3R - 367

REPORTS

DATE:

Nov. 18, 1999

Bill Olson
Wayne Price

This is significant due to proximity to Giant San Juan Refinery at Bloomfield.

295 Chipeta Way
P.O. Box 58900
Salt Lake City, UT 84108
801-584-6361
801-584-7760 Fax

November 18, 1999

Mr. Denny Foust
New Mexico Oil Conservation Division
1000 Rio Brazos Road
Aztec, NM 87410

RE: REPORT ON REMEDIAL ACTION AT THE CHACO TANK

Dear Mr. Foust:

Enclosed please find a report on the recent remedial action at the Chaco compressor station. You may recall the work was related to hydrocarbon impacted soils adjacent to an above ground tank located southwest of the station. Results from soil analyses shows total petroleum hydrocarbon concentrations and BTEX levels meet applicable NMOCD cleanup levels.

Your involvement in the project and guidance during the course of project work was appreciated. If you have any questions or need additional information, please call.

Respectfully,

Mark Harvey
Project Coordinator

Cc: Don Jones - TRD

Enclosure

WFS

REMEDIAL ACTION AT THE CHACO TANK ADJACENT TO CHACO COMPRESSOR STATION

O-27-29N-11W

Background

Following the cleanup of impacted soil resulting from a release of condensate and water at a 200 barrel storage tank adjacent to the Chaco Compressor Station, an OCD inspection concluded that contamination remained at the site and further remedial action was necessary. In order to address the remaining contamination, WFS would have to relocate the above ground tank. Based on operational considerations, the tank was removed from service and relocated on October 5, 1999. This report describes the additional cleanup at the site and presents the laboratory results confirming the cleanup as adequate.

Site Work

On Wednesday, October 6, 1999, a contractor mobilized to the site to begin excavation of soils adjacent to, and underlying the tank. Hydrocarbon impacted soil was excavated and processed through a "soil shredder" to effectively aerate the soil and particlize the soil matrix.

Excavation revealed the presence of grossly impacted soil evidenced by black staining and strong to very strong hydrocarbon odors. The soil was discovered to be impacted to a depth much greater than anticipated. The OCD Environmental Bureau representative visited the site throughout the course of work and concluded that the volume of soil impacted was unlikely related to the WFS release previously addressed. Soil excavation continued as directed by OCD and by both visual observation and the presence of organic vapors in the soil.

In all, a total of over 2100 cubic yards of soil was excavated and shredded. Working area limitations dictated that the soil be stockpiled rather than thin spread for landfarming. Due to this fact, all soil removed from the excavation was shredded a second time to achieve desired contaminant degradation and accelerate the cleanup process. This approach allowed on-site treatment of the soil rather than off-site disposal and facilitated use of the soil as acceptable backfill material.

Sidewalls in the excavation generally had a "bathtub ring" of staining. This condition was noted by the OCD and permission was received to limit the lateral extent of excavation. The main objective was to determine vertical extent of contamination in an attempt to expose a relatively clean floor. Final pit dimensions were 48' x 40' x 30', with the deepest point measured to be 33 feet below ground surface. Soils ranged from silty sand - sand to a depth of approximately 29 feet where a coarse sand and gravel was encountered. No ground water was encountered.

Confirmation samples were collected from the bottom of the excavation and from the four sidewalls following field analyses of progress samples showing acceptable levels of total petroleum hydrocarbons. Confirmation samples from the excavation and from the landfarm were sent to off-site laboratories for analysis. Results are summarized in the next section and laboratory reports are included for review.

Laboratory Results

All samples were collected using a stainless steel sampling tool which was decontaminated prior to use. Soil was taken from 2" – 6" into each excavation surface (exposing new material) and placed into 4-oz glass jars. Sample jars were placed on ice and shipped to the laboratory under strict Chain-of-Custody procedures. Samples were analyzed by QWAL labs in Pittsburg, KS by SW-846 Methods 8015 and 8021 and by On-Site Technologies in Farmington, NM. Results are summarized in the following table.

SAMPLE ID	LOCATION	TPH (mg/kg)	BTEX (mg/kg)
CHACO TANK-V-EXFL-01	4-PTS FROM THE EXCAVATION FLOOR	43	1.44
CHACO TANK-V-EXWA-01	4-PTS FROM EACH EXCAVATION WALL	75	1.15
CHACO TANK-V-LF-02	8-PT COMPOSITE OF SHREDDED SOIL	97	3.1

Conclusion and Recommendations

Based on the laboratory results, it appears that the hydrocarbon impacted soils at the site have been successfully removed and remediated to the applicable OCD concentrations of 100 ppm TPH and 50 ppm BTEX. It is generally concluded that the majority of soil found to be impacted, and ultimately addressed by this action, was impacted from numerous releases occurring previously in time. This observation was confirmed as accurate by district operations personnel familiar with historical operations at the site.

