

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 3/9/95)
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. #328 SWD
Well Name
Location: Unit or Qtr/Qtr Sec SE/SW Sec 33 T 29N R 12W County SAN JUAN
Pit Type: Separator Dehydrator Other EMERGENCY OVERFLOW
Land Type: BLM, State, Fee, Other INDIAN ALLOTTED LAND #01660

Pit Location: Pit dimensions: length 48.5', width 49', depth 8'
(Attach diagram) Reference: wellhead, other WATER STORAGE TANKS
Footage from reference: 15'
Direction from reference: Degrees East North of West South X

Depth To Ground Water: Less than 50 feet (20 points)
(Vertical distance from 50 feet to 99 feet (10 points)
contaminants to seasonal Greater than 100 feet (0 Points) 20
high water elevation of
ground water)

Wellhead Protection Area: Yes (20 points)
(Less than 200 feet from a private No (0 points) 0
domestic water source, or; less than
1000 feet from all other water sources)

Distance To Surface Water: Less than 200 feet (20 points)
(Horizontal distance to perennial 200 feet to 1000 feet (10 points)
lakes, ponds, rivers, streams, creeks, Greater than 1000 feet (0 points) 10
irrigation canals and ditches)

BANKING SCORE (TOTAL POINTS): 30

RECEIVED
MAR - 6 1995
OIL CON. DIV.
DIST. 3

Date Remediation Started: FEBRUARY 1, 1995 Date Completed: FEBRUARY 20, 1995

Remediation Method: Excavation Approx. cubic yards 187
(Check all appropriate sections) Landfarmed X Insitu Bioremediation
Other

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

General Description Of Remedial Action: EXCAVATED APPROX. 2' DEPTH OF BOTTOM & SIDE WALLS, REMOVED ALL CONTAMINATED SOIL, SOIL FROM THE PIT WAS THEN SPREAD & LOCATION FROM 8" TO 1' DEEP TO LAND FARM. WE THEN DILUTED WITH CLEAN SOIL TO BELOW THE SPECIFIC REMEDIATION LEVEL OF TPH 100 PPM, PIT WAS THEN CLOSED BY BACKFILLING AND CONTOURING. BHP TERMINATED REMEDIAL ACTION AFTER A FINAL COMPOSITE SOIL SAMPLE WAS TAKEN AND ANALYZED TO DOCUMENT SUCCESSFUL REMEDIATION HAD OCCURED THE REMEDIATED SOIL WAS THEN USED TO SHAPE THE EXCAVATION.

Ground Water Encountered: No X Yes Depth

Final Pit: Sample location PIT- N.W. WALL, S.W. WALL, CENTER, S.E. WA
Closure Sampling: N.E. WALL, 2 SAMPLES FROM FILL SOIL.
(if multiple samples, attach sample results and diagram of sample locations and depths)

Sample depth

Sample date 2-10-95 Sample time 3:00 P.M.

Sample Results

Benzene (ppm)

Total BTEX (ppm)

Field headspace (ppm)

TPH

Ground Water Sample: Yes No X (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
AND TITLE J.C. HARRIS PRODUCTION SUPERINTENDENT

