

District I

P.O. Box 1980, Hobbs, NM

District II

P.O. Drawer DD, Artesia, NM 88211

District III

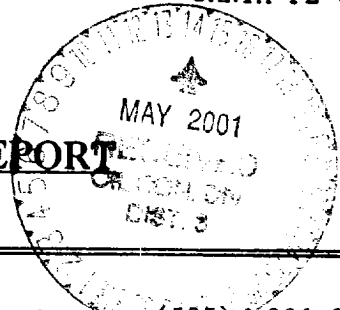
.00 Rio Brazos Rd, Aztec, NM 87410

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 TO
APPROPRIATE
DISTRICT OFFICE
AND 1 COPY TO
SANTA FE OFFICEPIT REMEDIATION AND CLOSURE REPORT

Operator: Amoco Production Company Telephone: (505) 326-9200

Address: 200 Amoco Court, Farmington, New Mexico 87401

Facility Or: DAY # 2E
Well Name

Location: Unit or Qtr/Qtr Sec I Sec 8 T29N R8W County SAN JUAN

Pit Type: Separator Dehydrator Other ABANDONED BLOW

Land Type: BLM ✓, State, Fee, Other

Pit Location: Pit dimensions: length 23', width 36', depth 5'
(Attach diagram)

Reference: wellhead X, other

Footage from reference: 99'

Direction from reference: 6 Degrees ✓ East North
of
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) 10

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) 0
Greater than 1000 feet (0 points)

RANKING SCORE (TOTAL POINTS):

10

Date Remediation Started: _____ Date Completed: 9/21/00

Remediation Method: Excavation ☒ Approx. cubic yards 140
 (Check all appropriate sections) Landfarmed _____ Insitu Bioremediation _____
 Other COMPOSTED

Remediation Location: Onsite _____ Offsite NYE GC B FIE (E-7-29-9)
 (ie. landfarmed onsite, name and location of offsite facility) TRANSPORTED TO CROWN MESA - 3/01. ^{NV}

General Description Of Remedial Action: _____
Excavation . BEDROCK BOTTOM . RISK ASSESSED .

Ground Water Encountered: No ☒ Yes _____ Depth _____

Final Pit: Sample location see Attached Documents

Closure Sampling:
 (if multiple samples, attach sample results and diagram of sample locations and depths)
 Sample depth 3' (WEST SIDEWALL)
 Sample date 9/20/00 Sample time 1045

Sample Results

Benzene(ppm) 0.0417Total BTEX(ppm) 0.0533Field headspace(ppm) 114.1 ^{PIT BOTTOM} 614TPH 543 ppm

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 9/21/00

SIGNATURE

B. ShawPRINTED NAME
AND TITLEBuddy D. Shaw
ENVIRONMENTAL COORDINATOR

30045249/4

CLIENT: AMOCOBLAGG ENGINEERING, INC.
P.O. BOX 87, BLOOMFIELD, NM 87413
(505) 632-1199LOCATION NO: 80795C.O.C. NO: 7496

FIELD REPORT: CLOSURE VERIFICATION

PAGE No: 1 of 1LOCATION: NAME: DAYWELL #: 2E PIT: ABAN. 8LWDATE STARTED: 9/20/00QUAD/UNIT: I SEC: 8 TWP: 29N RNG: 8W PM: NM CNTY: JS ST: NM

DATE FINISHED: _____

QTR/FOOTAGE: 1750.5/1000'E NESE CONTRACTOR: FLINTENVIRONMENTAL
SPECIALIST: NUEXCAVATION APPROX. 23 FT. x 36 FT. x 5 FT. DEEP. CUBIC YARDAGE: 140DISPOSAL FACILITY: NYE GC BIE (E-7-29-9) REMEDIATION METHOD: COMPOSTEDLAND USE: RANGE LEASE: 5F-078414 FORMATION: DR

FIELD NOTES & REMARKS:

PIT LOCATED APPROXIMATELY 99 FT. 56E FROM WELLHEAD.DEPTH TO GROUNDWATER: <100' NEAREST WATER SOURCE: >1000' NEAREST SURFACE WATER: >1000'NMCD RANKING SCORE: 10 NMCD TPH CLOSURE STD: 1000 PPM

CHECK ONE:

SOIL AND EXCAVATION

OVM CALIB. READ. 53.2 ppm☒ PIT ABANDONED

DESCRIPTION:

☐ STEEL TANK INSTALLEDTIME: 0810 am/pm 9/20/00 ☐ FIBERGLASS TANK INSTALLED

SIDEWALLS - OK. YELL. ORANGE SAND (SANDSTONE COLLECTED FROM NORTH SIDEWALL), NON COHESIVE, SLIGHTLY MOIST, FIRM TO DENSE, MED. DR. GRAY DISCOLORATION (COLLECTED FOR OVM READINGS) ON WEST SIDEWALL, STRONG HC ODOR IN WEST SIDEWALL OVM SAMPLE ONLY.

