	
							chloride	sulfate	0.05	1.553				0.01 - 0.06	0.01 - 16
NMWQCC Standard							250	600	0.05	1.0	0.2	1,000			
GBR Background Threshold Values (1)							560	2,546	1.553	97.06	6.42	4,566			
Regional Background Levels (Stone, et al. 1983) (2)							2 - 34,000	1.9 - 14,000	0.001 - 0.06	0.01 - 16	0 - 2.6	NA			
Lee Acres RI Background Concentrations - Alluvial Aquifer (1992) (3)							6.4 - 404	420 - 2,120	0.0144 - 0.113	0 - 1.48	0.0161 - 0.423	760 - 3,600			
Lee Acres RI/ROD Remedial Goals (1992/2004) (4)							34,000	14,000	0.06	16	0.346	10,000			
Units							mg/L	mg/L	mg/L	mg/L	mg/L	mg/L			
SHS-16	5,362.58	42.6	22.2 - 37.2	4	Jan 2018	32.68	NT	NT	NT	NT	NT				
SHS-17	5,364.35	46.21	35.67 - 45.67	4	Jan 2018	32.63	NT	NT	NT	NT	NT				
SHS-18	5,373.64	47.36	37.36 - 47.36	4	Jan 2018	39.24	NT	NT	NT	NT	NT				
SHS-19	5,378.89	52.4	32.40 - 52.40	4	Jan 2018	37.77	NT	NT	NT	NT	NT				

Notes

- (1) Background Concentrations Proposed for the Giant Bloomfield Refinery Site. Based on Statistical Analysis Prepared by LT Environmental and Submitted to New Mexico Oil Conservation District in an Email Dated June 10, 2019.
- (2) Regional Background Concentrations Established in Document Titled *Hydrogeology and Water Resources of San Juan Basin, New Mexico*, Stone et al., dated 1983
- (3) "Background" Concentration Proposed in Lee Acres DRAFT *Remedial Investigation Report* Prepared for the US Bureau of Land Management (dated February 1992)
- (4) Contaminant Concentrations Established as the "Remedial Goals" or "Background" Concentrations for the Lee Acres Superfund Site. Based on the Lee Acres DRAFT *Remedial Investigation Report* and *Record of Decision* (dated May 2004).
- (5) The Lee Acres *Remedial Investigation Report* Presents Analytical Data for Areas of the Site and Not Data for Individual Wells
- (6) Well Location Used for Statistical Analysis of Background Concentrations
- * Top-of-Casing Elevation is Unknown
- NM Not Measured
- P&A Plugged and Abandoned
- µg/L micrograms per liter
- BOLD** Indicates Concentration Exceeds the Greater Value of the NMWQCC Water-Quality Standards or Background Threshold Values Proposed for the Giant Bloomfield Refinery
- mg/L milligrams per liter
- NMWQCC New Mexico Water Quality Control Commission
- NT Not Tested
- USEPA United States Environmental Protection Agency

TABLE 4
CLOSURE AND POST CLOSURE COST ESTIMATES

FORMER GIANT BLOOMFIELD REFINERY
WESTERN REFINING SOUTHWEST, INC
SAN JUAN COUNTY, NEW MEXICO

QUARTERLY GROUNDWATER COMPLIANCE MONITORING					
LABOR COST	Senior Sci/Eng I	Project Sci/Eng II	Staff Sci/Eng II	CADD/ Designer	Admin/ Clerical
Task 1 -Office (2 Annual Reports)	8	60	16	16	4
Task 2 - Field (8 Sampling Events, 2 Personnel)	4	32	160		4
TOTAL HOURS	12	92	176	16	8
RATE (\$)	\$150.00	\$115.00	\$90.00	\$70.00	\$60.00
	\$1,800.00	\$10,580.00	\$15,840.00	\$1,120.00	\$480.00
				SUBTOTAL	\$29,820.00
OTHER DIRECT COSTS		QTY.	UNIT	RATE	UNIT TOTAL
Interface Probe		8	day	\$60.00	\$480.00
Temp/PH/Conductivity Meter		8	day	\$35.00	\$280.00
Field Vehicle		8	day	\$120.00	\$960.00
HDPE Disposable Bailers (20 each event)		160	ea.	\$7.00	\$1,120.00
Misc. Field Equipment		8	ea.	\$23.00	\$184.00
				SUBTOTAL	\$3,024.00
OTHER COSTS BILLED DIRECT TO WESTERN		QTY.	UNIT	RATE	UNIT TOTAL
Laboratory Analyses (VOCs, PAHs, 20 Wells each event)		160	ea.	\$270.00	\$43,200.00
				SUBTOTAL	\$43,200.00
				TOTAL	\$76,044.00

SYSTEM REMOVAL AND P&A OF WELLS					
LABOR COST	Senior Sci/Eng I	Project Sci/Eng II	Staff Sci/Eng II	CADD/ Designer	Admin/ Clerical
Task 1 - Follow Up and Documentation/State Engineer Coordination	2	20	10	10	2
Task 2 - Field		8	100		2
TOTAL HOURS	2	28	110	10	4
RATE (\$)	\$150.00	\$115.00	\$90.00	\$70.00	\$60.00
	\$300.00	\$3,220.00	\$9,900.00	\$700.00	\$240.00
				SUBTOTAL	\$14,360.00
OTHER DIRECT COSTS		QTY.	UNIT	RATE	UNIT TOTAL
Drilling Services, P&A of 47 Monitoring and Recovery Wells		1	ea.	\$45,000.00	\$45,000.00
Removal of Remediation System Infrastructure and Subsurface Piping		1	ea.	\$30,000.00	\$30,000.00
Field Vehicle		10	day	\$120.00	\$1,200.00
Misc. Field Equipment		10	ea.	\$23.00	\$230.00
				SUBTOTAL	\$76,430.00
				TOTAL	\$90,790.00

CLOSURE REPORTING AND NEGOTIATIONS					
LABOR COST	Senior Sci/Eng I	Project Sci/Eng II	Staff Sci/Eng II	CADD/ Designer	Admin/ Clerical
Task 1 - Closure Reporting and NMOCD Negotiations	8	76	28	16	3
TOTAL HOURS	8	76	28	16	3
RATE (\$)	\$150.00	\$115.00	\$90.00	\$70.00	\$60.00
	\$1,200.00	\$8,740.00	\$2,520.00	\$1,120.00	\$180.00
				SUBTOTAL	\$13,760.00
OTHER DIRECT COSTS		QTY.	UNIT	RATE	UNIT TOTAL
Field Vehicle		2	day	\$120.00	\$240.00
				SUBTOTAL	\$240.00
				TOTAL	\$14,000.00

SUBTOTAL	\$180,834.00
CONTINGENCY (10%)	\$18,083.40
TOTAL ESTIMATED COST	\$198,917.40





October 4, 2019

Nelly Smith, Remedial Project Manager
Superfund and Emergency Division – Remedial Branch (6SEDRL)
U.S. Environmental Protection Agency – Region 6
1445 Ross Avenue, Suite 1200, Dallas, TX 75202

**RE: EPA-Requested Information
Giant Bloomfield Refinery GW-40 Site
Western Refining Southwest, Inc. (Marathon Petroleum Company, LP)
Bloomfield, New Mexico**

Dear Ms. Smith:

At the request of the United States Environmental Protection Agency (USEPA), in conjunction with the New Mexico Oil Conservation Division (NMOCD), LT Environmental has prepared the attached table (Table 1) to provide requested well information and analytical data for the former Giant Bloomfield Refinery, “GW-40” site (the “Site”). Specifically, the table provides well information that includes wellhead elevation, well depth, well-screen interval, well diameter, and depth to water measurements. The table also presents analytical results for select constituents requested by the USEPA, collected during annual sampling events between 2010 and 2018 (chloride, sulfate, chromium, iron, manganese, and total dissolved solids). In addition, the *2018 Annual Report* prepared for the Site is attached for your review. The report includes analytical results for the 2018 groundwater-sampling event, as well as figures presenting well locations, cross sections, and groundwater potentiometric surface maps with interpreted groundwater-flow directions. We understand that this information will be used as part of the upcoming five-year review for the upgradient Lee Acres Superfund Site.

Please contact us if you have questions regarding the attached information.

Sincerely,

LT ENVIRONMENTAL, INC.

Devin Hencmann
Project Geologist

Stuart Hyde, LG
Project Geologist

cc: Greg McCartney, Marathon Petroleum Company, LP
Carl Chavez, NMOCD



TABLE 1
2010 to 2018 - ANNUAL COMPLIANCE GROUNDWATER LABORATORY ANALYTICAL RESULTS

FORMER GIANT BLOOMFIELD REFINERY
SAN JUAN COUNTRY, NEW MEXICO
WESTERN REFINING PIPELINE, LLC.

Exploration Location	Wellhead Elevation (feet)	Well Depth (feet)	Screened Interval (depth in feet)	Well Diameter (inches)	Sample Date	Depth to Water (feet BTOC)	USEPA Method 300.0: Anions		USEPA Method 200.7: Total Metals		iron	manganese	USEPA Method SM2540C Modified: Total Dissolved Solids	
							chloride	sulfate	chromium					
NMWQCC Standard														
GBR Background Threshold Values (1)							250	600	0.05	1.0	0.2		1,000	
Regional Background Levels (Stone, et al. 1983) (2)							560	2,546	1.553	97.06	6.42		4,566	
Lee Acres RI Background Concentrations - Alluvial Aquifer (1992) (3)							2 - 34,000	1.9 - 14,000	0.001 - 0.06	0.01 - 16	0 - 2.6		NA	
Lee Acres RI/ROD Remedial Goals (1992/2004) (4)							6.4 - 404	420 - 2,120	0.0144 - 0.113	0 - 1.48	0.0161 - 0.423		760 - 3,600	
							34,000	14,000	0.06	16	0.346		10,000	
Units							mg/L	mg/L	mg/L	mg/L	mg/L		mg/L	
Lee Acres Sampling, 1992 RI Report (5)														
Lee Acres Site 1, Subarea 2, OU 2 - Alluvial Aquifer														
Lee Acres Site 1, Subarea 3, OU 2 - Southern Area - Alluvial Aquifer														
Lee Acres Site 2, Subarea 4 - Alluvial Aquifer														
GBR Sampling, Upgradient Wells (6)														
GBR-32	5,414.86	45	25 - 40	2	Oct 2018	33.95	200	1,700	0.074	2.7	1.9		3,110	
					Dec 2017		290	1,600	0.13	2.3	1.2		3,210	
					Jan 2017		NT	NT	NT	NT	NT		NT	
					Aug 2015		NT	NT	NT	NT	NT		NT	
					Nov 2014		380	1,900	1.4	5.9	0.70		3,800	
					Jan 2013		400	2,200	0.098	1.2	0.40		4,320	
					Jan 2012		500	2,800	0.030	0.88	0.50		4,290	
					Jan 2011		420	2,300	0.13	NT	NT		4,010	
					Jan 2010		NT	NT	NT	NT	NT		NT	
GBR-48	5,413.90	43.6	28.4 - 38.4	2	Oct 2018	35.62	300	1,800	0.036	18	0.49		3,580	
					Dec 2017		350	1,900	0.13	40	1.7		3,690	
					Jan 2017		NT	NT	NT	NT	NT		NT	
					Aug 2015		NT	NT	NT	NT	NT		NT	
					Nov 2014		420	2,100	0.92	52	2.0		4,030	
					Jan 2013		230	2,200	0.52	17	0.94		4,020	
					Jan 2012		200	1,700	0.63	15	0.83		2,940	
					Jan 2011		390	2,200	0.71	9.3	NT		3,510	
					Jan 2010		NT	NT	NT	NT	NT		NT	
GBR-49	*	38.5	25.9 - 36.3	2	Oct 2018	32.06	180	1,800	1.2	23	0.98		3,010	
					Dec 2017		150	1,300	0.018	0.44	0.30		2,720	
					Jan 2017		NT	NT	NT	NT	NT		NT	
					Aug 2015		NT	NT	NT	NT	NT		NT	
					Nov 2014		63	1,400	0.060	41	3.9		2,340	
					Jan 2013		240	1,600	0.041	4.6	1.3		3,290	
					Jan 2012		260	2,000	0.018	0.23	0.34		3,470	
					Jan 2011		310	2,000	0.48	NT	NT		3,390	
					Jan 2010		NT	NT	NT	NT	NT		NT	

Exploration Location	Wellhead Elevation (feet)	Well Depth (feet)	Screened Interval (depth in feet)	Well Diameter (inches)	Sample Date	Depth to Water (feet BTOC)	USEPA Method 300.0: Anions					USEPA Method 200.7: Total Metals				Total Dissolved Solids		
							chloride	sulfate	USEPA Method 200.7: Total Metals				chromium	iron	manganese	USEPA Method SM2540C Modified: Total Dissolved Solids		

NMWQCC Standard							250	600	0.05	1.0	0.2					1,000		
GBR Background Threshold Values (1)							560	2,546	1.553	97.06	6.42					4,566		

Regional Background Levels (Stone, et al. 1983) (2)																		
Lee Acres RI Background Concentrations - Alluvial Aquifer (1992) (3)																		
Lee Acres RI/ROD Remedial Goals (1992/2004) (4)																		

Units							mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
GBR-50	*	42.5	26.91 - 37.26		Oct 2018	31.26	59	1,700	0.044	4.0	0.13							2,770
					Dec 2017		54	1,500	0.16	5.8	0.32							2,590
					Jan 2017		NT	NT	NT	NT	NT							NT
					Aug 2015		NT	NT	NT	NT	NT							NT
					Nov 2014		52	1,700	0.013	3.6	0.22							2,800
					Jan 2013		49	1,600	<0.0060	1.3	0.12							2,830
					Jan 2012		49	1,800	0.0069	0.72	0.041							2,730
					Jan 2011		46	1,800	0.023	NT	NT							2,640
					Jan 2010		NT	NT	NT	NT	NT							NT

GBR Sampling, Source-Area Wells

GRW-3/GBR-29 or 43	5,388.77	58.3	34.5 - 50.2	6	Oct 2018	43.13	99	640	NT	18	0.80							2,190
					Dec 2017		74	1,400	NT	54	1.9							2,920
					Aug 2015		NT	NT	NT	NT	NT							NT
					Jan 2017		NT	NT	NT	NT	NT							NT
					Nov 2014		26	2,200	NT	0.86	0.44							3,680
					Jan 2013		59	1,300	NT	2.8	0.54							2,620
					Jan 2012		54	1,300	NT	2.8	0.67							2,660
					Jan 2011		95	480	NT	NT	NT							1,810
					Jan 2010		NT	NT	NT	NT	NT							NT

GRW-6/GBR-44	5,390.81	58.6	32.6 - 48.3	6	Oct 2018	40.89	100	1,300	NT	890	45							2,390
					Dec 2017		120	1,200	NT	40	9.1							2,570
					Jan 2017		NT	NT	NT	NT	NT							NT
					Aug 2015		NT	NT	NT	NT	NT							NT
					Nov 2014		86	1,600	NT	35	8.5							3,170
					Jan 2013		100	1,500	NT	2.4	1.2							2,760
					Apr 2012		80	1,900	NT	0.47	1.0							2,740
					Jan 2011		110	1,400	NT	NT	NT							2,490
					Jan 2010		NT	NT	NT	NT	NT							NT

GBR-17	5,402.69	51	31 - 51	2	Oct 2018	34.00	49	1,200	NT	100	3.0							2,180
					Dec 2017		50	1,000	NT	9.3	0.25							2,110
					Jan 2017		NT	NT	NT	NT	NT							NT
					Aug 2015		NT	NT	NT	NT	NT							NT
					Nov 2014		44	1,200	NT	3.7	0.13							1,980
					Jan 2013		47	1,300	NT	1.2	0.045							2,700
					Jan 2012		46	1,400	NT	3.9	0.15							2,150
					Jan 2011		47	1,300	NT	NT	NT							2,140
					Jan 2010		NT	NT	NT	NT	NT							NT