GCU # 328 SWD

CONTRACTOR LIST

Holgate Oilfield Service

201 Frederick Av.

Aztec, New Mexico

87410

BHP Petroleum

Pit Closure Report

**Gallegos Canyon Unit
Well #328**

**I - 149 - IND - 8486
1070 FSL 1520 FWL
SEC 33 - T29N - R12W**

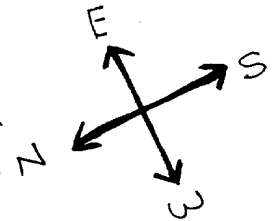
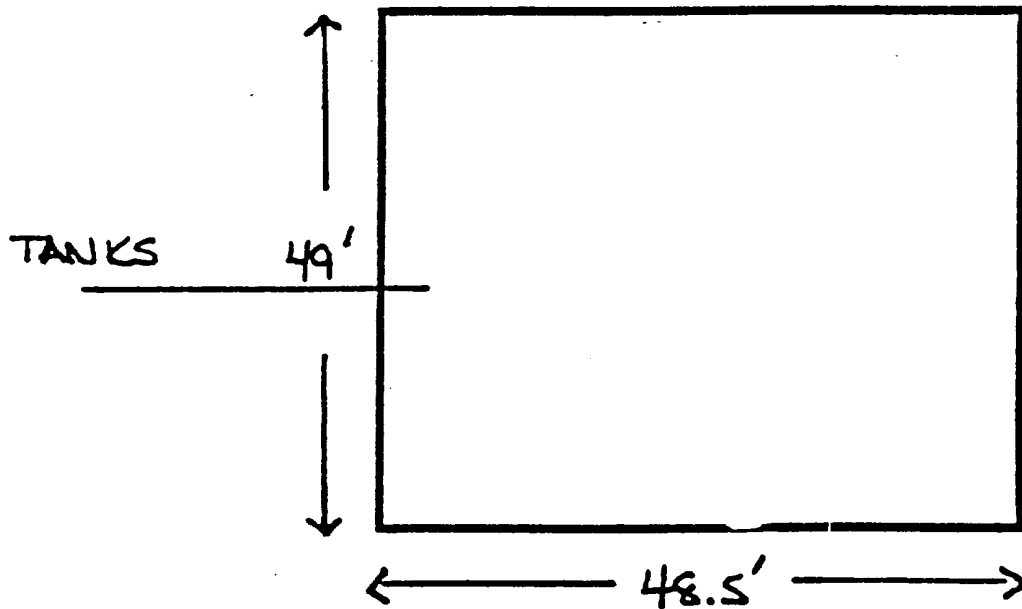


Diagram:



U.S. ENVIRONMENTAL PROTECTION AGENCY

NOTICE OF INSPECTION

Address (EPA Regional Office) Region 9 Environmental Inspection Agency 215 Fremont Street (W-6-2) San Francisco, CA 94105	Inspection Contractor THE CADMUS GROUP, INC. CORPORATE OFFICE 135 Beaver Street Waltham, MA 02154 (617) 894-9830	Firm To Be Inspected <i>DHP</i> <i>G.C.C. # 3285257</i> <i>SUD VALLE</i>
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Date <i>2/1/95</i>	Notice of inspection is hereby given according to Section 1445(b) of the Safe Drinking Water Act (42 U.S.C. §300 f et seq.).
Hour <i>9 AM</i>	

Reason For Inspection

For the purpose of inspecting records, files, papers, processes, controls and facilities, and obtaining samples to determine whether the person subject to an applicable underground injection control program has acted or is acting in compliance with the Safe Drinking Water Act and any applicable permit or rule.

routine inspection

Section 1445(b) of the SDWA (42 U.S.C. §300 j-4 (b)) is quoted on the reverse of this form.

Receipt of this Notice of Inspection is hereby acknowledged.

Firm Representative <i>[Signature]</i>	Date <i>2/1/95</i>	Inspector <i>[Signature]</i>
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February 28, 1995

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

Dear Mr. Harris:

Enclosed are the results for the analyses of two sets of samples received on February 10, 1995. The samples were designated GCU 328 and GCU 307 and were received cool and intact. Analyses for Total Petroleum Hydrocarbons (TPH, C₆ - C₁₀ and C₁₀ - C₂₀ ranges), were performed on composites of the samples. Benzene, Toluene, Ethylbenzene, and Xylene (BTEX) analysis was run on the composite for GCU 328 - pit. BTEX analysis for the GCU 307 - pit was run previously, so not repeated. Samples designated pit consisted of five point composites and those designated fill were two point composites as per OCD guidelines.

BTEX analysis was performed according to EPA Method 8020 on a methanol extract of the composite, using a Hewlett-Packard 5890 gas chromatograph equipped with an OI Analytical Purge and Trap (model 4560) and a photoionization detector. Detectable levels of btex analytes were not found in the sample, as reported.