BOTTOM - BEDROCK (SANDSTONE), MOSTLY MED. TO MED. DR. GRAY, VERY HARD, STRONG HC ODOR IN OVM SAMPLE.

BEDROCK
BOTTOM

(SS)

RISK ASSESSED

FIELD 418.1 CALCULATIONS

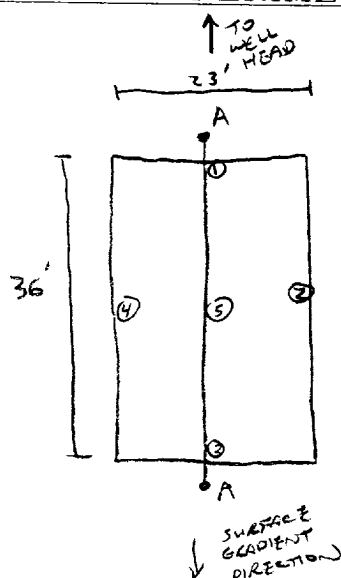
TIME	SAMPLE I.D.	LAB No:	WEIGHT (g)	mL. FREON	DILUTION	READING	CALC. ppm
1045							

SCALE



0 FT

PIT PERIMETER

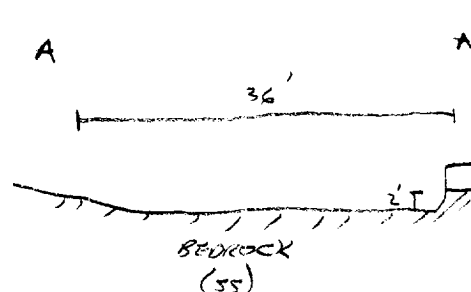
OVM
RESULTS

SAMPLE ID	FIELD HEADSPACE PID (ppm)
1 @ 3'	0.0 RK
2 @ 3'	0.0
3 @ 3'	0.0
4 @ 3'	114.1
5 @ 5'	614 RK

LAB SAMPLES

SAMPLE ID	ANALYSIS	TIME
4 @ 3'	TPH (8015)	1045
"	BTEX (8021)	"
BOTH PASSED		

PIT PROFILE



TRAVEL NOTES:

CALLOUT: 9/20/00 - MORN.ONSITE: 9/20/00 - MORN.

Well Name:

Well Site location:

Pit Type:

Producing Formation:

Pit Category:

Horizontal Distance to Surface Water:

Vicinity Groundwater Depth:

Day #2E

Unit I, Sec. 8, T29N, R8W

Abandoned Blow Pit

Basin Dakota

Vulnerable

> 1000 ft.

< 100 ft.

RISK ASSESSMENT

Pit remediation activities were terminated when backhoe encountered competent sandstone bedrock at 5 feet below grade.

No past or future threat to surface water or groundwater is likely based on the following considerations:

1. Past production fluids were contained locally by the relatively shallow sandstone bedrock. Groundwater levels located on or close to the well pad are estimated to be at a much greater depth below the bedrock.
2. Topographic information does not indicate off site lateral fluid migration near the earthen pit.
3. Daily discharge into the earthen pit has been terminated (abandoned). Prior discharge into the pit is believed to be under 5 barrels per day.
4. Field headspace readings (OVM/PID) on Basin Dakota type locations do not reflect direct correlation to total BTEX per US EPA Method 8021 concentrations. Listed below are several typical and formerly owned BP AMOCO Basin Dakota pit soil analyses comparing headspace to Benzene and total BTEX results.

LOCATION	HEADSPACE (ppm)	BENZENE (ppm)	TOTAL BTEX (ppm)
Frost, Jack B 1E	1100	0.011	5.889
Berger A 1	482	0.084	0.681
Mudge Com B 1E	684	0.017	16.438
L.C. Kelly 5	1235	0.643	13.908

The comparisons listed above demonstrates that headspace testing is not an accurate measurement to Benzene or total BTEX concentrations when above standards for Basin Dakota type pits.