Exploration Location	Wellhead Elevation (feet)	Well Depth (feet)	Screened Interval (depth in feet)	Well Diameter (inches)	Sample Date	Depth to Water (feet BTOC)	USEPA Method 300.0: Anions				USEPA Method 200.7: Total Metals				manganese		iron		USEPA Method SM2540C Modified: Total Dissolved Solids		Total dissolved solids
							chloride	sulfate			chromium										
NMWQCC Standard							250	600			0.05				1.0						1,000
GBR Background Threshold Values (1)							560	2,546			1.553				97.06						4,566
Regional Background Levels (Stone, et al. 1983) (2)																					NA
Lee Acres RI Background Concentrations - Alluvial Aquifer (1992) (3)							2 - 34,000	1.9 - 14,000					0.001 - 0.06	0.01 - 16		0 - 2.6					
Lee Acres RI/ROD Remedial Goals (1992/2004) (4)							6.4 - 404	420 - 2,120					0.0144 - 0.113	0 - 1.48		0.0161 - 0.423				760 - 3,600	
Units							mg/L	mg/L					mg/L	mg/L		mg/L				mg/L	
GBR-24D	5,396.77	46.3	33 - 43	2	Oct 2018	30.92	130	2,300					NT	9.1		1.8				3,780	
					Dec 2017		140	1,800					NT	11		1.8				3,560	
					Jan 2017		NT	NT					NT	NT		NT				NT	
					Aug 2015		NT	NT					NT	NT		NT				NT	
					Nov 2014		210	1,800					NT	12		1.7				3,410	
					Jan 2013		200	1,700					NT	3.6		1.8				3,430	
					Jan 2012		200	2,000					NT	2.4		1.7				3,320	
GBR-30	5,395.59	45	25 - 40	2	Jan 2011		170	2,400					NT	NT		NT				3,410	
					Jan 2010		NT	NT					NT	NT		NT				NT	
					Oct 2018	32.31	250	1,500					NT	28		0.76				3,000	
					Dec 2017		220	1,300					NT	38		1.4				2,770	
					Jan 2017		NT	NT					NT	NT		NT				NT	
					Aug 2015		NT	NT					NT	NT		NT				NT	
					Nov 2014		270	1,400					NT	88		2.2				2,520	
GBR-31	5,396.58	45	24.6 - 39.6	2	Jan 2013		310	1,500					NT	130		6.1				3,340	
					Jan 2012		390	1,700					NT	2.9		0.29				3,240	
					Jan 2011		320	1,600					NT	NT		NT				3,340	
					Jan 2010		NT	NT					NT	NT		NT				NT	
					Oct 2018	32.27	220	1,400					NT	13		3.1				2,660	
					Dec 2017		93	1,700					NT	21		4.2				2,940	
					Jan 2017		NT	NT					NT	NT		NT				NT	
GBR-51	5,389.68	59.5	38.5 - 54.25	6	Aug 2015		NT	NT					NT	NT		NT				NT	
					Nov 2014		230	1,500					NT	12		1.6				3,100	
					Jan 2013		79	1,600					NT	15		0.77				2,720	
					Jan 2012		74	1,700					NT	3.8		0.27				2,760	
					Jan 2011		97	1,800					NT	NT		NT				2,740	
					Jan 2010		NT	NT					NT	NT		NT				NT	
					Oct 2018	NM	54	1,300					NT	0.059		<0.0020				2,330	
GBR-51	5,389.68	59.5	38.5 - 54.25	6	Dec 2017		51	1,200					NT	0.080		<0.020				2,250	
					Jan 2017		NT	NT					NT	NT		NT				NT	
					Aug 2015		NT	NT					NT	NT		NT				NT	
					Nov 2014		54	1,400					NT	16		0.47				2,320	
					Jan 2013		56	1,500					NT	9.7		0.88				2,540	
					Jan 2012		53	1,600					NT	3.1		0.16				2,440	
					Jan 2011		53	1,600					NT	NT		NT				2,380	
GBR-51	5,389.68	59.5	38.5 - 54.25	6	Jan 2010		NT	NT					NT	NT		NT				NT	

Exploration Location	Wellhead Elevation (feet)	Well Depth (feet)	Screened Interval (depth in feet)	Well Diameter (inches)	Sample Date	Depth to Water (feet BTOC)	USEPA Method 300.0: Anions		sulfate	USEPA Method 200.7: Total Metals		chromium	iron	manganese	USEPA Method SM2540C Modified: Total Dissolved Solids	
							chloride	mg/L		mg/L	mg/L				mg/L	mg/L
NMWQCC Standard							250	600		0.05	1.0	0.2			1,000	
GBR Background Threshold Values (1)							560	2,546		1.553	97.06	6.42			4,566	
Regional Background Levels (Stone, et al. 1983) (2)							2 - 34,000	1.9 - 14,000		0.001 - 0.06	0.01 - 16	0 - 2.6			NA	
Lee Acres RI Background Concentrations - Alluvial Aquifer (1992) (3)							6.4 - 404	420 - 2,120		0.0144 - 0.113	0 - 1.48	0.0161 - 0.423			760 - 3,600	
Lee Acres RI/ROD Remedial Goals (1992/2004) (4)							34,000	14,000		0.06	16	0.346			10,000	
Units							mg/L	mg/L		mg/L	mg/L	mg/L			mg/L	
GBR-52	5,387.74	50.78	30.08 - 45.75	6	Oct 2018	NM	54	1,500		NT	0.12	0.0028			2,580	
					Dec 2017		54	1,500		NT	0.048	<0.0020			2,640	
					Jan 2017		NT	NT		NT	NT	NT			NT	
					Aug 2015		NT	NT		NT	NT	NT			NT	
					Nov 2014		65	1,700		NT	12	0.25			2,540	
					Jan 2013		63	1,700		NT	2.3	0.036			2,770	
					Jan 2012		60	1,800		NT	2.2	0.032			2,720	
					Jan 2011		62	1,900		NT	NT	NT			2,700	
					Jan 2010		NT	NT		NT	NT	NT			NT	
GBR Sampling, Downgradient Wells																
SHS-1	5,383.54	50.97	35.67 - 45.67	4	June 2017	P&A	100	1,300		NT	NT	NT			2,400	
					Jan 2011		NT	NT		NT	NT	NT			NT	
SHS-2	5,381.66	41.28	30.98 - 40.98	4	June 2017	P&A	310	2,200		NT	NT	NT			4,100	
					Jan 2011		NT	NT		NT	NT	NT			NT	
SHS-4	5,383.62	55	37 - 47	2	June 2017	P&A	59	1,600		NT	NT	NT			2,270	
SHS-5	5,378.36	53.33	37.62 - 48.0	4	June 2017	P&A	50	1,200		NT	NT	NT			2,030	
					Jan 2011		NT	NT		NT	NT	NT			NT	
SHS-6	5,378.17	47.88	32.48 - 42.85	4	Jan 2018	37.85	NT	NT		NT	NT	NT			NT	
SHS-8	5,380.25	52.5	30.83 - 46.60	4	Oct 2018	38.25	130	890		NT	50	3.1			2,730	
SHS-8					Jan 2018		NT	NT		NT	NT	NT			NT	
SHS-8					Dec 2017		110	1,200		NT	10	3.6			2,730	
SHS-8					Jan 2017		NT	NT		NT	NT	NT			NT	
SHS-8					Aug 2015		NT	NT		NT	NT	NT			NT	
SHS-8					Nov 2014		110	350		NT	260	5.0			1,400	
SHS-8					Jan 2013		120	770		0.099	100	4.7			1,800	
SHS-8					Jan 2012		170	430		NT	15	2.3			2,040	
SHS-8					Jan 2011		150	150		0.0063	NT	NT			1,440	
SHS-8					Jan 2010		NT	NT		NT	NT	NT			NT	
SHS-9	5,380.79	49.88	34.46 - 44.46	4	Jan 2018	37.43	NT	NT		NT	NT	NT			NT	
SHS-13	5,367.81	47.4	27 - 42	4	Jan 2018	35.85	NT	NT		NT	NT	NT			NT	
SHS-14	5,367.07	54	28.70 - 48.70	4	Jan 2018	34.18	NT	NT		NT	NT	NT			NT	
SHS-15	5,366.21	47.8	27.40 - 42.40	4	Jan 2018	33.00	NT	NT		NT	NT	NT			NT	

Exploration Location	Wellhead Elevation (feet)	Well Depth (feet)	Screened Interval (depth in feet)	Well Diameter (inches)	Sample Date	Depth to Water (feet BTOC)	USEPA Method 300.0: Anions			USEPA Method 200.7: Total Metals			sulfate	chromium	iron	manganese	USEPA Method SM2540C Modified: Total Dissolved Solids	
							chloride	nitrate	ammonia	total metals	total dissolved solids	total dissolved solids						
NMWQCC Standard							250	600	0.05	1.0	0.2	1,000						
GBR Background Threshold Values (1)							560	2,546	1.553	97.06	6.42	4,566						
Regional Background Levels (Stone, et al. 1983) (2)							2 - 34,000	1.9 - 14,000	0.001 - 0.06	0.01 - 16	0 - 2.6	NA						
Lee Acres RI Background Concentrations - Alluvial Aquifer (1992) (3)							6.4 - 404	420 - 2,120	0.0144 - 0.113	0 - 1.48	0.0161 - 0.423	760 - 3,600						
Lee Acres RI/ROD Remedial Goals (1992/2004) (4)							34,000	14,000	0.06	16	0.346	10,000						
Units							mg/L	mg/L	mg/L	mg/L	mg/L	mg/L						
SHS-16	5,362.58	42.6	22.2 - 37.2	4	Jan 2018	32.68	NT	NT	NT	NT	NT	NT						
SHS-17	5,364.35	46.21	35.67 - 45.67	4	Jan 2018	32.63	NT	NT	NT	NT	NT	NT						
SHS-18	5,373.64	47.36	37.36 - 47.36	4	Jan 2018	39.24	NT	NT	NT	NT	NT	NT						
SHS-19	5,378.89	52.4	32.40 - 52.40	4	Jan 2018	37.77	NT	NT	NT	NT	NT	NT						

Notes

- Background Concentrations Proposed for the Giant Bloomfield Refinery Site. Based on Statistical Analysis Prepared by LT Environmental and Submitted to New Mexico Oil Conservation District in an Email Dated June 10, 2019.

Regional Background Concentrations Established in Document Titled *Hydrogeology and Water Resources of San Juan Basin, New Mexico*, Stone et al., dated 1983

"Background" Concentration Proposed in Lee Acres DRAFT *Remedial Investigation Report* Prepared for the US Bureau of Land Management (dated February 1992)

Contaminant Concentrations Established as the "Remedial Goals" or "Background" Concentrations for the Lee Acres Superfund Site. Based on the Lee Acres DRAFT *Remedial Investigation Report* and *Record of Decision* (dated May 2004).

The Lee Acres *Remedial Investigation Report* Presents Analytical Data for Areas of the Site and Not Data for Individual Wells

Well Location Used for Statistical Analysis of Background Concentrations

Top-of-Casing Elevation is Unknown

Not Measured

P&A

Plugged and Abandoned

µg/L

micrograms per liter

Indicates Concentration Exceeds the Greater Value of the NMWQCC Water-Quality Standards or Background Threshold Values Proposed for the Giant Bloomfield Refinery

mg/L

milligrams per liter

NMWQCC

New Mexico Water Quality Control Commission

NT

Not Tested

USEPA

United States Environmental Protection Agency

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Revised August 1, 2011

Submit Original
Plus 1 Copy
to Santa Fe
1 Copy to Appropriate
District Office

**DISCHARGE PLAN APPLICATION FOR SERVICE COMPANIES, GAS PLANTS,
REFINERIES, COMPRESSOR, GEOTHERMAL FACILITIES
AND CRUDE OIL PUMP STATIONS**

(Refer to the OCD Guidelines for assistance in completing the application)

☒ New ☐ Renewal ☐ Modification

1. Type: Discharge Permit
 2. Operator: Western Refining Southwest, Inc.
Address: 111 County Road 4990, Bloomfield NM 87413
Contact Person: Greg McCartney Phone: 419-310-4888
 3. Location: NW 1/4 /4 SW 1/4 /4 Section 22 & 27 Township 29N Range 12W
Submit large scale topographic map showing exact location.
 4. Attach the name, telephone number and address of the landowner of the facility site. SECTION 2.0
 5. Attach the description of the facility with a diagram indicating location of fences, pits, dikes and tanks on the facility. SECTION 5.0
 6. Attach a description of all materials stored or used at the facility. SECTION 6.0
 7. Attach a description of present sources of effluent and waste solids. Average quality and daily volume of waste water must be included. SECTION 7.0
 8. Attach a description of current liquid and solid waste collection/treatment/disposal procedures. SECTION 8.0
 9. Attach a description of proposed modifications to existing collection/treatment/disposal systems. SECTION 9.0
 10. Attach a routine inspection and maintenance plan to ensure permit compliance. SECTION 10.0
 11. Attach a contingency plan for reporting and clean-up of spills or releases. SECTION 11.0
 12. Attach geological/hydrological information for the facility. Depth to and quality of ground water must be included. SECTION 12.0
 13. Attach a facility closure plan, and other information as is necessary to demonstrate compliance with any other OCD rules, regulations and/or orders. SECTION 14.0
 14. CERTIFICATION: I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.
- Name: Greg McCartney Title: Senior Environmental Professional
Signature:  Date: March 27, 2020
E-mail Address: gjmccartney@marathonpetroleum.com



A proud member
of WSP

DISCHARGE PERMIT APPLICATION

**FORMER GIANT BLOOMFIELD
REFINERY
BLOOMFIELD, NEW MEXICO**

MARCH 2020

Prepared for:

**WESTERN REFINING SOUTHWEST, INC.
111 COUNTY ROAD 4990
BLOOMFIELD, NEW MEXICO 87413**

Prepared by:

**LT ENVIRONMENTAL, INC.
848 East Second Avenue
Durango, Colorado 81301
970.385.1096**

DISCHARGE PERMIT APPLICATION

FORMER GIANT BLOOMFIELD REFINERY
BLOOMFIELD, NEW MEXICO

Project Number: 095820002

Prepared by:

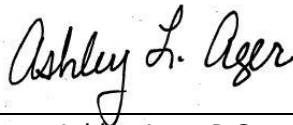


Stuart Hyde, LG
LTE Project Geologist

March 27, 2020

Date

Reviewed by:



Ashley Ager, P.G.
LTE Senior Geologist

March 27, 2020

Date

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TABLES

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TABLE 3	2010 TO 2018 – ANNUAL COMPLIANCE GROUNDWATER LABORATORY ANALYTICAL RESULTS

APPENDICES

APPENDIX A	BACKGROUND CONCENTRATIONS IN UPGRADIENT WELLS
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1.0 DISCHARGE PERMIT TYPE

Western Refining Southwest, Inc. (Western) proposes the potential discharge of water derived from wells at the inactive former Giant Bloomfield Refinery (GBR) in San Juan County, New Mexico. Monitoring and recovery wells were installed as part of site characterization activities and as a remedial action (groundwater recovery and treatment) to address groundwater contamination associated with historical releases of diesel fuel on the GBR property. For the purposes of this document, the “Site” is considered to be the lateral and vertical extents of contamination related to historical diesel-fuel releases originating from the GBR property. The “Facility” is considered the groundwater recovery and treatment system, as well as the existing water-discharge infrastructure, located on the GBR property.

Since 2015, no water has been discharged at the Facility. However, additional groundwater sampling is planned as part of additional characterization proposed for the Site per the *Stage 1 Abatement Plan* prepared by LT Environmental (LTE). Depending on the results of the additional sampling, the groundwater recovery and treatment system may be reactivated and require the discharge of treated effluent into the existing infiltration trenches located at the Site.

2.0 OPERATOR INFORMATION

The landowner, operator and legally responsible party is as follows:

Western Refining Southwest, Inc.
539 South Main Street, Room M-7081
Findlay, OH 45840
Phone: (419) 421-2338

Correspondence regarding this discharge plan should be directed to the local representative:

Gregory McCartney
Senior Environmental Professional
Marathon Petroleum Company LP
539 South Main Street, Room M-7081
Findlay, OH 45840
Phone: (419) 310-4888

3.0 LOCATION

The Facility is located on the northeast corner of United States Highway 64 and County Road 3500, approximately five miles west of Bloomfield, New Mexico, in the southwest quarter of Section 22 and the northwest quarter of Section 27, Township 29 North, Range 12 West in San Juan County, New Mexico (Figure 1).

4.0 LANDOWNER INFORMATION

The landowner, operator and legally responsible party is as follows:

Western Refining Southwest, Inc.
539 South Main Street, Room M-7081
Findlay, OH 45840
Phone: (419) 421-2338

5.0 FACILITY DESCRIPTION

The Facility consists of the former Giant Bloomfield Refinery storage tanks and equipment, as well as the remedial equipment installed for recovery, treatment, and discharge of groundwater from the Site (pumps, piping, and treatment system). The refinery operated from 1974 to 1982 and is presently inactive. A remediation system was installed in stages beginning in 1988 and has gradually been simplified over time. The remediation system was designed to treat groundwater affected by various releases during operation of the former refinery and periodic spills at the truck unloading facility. The remediation system consists of a series of groundwater monitoring wells, groundwater recovery wells, water treatment equipment, and treated-water infiltration trenches. During operation, the treatment system could process up to 5,000,000 gallons of water per year. Currently, the Facility and associated equipment is located within the GBR property boundary. The location of the current Facility equipment is shown on Figure 2.

