

District I
P.O. Box 1980, Hobbs, NM
District II
P.O. Drawer DD, Artesia, NM 88211
District III
1000 Rio Brazos Rd, Aztec, NM 87410

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, New Mexico 87504-2088

SUBMIT 1 COPY
APPROPRIATE
DISTRICT OFFICE
AND 1 COPY TO
SANTA FE OFFICE
DEPUTY OIL & GAS INSPECTOR
(Revised 3/9/94)

SEP 08 1995

PIT REMEDIATION AND CLOSURE REPORT

Operator: BHP PETROLEUM (AMERICAS) INC. Telephone: (505)327-1639

Address: P.O. BOX 977 FARMINGTON, NEW MEXICO 87499

Facility Or: G.C.U. #259 SWD
Well Name

Location: Unit or Qtr/Qtr Sec SE/SE Sec 14 T28N R12W County SAN JUAN

Pit Type: Separator Dehydrator Other EMERGENCY OVERFLOW

Land Type: BLM, State, Fee, Other FEDERAL

Pit Location: Pit dimensions: length 36', width 45', depth 8'
(Attach diagram)

Reference: wellhead, other WATER STORAGE TANKS

Footage from reference: 32'

Direction from reference: Degrees East North
X West South

Depth To Ground Water:

(Vertical distance from
contaminants to seasonal
high water elevation of
ground water)

Less than 50 feet (20 points)
50 feet to 99 feet (10 points)
Greater than 100 feet (0 points) 0

Wellhead Protection Area:

(Less than 200 feet from a private
domestic water source, or; less than
1000 feet from all other water sources)

Yes (20 points)
No (0 points) 0

Distance To Surface Water:

(Horizontal distance to perennial
lakes, ponds, rivers, streams, creeks,
irrigation canals and ditches)

Less than 200 feet (20 points)
200 feet to 1000 feet (10 points)
Greater than 1000 feet (0 points) 0

RANKING SCORE (TOTAL POINTS): 0

Date Remediation Started: JANUARY 31, 1995 Date Completed: JANUARY 31, 1995

Remediation Method: Excavation ☒ Approx. cubic yards 480
(Check all appropriate sections) Landfarmed ☐ Insitu Bioremediation ☐
Other ☐

Remediation Location: Onsite ☒ Offsite ☐
(ie. landfarmed onsite, name and location of offsite facility)

General Description Of Remedial Action: BACK FILLED PIT WITH CLEAN SOIL.

Ground Water Encountered: No ☒ Yes ☐ Depth ☐

Final Pit:
Closure Sampling:
(if multiple samples, attach sample results and diagram of sample locations and depths)

Sample location PIT NORTH WALL, SOUTH WALL, WEST WALL
EAST WALL AND THE CENTER OF PIT.

Sample depth ☐

Sample date 10-10-94 Sample time ☐

Sample Results

Benzene(ppm) ☐

Total BTEX(ppm) ☐

Field headspace(ppm) ☐

TPH ☐

Ground Water Sample: Yes ☐ No ☒ (If yes, attach sample results)