TPH analysis in the C₆ - C₁₀ range was performed using the method for Gasoline Range Organics as developed by the State of Tennessee and the USEPA. TPH analysis for the nonvolatile hydrocarbons (C₁₀ - C₂₀ range) was performed according to EPA Method 8015, modified, following extraction with hexane, using a Hewlett Packard 5890 gas chromatograph equipped with a flame ionization detector. Petroleum hydrocarbons were found in none of the samples, at a level above the stated detection limit, as reported. Make note that detection limits for the gasoline range hydrocarbons are in the parts per billion range, while those for the heavier hydrocarbons are in the part per million.

Samples were originally extracted for analysis on February 17, 1995; however, unacceptable spike recoveries required reextraction and reanalysis of the samples for Diesel range analysis. Quality control reports appear at the end of the analytical package and can be identified by title. In addition chromatography is provided for your information and records. Should you have any questions regarding the analysis, feel free to call.

Sincerely,

Denise A. Bohemier
Lab Director

VOLATILE AROMATIC HYDROCARBONS

BHP Petroleum

Project ID: GCU 328
Sample ID: Pit - Composite
Lab ID: 659
Sample Matrix: Soil
Preservative: Cool
Condition: Intact

Report Date: 02/23/95
Date Sampled: 02/10/95
Date Received: 02/10/95
Date Extracted: 02/17/95
Date Analyzed: 02/22/95


Target Analyte	Concentration (ug/kg)	Detection Limit (ug/kg)
Benzene	ND	9.82
Toluene	ND	9.82
Ethylbenzene	ND	9.82
m,p-Xylenes	ND	19.6
o-Xylene	ND	9.82

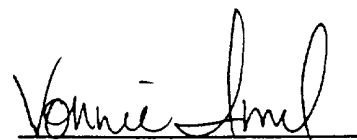
ND - Analyte not detected at the stated detection limit.

Quality Control:	<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptance Limits</u>
	Trifluorotoluene	97	81 -117%
	Bromofluorobenzene	96	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

TOTAL VOLATILE PETROLEUM HYDROCARBONS
Gasoline Range Organics

BHP Petroleum

Project ID: GCU 328
Sample Matrix: Soil
Preservative: Cool
Condition: Intact

Report Date: 02/16/95
Date Sampled: 02/10/95
Date Received: 02/10/95
Date Analyzed: 02/16/95

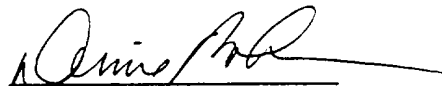
Sample ID	Lab ID	Concentration (ug/kg)	Detection Limit (ug/kg)
Pit - Composite	0659	ND	70.1

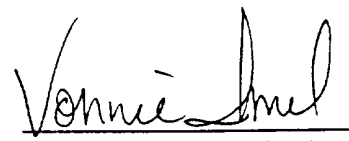
ND- Analyte not detected at the stated detection limit.

Quality Control:	<u>Surrogate</u>	<u>% Recovery</u>	<u>Acceptance Limits</u>
	Trifluorotoluene	93%	50 - 150%

Reference: Method for the Determination of Gasoline Range Organics,
State of Tennessee, Department of Environment and Conservation, Division
of Underground Storage Tanks.

Comments:


Analyst


Review

TOTAL VOLATILE PETROLEUM HYDROCARBONS
Diesel Range Organics

BHP Petroleum

Project ID: GCU 328
Sample Matrix: Soil
Preservative: Cool
Condition: Intact

Report Date: 02/27/95
Date Sampled: 02/10/95
Date Received: 02/10/95
Date Extracted: 02/23/95
Date Analyzed: 02/24/95

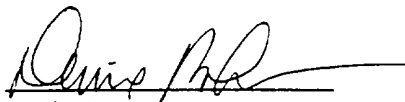
Sample ID	Lab ID	Concentration (mg/kg)	Detection Limit (mg/kg)
Pit - Composite	0659	ND	13.1

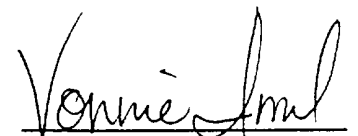
ND- Analyte not detected at the stated detection limit.