6.0 STORED MATERIALS

The refinery is no longer in operation and there are no stored materials located at the Facility.

7.0 EFFLUENT SOURCES

The effluent will be derived from groundwater pumped from a series of recovery wells at the Site. Groundwater in several areas of the Site is impacted by petroleum hydrocarbons. However, the recovered water will be treated prior to discharge (see Section 8.0). Table 1 presents the analytical results of the influent and effluent water in 2015 prior to shut-down of the remediation system. Up to 420,000 gallons of water was previously treated and discharged per month.

8.0 WATER COLLECTION, TREATMENT, AND DISPOSAL

8.1 WATER COLLECTION

At the Facility, petroleum hydrocarbon-impacted groundwater and phase-separated hydrocarbons (PSH) may be pumped from the shallow aquifer through a series of recovery wells located within the formerly defined contaminant plume associated with the Site. Locations of previously used recovery wells are shown in Figure 2 and are identified by the acronym GRW (Giant Recovery Well), followed by a numerical designation. There may be solid filters in each recovery well enclosure to control deposition of solid contaminants in the system. Flow meters will be installed to monitor volumes of groundwater recovered.

8.2 WATER TREATMENT

Recovered water exhibiting dissolved phase contaminants and/or PSH above New Mexico Water Quality Control Commission (NMWQCC) regulatory standards require treatment to within applicable guidelines prior to discharge. A carbon adsorption process formerly was utilized for water treatment prior to discharge and is available for future use, if appropriate. This process removes contaminants from the groundwater by forcing it through tanks containing activated carbon treated to attract the contaminants. Figure 3 presents a simplified representation of the groundwater recovery and treatment system at the Site. Figure 4 details the carbon adsorption tank and associated piping used at the refinery.

8.2.1 Tank 102

Depending on the volume recovered, Tank 102 (capacity of 500 barrels, or 21,000 gallons) may be used as an intermediate storage tank for the water treatment system. The tank can store water before it is treated.

8.3 WATER DISCHARGE

Once treated, water can be discharged to an infiltration trench located within the Site boundary. Infiltration trenches consist of subsurface distribution systems placed within gravel packs. Water infiltrates into the surrounding strata and eventually makes its way to the shallow aquifer. Figure 5 illustrates a typical infiltration gallery. The return of treated water to the aquifer serves to recharge the aquifer.

9.0 PROPOSED MODIFICATION OF EXISTING COLLECTION, TREATMENT, AND DISPOSAL SYSTEMS

No modifications of the existing collection, treatment, and/or disposal systems are requested at this time. Following completion of a Stage 1 Abatement Plan, changes may be proposed in a Stage 2 Abatement Plan.

10.0 INSPECTION AND MAINTENANCE PLAN

When in operation, inspection and maintenance are an integral part of the remediation system. Inspection provides information critical to the safe and efficient operation of the system. Maintenance is key in the prevention of undesirable events and excessive downtime. Regular inspections are performed to assure safe and efficient operation. During operation, the system will be monitored on a regular basis during the work week. Observations will be recorded in a bound field logbook with the date, time, and person recording the information noted.

During operation, an inspection will be made weekly in the control building, at the storage tank, and each recovery well. All equipment will be inspected for leaks and malfunctions. The operator will be familiar with the location of underground lines and note any surface indication of underground leaks. Leaks of any size will be noted and repaired. Readings from all water meters will be observed and recorded in the logbook regularly, and comparisons to previous readings will be made. Abnormal meter readings can indicate problems within the system. On a semi-annual basis, the level of water and product is determined for each monitoring and recovery well. An electronic water/oil detection tape is used to determine levels. The data will be recorded in a logbook.

Maintenance of the Facility will include replacement of filters in well houses, lubrication of rotating equipment, air compressor oil changes, addition of nutrients as necessary, observations of unusual pump and motor noise, inspection of the carbon pre-filter, and repair of any equipment as required. Water volumes removed from each recovery well will be metered. Metered water volumes, as well as water levels, indicate the effectiveness of the well pump and controls. Efforts will be made to maintain consistent pumping rates.

An inspection and maintenance schedule and checklist will be provided with the Stage 2 Abatement Plan.

11.0 SPILLS AND RELEASE CONTINGENCY PLAN

In the event of an unplanned release of water or hydrocarbon at the Facility, the Western Project Manager should be notified and act as the response coordinator. If the Project Manager is not available, the next person noted in the following list of alternates should be notified.

INTERNAL EMERGENCY NOTIFICATIONS

- **24-hour Emergency Line:** 1-888-658-8006
- **Tommy D. Roberts – Facility Supervisor**
Mobile: 505-801-0421
Office: 505-632-4195
- **Frank Dooling - Operations**
Mobile: 505-634-6138
Office: 505-632-4142

EMERGENCY RESPONSE CONTRACTORS

- **EnviroTech Inc. / Emergency Spill Response Contractor**
5796 U.S. Highway 64
Farmington, New Mexico 87401
24 Hour Emergency Response: 1-800-362-1879
- **H2O Environmental / Emergency Spill Response Contractor**
2634 S Airport Blvd #2
Chandler, Arizona 85286
24 Hour Emergency Response: 480-855-5676

If it is determined that the release is 5 barrels or greater, the OCD will be notified and a written report submitted. Leaks occurring outside of tank containment berms should be contained or redirected so that they can be picked up by pumps or vacuum trucks and placed back in storage. In the event of a broken pipe, the leaking section should be isolated by closing necessary valves and shutting down pumps.

11.1 SPILL AND LEAK PREVENTION AND MONITORING

Leaks and spills are not likely; however, the potential does exist for these events. Tanks and piping are the most likely locations for leak and/or spills. Safeguards in place in the refinery include choice of construction materials, safety and shutdown devices, secondary containment, inspection and security.

11.1.1 Construction Materials

All piping is and will be constructed of PVC or other hydrocarbon and corrosion resistant plastic. Material choices for valves and controls include plastic, stainless steel, bronze and cast iron. All are suitable for water and hydrocarbon service. Storage Tank 102 is constructed of steel.

11.1.2 Safety and Shutdown Devices

All storage tanks are equipped with high- and low-level liquid sensors to detect breaches or overfills. Any treatment system installed may be equipped with an emergency shutoff.

11.1.3 Secondary Containment

Tank 102 has viable earthen secondary containment berms in place. The bermed area has a minimum liquid capacity of 1.5 times the total capacity of the tank contained within it. Berms are monitored and maintained to ensure effectiveness.

11.1.4 Inspection

During system operation, regular inspections will be performed during the work week. These inspections include looking for visual indications of leaks, checking tank levels, recording and comparing meter readings and checking the condition of pump seals and motors. Unusual conditions are noted in the logbook and reported to the Project Manager.

11.1.5 Security

The facility is entirely fenced with chain link or barbed wire. Gates are locked and access is limited to facility personnel and supervised visitors and contractors.

12.0 GEOLOGICAL/HYDROLOGICAL INFORMATION

The Facility and Site are located on weathered outcrops of Nacimiento Formation, which is comprised of shales, sandstones and siltstones of Cretaceous-Tertiary age. Immediately to the west of the Facility and on Western's property is a large unnamed arroyo, which is underlain by 30 to 60 feet of Quaternary alluvial sediments. Older Quaternary terrace deposits of cobbles and boulders are observed on the interfluvial ridges adjacent to the arroyo. These terrace deposits may have been utilized as fill on the refinery site. The San Juan River Valley is located south of the site and contains up to several hundred feet of alluvial fill.

The uppermost zone of ground water in the refinery area is unconfined to partially confined water table unit, which is hosted by the weathered, locally porous sandstones and shales of the Nacimiento Formation and arroyo alluvium. These units merge hydrologically with the San Juan River alluvium to the south. Figures 6 and 7 present generalized cross sections through the refinery site showing the relationship of the arroyo alluvium to bedrock. Major hydrogeologic features of the site are:

- An interconnected water table aquifer hosted by both valley and arroyo fill and the upper parts of the Nacimiento Formation;
- Ground water at a depth of 30 to 70 feet beneath the land surface;
- An upper water table surface generally conforming to topography, with ground water flow from north or northeast to south (towards the San Juan River) through the refinery area;
- Minor, local zones of perched ground water lying 5 to 10 feet above the water table.

Water levels and floating product thicknesses were measured in all wells at the Site during 2019. A record of these measurements is shown in Table 2. A groundwater contour map was prepared based on the static water levels of all the wells at the Site in November 2019 (Figure 8). This map is representative of static conditions of the aquifer because pumping currently is not being performed on wells at the Site. Where floating product was encountered, the product thickness has been multiplied by 0.8 and added to the measured water elevation. This calculation corrects for the difference in density between floating product and water.

12.1 BACKGROUND CONCENTRATIONS

As discussed in the *Stage 1 Abatement Plan* prepared for the Site (LTE, 2020), several constituents are present at the Site at concentrations exceeding NMWQCC standards. However, based on concentrations detected in wells hydrogeologically upgradient of the Site, elevated concentrations of several constituents are present due to the offsite migration of contaminants originating from the Lee Acres Landfill Superfund site. Specifically, chloride, chromium, iron, sulfate, and TDS concentrations are present in groundwater at and downgradient of the Lee Acres Landfill at concentrations above NMWQCC standards; however, these constituents were not considered during the remediation-selection process outlined in the *Record of Decision* for the Superfund site (EPA, 2004). In addition to these constituents, manganese (considered a COC for the Lee Acres Landfill Superfund site) also is found at concentrations above NMWQCC standards. These constituents have long been detected at the Site in upgradient wells GBR-32, GBR-48, GBR-49, and

GBR-50, located hydrogeologically upgradient of the source areas at the Site (identified on Figure 2) and downgradient of the Lee Acres Landfill Superfund site.

In June 2019, LTE performed a statistical analysis using ProUCL software (developed by the United States Environmental Protection Agency, or EPA) to develop “background” concentrations for the following constituents migrating onto the Site: chloride, chromium, iron, manganese, sulfate, and TDS. Table 3 presents the results of the statistical analysis and groundwater analytical results for these constituents detected between 2010 and 2018. Table 3 also presents the cleanup standards (or “remedial goals”) established for the Lee Acres Landfill Superfund site in their *Remedial Investigation Report* (BLM, 1992) and *Record of Decision* (EPA, 2004). Appendix B presents the assumptions and inputs used for the statistical analysis. Appendix B also includes a letter prepared by LTE summarizing our findings that was provided to the EPA for their five-year review of the Lee Acres Landfill Superfund site (conducted in 2019).

12.2 FLOODING POTENTIAL

The greatest threat to flooding of the Facility are the San Juan River (located less than one mile south of the site) and the unnamed arroyo located within the Site itself. History suggests flooding potential of the San Juan River is small. From 1904 until 1976, only 23 flood events (on individual streams, not concurrent on all streams) have been recorded. According to a study conducted by the New Mexico Floodplain Managers Association (2003), previous floods of the San Juan River resulted from general rainstorms, snowmelt augmented by rain, and from cloudburst storms. Rain floods usually occur during the months of September and October. This type of flood results from prolonged heavy rainfall over tributary areas and is characterized by high peak flows of moderate duration. Major floods (recurrence interval of 100 or more years) result from excessive snowmelt runoff generated in the watershed upstream from Bloomfield. Flood flows generated by snowmelt generally occur during the period from May through July. Snowmelt flooding is characterized by moderate peak flows, large volume and long duration, and marked diurnal fluctuation in flow. The refinery is elevated above the floodplain of the San Juan River, decreasing the chance of a river flood, such as the ones described above, from reaching the Facility.

The flooding potential of the arroyo is predicted to be low as well. Similar arroyos have been studied in detail near Farmington and are described as ephemeral in character, flowing only during periods of heavy rainfall (New Mexico Floodplain Managers Association, 2003). Furthermore, the arroyo’s influence on the Site and Facility has been decreased due to the construction of a new highway located between the arroyo and the refinery.

13.0 MONITORING AND REPORTING

When the Facility is in operation, influent/effluent and water samples will be collected on a monthly basis. Per the *Stage 1 Abatement Plan* (LTE, 2020) prepared for the Site, groundwater conditions also will be monitored through sampling of the existing Site monitoring wells. Based on the results of the Stage 1 sampling, a *Stage 2 Abatement Plan* and/or *Groundwater Monitoring Plan* will be prepared for the Site. At a minimum, appropriate wells will be gauged quarterly, with groundwater sampled for chemical analysis annually when the Facility is in operation. Constituents to be analyzed will be based on the results of the *Stage 1* and *Stage 2 Abatement Plans*.

A report of activities performed at the Facility will be prepared annually. The report will include an update of operations, analytical results, water levels, a potentiometric surface map, and discharge volume history. Reports and associated data will be retained by Western for a period of at least five years.

14.0 FACILITY CLOSURE PLAN

The NMOCD will be notified when operations at the Facility are discontinued for a period in excess of six months. In addition, prior to permanent closure of the Facility, a closure plan will be submitted for approval by the NMOCD. Closure and waste disposal will be conducted in accordance with the statutes, rules, and regulations in effect at the time of closure.

15.0 PERMIT RENEWAL

The Facility discharge permit will expire five years after NMOCD approval and notification of this application. Western will prepare and submit an application for discharge permit renewal at least 120 days before the discharge permit expires. If the renewal application is submitted at least 120 day prior to expiration, then the existing discharge permit for the same activity shall not expire until the application for renewal has been approved or disapproved by NMOCD.

16.0 PERMIT MODIFICATIONS

In the case of Facility expansion, increase in discharge, and/or other significant modifications to the discharge of water, Western will notify NMOCD in writing for review and approval prior to implementing the modification. An application and a description of the requested modifications will be included in the written notice.

Modifications to abatement or monitoring plans prepared to address pre-existing contaminants associated with the Site (as of March 2020) also will be submitted to NMOCD in writing for review and approval. These modifications will not require an application and will not be subject to permit fees as described in Table 1 of 20.6.2.3114 NMAC. However, filing and/or review fees may be applied as presented in Table 2 of 20.6.2.3114 NMAC.

17.0 REFERENCES

New Mexico Floodplain Managers Association, 2003, A History of Floods and Flood Problems in New Mexico, LA Bond Associates, High Rolls, New Mexico, 144 p.

United States Bureau of Land Management (BLM). (1992). Remedial Investigation Report for the Lee Acres Landfill. Albuquerque: US Bureau of Land Management.

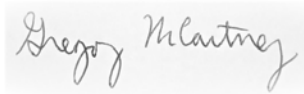
United States Environmental Protection Agency (EPA). (2004). Record of Decision for the Lee Acres Landfill Superfund Site, Farmington, New Mexico.

18.0 CERTIFICATION

WESTERN REFINING SOUTHWEST, INC.
GIANT BLOOMFIELD REFINERY
BLOOMFIELD, NEW MEXICO

I certify that the information provided in the application is true, accurate, and complete to the best of my knowledge, after reasonable inquiry.