Based upon the information given, we conclude that the subsurface vertical impact from the earthen pit is very limited and that the sandstone bottom creates enough of a impermeable barrier as to subdue impact to groundwater below it (please refer to BP AMOCO's (formerly Amoco Production Company) report "Post Excavation Pit Closure Investigation Summary, July, 1995", with cover letter dated November 30, 1995). BP AMOCO therefore request pit closure approval on this location.

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

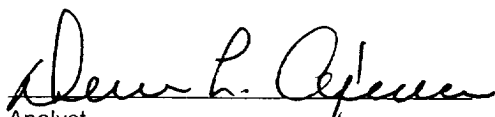
Client:	Blagg / BP	Project #:	403410
Sample ID:	4 @ 3'	Date Reported:	09-21-00
Laboratory Number:	18197	Date Sampled:	09-20-00
Chain of Custody No:	7496	Date Received:	09-20-00
Sample Matrix:	Soil	Date Extracted:	09-20-00
Preservative:	Cool	Date Analyzed:	09-21-00
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

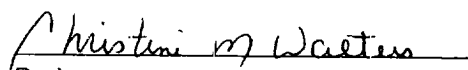
Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	264	0.2
Diesel Range (C10 - C28)	162	0.1
Total Petroleum Hydrocarbons	426	0.1

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Day #2E Abandoned Blow Pit.**


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8021 AROMATIC VOLATILE ORGANICS

Client:	Blagg / BP	Project #:	403410
Sample ID:	4 @ 3'	Date Reported:	09-21-00
Laboratory Number:	18197	Date Sampled:	09-20-00
Chain of Custody:	7496	Date Received:	09-20-00
Sample Matrix:	Soil	Date Analyzed:	09-21-00
Preservative:	Cool	Date Extracted:	09-20-00
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	6.0	1.8
Toluene	42.0	1.7
Ethylbenzene	45.9	1.5
p,m-Xylene	248	2.2
o-Xylene	201	1.0
Total BTEX	543	

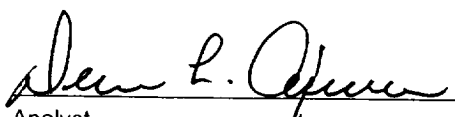
ND - Parameter not detected at the stated detection limit.

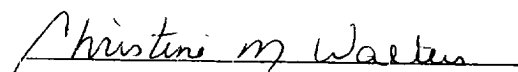
Surrogate Recoveries:	Parameter	Percent Recovery
	Trifluorotoluene	100 %
	Bromofluorobenzene	100 %

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: Day # 2E Abandoned Blow Pit.


Analyst


Review

District I

P.O. Box 1980, Hobbs, NM

District II

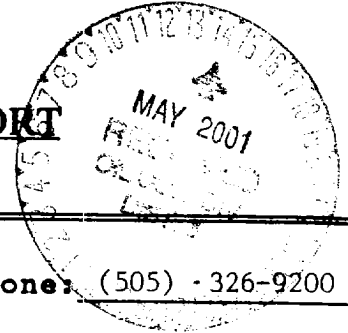
P.O. Drawer DD, Artesia, NM 88211

District III

100 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 87504-2088SUBMIT 1 COPY TO
APPROPRIATE
DISTRICT OFFICE
AND 1 COPY TO
SANTA FE OFFICEPIT REMEDIATION AND CLOSURE REPORTOperator: Amoco Production Company Telephone: (505) - 326-9200Address: 200 Amoco Court, Farmington, New Mexico 87401Facility Or: DAY # 2E
Well NameLocation: Unit or Qtr/Qtr Sec I Sec 8 T 29N R 8W County SAN JUANPit Type: Separator ABANDONED Dehydrator ✓ OtherLand Type: BLM ✓, State , Fee , OtherPit Location: Pit dimensions: length 19', width 17', depth 5'
(Attach diagram)Reference: wellhead X, otherFootage from reference: 70'Direction from reference: 8 Degrees ✓ East North ✓
of
 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) 10

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) 0RANKING SCORE (TOTAL POINTS): 10

Date Remediation Started: _____ Date Completed: 9/21/00

Remediation Method: Excavation ☒ Approx. cubic yards 50
 (Check all appropriate sections) Landfarmed _____ Insitu Bioremediation _____
 Other COMPOSTED

Remediation Location: Onsite _____ Offsite NYE GC B #1E (E-7-29-9)
 (ie. landfarmed onsite, name and location of offsite facility) TRANSPORTED TO CROUCH MESA 3/01.²⁵

General Description Of Remedial Action: _____
Excavation. BEDROCK BOTTOM. RISK ASSESSED.