Quality Control: Surrogate % Recovery Acceptance Limits
 o - Terphenyl 103% 50 - 150%

Reference: EPA Method 8015A, modified. "Nonhalogenated Volatile Organics by Gas Chromatography." Test Methods for Evaluating Solid Waste. Physical/ Chemical Methods, SW-846, 3rd Ed, Final Update I, July, 1992. USEPA.

Comments:


Analyst


Review

TOTAL VOLATILE PETROLEUM HYDROCARBONS
Gasoline Range Organics

BHP Petroleum

Project ID: GCU 328
Sample Matrix: Soil
Preservative: Cool
Condition: Intact

Report Date: 02/16/95
Date Sampled: 02/10/95
Date Received: 02/10/95
Date Analyzed: 02/16/95

Sample ID	Lab ID	Concentration (ug/kg)	Detection Limit (ug/kg)
Fill - Composite	0660	ND	84.7

ND- Analyte not detected at the stated detection limit.

Quality Control: Surrogate % Recovery Acceptance Limits
 Trifluorotoluene 96% 50 - 150%

Reference: Method for the Determination of Gasoline Range Organics,
 State of Tennessee, Department of Environment and Conservation, Division
 of Underground Storage Tanks.

Comments:


Analyst

Review

TOTAL VOLATILE PETROLEUM HYDROCARBONS
Diesel Range Organics

BHP Petroleum

Project ID: GCU 328
Sample Matrix: Soil
Preservative: Cool
Condition: Intact

Report Date: 02/27/95
Date Sampled: 02/10/95
Date Received: 02/10/95
Date Extracted: 02/23/95
Date Analyzed: 02/24/95


Sample ID	Lab ID	Concentration (mg/kg)	Detection Limit (mg/kg)
Fill - Composite	0660	ND	16.5

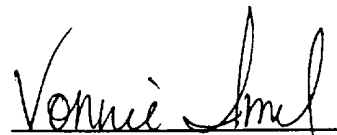
ND- Analyte not detected at the stated detection limit.

Quality Control: Surrogate % Recovery Acceptance Limits
 o - Terphenyl 102% 50 - 150%

Reference: EPA Method 8015A, modified. "Nonhalogenated Volatile Organics by Gas Chromatography." Test Methods for Evaluating Solid Waste. Physical/ Chemical Methods, SW-846, 3rd Ed, Final Update I, July, 1992. USEPA.

Comments:


Analyst


Review

VOLATILE AROMATIC HYDROC
QUALITY CONTROL REP

QC

Method Blank Analysis

Sample Matrix: Soil
Lab ID: MB34752

Report Date: 02/23/95
Date Extracted: 02/17/95
Date Analyzed: 02/22/95

Target Analyte	Concentration (ug/kg)	Detection Limit (ug/kg)
Benzene	ND	10.0
Toluene	ND	10.0
Ethylbenzene	ND	10.0
m,p-Xylenes	ND	20.0
o-Xylene	ND	10.0


ND - Analyte not detected at the stated detection limit.

Quality Control:	<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptance Limits</u>
	Trifluorotoluene	94	81-117%
	Bromofluorobenzene	94	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: GCU 328


Analyst


Review

VOLATILE AROMATIC HYDROCARBONS

Matrix Spike Analysis

Lab ID: MB34752Spk
Sample Matrix: Soil
Preservative: NA
Condition: NA

Report Date: 02/23/95
Date Sampled: NA
Date Received: NA
Date Extracted: 02/17/95
Date Analyzed: 02/22/95

Target Analyte	Spike Added. (mg/kg)	Original Conc. (mg/kg)	Spiked Sample Conc. (mg/kg)	% Recovery	Acceptance Limits (%)
Benzene	200	0.00	155	78%	39-150
Toluene	200	0.00	169	84%	32-160
Ethylbenzene	200	0.00	177	88%	46-148
m,p-Xylenes	200	0.00	354	88%	NE
o-Xylene	200	0.00	182	91%	NE

ND - Analyte not detected at the stated detection limit.