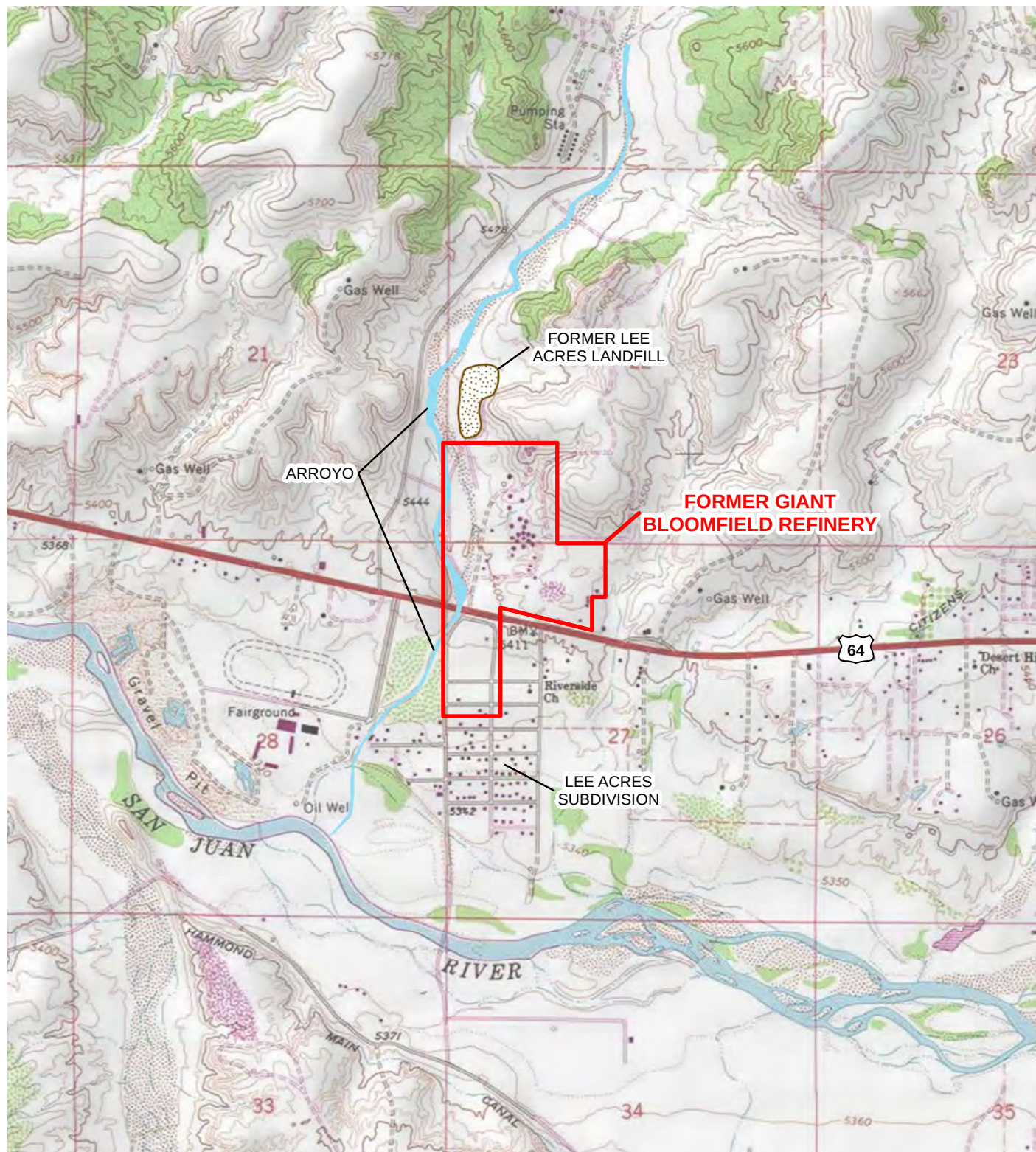
Signature:



Gregory McCartney
Senior Environmental Professional
gjmccartney@marathonpetroleum.com

March 27, 2020

Date



LEGEND

- SITE LOCATION
- ARROYO
- FORMER LEE ACRES LANDFILL



NEW
MEXICO

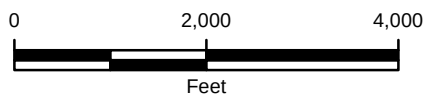


IMAGE COURTESY OF ESRI/USGS

FIGURE 1
SITE LOCATION MAP
 FORMER GIANT BLOOMFIELD REFINERY
 SW SEC 22 & NW SEC 27 T29N R12W
 SAN JUAN COUNTY, NEW MEXICO
 WESTERN REFINING SOUTHWEST, INC.



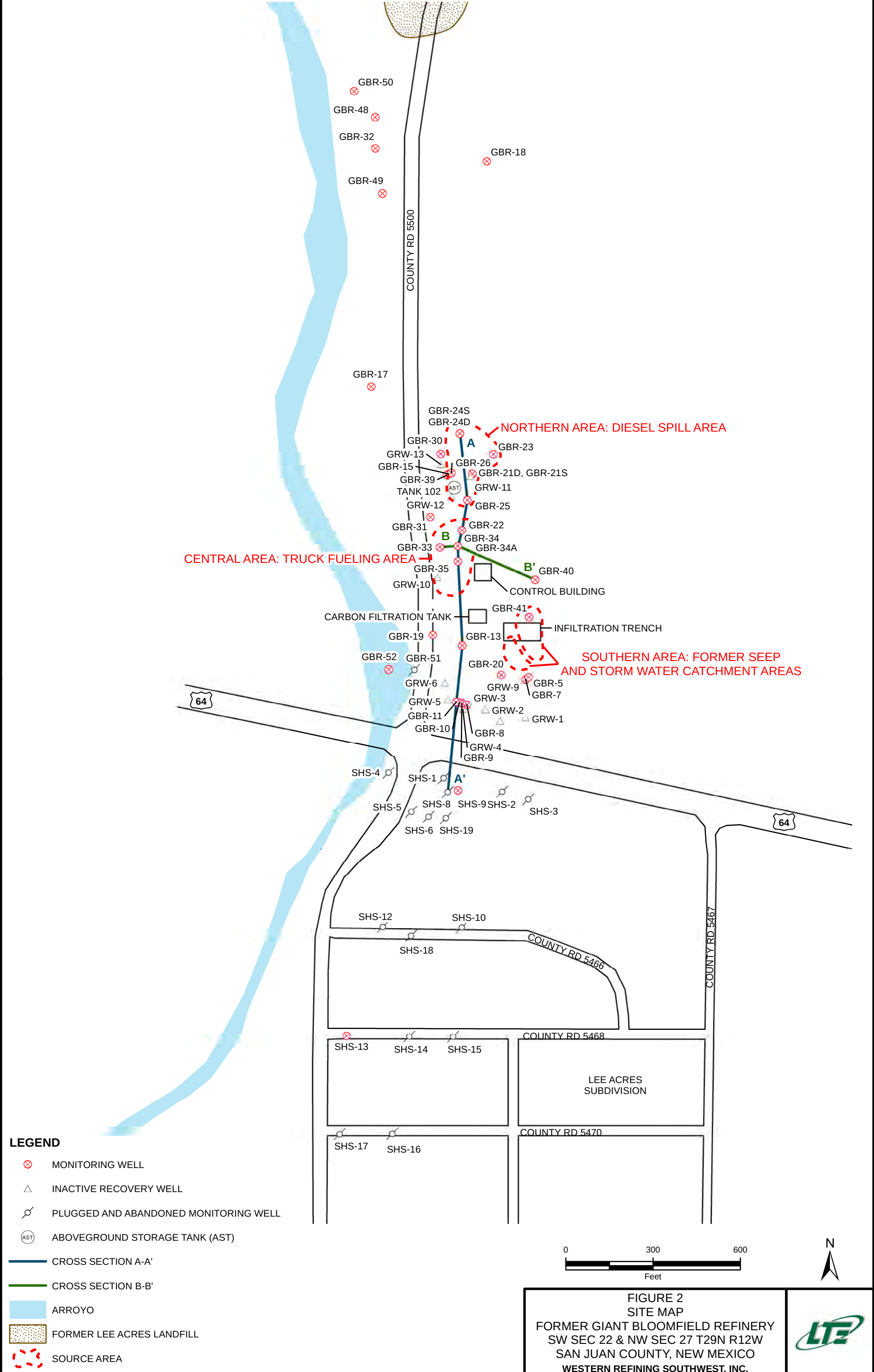


FIGURE 3

**SIMPLIFIED REPRESENTATION OF THE
GROUNDWATER RECOVERY, TREATMENT,
AND DISCHARGE SYSTEM**

FORMER GIANT BLOOMFIELD REFINERY
SW SEC 22 & NW SEC 27 T29N R12W
SAN JUAN COUNTY, NEW MEXICO
WESTERN REFINING SOUTHWEST, INC.

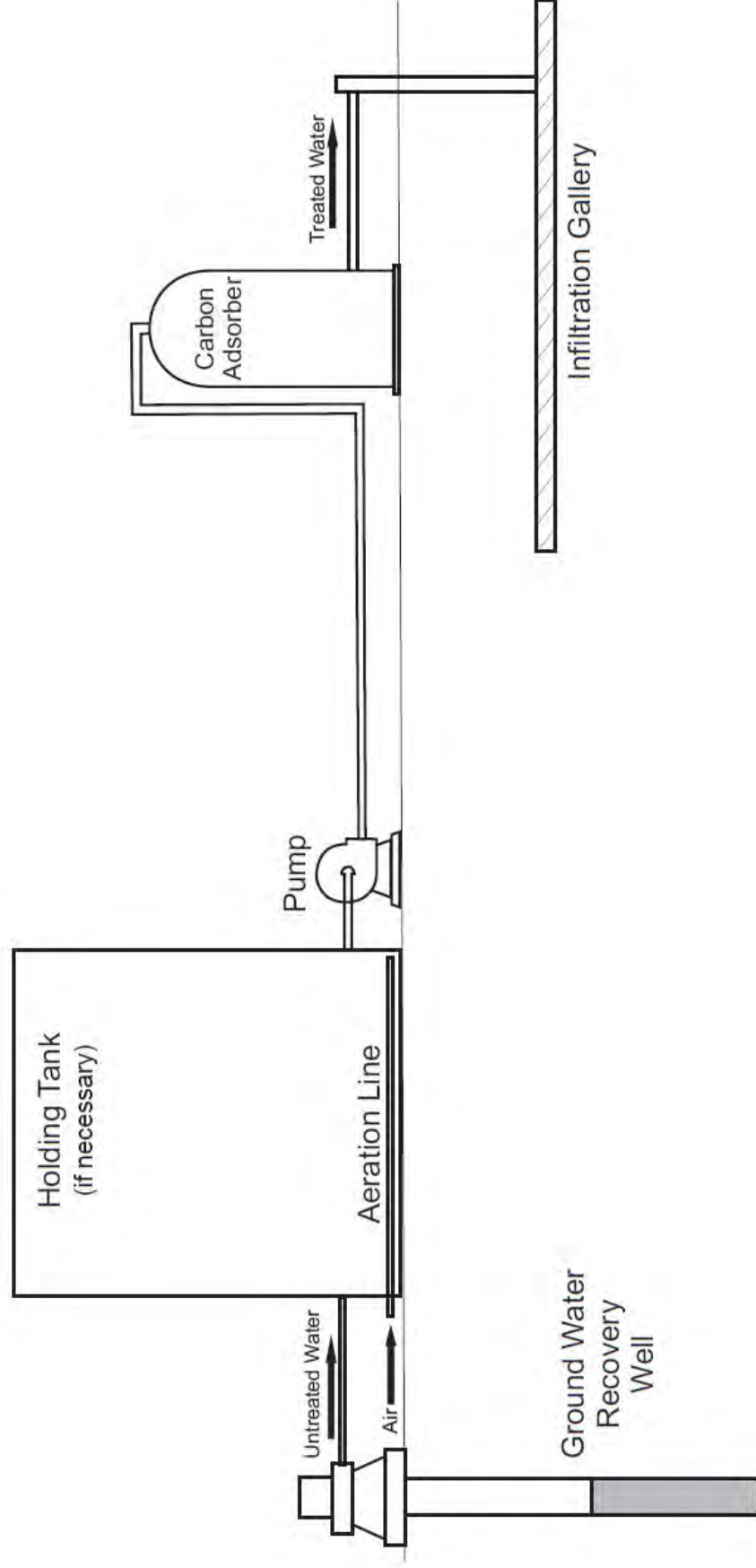


FIGURE 4

THE CARBON ADSORPTION SYSTEM
 FORMER GIANT BLOOMFIELD REFINERY
 SW SEC 22 & NW SEC 27 T29N R12W
 SAN JUAN COUNTY, NEW MEXICO
 WESTERN REFINING SOUTHWEST, INC.

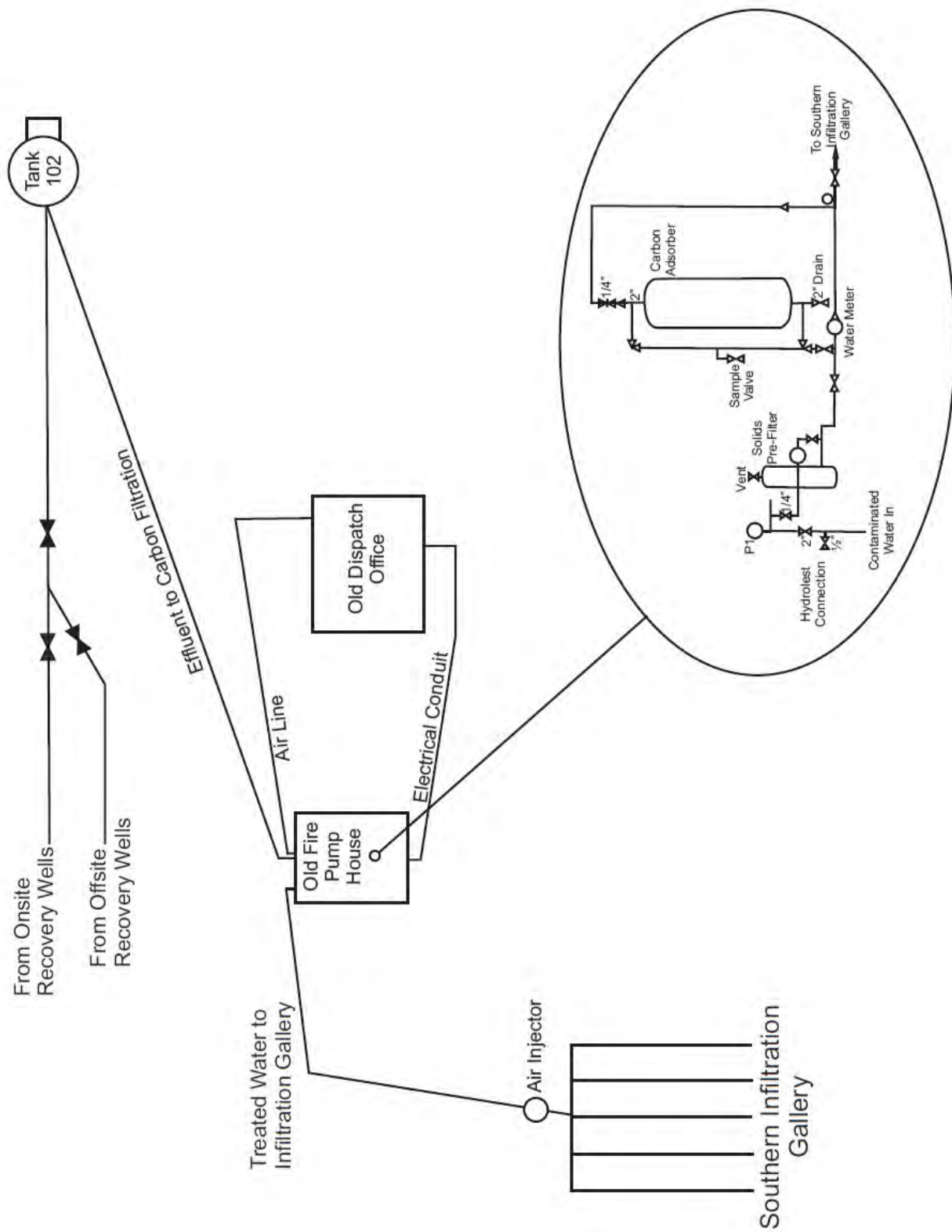
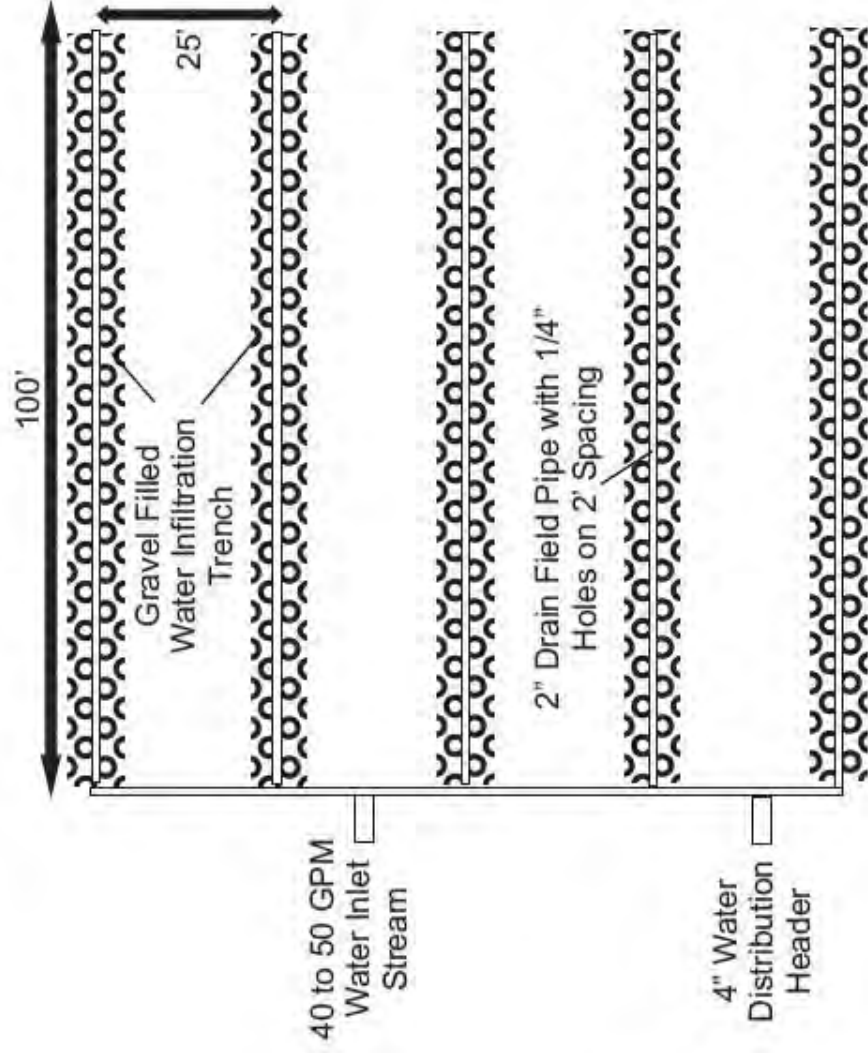