I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF

DATE

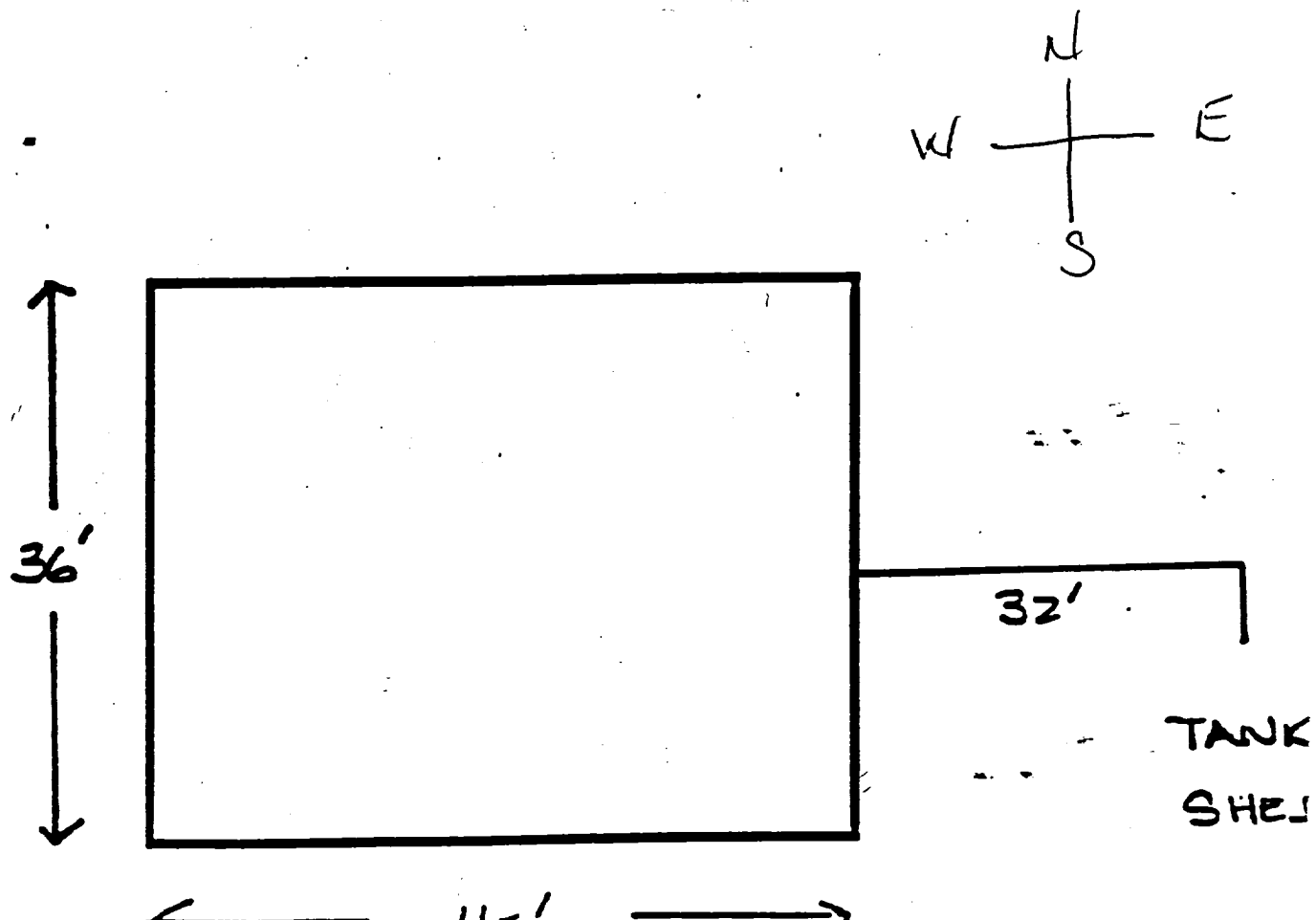
SIGNATURE

PRINTED NAME J.C.HARRIS PRODUCTION SUPT.
AND TITLE

Pit Closure Report

Gallegos Canyon Unit
Well #259

SF - 078905
740 FSL 810 FEL
SEC 14 - T28N - R12W



GCU# 259

Contractors List

Holgate Oilfield Service
201 FREDRICK Av.

AZTEC NEW MEXICO 87410

ANALYTICAL

ENVIRONMENTAL LABORATORY

October 28, 1994

J. C. Harris
BHP Petroleum
PO Box 977
Farmington, NM 87499

RECEIVED
AUG 28 1995
OIL CON. DIV.
DIST. 3

Dear J. C.:

Enclosed are the results for the assessments of GCU 306, 307, 328, and 259. Analyses for Benzene, Toluene, Ethylbenzene, and Xylenes (BTEX) and Total Petroleum Hydrocarbons were performed on 5 samples from each pit. Samples were pulled from the center of each pit and at center points along each side. With the exception of GCU 328, all samples were pulled from a minimum depth of 3 feet. Sandstone was encountered at the GCU 328 at a depth of 12 to 18 inches.

Analysis was performed on the samples according to EPA Method 602, using a Hewlett-Packard 5890 gas chromatograph equipped with an OI Analytical purge and trap (model 4560) and a photoionization detector. Levels of BTEX present are indicated on the report sheets.

TPH analysis was performed according to EPA Method 418.1 following the freon extraction of the samples (EPA Method 3550 - Sonication Extraction). The instrument used for the analysis was a BUCK TPH analyzer. Levels of TPH present in the samples are indicated on the report sheets.

Closure is recommended for GCU 259.

A small amount of contamination was found at GCU 307. It was suspected that plant and other organic material was interfering with the TPH results, but confirmation runs of the two samples indicate that this not likely the case. High TPH hits also corresponded to regions of visible staining. Depth and extent of contamination needs to be determined.