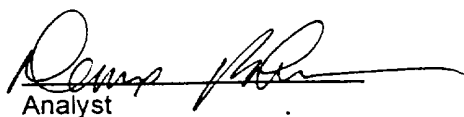
NA - Not applicable or not calculated.

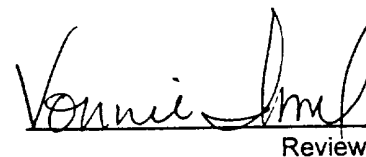
NE - Spike acceptance range not established by the EPA.

Quality Control:	<u>Surrogate</u>	<u>% Recovery</u>	<u>Acceptance Limits</u>
	Trifluorotoluene	100	81 - 117%
	Bromofluorobenzene	100	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, September 1986.

Comments: GCU 328


Analyst


Review

VOLATILE AROMATIC HYDROCARBONS

Matrix Spike Duplicate Analysis

Lab ID: MB34752Spk
Sample Matrix: Extract Blank
Preservative: NA
Condition: NA

Report Date: 02/23/95
Date Sampled: NA
Date Received: NA
Date Extracted: 02/17/95
Date Analyzed: 02/22/95

Target Analyte	Spike Added (ug/kg)	Sample Spike Recovery (%)	Duplicate Spike Recovery (%)	Acceptance Limits (%)
Benzene	200	78%	74%	61.1 - 90.8
Toluene	200	84%	82%	67.0 - 98.8
Ethylbenzene	200	88%	86%	56.5 - 117
m,p-Xylenes	200	88%	86%	NE
o-Xylene	200	91%	44%	NE

ND - Analyte not detected at the stated detection limit.

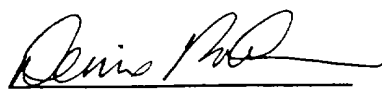
NA - Not applicable or not calculated.

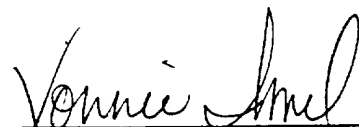
NE - Spike acceptance range not established by the EPA.

Quality Control:	<u>Surrogate</u>	<u>% Recovery</u>	<u>Acceptance Limits</u>
	Trifluorotoluene	96	81-117%
	Bromofluorobenzene	97	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, September 1986.

Comments: GCU 328


Analyst


Review

QUALITY CONTROL REPORT
TOTAL VOLATILE PETROLEUM HYDROCARBONS
Gasoline Range Organics

Method Blank Analysis

Project ID: NA
Sample Matrix: Soil
Preservative: NA
Condition: NA

Report Date: 02/28/95
Date Sampled: NA
Date Received: NA
Date Analyzed: 02/16/95


Sample ID	Lab ID	Concentration (ug/kg)	Detection Limit (ug/kg)
Method Blank	MB34746	ND	90.0

ND- Analyte not detected at the stated detection limit.

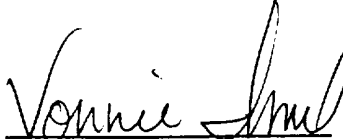
Quality Control:	<u>Surrogate</u>	<u>% Recovery</u>	<u>Acceptance Limits</u>
	Trifluorotoluene	97%	50 - 150%

Reference: Method for the Determination of Gasoline Range Organics,
State of Tennessee, Department of Environment and Conservation, Division
of Underground Storage Tanks.

Comments: GCU 328



Analyst



Review

QUALITY CONTROL REPORT
TOTAL VOLATILE PETROLEUM HYDROCARBONS
Gasoline Range Organics

Matrix Spike Analysis

Project ID: NA
Sample Matrix: Soil
Preservative: NA
Condition: NA

Report Date: 02/16/95
Date Sampled: NA
Date Received: NA
Date Analyzed: 02/16/95


Lab ID	Spike Added (ug/kg)	Original Conc. (ug/kg)	Spike Conc. (ug/kg)	Percent Recovery
MBSPK34746	2,700	< 90	2,770	100%

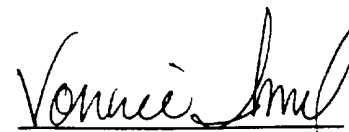
ND- Analyte not detected at the stated detection limit.