FIGURE 5

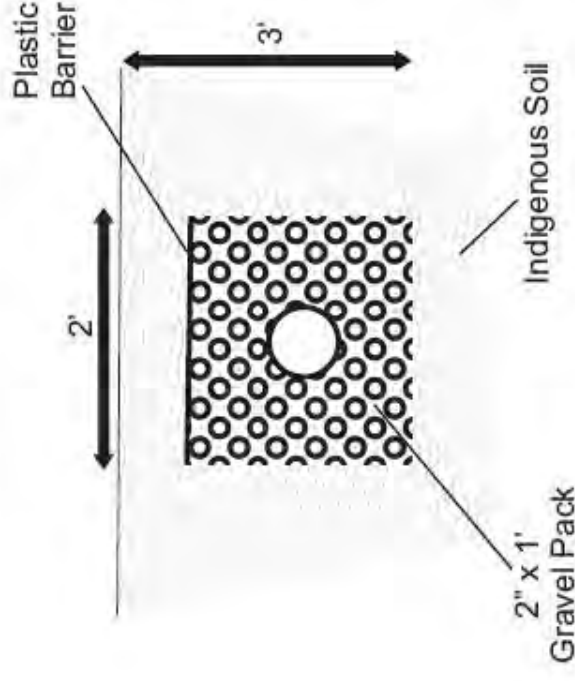
INFILTRATION TRENCH DESIGN AND
CONSTRUCTION SPECIFICATIONS
FORMER GIANT BLOOMFIELD REFINERY
SW SEC 22 & NW SEC 27 T29N R12W
SAN JUAN COUNTY, NEW MEXICO
WESTERN REFINING SOUTHWEST, INC.



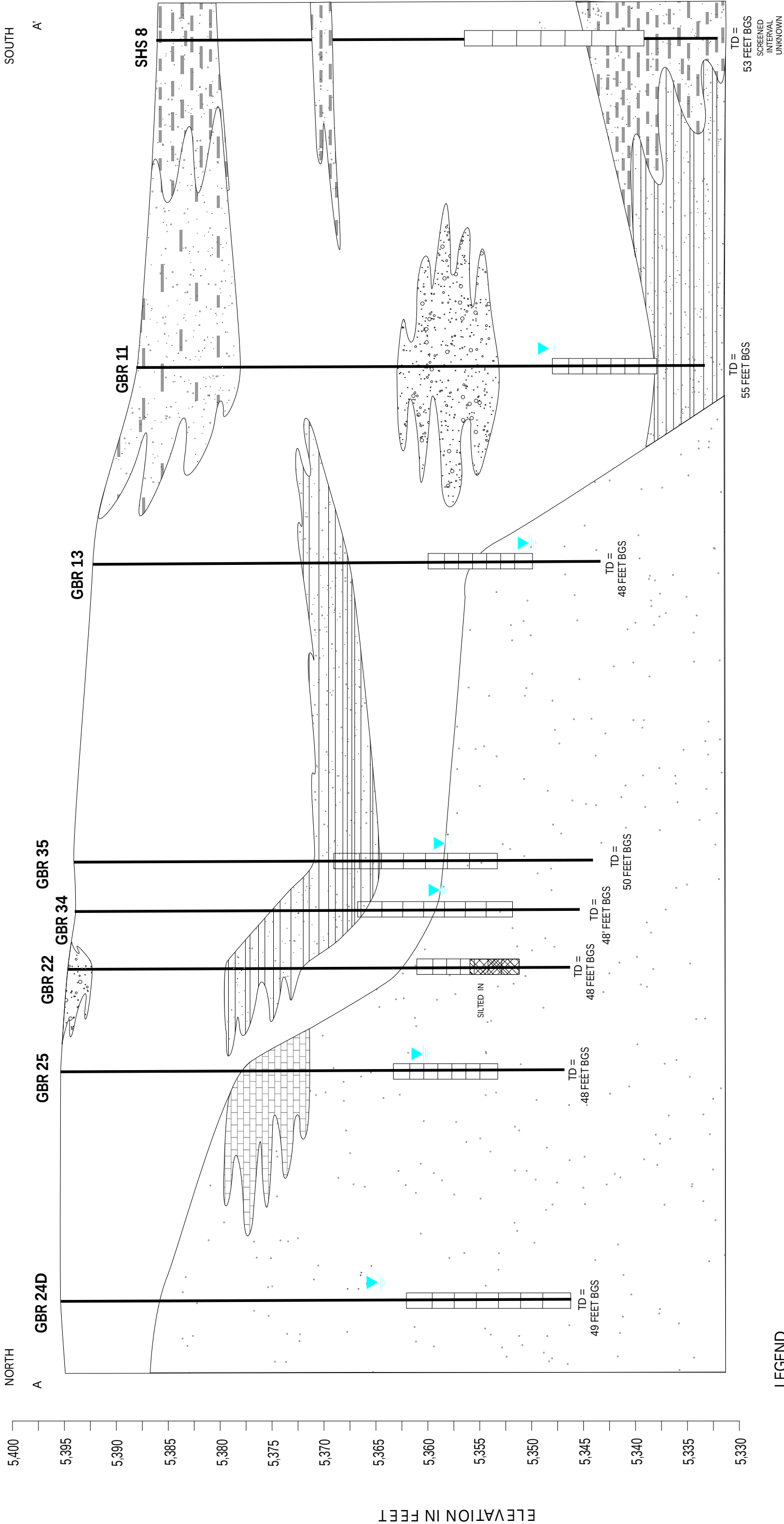
Trench Top View Cut Away
at the Infiltration Line Depth



Cross Section of a
Typical Infiltration Trench



2" infiltration lines are designed
to handle approximately 10 gal/min
each with a maximum length of 100'



LEGEND

- SANDY SILT
- CLAYEY SAND
- SILTY SAND
- SAND
- PEBBLES/GRAVEL
- NACIMIENTO SHALE
- NACIMIENTO SANDSTONE

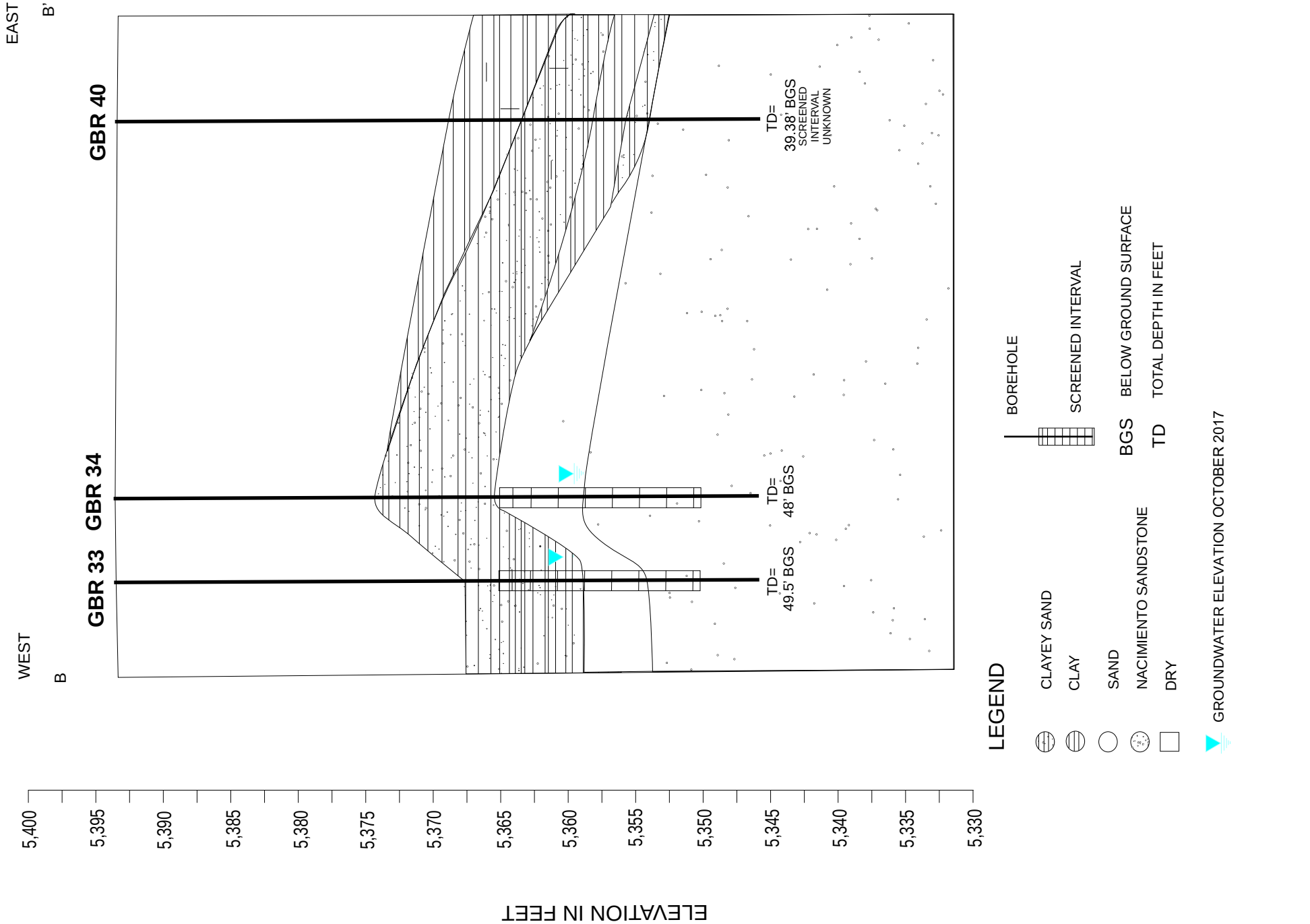
- BOREHOLE
- BGS
- TD
- SCREENED INTERVAL
- BELOW GROUND SURFACE
- TOTAL DEPTH IN FEET
- GROUNDWATER ELEVATION FROM OCTOBER 2018

HORIZONTAL SCALE
1" = 10 FEET

VERTICAL SCALE
1" = 90 FEET

FIGURE 6
CROSS SECTION A-A'
FORMER GIANT BLOOMFIELD REFINERY
SWSW SEC 22 &WNW SEC 27 T29N R12W
WESTERN REFINING SOUTHWEST, INC.





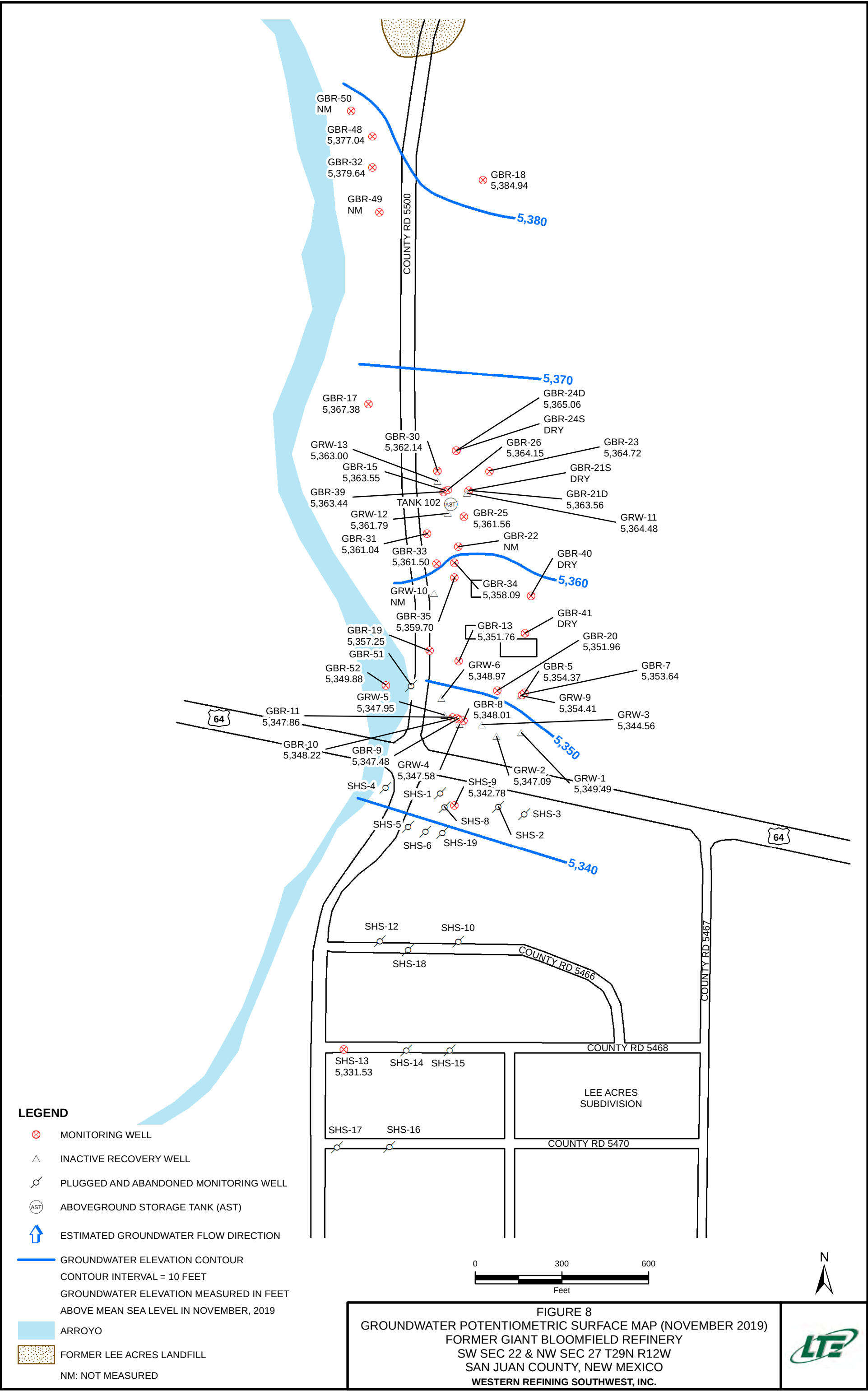


TABLE 1
2015 INFUENT AND EFFLUENT ANALYTICAL RESULTS

FORMER GIANT BLOOMFIELD REFINERY
WESTERN REFINING SOUTHWEST, INC.
SAN JUAN COUNTY, NEW MEXICO

Analyte	NMWQCC Standard	Unit	Influent	Effluent	Influent	Effluent	Influent	Effluent
			27-Jan	27-Jan	8-Apr	8-Apr	24-Jul	24-Jul
USEPA Method 8260B: Volatiles								
benzene	10	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
toluene	750	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
ethylbenzene	750	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
methyl tert-butyl ether (MTBE)	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2,4-trimethylbenzene	620	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,3,5-trimethylbenzene	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-dichloroethane (EDC)	10	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-dibromoethane (EDB)	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
naphthalene	NE	µg/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1-methylnaphthalene	NE	µg/L	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
2-methylnaphthalene	NE	µg/L	<4.0	<4.0	<4.0	<4.0	<4.0	<4.0
acetone	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
bromobenzene	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
bromodichloromethane	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
bromoform	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
bromomethane	NE	µg/L	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
2-butanone	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
carbon disulfide	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
carbon tetrachloride	10	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
chlorobenzene	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
chloroethane	NE	µg/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
chloroform	100	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
chloromethane	NE	µg/L	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
2-chlorotoluene	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
4-chlorotoluene	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
cis-1,2-DCE	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
cis-1,3-dichloropropene	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-dibromo-3-chloropropane	NE	µg/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
dibromochloromethane	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
dibromomethane	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-dichlorobenzene	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,3-dichlorobenzene	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,4-dichlorobenzene	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
dichlorodifluoromethane	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-dichloroethane	25	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1-dichloroethene	5	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2-dichloropropane	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,3-dichloropropane	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
2,2-dichloropropane	NE	µg/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
1,1-dichloropropene	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0