It is improbable that the recent WFS release of condensate and water would discolor the soil as observed and affect soil to a depth of 30 feet. The impact more likely was the result of a leaking tank or successive overflow events that were never addressed. WFS intends to perform a tank test before putting it back in service to ensure tank integrity

Since all potential sources will have been eliminated and any future releases are to be addressed as required under company policy and environmental regulations, future adverse impact at the site is seen as unlikely. Residual contamination will continue to naturally degrade over time as documented at other sites under similar conditions. As such, the remedial action conducted at this site is deemed adequate to protect human health and the environment.

QWAL LABORATORIES, INC.

2911 ROTARY TERRACE, P.O. BOX 562/PITTSBURG, KS 66762/(316)232-1970

LABORATORY REPORT: **REFERENCE #: 9910524**

SENT TO: ***WILLIAMS FIELD SERVICE***
295 CHIPETA WAY
SALT LAKE CITY, UTAH 84158
MARK HARVEY
PROJECT: WFS/IGN PITS

DATE REPORTED: 10/20/99
DATE COLLECTED: 10/11/99
DATE RECEIVED: 10/15/99

Reference Fraction:9910524-01A
Sample ID: CHACO TANK-V-EXFL-01
Sample Date Collected: 10/11/9915:15:00

Sample Matrix: SOIL

TEST	METHOD	RESULT	UNITS	PQL	ANALYZED	BY
TPH-DRO	SW846-8015D	43	MG/KG	2.0	10/18/99	BE
BTEX	OA1/8021B			3.0		
BENZENE		ND	MG/KG	0.050	10/18/99	KK
TOLUENE		0.215	MG/KG	0.050	10/18/99	KK
ETHYLBENZENE		1.08	MG/KG	0.050	10/18/99	KK
TOTAL XYLENES		0.148	MG/KG	0.050	10/18/99	KK
BFB (SURROGATE)		80	125	75		
QA/QC PACKAGE LEVEL	NONE		SU			

ND=NONE DETECTED
PQL=PRACTICAL QUANTITAION LIMIT
SU=STANDARD UNITS
B=DETECTED IN METHOD BLANK

APPROVED BY: _____
TERRY KOESTER
LABORATORY DIRECTOR

QWAL LABORATORIES, INC.

2911 ROTARY TERRACE, P.O. BOX 562/PITTSBURG, KS 66762/(316)232-1970

LABORATORY REPORT: **REFERENCE #:** 9910524

SENT TO: ***WILLIAMS FIELD SERVICE***
295 CHIPETA WAY
SALT LAKE CITY, UTAH 84158
MARK HARVEY
PROJECT: WFS/IGN PITS

DATE REPORTED: 10/20/99
DATE COLLECTED: 10/11/99
DATE RECEIVED: 10/15/99

Reference Fraction:9910524-02A
Sample ID: CHACO TANK-V-EXWA-01
Sample Date Collected: 10/11/9915:25:00

Sample Matrix: WATER

TEST	METHOD	RESULT	UNITS	PQL	ANALYZED	BY
TPH-DRO	SW846-8015D	75	MG/KG	2.0	10/18/99	BE
BTEX	OA1/8021B			3.0		
BENZENE		ND	MG/KG	0.050	10/18/99	KK
TOLUENE		0.288	MG/KG	0.050	10/18/99	KK
ETHYLBENZENE		0.457	MG/KG	0.050	10/18/99	KK
TOTAL XYLENES		0.403	MG/KG	0.050	10/18/99	KK
BFB (SURROGATE)		85	125	75		
QA/QC PACKAGE LEVEL	NONE		SU			

ND=NONE DETECTED
PQL=PRACTICAL QUANTITAION LIMIT
SU=STANDARD UNITS
B=DETECTED IN METHOD BLANK

APPROVED BY: _____
TERRY KOESTER
LABORATORY DIRECTOR

Q.W.A.L. LABORATORIES, INC.

Established 1976

2911 Rotary Terrace • Pittsburg, Kansas 66762

TO ORDER: FAX 1-316-232-7730 OR PHONE 1-316-232-1970

99105,711

FROM : Q.W.A.L. LABORATORIES, INC. PHONE NO. : 316 231 6641 Oct. 15 1999 03:31PM P2

(1) Company Name: WFS

Attention: MARK HARVEY

Address: 295 CHAPETA WAY

City, State, Zip Code: SLC, UT 84158

(4) Phone #: 801-584-6361

(4) Fax #: 801-584-7760

(2) Project Name or Number: WFS / IGN PITS

(5) Purchase Order #:

(3) Sampling Personnel Signature(s): James P. Struhs

Sampling Personnel (print name): James P. Struhs

(13) TURNAROUND TIME REQUESTED (Additional Charges May Apply)

☐ Standard ☐ 72 Hours ☒ 48 Hours ☐ 24 Hours ☐ SameDay

* Note - Please contact lab for availability of priority service.