Contamination was high at two points within GCU 328. One such point was close to the drip pipe that had been draining into the pit. Because of the sandstone layer, it expected that the extent of the contamination is probably low, and the pit can be remediated quickly and inexpensively. Options would include bioremediation in place or on site, removal and disposal of contaminated soil (as the amount of soil is expected to be small), or if the quantity of contaminated soil is sufficiently small, dilution with clean backfill to give an overall reading of 100 ppm.

GCU 306 was contaminated below the surface with heavy, black hydrocarbon. GC analysis indicates that the hydrocarbon range is mid to heavy ($> C_{10}$). An exact ranking score needs to be determined, but is estimated to be 20. Bioremediation is suggested for GCU 306 because of the nature of the contamination. Companies that I have worked with are EPC (contact: Catherine Block), Applied Bioscience (contact: Bob Durbin), and Plant Maintenance and Supply (contact: Gene Gosnell).

Sincerely,

A handwritten signature in black ink, appearing to read "Denise A. Bohemier", with a long horizontal flourish extending to the right.

Denise A. Bohemier
Lab Director

Client: BHP Petroleum

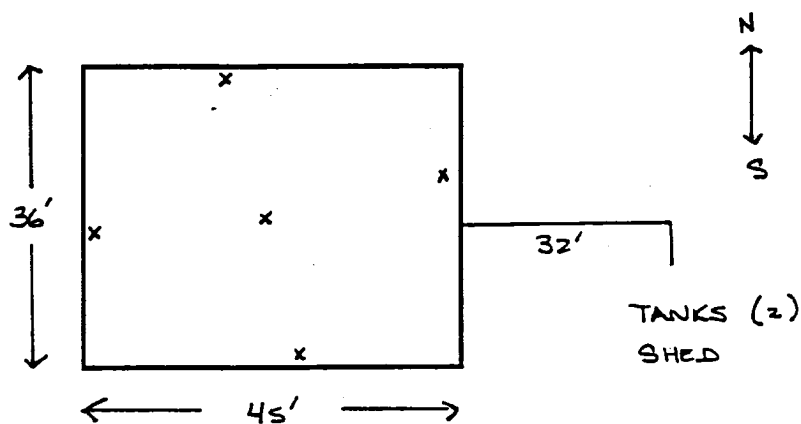
Pit Closure Report

Site: Gallegos Canyon Unit
Well #259

Lease: SF - 078905
740 FSL 810 FEL
SEC 14 - T28N - R12W

Ranking Score: 0 - 9 Benzene < 10
BTEX < 50
TPH < 5000

Diagram:



Appearance: Sandy; appeared clean. No odor

Laboratory Results:

Sample Location	Benzene (ppm) (EPA 8020)	Total BTEX (ppm) (EPA 8020)	TPH (ppm) (EPA 418.1)
North Wall	< 10	< 50	< 25
East Wall	< 10	< 50	< 25
West Wall	< 10	< 50	< 25
South Wall	< 10	< 50	< 25
Center	< 10	< 50	< 25

Closure recommended.

TOTAL PETROLEUM HYDROCARBONS

EPA Method 418.1

BHP Petroleum

Project ID: GCU 259
Sample Matrix: Soil
Preservative: Cool
Condition: Intact

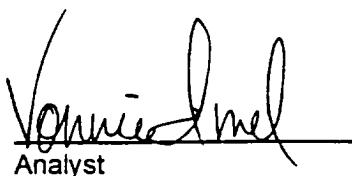
Report Date: 10/28/94
Date Sampled: 10/10/94
Date Received: 10/10/94
Date Extracted: 10/19/94
Date Analyzed: 10/19/94

Sample ID	Lab ID	Concentration (mg/kg)	Detection Limit (mg/kg)
South Wall	0194	ND	24.5
North Wall	0195	ND	25.0
East Wall	0196	ND	24.9
West Wall	0197	ND	25.4
Center	0198	ND	24.7

ND- Analyte not detected at the stated detection limit.

Reference: Method 3550 - Sonication Extraction; Test Methods for Evaluating Solid Waste, SW-846, United States Environmental Protection Agency, September, 1986;
Method 418.1 - Petroleum Hydrocarbons, Total Recoverable; Chemical Analysis of Water and Waste, United States Environmental Protection Agency, 1978.