TABLE 1
2015 INFUENT AND EFFLUENT ANALYTICAL RESULTS

FORMER GIANT BLOOMFIELD REFINERY
WESTERN REFINING SOUTHWEST, INC.
SAN JUAN COUNTY, NEW MEXICO

Analyte	NMWQCC Standard	Unit	Influent 27-Jan	Effluent 27-Jan	Influent 8-Apr	Effluent 8-Apr	Influent 24-Jul	Effluent 24-Jul	Influent 3-Aug	Effluent 3-Aug
hexachlorobutadiene	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
2-hexanone	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
isopropylbenzene	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
4-isopropyltoluene	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
4-methyl-2-pentanone	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
methylene chloride	100	µg/L	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
n-butylbenzene	NE	µg/L	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0	<3.0
n-propylbenzene	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
sec-butylbenzene	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
styrene	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
tert-butylbenzene	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,1,2-tetrachloroethane	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,2,2-tetrachloroethane	10	µg/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
tetrachloroethene (PCE)	20	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
trans-1,2-DCE	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
trans-1,3-dichloropropene	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2,3-trichlorobenzene	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2,4-trichlorobenzene	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,1-trichloroethane	60	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,1,2-trichloroethane	10	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
trichloroethene (TCE)	100	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
trichlorofluoromethane	NE	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
1,2,3-trichloropropane	NE	µg/L	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0	<2.0
vinyl chloride	1	µg/L	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0	<1.0
xylenes, total	620	µg/L	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5	<1.5

Notes:

BOLD - indicates concentration exceeds the NMWQCC standard
mg/L - milligrams per liter
NE - not established
NMWQCC - New Mexico Water Quality Control Commission
NT - not tested
µg/L - micrograms per liter
USEPA - United States Environmental Protection Agency



TABLE 2
GROUNDWATER ELEVATIONS AND THICKNESS OF PHASE-SEPARATED HYDROCARBONS

FORMER GIANT BLOOMFIELD REFINERY
WESTERN REFINING SOUTHWEST, INC.
SAN JUAN COUNTY, NEW MEXICO

Well Number	Wellhead Elevation (feet)	Total Depth (feet)	March 2019				November 2019			
			Depth to Water (feet BTOC)	Depth to Product (feet)	PSH Thickness (feet)	Adjusted GWEL (feet)	Depth to Water (feet BTOC)	Depth to Product (feet)	PSH Thickness (feet)	Adjusted GWEL (feet)
GRW-1	5,394.30	73.35	43.33	-	-	5,350.97	44.81	-	-	5,349.49
GRW-2	5,391.28	61.00	44.98	-	-	5,346.30	44.19	-	-	5,347.09
GRW-3	5,388.77	58.30	43.83	-	-	5,344.94	44.21	-	-	5,344.56
GRW-4	5,390.02	60.00	42.19	-	-	5,347.83	42.44	-	-	5,347.58
GRW-5	5,390.56	68.30	42.28	-	-	5,348.28	42.61	-	-	5,347.95
GRW-6	5,390.81	53.80	41.45	-	-	5,349.36	41.84	-	-	5,348.97
GRW-9	5,395.70	54.40	41.10	-	-	5,354.60	41.29	-	-	5,354.41
GRW-10	5,395.02	66.02	36.15	-	-	5,358.87	NM - Well blocked at 5 feet			
GRW-11	5,397.85	64.00	33.18	-	-	5,364.67	33.37	-	-	5,364.48
GRW-12	5,397.24	48.00	35.42	-	-	5,361.82	35.45	-	-	5,361.79
GRW-13	5,396.90	61.30	34.51	-	-	5,362.39	33.90	-	-	5,363.00
GBR-5	5,395.07	47.08	41.41	-	-	5,353.66	40.70	-	-	5,354.37
GBR-7	5,395.85	51.65	41.91	41.74	0.17	5,354.08	42.35	42.18	0.17	5,353.64
GBR-8	5,390.50	50.90	42.30	-	-	5,348.20	42.49	-	-	5,348.01
GBR-9	5,389.92	67.22	42.25	-	-	5,347.67	42.44	-	-	5,347.48
GBR-10	5,390.57	47.56	42.34	-	-	5,348.23	42.35	-	-	5,348.22
GBR-11	5,389.43	51.87	41.29	-	-	5,348.14	41.57	-	-	5,347.86
GBR-13	5,393.04	45.47	40.98	-	-	5,352.06	41.28	-	-	5,351.76
GBR-15	5,397.99	58.42	34.25	-	-	5,363.74	34.44	-	-	5,363.55
GBR-17	5,402.69	43.20	34.68	-	-	5,368.01	35.31	-	-	5,367.38
GBR-18	5,421.68	47.85	37.29	-	-	5,384.39	37.74	-	-	5,383.94
GBR-19 (1)	5,393.83	46.23	-	-	-	-	-	-	-	-
GBR-20	5,393.47	54.57	41.21	-	-	5,352.26	41.51	-	-	5,351.96
GBR-21D	5,400.19	49.77	36.38	-	-	5,363.81	36.63	-	-	5,363.56
GBR-21S	5,400.65	49.77	Dry				Dry			
GBR-22	5,395.91	38.73	37.60	-	-	5,358.31	NM - Cap glued onto well casing			
GBR-23 (2)	5,403.72	39.45	37.54	-	-	-	39.00	-	-	5,364.72
GBR-24D	5,396.77	51.40	30.66	-	-	5,366.11	31.71	-	-	5,365.06
GBR-24S	5,396.08	37.05	33.38	-	-	5,362.70	Dry			
GBR-25	5,397.03	37.12	35.05	-	-	5,361.98	35.47	-	-	5,361.56
GBR-26	5,396.72	41.29	33.57	-	-	5,363.15	32.57	-	-	5,364.15
GBR-30	5,395.59	41.66	33.04	-	-	5,362.55	33.45	-	-	5,362.14
GBR-31	5,396.58	43.50	Dry				35.54	-	-	5,361.04
GBR-32	5,414.86	47.83	34.56	-	-	5,380.30	35.22	-	-	5,379.64
GBR-33	5,396.28	45.72	-	-	-	-	34.78	-	-	5,361.50
GBR-34	5,394.00	42.20	34.54	-	-	5,359.46	35.91	-	-	5,358.09
GBR-35	5,393.66	42.35	34.57	-	-	5,359.09	34.96	-	-	5,358.70
GBR-39	5,397.55	41.42	34.86	-	-	5,362.69	34.11	-	-	5,363.44
GBR-40	5,400.76	39.38	Dry				Dry			
GBR-41	5,396.35	34.28	34.29	-	-	5,362.06	Dry			
GBR-48	5,413.90	43.54	32.04	-	-	5,381.86	36.86	-	-	5,377.04
GBR-49	(3)	40.30	32.96	-	-	-	33.34	-	-	-
GBR-50	(3)	44.37	32.12	-	-	-	32.59	-	-	-
GBR-51	5,389.68	57.07	39.76	-	-	-	P&A	-	-	-
GBR-52	5,387.74	52.73	37.88	-	-	-	37.86	-	-	5,349.88



TABLE 2
GROUNDWATER ELEVATIONS AND THICKNESS OF PHASE-SEPARATED HYDROCARBONS

FORMER GIANT BLOOMFIELD REFINERY
WESTERN REFINING SOUTHWEST, INC.
SAN JUAN COUNTY, NEW MEXICO

Well Number	Wellhead Elevation (feet)	Total Depth (feet)	March 2019				November 2019			
			Depth to Water (feet BTOC)	Depth to Product (feet)	PSH Thickness (feet)	Adjusted GWEL (feet)	Depth to Water (feet BTOC)	Depth to Product (feet)	PSH Thickness (feet)	Adjusted GWEL (feet)
SHS-1	5,383.54	50.40	P&A	-	-	-	P&A	-	-	-
SHS-2	5,381.66	44.56	P&A	-	-	-	P&A	-	-	-
SHS-3 (4)	5,383.33	-	P&A	-	-	-	P&A	-	-	-
SHS-4	5,383.62	52.16	P&A	-	-	-	P&A	-	-	-
SHS-5	5,378.36	47.85	P&A	-	-	-	P&A	-	-	-
SHS-6	5,378.17	52.78	38.05	-	-	5,340.12	P&A	-	-	-
SHS-8	5,380.25	50.92	38.52	-	-	5,341.73	P&A	-	-	-
SHS-9	5,380.79	46.25	Dry				38.01	-	-	5,342.78
SHS-10	5,373.80	45.80	Dry				P&A	-	-	-
SHS-12	5,373.94	52.41	Dry				P&A	-	-	-
SHS-13	5,367.81	47.51	36.03	-	-	5,331.78	36.28	-	-	5,331.53
SHS-14	5,367.07	52.71	34.36	-	-	5,332.71	P&A	-	-	-
SHS-15 (5)	5,366.21	47.78	34.02	-	-	5,332.19	P&A	-	-	-
SHS-16	5,362.58	42.20	31.25	-	-	5,331.33	P&A	-	-	-
SHS-17	5,364.35	46.21	33.87	-	-	5,330.48	P&A	-	-	-
SHS-18	5,373.64	47.36	39.51	-	-	5,334.13	P&A	-	-	-
SHS-19	5,378.89	52.40	37.76	-	-	5,341.13	P&A	-	-	-

Notes:

BTOC - below top of casing

D - designates that the well screen is deep

GWEL - groundwater elevation

NM - not measured

P&A - plugged and abandoned

PSH - phase-separated hydrocarbon

S - designates that the well screen is shallow

(1) Well was paved over in June 2010

(2) Well hit by a vehicle May 2014

(3) Top-of-casing elevation is unknown

(4) Well is damaged by a tree root

(5) Well visibly broken/buried January 2016

- indicates no GWEL or PSH measured

When PSH is detected, the GWEL is corrected using an estimated density correction factor of 0.8

TABLE 3
2010 to 2018 - ANNUAL COMPLIANCE GROUNDWATER LABORATORY ANALYTICAL RESULTS

FORMER GIANT BLOOMFIELD REFINERY
WESTERN REFINING SOUTHWEST, INC.
SAN JUAN COUNTRY, NEW MEXICO

Exploration Location	Wellhead		Well Depth (feet)	Screened Interval (depth in feet)	Well Diameter (inches)	Sample Date	Depth to Water (feet BTOC)	USEPA Method 300.0: Anions				USEPA Method 200.7: Total Metals				Iron	Manganese	USEPA Method 502.40C Modified:	
	Elevation (feet)							chloride	sulfate	chromium	mg/L	mg/L	mg/L	mg/L	mg/L			Total Dissolved Solids	Total dissolved solids
NMWQCC Standard								250	600	0.05	1.0	0.2						1,000	
GBR Background Threshold Values (1)								560	2,546	1.553	97.06	6.42						4,566	
Regional Background Levels (Stone, et al. 1983) (2)								2 - 34,000	1.9 - 14,000	0.001 - 0.06	0.01 - 16	0 - 2.6						NA	
Lee Acres RI Background Concentrations - Alluvial Aquifer (1992) (3)								6.4 - 404	420 - 2,120	0.0144 - 0.113	0 - 1.48	0.0161 - 0.423						760 - 3,600	
Lee Acres RI/ROD Remedial Goals (1992/2004) (4)								34,000	14,000	0.06	16	0.346						10,000	
Units								mg/L	mg/L	mg/L	mg/L	mg/L						mg/L	
Lee Acres Sampling, 1992 RI Report (5)																			
Lee Acres Site 1, Subarea 2, OU 2 - Alluvial Aquifer								8.8 - 730	195 - 4,370	0.0108 - 0.124	0.118 - 1.71	0.0161 - 8.62						943 - 6,560	
Lee Acres Site 1, Subarea 3, OU 2 - Southern Area - Alluvial Aquifer								19 - 2,110	830 - 2,610	0.0145 - 0.0406	0.148 - 23.9	0.0214 - 4.23						622 - 5,300	
Lee Acres Site 2, Subarea 4 - Alluvial Aquifer								3.5 - 604	310 - 3,220	0.043 - 0.110	0.0749 - 64.1	0.0131 - 3.4						616 - 6,370	
GBR Sampling, Upgradient Wells (6)																			
GBR-32	5,414.86	45	25 - 40	2		Oct 2018	33.95	200	1,700	0.074	2.7	1.9							3,110
						Dec 2017		290	1,600	0.13	2.3	1.2							3,210
						Jan 2017		320	2,000	0.33	11	1.2							3,500
						Aug 2015		370	2,000	0.02	0.26	0.56							3,830
						Nov 2014		380	1,900	1.4	5.9	0.70							3,800
						Jan 2013		400	2,200	0.098	1.2	0.40							4,320
						Jan 2012		500	2,800	0.030	0.88	0.50							4,290
						Jan 2011		420	2,300	0.13	NT	NT							4,010
						Jan 2010		NT	NT	NT	NT	NT							NT
GBR-48	5,413.90	43.6	28.4 - 38.4	2		Oct 2018	35.62	300	1,800	0.036	18	0.49							3,580
						Dec 2017		350	1,900	0.13	40	1.7							3,690
						Jan 2017		340	2,000	0.42	89	4.8							3,360
						Aug 2015		370	2,100	0.95	170	6.4							3,730
						Nov 2014		420	2,100	0.92	52	2.0							4,030
						Jan 2013		230	2,200	0.52	17	0.94							4,020
						Jan 2012		200	1,700	0.63	15	0.83							2,940
						Jan 2011		390	2,200	0.71	9.3	NT							3,510
						Jan 2010		NT	NT	NT	NT	NT							NT
GBR-49	*	38.5	25.9 - 36.3	2		Oct 2018	32.06	180	1,800	1.2	23	0.98							3,010
						Dec 2017		150	1,300	0.018	0.44	0.30							2,720
						Jan 2017		210	1,900	0.2	11	1.1							3,160
						Aug 2015		180	1,500	0.38	7.1	0.54							2,840
						Nov 2014		63	1,400	0.060	41	3.9							2,340
						Jan 2013		240	1,600	0.041	4.6	1.3							3,290
						Jan 2012		260	2,000	0.018	0.23	0.34							3,470
						Jan 2011		310	2,000	0.48	NT	NT							3,390
						Jan 2010		NT	NT	NT	NT	NT							NT

Exploration Location	Wellhead Elevation (feet)	Well Depth (feet)	Screened Interval (depth in feet)	Well Diameter (inches)	Sample Date	Depth to Water (feet BTOC)	USEPA Method 300.0: Anions			USEPA Method 200.7: Total Metals			iron	manganese	USEPA Method SM2540C Modified: Total Dissolved Solids
							chloride	sulfate	chromium	chromium	iron	manganese			
NMWQCC Standard							250	600	0.05	1.0	0.2	1,000			
GBR Background Threshold Values (1)							560	2,546	1.553	97.06	6.42	4,566			
Regional Background Levels (Stone, et al. 1983) (2)							2 - 34,000	1.9 - 14,000	0.001 - 0.06	0.01 - 16	0 - 2.6	NA			
Lee Acres RI Background Concentrations - Alluvial Aquifer (1992) (3)							6.4 - 404	420 - 2,120	0.0144 - 0.113	0 - 1.48	0.0161 - 0.423	760 - 3,600			
Lee Acres RI/ROD Remedial Goals (1992/2004) (4)							34,000	14,000	0.06	16	0.346	10,000			
Units							mg/L	mg/L	mg/L	mg/L	mg/L	mg/L			
GBR-50	*	42.5	26.91 - 37.26		Oct 2018	31.26	59	1,700	0.044	4.0	0.13	2,770			
					Dec 2017		54	1,500	0.16	5.8	0.32	2,590			
					Jan 2017		59	1,500	0.36	6.8	1.3	2,580			
					Aug 2015		44	1,700	0.073	2.2	0.19	2,760			
					Nov 2014		52	1,700	0.013	3.6	0.22	2,800			
					Jan 2013		49	1,600	<0.0060	1.3	0.12	2,830			
					Jan 2012		49	1,800	0.0069	0.72	0.041	2,730			
					Jan 2011		46	1,800	0.023	NT	NT	2,640			
					Jan 2010		NT	NT	NT	NT	NT	NT			
GBR Sampling, Source-Area Wells															
GRW-3/GBR-29 or 43	5,388.77	58.3	34.5 - 50.2	6	Oct 2018	43.13	99	640	NT	18	0.80	2,190			
					Dec 2017		74	1,400	NT	54	1.9	2,920			
					Jan 2017		74	1,200	NT	150	2.9	2,730			
					Aug 2015		38	1,900	NT	0.89	0.69	3,320			
					Nov 2014		26	2,200	NT	0.86	0.44	3,680			
					Jan 2013		59	1,300	NT	2.8	0.54	2,620			
					Jan 2012		54	1,300	NT	2.8	0.67	2,660			
					Jan 2011		95	480	NT	NT	NT	1,810			
					Jan 2010		NT	NT	NT	NT	NT	NT			
GRW-6/GBR-44	5,390.81	58.6	32.6 - 48.3	6	Oct 2018	40.89	100	1,300	NT	890	45	2,390			
					Dec 2017		120	1,200	NT	40	9.1	2,570			
					Jan 2017		89	1,500	NT	11	17	2,580			
					Aug 2015		88	1,400	NT	15	18	3,220			
					Nov 2014		86	1,600	NT	35	8.5	3,170			
					Jan 2013		100	1,500	NT	2.4	1.2	2,760			
					Apr 2012		80	1,900	NT	0.47	1.0	2,740			
					Jan 2011		110	1,400	NT	NT	NT	2,490			
					Jan 2010		NT	NT	NT	NT	NT	NT			
GBR-17	5,402.69	51	31 - 51	2	Oct 2018	34.00	49	1,200	NT	100	3.0	2,180			
					Dec 2017		50	1,000	NT	9.3	0.25	2,110			
					Jan 2017		46	1,100	NT	15	0.35	1,890			
					Aug 2015		43	1,100	NT	3.6	<0.00200	1,960			
					Nov 2014		44	1,200	NT	3.7	0.13	1,980			
					Jan 2013		47	1,300	NT	1.2	0.045	2,700			
					Jan 2012		46	1,400	NT	3.9	0.15	2,150			
					Jan 2011		47	1,300	NT	NT	NT	2,140			
					Jan 2010		NT	NT	NT	NT	NT	NT			