(12) ANALYSIS REQUEST

(Write Tests Here)

(6) Sample I.D.	Date (7)	Time (7)	(8) Comp.	(8) Grab	(9) # of Containers	(10) Method Preserved: H2SO4	HNO3	NAOH	HCL	Ice	None	(11) Sample Matrix: Water	Soil	Air	Sludge	Other	TPH / BTEX 8015D (DRO)	REMARKS
CHACO TANK-V-EXCL-01	10/11	1515	X		1					X			X				X	
CHACO TANK-V-EXWA-01	10/11	1525	X		1					X			X				X	

(If special detection limits are required please note below.)

(14) Relinquished By: James P. Struhs Date: 10/14/99 Time: 0900

Received By: William Robinson Date: 10/15/99 Time: 910

Relinquished By: Date: Time:

Received By: Date: Time:

Relinquished By: Date: Time:

Received By: Date: Time:

(15) Send Report to:

Company: WFS

Attn: MARK HARVEY

Address:

City/State: SAME AS ABOVE

Phone:

Fax:

(16) Send Invoice to:

(if different form report address)

Company:

Attn:

Address:

City/State:

Phone:

Fax:

*FAILURE TO COMPLETE THIS FORM MAY DELAY LABORATORY RESULTS

OFF: (505) 325-5667

ON SITE TECHNOLOGIES, LTD.

LAB: (505) 325-1556

ANALYTICAL REPORT

Date: *03-Nov-99*

Client:	Mile High Environmental	**Client Sample Info:**	Chaco Tank Landfarm
Work Order:	9910032	**Client Sample ID:**	1018991535
Lab ID:	9910032-01A **Matrix:** SOIL	**Collection Date:**	10/18/99 3:35:00 PM
Project:	Chaco Tank Landfarm	**COC Record:**	10385

Parameter	Result	PQL	Qual	Units	DF	Date Analyzed
DIESEL RANGE ORGANICS		**SW8015B**				Analyst: **HR**
T/R Hydrocarbons: C10-C28	97	25		mg/Kg	1	10/29/99
AROMATIC VOLATILES BY GC/PID		**SW8021B**				Analyst: **DC**
Benzene	ND	25		µg/Kg	25	10/28/99
Toluene	100	50		µg/Kg	25	10/28/99
Ethylbenzene	230	25		µg/Kg	25	10/28/99
m,p-Xylene	1900	50		µg/Kg	25	10/28/99
o-Xylene	930	25		µg/Kg	25	10/28/99

Qualifiers:

PQL - Practical Quantitation Limit

ND - Not Detected at Practical Quantitation Limit

J - Analyte detected below Practical Quantitation Limit

B - Analyte detected in the associated Method Blank

S - Spike Recovery outside accepted recovery limits

R - RPD outside accepted recovery limits

E - Value above quantitation range

Surr: - Surrogate

P.O. BOX 2606 • FARMINGTON, NM 87499

10385

CHAIN OF CUSTODY RECORD

ON SITE TECHNOLOGIES, LTD.

612 E. Murray Dr. • P.O. Box 2606 • Farmington, NM 87499
LAB: (505) 325-5667 • FAX: (505) 327-1496

Date: 10-18-99

Page: 1 of 1

Purchase Order No.:

Project No. Chaco Tank LF

SEND INVOICE TO

Name: Mile High Environmental

Company: Mile High Environmental Dept.

Address:

City, State, Zip: Colorado Springs Co.

REPORT RESULTS TO

Name: Title:

Company: Mile High Enviromental

Mailing Address:

City, State, Zip: Salt Lake City Utah

Telephone No.: 801-584-6361 Telefax No.:

PROJECT LOCATION:
Chaco Tank Land Farm sample

SAMPLER'S SIGNATURE:
Steve Archuleta

SAMPLE IDENTIFICATION	SAMPLE DATE	SAMPLE TIME	SAMPLE MATRIX	SAMPLE PRES.	Number of Containers	ANALYSIS REQUESTED: BTEX	ANALYSIS REQUESTED: TPH (DRO)	LAB ID
1018991535	10-18-99	1535	soil	ICE	1	X	X	990032-01A

Relinquished by: Steve Archuleta Date/Time 10-18-99 1604

Relinquished by: Date/Time

Relinquished by: Date/Time

Received by: Date/Time 10/18/99 1604

Received by: Date/Time

Received by: Date/Time

Method of Shipment:

Rush | 24-48 Hours | 10 Working Days | By Date

Special Instructions / Remarks:

Authorized by: Steve Archuleta Date 10-18-99
(Client Signature Must Accompany Request)

Distribution: White - On Site Yellow - LAB Pink - Sampler Goldenrod - Client