Comments:


Analyst


Review

VOLATILE AROMATIC HYDROCARBONS

BHP Petroleum

Project ID: GCU 259
Sample ID: North Wall
Lab ID: 0195
Sample Matrix: Soil
Preservative: Cool
Condition: Intact

Report Date: 10/25/94
Date Sampled: 10/10/94
Date Received: 10/10/94
Date Extracted: 10/14/94
Date Analyzed: 10/18/94


Target Analyte	Concentration (ug/kg)	Detection Limit (ug/kg)
Benzene	ND	9.71
Toluene	ND	9.71
Ethylbenzene	ND	9.71
m,p-Xylenes	ND	19.4
o-Xylene	ND	9.71

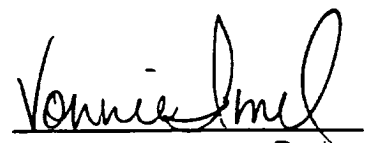
ND - Analyte not detected at the stated detection limit.

Quality Control:	<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptance Limits</u>
	Trifluorotoluene	103	81 -117%
	Bromofluorobenzene	108	74 -121%

Reference: Method 5030, Purge and Trap; Method 8020, Aromatic Volatile Organics;
Test Methods for Evaluating Solid Wastes, SW-846, United States
Environmental Protection Agency, Final Update I, July, 1992.

Comments:


Analyst


Review

VOLATILE AROMATIC HYDROCARBONS

BHP Petroleum

Project ID: GCU 259
Sample ID: East Wall
Lab ID: 0196
Sample Matrix: Soil
Preservative: Cool
Condition: Intact

Report Date: 10/25/94
Date Sampled: 10/10/94
Date Received: 10/10/94
Date Extracted: 10/14/94
Date Analyzed: 10/18/94

Target Analyte	Concentration (ug/kg)	Detection Limit (ug/kg)
Benzene	ND	9.42
Toluene	ND	9.42
Ethylbenzene	ND	9.42
m,p-Xylenes	ND	18.8
o-Xylene	ND	9.42


ND - Analyte not detected at the stated detection limit.

Quality Control:	<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptance Limits</u>
	Trifluorotoluene	103	81 -117%
	Bromofluorobenzene	107	74 -121%

Reference: Method 5030, Purge and Trap; Method 8020, Aromatic Volatile Organics;
Test Methods for Evaluating Solid Wastes, SW-846, United States
Environmental Protection Agency, Final Update I, July, 1992.

Comments:


Analyst


Review

VOLATILE AROMATIC HYDROCARBONS

BHP Petroleum

Project ID:	GCU 259	Report Date:	10/25/94
Sample ID:	West Wall	Date Sampled:	10/10/94
Lab ID:	0197	Date Received:	10/10/94
Sample Matrix:	Soil	Date Extracted:	10/14/94
Preservative:	Cool	Date Analyzed:	10/18/94
Condition:	Intact		

Target Analyte	Concentration (ug/kg)	Detection Limit (ug/kg)
Benzene	ND	8.40
Toluene	ND	8.40
Ethylbenzene	ND	8.40
m,p-Xylenes	ND	16.8
o-Xylene	ND	8.40


ND - Analyte not detected at the stated detection limit.

Quality Control:	<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptance Limits</u>
	Trifluorotoluene	102	81 -117%
	Bromofluorobenzene	106	74 -121%

Reference: Method 5030, Purge and Trap; Method 8020, Aromatic Volatile Organics;
Test Methods for Evaluating Solid Wastes, SW-846, United States
Environmental Protection Agency, Final Update I, July, 1992.

Comments:


Analyst


Review

VOLATILE AROMATIC HYDROCARBONS

BHP Petroleum

Project ID: GCU 259
Sample ID: Center
Lab ID: 0198
Sample Matrix: Soil
Preservative: Cool
Condition: Intact

Report Date: 10/25/94
Date Sampled: 10/10/94
Date Received: 10/10/94
Date Extracted: 10/14/94
Date Analyzed: 10/18/94

Target Analyte	Concentration (ug/kg)	Detection Limit (ug/kg)
Benzene	ND	9.42
Toluene	ND	9.42
Ethylbenzene	ND	9.42
m,p-Xylenes	ND	18.8
o-Xylene	ND	9.42

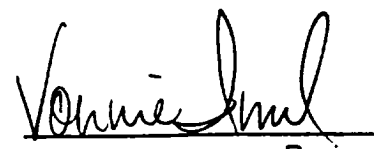
ND - Analyte not detected at the stated detection limit.

Quality Control:	<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptance Limits</u>
	Trifluorotoluene	102	81 -117%
	Bromofluorobenzene	103	74 -121%

Reference: Method 5030, Purge and Trap; Method 8020, Aromatic Volatile Organics;
Test Methods for Evaluating Solid Wastes, SW-846, United States
Environmental Protection Agency, Final Update I, July, 1992.

Comments:


Analyst


Review