Exploration Location	Wellhead Elevation (feet)	Well Depth (feet)	Screened Interval (depth in feet)	Well Diameter (inches)	Sample Date	Depth to Water (feet BTOC)	USEPA Method 300.0: Anions		sulfate	USEPA Method 200.7: Total Metals		chromium	iron	manganese	USEPA Method SM2540C Modified: Total Dissolved Solids
							chloride	mg/L		mg/L	mg/L				
NMWQCC Standard															
GBR Background Threshold Values (1)															
Regional Background Levels (Stone, et al. 1983) (2)															
Lee Acres RI Background Concentrations - Alluvial Aquifer (1992) (3)															
Lee Acres RI/ROD Remedial Goals (1992/2004) (4)															
Units							mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
GBR-24D	5,396.77	46.3	33 - 43	2	Oct 2018	30.92	130	2,300	NT	9.1	1.8	3,780			
					Dec 2017		140	1,800	NT	11	1.8	3,560			
					Jan 2017		130	1,900	NT	14	1.8	3,390			
					Aug 2015		160	2,100	NT	11	1.8	3,380			
					Nov 2014		210	1,800	NT	12	1.7	3,410			
					Jan 2013		200	1,700	NT	3.6	1.8	3,430			
					Jan 2012		200	2,000	NT	2.4	1.7	3,320			
					Jan 2011		170	2,400	NT	NT	NT	3,410			
					Jan 2010		NT	NT	NT	NT	NT	NT			
GBR-30	5,395.59	45	25 - 40	2	Oct 2018	32.31	250	1,500	NT	28	0.76	3,000			
					Dec 2017		220	1,300	NT	38	1.4	2,770			
					Jan 2017		220	1,400	NT	64	2.3	2,580			
					Aug 2015		310	1,600	NT	7.6	0.5	3,020			
					Nov 2014		270	1,400	NT	88	2.2	2,520			
					Jan 2013		310	1,500	NT	130	6.1	3,340			
					Jan 2012		390	1,700	NT	2.9	0.29	3,240			
					Jan 2011		320	1,600	NT	NT	NT	3,340			
					Jan 2010		NT	NT	NT	NT	NT	NT			
GBR-31	5,396.58	45	24.6 - 39.6	2	Oct 2018	32.27	220	1,400	NT	13	3.1	2,660			
					Dec 2017		93	1,700	NT	21	4.2	2,940			
					Jan 2017		84	1,700	NT	1.9	0.18	2,970			
					Aug 2015		250	1,700	NT	2.4	0.45	3,170			
					Nov 2014		230	1,500	NT	12	1.6	3,100			
					Jan 2013		79	1,600	NT	15	0.77	2,720			
					Jan 2012		74	1,700	NT	3.8	0.27	2,760			
					Jan 2011		97	1,800	NT	NT	NT	2,740			
					Jan 2010		NT	NT	NT	NT	NT	NT			
GBR-51	5,389.68	59.5	38.5 - 54.25	6	Oct 2018	NM	54	1,300	NT	0.059	<0.0020	2,330			
					Dec 2017		51	1,200	NT	0.080	<0.020	2,250			
					Jan 2017		45	990	NT	9.1	0.47	2,080			
					Aug 2015		54	1,600	NT	17	0.42	2,430			
					Nov 2014		54	1,400	NT	16	0.47	2,320			
					Jan 2013		56	1,500	NT	9.7	0.88	2,540			
					Jan 2012		53	1,600	NT	3.1	0.16	2,440			
					Jan 2011		53	1,600	NT	NT	NT	2,380			
					Jan 2010		NT	NT	NT	NT	NT	NT			

Exploration Location	Wellhead Elevation (feet)	Well Depth (feet)	Screened Interval (depth in feet)	Well Diameter (inches)	Sample Date	Depth to Water (feet BTOC)	USEPA Method 300.0: Anions			USEPA Method 200.7: Total Metals			Total Dissolved Solids		
							chloride	sulfate	chromium	iron	manganese	USEPA Method SM2540C Modified: Total Dissolved Solids			
NMWQCC Standard							250	600	0.05	1.0	0.2	1,000			
GBR Background Threshold Values (1)							560	2,546	1.553	97.06	6.42	4,566			
Regional Background Levels (Stone, et al. 1983) (2)							2 - 34,000	1.9 - 14,000	0.001 - 0.06	0.01 - 16	0 - 2.6	NA			
Lee Acres RI Background Concentrations - Alluvial Aquifer (1992) (3)							6.4 - 404	420 - 2,120	0.0144 - 0.113	0 - 1.48	0.0161 - 0.423	760 - 3,600			
Lee Acres RI/ROD Remedial Goals (1992/2004) (4)							34,000	14,000	0.06	16	0.346	10,000			
Units							mg/L	mg/L	mg/L	mg/L	mg/L	mg/L			
GBR-52	5,387.74	50.78	30.08 - 45.75	6	Oct 2018	NM	54	1,500	NT	0.12	0.0028	2,580			
					Dec 2017		54	1,500	NT	0.048	<0.0020	2,640			
					Jan 2017		58	1,400	NT	18	0.46	2,540			
					Aug 2015		65	1,400	NT	8.2	0.15	2,840			
					Nov 2014		65	1,700	NT	12	0.25	2,540			
					Jan 2013		63	1,700	NT	2.3	0.036	2,770			
					Jan 2012		60	1,800	NT	2.2	0.032	2,720			
					Jan 2011		62	1,900	NT	NT	NT	2,700			
					Jan 2010		NT	NT	NT	NT	NT	NT			
GBR Sampling, Downgradient Wells															
SHS-1	5,383.54	50.97	35.67 - 45.67	4	June 2017	P&A	100	1,300	NT	NT	NT	2,400			
					Jan 2011		NT	NT	NT	NT	NT	NT			
SHS-2	5,381.66	41.28	30.98 - 40.98	4	June 2017	P&A	310	2,200	NT	NT	NT	4,100			
					Jan 2011		NT	NT	NT	NT	NT	NT			
SHS-4	5,383.62	55	37 - 47	2	June 2017	P&A	59	1,600	NT	NT	NT	2,270			
SHS-5	5,378.36	53.33	37.62 - 48.0	4	June 2017	P&A	50	1,200	NT	NT	NT	2,030			
					Jan 2011		NT	NT	NT	NT	NT	NT			
SHS-6	5,378.17	47.88	32.48 - 42.85	4	Jan 2018	37.85	NT	NT	NT	NT	NT	NT			
SHS-8	5,380.25	52.5	30.83 - 46.60	4	Oct 2018	38.25	130	890	NT	50	3.1	2,730			
SHS-8					Dec 2017		110	1,200	NT	10	3.6	2,730			
SHS-8					Jan 2017		100	720	NT	66	3.0	2,210			
SHS-8					Aug 2015		120	47	NT	8.6	0.41	1,300			
SHS-8					Nov 2014		110	350	NT	260	5.0	1,400			
SHS-8					Jan 2013		120	770	0.099	100	4.7	1,800			
SHS-8					Jan 2012		170	430	NT	15	2.3	2,040			
SHS-8					Jan 2011		150	150	0.0063	NT	NT	1,440			
SHS-8					Jan 2010		NT	NT	NT	NT	NT	NT			
SHS-9	5,380.79	49.88	34.46 - 44.46	4	Jan 2018	37.43	NT	NT	NT	NT	NT	NT			
SHS-13	5,367.81	47.4	27 - 42	4	Jan 2018	35.85	NT	NT	NT	NT	NT	NT			
SHS-14	5,367.07	54	28.70 - 48.70	4	Jan 2018	34.18	NT	NT	NT	NT	NT	NT			
SHS-15	5,366.21	47.8	27.40 - 42.40	4	Jan 2018	33.00	NT	NT	NT	NT	NT	NT			

Exploration Location	Wellhead Elevation (feet)	Well Depth (feet)	Screened Interval (depth in feet)	Well Diameter (inches)	Sample Date	Depth to Water (feet BTOC)	USEPA Method 300.0: Anions				USEPA Method 200.7: Total Metals			Iron	Manganese	USEPA Method SM/2540C Modified: Total Dissolved Solids	
							chloride	sulfate	chromium								
NMWQCC Standard							250	600	0.05	1.0	0.2					1,000	
GBR Background Threshold Values (1)							560	2,546	1.553	97.06	6.42					4,566	
Regional Background Levels (Stone, et al. 1983) (2)							2 - 34,000	1.9 - 14,000	0.001 - 0.06	0.01 - 16	0 - 2.6					NA	
Lee Acres RI Background Concentrations - Alluvial Aquifer (1992) (3)							6.4 - 404	420 - 2,120	0.0144 - 0.113	0 - 1.48	0.0161 - 0.423					760 - 3,600	
Lee Acres RI/ROD Remedial Goals (1992/2004) (4)							34,000	14,000	0.06	16	0.346					10,000	
Units							mg/L	mg/L	mg/L	mg/L	mg/L					mg/L	
SHS-16	5,362.58	42.6	22.2 - 37.2	4	Jan 2018	32.68	NT	NT	NT	NT	NT					NT	
SHS-17	5,364.35	46.21	35.67 - 45.67	4	Jan 2018	32.63	NT	NT	NT	NT	NT					NT	
SHS-18	5,373.64	47.36	37.36 - 47.36	4	Jan 2018	39.24	NT	NT	NT	NT	NT					NT	
SHS-19	5,378.89	52.4	32.40 - 52.40	4	Jan 2018	37.77	NT	NT	NT	NT	NT					NT	

Notes

- (1) Background Concentrations Proposed for the Giant Bloomfield Refinery Site. Based on Statistical Analysis Prepared by LT Environmental and Submitted to New Mexico Oil Conservation District in an Email Dated June 10, 2019.
(2) Regional Background Concentrations Established in Document Titled *Hydrogeology and Water Resources of San Juan Basin, New Mexico*, Stone et al., dated 1983
(3) "Background" Concentration Proposed in Lee Acres DRAFT *Remedial Investigation Report* Prepared for the US Bureau of Land Management (dated February 1992)
(4) Contaminant Concentrations Established as the "Remedial Goals" or "Background" Concentrations for the Lee Acres Superfund Site. Based on the Lee Acres DRAFT *Remedial Investigation Report* and *Record of Decision* (dated May 2004).
(5) The Lee Acres *Remedial Investigation Report* Presents Analytical Data for Areas of the Site and Not Data for Individual Wells
(6) Well Location Used for Statistical Analysis of Background Concentrations
* Top-of-Casing Elevation is Unknown
NM Not Measured
P&A Plugged and Abandoned
µg/L micrograms per liter
BOLD Indicates Concentration Exceeds the Greater Value of the NMWQCC Water-Quality Standards or Background Threshold Values Proposed for the Giant Bloomfield Refinery
mg/L milligrams per liter
NMWQCC New Mexico Water Quality Control Commission
NT Not Tested
USEPA United States Environmental Protection Agency



October 4, 2019

Nelly Smith, Remedial Project Manager
Superfund and Emergency Division – Remedial Branch (6SEDRL)
U.S. Environmental Protection Agency – Region 6
1445 Ross Avenue, Suite 1200, Dallas, TX 75202

**RE: EPA-Requested Information
Giant Bloomfield Refinery GW-40 Site
Western Refining Southwest, Inc. (Marathon Petroleum Company, LP)
Bloomfield, New Mexico**

Dear Ms. Smith:

At the request of the United States Environmental Protection Agency (USEPA), in conjunction with the New Mexico Oil Conservation Division (NMOCD), LT Environmental has prepared the attached table (Table 1) to provide requested well information and analytical data for the former Giant Bloomfield Refinery, “GW-40” site (the “Site”). Specifically, the table provides well information that includes wellhead elevation, well depth, well-screen interval, well diameter, and depth to water measurements. The table also presents analytical results for select constituents requested by the USEPA, collected during annual sampling events between 2010 and 2018 (chloride, sulfate, chromium, iron, manganese, and total dissolved solids). In addition, the *2018 Annual Report* prepared for the Site is attached for your review. The report includes analytical results for the 2018 groundwater-sampling event, as well as figures presenting well locations, cross sections, and groundwater potentiometric surface maps with interpreted groundwater-flow directions. We understand that this information will be used as part of the upcoming five-year review for the upgradient Lee Acres Superfund Site.

Please contact us if you have questions regarding the attached information.

Sincerely,

LT ENVIRONMENTAL, INC.

Devin Hencmann
Project Geologist

Stuart Hyde, LG
Project Geologist

cc: Greg McCartney, Marathon Petroleum Company, LP
Carl Chavez, NMOCD



TABLE 1
2010 to 2018 - ANNUAL COMPLIANCE GROUNDWATER LABORATORY ANALYTICAL RESULTS

FORMER GIANT BLOOMFIELD REFINERY
SAN JUAN COUNTRY, NEW MEXICO
WESTERN REFINING PIPELINE, LLC.