Quality Control:	<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptance Limits</u>
	Trifluorotoluene	90%	50 - 150%

Reference: Method for the Determination of Gasoline Range Organics,
State of Tennessee, Department of Environment and Conservation,
Division of Underground Storage Tanks.

Comments: GCU 328


Analyst


Review

QUALITY CONTROL REPORT
TOTAL VOLATILE PETROLEUM HYDROCARBONS
Gasoline Range Organics

Duplicate Analysis

Project ID: NA
Sample Matrix: Soil
Preservative: NA
Condition: NA

Report Date: 02/16/95
Date Sampled: NA
Date Received: NA
Date Analyzed: 02/16/95

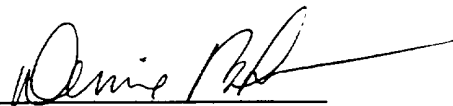
Lab ID	Sample Conc. (ug/kg)	Duplicate Conc. (ug/kg)	Percent Difference
MBSPK34746 DUP	2.77	2.63	5%

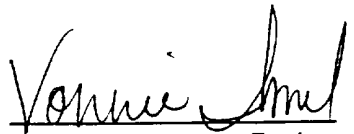
ND- Analyte not detected at the stated detection limit.

Quality Control:	<u>Surrogate</u>	<u>% Recovery</u>	<u>Acceptance Limits</u>
	Trifluorotoluene	96%	50 - 150%

Reference: Method for the Determination of Gasoline Range Organics,
State of Tennessee, Department of Environment and Conservation, Division
of Underground Storage Tanks.

Comments: GCU 328


Analyst


Review

QUALITY CONTROL REPORT
TOTAL VOLATILE PETROLEUM HYDROCARBONS
Diesel Range Organics

Method Blank Analysis

Project ID: NA
Sample Matrix: Soil
Preservative: NA
Condition: NA

Report Date: 02/27/95
Date Sampled: NA
Date Received: NA
Date Extracted: 02/23/95
Date Analyzed: 02/24/95


Sample ID	Lab ID	Concentration (mg/kg)	Detection Limit (mg/kg)
Method Blank	MB34753	ND	20.0

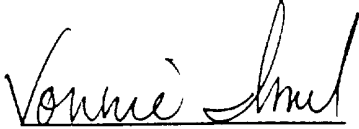
ND- Analyte not detected at the stated detection limit.

Quality Control:	<u>Surrogate</u>	<u>% Recovery</u>	<u>Acceptance Limits</u>
	o - Terphenyl	101%	50 - 150%

Reference: EPA Method 8015A, modified. "Nonhalogenated Volatile Organics by Gas Chromatography." Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, 3rd Ed, Final Update I, July, 1992. USEPA.

Comments: GCU 328


Analyst


Review

QUALITY CONTROL REPORT
TOTAL VOLATILE PETROLEUM HYDROCARBONS
Diesel Range Organics

Matrix Spike Analysis

Project ID: NA
Sample Matrix: Soil
Preservative: NA
Condition: NA

Report Date: 02/27/95
Date Sampled: NA
Date Received: NA
Date Extracted: 02/23/95
Date Analyzed: 02/24/95

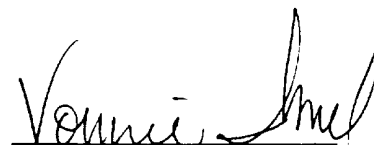
Lab ID	Spike Added (mg/kg)	Original Conc. (mg/kg)	Spike Conc. (mg/kg)	Percent Recovery
MBSPK34754	2,120	ND	2,420	114%

ND- Analyte not detected at the stated detection limit.

Reference: EPA Method 8015A, modified. "Nonhalogenated Volatile Organics by Gas Chromatography." Test Methods for Evaluating Solid Waste, Physical/Chemical Methods, SW-846, 3rd Ed, Final Update I, July, 1992. USEPA.

Comments: GCU 328


Analyst


Review