Exploration Location	Wellhead Elevation (feet)	Well Depth (feet)	Screened Interval (depth in feet)	Well Diameter (inches)	Sample Date	Depth to Water (feet BTOC)	USEPA Method 300.0: Anions		USEPA Method 200.7: Total Metals		iron	manganese	USEPA Method SM2540C Modified: Total Dissolved Solids	
							chloride	sulfate	chromium					
NMWQCC Standard														
GBR Background Threshold Values (1)														
							250	600	0.05	1.0	0.2		1,000	
							560	2,546	1.553	97.06	6.42		4,566	
Regional Background Levels (Stone, et al. 1983) (2)							2 - 34,000	1.9 - 14,000	0.001 - 0.06	0.01 - 16	0 - 2.6		NA	
Lee Acres RI Background Concentrations - Alluvial Aquifer (1992) (3)							6.4 - 404	420 - 2,120	0.0144 - 0.113	0 - 1.48	0.0161 - 0.423		760 - 3,600	
Lee Acres RI/ROD Remedial Goals (1992/2004) (4)							34,000	14,000	0.06	16	0.346		10,000	
Units							mg/L	mg/L	mg/L	mg/L	mg/L		mg/L	
Lee Acres Sampling, 1992 RI Report (5)														
Lee Acres Site 1, Subarea 2, OU 2 - Alluvial Aquifer														
Lee Acres Site 1, Subarea 3, OU 2 - Southern Area - Alluvial Aquifer							8.8 - 730	195 - 4,370	0.0108 - 0.124	0.118 - 1.71	0.0161 - 8.62		943 - 6,560	
Lee Acres Site 2, Subarea 4 - Alluvial Aquifer							19 - 2,110	830 - 2,610	0.0145 - 0.0406	0.148 - 23.9	0.0214 - 4.23		622 - 5,300	
							3.5 - 604	310 - 3,220	0.043 - 0.110	0.0749 - 64.1	0.0131 - 3.4		616 - 6,370	
GBR Sampling, Upgradient Wells (6)														
GBR-32	5,414.86	45	25 - 40	2	Oct 2018	33.95	200	1,700	0.074	2.7	1.9		3,110	
					Dec 2017		290	1,600	0.13	2.3	1.2		3,210	
					Jan 2017		NT	NT	NT	NT	NT		NT	
					Aug 2015		NT	NT	NT	NT	NT		NT	
					Nov 2014		380	1,900	1.4	5.9	0.70		3,800	
					Jan 2013		400	2,200	0.098	1.2	0.40		4,320	
					Jan 2012		500	2,800	0.030	0.88	0.50		4,290	
					Jan 2011		420	2,300	0.13	NT	NT		4,010	
					Jan 2010		NT	NT	NT	NT	NT		NT	
GBR-48	5,413.90	43.6	28.4 - 38.4	2	Oct 2018	35.62	300	1,800	0.036	18	0.49		3,580	
					Dec 2017		350	1,900	0.13	40	1.7		3,690	
					Jan 2017		NT	NT	NT	NT	NT		NT	
					Aug 2015		NT	NT	NT	NT	NT		NT	
					Nov 2014		420	2,100	0.92	52	2.0		4,030	
					Jan 2013		230	2,200	0.52	17	0.94		4,020	
					Jan 2012		200	1,700	0.63	15	0.83		2,940	
					Jan 2011		390	2,200	0.71	9.3	NT		3,510	
					Jan 2010		NT	NT	NT	NT	NT		NT	
GBR-49	*	38.5	25.9 - 36.3	2	Oct 2018	32.06	180	1,800	1.2	23	0.98		3,010	
					Dec 2017		150	1,300	0.018	0.44	0.30		2,720	
					Jan 2017		NT	NT	NT	NT	NT		NT	
					Aug 2015		NT	NT	NT	NT	NT		NT	
					Nov 2014		63	1,400	0.060	41	3.9		2,340	
					Jan 2013		240	1,600	0.041	4.6	1.3		3,290	
					Jan 2012		260	2,000	0.018	0.23	0.34		3,470	
					Jan 2011		310	2,000	0.48	NT	NT		3,390	
					Jan 2010		NT	NT	NT	NT	NT		NT	

Exploration Location	Wellhead Elevation (feet)	Well Depth (feet)	Screened Interval (depth in feet)	Well Diameter (inches)	Sample Date	Depth to Water (feet BTOC)	USEPA Method 300.0: Anions					USEPA Method 200.7: Total Metals				Iron		manganese		Total dissolved solids		USEPA Method SM2540C Modified: Total Dissolved Solids	
							chloride	sulfate	chromium		iron	manganese	Total dissolved solids		USEPA Method SM2540C Modified: Total Dissolved Solids								

NMWQCC Standard							250	600	0.05	1.0	0.2		1,000
GBR Background Threshold Values (1)							560	2,546	1.553	97.06	6.42		4,566

Regional Background Levels (Stone, et al. 1983) (2)																
Lee Acres RI Background Concentrations - Alluvial Aquifer (1992) (3)																
Lee Acres RI/ROD Remedial Goals (1992/2004) (4)																

Units							mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L
GBR-50	*	42.5	26.91 - 37.26		Oct 2018	31.26	59	1,700	0.044	4.0	0.13					2,770
					Dec 2017		54	1,500	0.16	5.8	0.32					2,590
					Jan 2017		NT	NT	NT	NT	NT					NT
					Aug 2015		NT	NT	NT	NT	NT					NT
					Nov 2014		52	1,700	0.013	3.6	0.22					2,800
					Jan 2013		49	1,600	<0.0060	1.3	0.12					2,830
					Jan 2012		49	1,800	0.0069	0.72	0.041					2,730
					Jan 2011		46	1,800	0.023	NT	NT					2,640
					Jan 2010		NT	NT	NT	NT	NT					NT

GBR Sampling, Source-Area Wells

GRW-3/GBR-29 or 43	5,388.77	58.3	34.5 - 50.2	6	Oct 2018	43.13	99	640	NT	18	0.80					2,190
					Dec 2017		74	1,400	NT	54	1.9					2,920
					Aug 2015		NT	NT	NT	NT	NT					NT
					Jan 2017		NT	NT	NT	NT	NT					NT
					Nov 2014		26	2,200	NT	0.86	0.44					3,680
					Jan 2013		59	1,300	NT	2.8	0.54					2,620
					Jan 2012		54	1,300	NT	2.8	0.67					2,660
					Jan 2011		95	480	NT	NT	NT					1,810
					Jan 2010		NT	NT	NT	NT	NT					NT

GRW-6/GBR-44	5,390.81	58.6	32.6 - 48.3	6	Oct 2018	40.89	100	1,300	NT	890	45					2,390
					Dec 2017		120	1,200	NT	40	9.1					2,570
					Jan 2017		NT	NT	NT	NT	NT					NT
					Aug 2015		NT	NT	NT	NT	NT					NT
					Nov 2014		86	1,600	NT	35	8.5					3,170
					Jan 2013		100	1,500	NT	2.4	1.2					2,760
					Apr 2012		80	1,900	NT	0.47	1.0					2,740
					Jan 2011		110	1,400	NT	NT	NT					2,490
					Jan 2010		NT	NT	NT	NT	NT					NT

GBR-17	5,402.69	51	31 - 51	2	Oct 2018	34.00	49	1,200	NT	100	3.0					2,180
					Dec 2017		50	1,000	NT	9.3	0.25					2,110
					Jan 2017		NT	NT	NT	NT	NT					NT
					Aug 2015		NT	NT	NT	NT	NT					NT
					Nov 2014		44	1,200	NT	3.7	0.13					1,980
					Jan 2013		47	1,300	NT	1.2	0.045					2,700
					Jan 2012		46	1,400	NT	3.9	0.15					2,150
					Jan 2011		47	1,300	NT	NT	NT					2,140
					Jan 2010		NT	NT	NT	NT	NT					NT

Exploration Location	Wellhead		Well Depth (feet)	Screened Interval (depth in feet)		Well Diameter (inches)	Sample Date	Depth to Water (feet BTOC)		USEPA Method 200.7: Total Metals				USEPA Method SM2540C Modified: Total Dissolved Solids			
	Elevation (feet)									chloride	sulfate	chromium	iron	manganese	Total dissolved solids		
NMWQCC Standard										250	600	0.05	1.0	0.2	1,000		
GBR Background Threshold Values (1)										560	2,546	1.553	97.06	6.42	4,566		
Regional Background Levels (Stone, et al. 1983) (2)																	
Lee Acres RI Background Concentrations - Alluvial Aquifer (1992) (3)										2 - 34,000	1.9 - 14,000	0.001 - 0.06	0.01 - 16	0 - 2.6	NA		
Lee Acres RI/ROD Remedial Goals (1992/2004) (4)										6.4 - 404	420 - 2,120	0.0144 - 0.113	0 - 1.48	0.0161 - 0.423	760 - 3,600		
Units										mg/L	mg/L	mg/L	mg/L	mg/L	mg/L		
GBR-24D	5,396.77	46.3	33 - 43	2			Oct 2018	30.92		130	2,300	NT	9.1	1.8	3,780		
							Dec 2017			140	1,800	NT	11	1.8	3,560		
							Jan 2017			NT	NT	NT	NT	NT	NT		
							Aug 2015			NT	NT	NT	NT	NT	NT		
							Nov 2014			210	1,800	NT	12	1.7	3,410		
							Jan 2013			200	1,700	NT	3.6	1.8	3,430		
							Jan 2012			200	2,000	NT	2.4	1.7	3,320		
							Jan 2011			170	2,400	NT	NT	NT	3,410		
							Jan 2010			NT	NT	NT	NT	NT	NT		
GBR-30	5,395.59	45	25 - 40	2			Oct 2018	32.31		250	1,500	NT	28	0.76	3,000		
							Dec 2017			220	1,300	NT	38	1.4	2,770		
							Jan 2017			NT	NT	NT	NT	NT	NT		
							Aug 2015			NT	NT	NT	NT	NT	NT		
							Nov 2014			270	1,400	NT	88	2.2	2,520		
							Jan 2013			310	1,500	NT	130	6.1	3,340		
							Jan 2012			390	1,700	NT	2.9	0.29	3,240		
							Jan 2011			320	1,600	NT	NT	NT	3,340		
							Jan 2010			NT	NT	NT	NT	NT	NT		
GBR-31	5,396.58	45	24.6 - 39.6	2			Oct 2018	32.27		220	1,400	NT	13	3.1	2,660		
							Dec 2017			93	1,700	NT	21	4.2	2,940		
							Jan 2017			NT	NT	NT	NT	NT	NT		
							Aug 2015			NT	NT	NT	NT	NT	NT		
							Nov 2014			230	1,500	NT	12	1.6	3,100		
							Jan 2013			79	1,600	NT	15	0.77	2,720		
							Jan 2012			74	1,700	NT	3.8	0.27	2,760		
							Jan 2011			97	1,800	NT	NT	NT	2,740		
							Jan 2010			NT	NT	NT	NT	NT	NT		
GBR-51	5,389.68	59.5	38.5 - 54.25	6			Oct 2018	NM		54	1,300	NT	0.059	<0.0020	2,330		
							Dec 2017			51	1,200	NT	0.080	<0.020	2,250		
							Jan 2017			NT	NT	NT	NT	NT	NT		
							Aug 2015			NT	NT	NT	NT	NT	NT		
							Nov 2014			54	1,400	NT	16	0.47	2,320		
							Jan 2013			56	1,500	NT	9.7	0.88	2,540		
							Jan 2012			53	1,600	NT	3.1	0.16	2,440		
							Jan 2011			53	1,600	NT	NT	NT	2,380		
							Jan 2010			NT	NT	NT	NT	NT	NT		

Exploration Location	Wellhead Elevation (feet)	Well Depth (feet)	Screened Interval (depth in feet)	Well Diameter (inches)	Sample Date	Depth to Water (feet BTOC)	USEPA Method 300.0: Anions		USEPA Method 200.7: Total Metals		Iron	Manganese	USEPA Method SM2540C Modified: Total Dissolved Solids	
							Chloride	Sulfate	Chromium				Total dissolved solids	
NMWQCC Standard							250	600	0.05	1.0	0.2		1,000	
GBR Background Threshold Values (1)							560	2,546	1.553	97.06	6.42		4,566	
Regional Background Levels (Stone, et al. 1983) (2)							2 - 34,000	1.9 - 14,000	0.001 - 0.06	0.01 - 16	0 - 2.6		NA	
Lee Acres RI Background Concentrations - Alluvial Aquifer (1992) (3)							6.4 - 404	420 - 2,120	0.0144 - 0.113	0 - 1.48	0.0161 - 0.423		760 - 3,600	
Lee Acres RI/ROD Remedial Goals (1992/2004) (4)							34,000	14,000	0.06	16	0.346		10,000	
Units							mg/L	mg/L	mg/L	mg/L	mg/L		mg/L	
GBR-52	5,387.74	50.78	30.08 - 45.75	6	Oct 2018	NM	54	1,500	NT	0.12	0.0028		2,580	
					Dec 2017		54	1,500	NT	0.048	<0.0020		2,640	
					Jan 2017		NT	NT	NT	NT	NT		NT	
					Aug 2015		NT	NT	NT	NT	NT		NT	
					Nov 2014		65	1,700	NT	12	0.25		2,540	
					Jan 2013		63	1,700	NT	2.3	0.036		2,770	
					Jan 2012		60	1,800	NT	2.2	0.032		2,720	
					Jan 2011		62	1,900	NT	NT	NT		2,700	
					Jan 2010		NT	NT	NT	NT	NT		NT	
GBR Sampling, Downgradient Wells														
SHS-1	5,383.54	50.97	35.67 - 45.67	4	June 2017	P&A	100	1,300	NT	NT	NT		2,400	
					Jan 2011		NT	NT	NT	NT	NT		NT	
SHS-2	5,381.66	41.28	30.98 - 40.98	4	June 2017	P&A	310	2,200	NT	NT	NT		4,100	
					Jan 2011		NT	NT	NT	NT	NT		NT	
SHS-4	5,383.62	55	37 - 47	2	June 2017	P&A	59	1,600	NT	NT	NT		2,270	
SHS-5	5,378.36	53.33	37.62 - 48.0	4	June 2017	P&A	50	1,200	NT	NT	NT		2,030	
					Jan 2011		NT	NT	NT	NT	NT		NT	
SHS-6	5,378.17	47.88	32.48 - 42.85	4	Jan 2018	37.85	NT	NT	NT	NT	NT		NT	
SHS-8	5,380.25	52.5	30.83 - 46.60	4	Oct 2018	38.25	130	890	NT	50	3.1		2,730	
SHS-8					Jan 2018		NT	NT	NT	NT	NT		NT	
SHS-8					Dec 2017		110	1,200	NT	10	3.6		2,730	
SHS-8					Jan 2017		NT	NT	NT	NT	NT		NT	
SHS-8					Aug 2015		NT	NT	NT	NT	NT		NT	
SHS-8					Nov 2014		110	350	NT	260	5.0		1,400	
SHS-8					Jan 2013		120	770	0.099	100	4.7		1,800	
SHS-8					Jan 2012		170	430	NT	15	2.3		2,040	
SHS-8					Jan 2011		150	150	0.0063	NT	NT		1,440	
SHS-8					Jan 2010		NT	NT	NT	NT	NT		NT	
SHS-9	5,380.79	49.88	34.46 - 44.46	4	Jan 2018	37.43	NT	NT	NT	NT	NT		NT	
SHS-13	5,367.81	47.4	27 - 42	4	Jan 2018	35.85	NT	NT	NT	NT	NT		NT	
SHS-14	5,367.07	54	28.70 - 48.70	4	Jan 2018	34.18	NT	NT	NT	NT	NT		NT	
SHS-15	5,366.21	47.8	27.40 - 42.40	4	Jan 2018	33.00	NT	NT	NT	NT	NT		NT	

Exploration Location	Wellhead Elevation (feet)	Well Depth (feet)	Screened Interval (depth in feet)	Well Diameter (inches)	Sample Date	Depth to Water (feet BTOC)	USEPA Method 300.0: Anions			USEPA Method 200.7: Total Metals			sulfate	chromium	iron	manganese	USEPA Method SM2540C Modified: Total Dissolved Solids	
							chloride	nitrate	ammonia	total metals	total dissolved solids	total dissolved solids						
NMWQCC Standard							250	600	0.05	1.0	0.2	1,000						
GBR Background Threshold Values (1)							560	2,546	1.553	97.06	6.42	4,566						
Regional Background Levels (Stone, et al. 1983) (2)							2 - 34,000	1.9 - 14,000	0.001 - 0.06	0.01 - 16	0 - 2.6	NA						
Lee Acres RI Background Concentrations - Alluvial Aquifer (1992) (3)							6.4 - 404	420 - 2,120	0.0144 - 0.113	0 - 1.48	0.0161 - 0.423	760 - 3,600						
Lee Acres RI/ROD Remedial Goals (1992/2004) (4)							34,000	14,000	0.06	16	0.346	10,000						
Units							mg/L	mg/L	mg/L	mg/L	mg/L	mg/L						
SHS-16	5,362.58	42.6	22.2 - 37.2	4	Jan 2018	32.68	NT	NT	NT	NT	NT	NT						
SHS-17	5,364.35	46.21	35.67 - 45.67	4	Jan 2018	32.63	NT	NT	NT	NT	NT	NT						
SHS-18	5,373.64	47.36	37.36 - 47.36	4	Jan 2018	39.24	NT	NT	NT	NT	NT	NT						
SHS-19	5,378.89	52.4	32.40 - 52.40	4	Jan 2018	37.77	NT	NT	NT	NT	NT	NT						

Notes

- Background Concentrations Proposed for the Giant Bloomfield Refinery Site. Based on Statistical Analysis Prepared by LT Environmental and Submitted to New Mexico Oil Conservation District in an Email Dated June 10, 2019.
- Regional Background Concentrations Established in Document Titled *Hydrogeology and Water Resources of San Juan Basin, New Mexico*, Stone et al., dated 1983
- "Background" Concentration Proposed in Lee Acres DRAFT *Remedial Investigation Report* Prepared for the US Bureau of Land Management (dated February 1992)
- Contaminant Concentrations Established as the "Remedial Goals" or "Background" Concentrations for the Lee Acres Superfund Site. Based on the Lee Acres DRAFT *Remedial Investigation Report* and *Record of Decision* (dated May 2004).
- The Lee Acres *Remedial Investigation Report* Presents Analytical Data for Areas of the Site and Not Data for Individual Wells
- Well Location Used for Statistical Analysis of Background Concentrations
- * Top-of-Casing Elevation is Unknown
- NM Not Measured
- P&A Plugged and Abandoned
- µg/L micrograms per liter
- BOLD** Indicates Concentration Exceeds the Greater Value of the NMWQCC Water-Quality Standards or Background Threshold Values Proposed for the Giant Bloomfield Refinery
- mg/L milligrams per liter
- NMWQCC New Mexico Water Quality Control Commission
- NT Not Tested
- USEPA United States Environmental Protection Agency