Ground Water Encountered: No ☒ Yes _____ Depth _____

Final Pit: Sample location see Attached Documents

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

Sample depth 2' (WEST SIDEWALL)
 Sample date 9/20/00 Sample time 0925

Sample Results

Benzene(ppm) NDTotal BTEX(ppm) 0.158Field headspace(ppm) 204.2 1,609

SOUTH SIDEWALL (BEDROCK)

TPH 53.3

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 9/21/00

SIGNATURE

B. ShawPRINTED NAME
AND TITLEBuddy D. Shaw
ENVIRONMENTAL COORDINATOR

CLIENT: AMOCOBLAGG ENGINEERING, INC.
P.O. BOX 87, BLOOMFIELD, NM 87413
(505) 632-1199LOCATION NO: 80795C.O.C. NO: 7496

FIELD REPORT: CLOSURE VERIFICATION

PAGE No: 1 of 1LOCATION: NAME: DAYWELL #: ZEPIT: ABAN. DEHYDATE STARTED: 9/20/00QUAD/UNIT: I SEC: 8 TWP: 29N RNG: 8W PM: NW CNTY: SJ ST: NM

DATE FINISHED: _____

QTR/FOOTAGE: 1750'S/1000'E NESE CONTRACTOR: FUNTENVIRONMENTAL SPECIALIST: NVEXCAVATION APPROX. 19 FT. x 17 FT. x 5 FT. DEEP. CUBIC YARDAGE: 50DISPOSAL FACILITY: NYE GC BIE (E-7-29-9) REMEDIATION METHOD: COMPOSTEDLAND USE: RANGE LEASE: SF-078414 FORMATION: DK

FIELD NOTES & REMARKS:

PIT LOCATED APPROXIMATELY 70 FT. N8E FROM WELLHEADDEPTH TO GROUNDWATER: <100' NEAREST WATER SOURCE: >1000' NEAREST SURFACE WATER: >1000'NMOC RANKING SCORE: 10 NMOC TPH CLOSURE STD: 1000 PPM

CHECK ONE:

SOIL AND EXCAVATION

OVM CALIB. READ. 53.2 ppmTIME: 0810 @ pm 9/20/00☒ PIT ABANDONED☐ STEEL TANK INSTALLED☐ FIBERGLASS TANK INSTALLED

DESCRIPTION:

SOIL - MOD. YELL. BROWN SAND, NON COHESIVE, SLIGHTLY MOIST, FIRM, STRONG HC ODOR IN WEST SIDEWALL OVM SAMPLE, NO APPARENT DISCOLORATION OBSERVED. EAST & SOUTH SIDEWALL OVM SAMPLES COLLECTED FROM BEDROCK (SILTSTONE) - DUSKY BROWN

BOTTOM - BEDROCK (SANDSTONE), PALE YELL. BROWN, VERY HARD, HC ODOR DETECTED IN OVM SAMPLE.

BEDROCK
Bottom

RISK ASSESSED

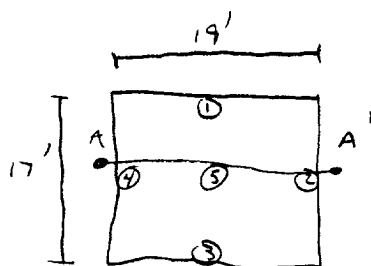
FIELD 418.1 CALCULATIONS

TIME	SAMPLE I.D.	LAB No:	WEIGHT (g)	mL. FREON	DILUTION	READING	CALC. ppm
0925							

SCALE

0 FT

PIT PERIMETER

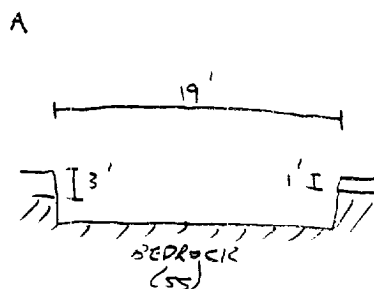
DOWN SLOPE
DIRECTIONOVM
RESULTS

SAMPLE ID	FIELD HEADSPACE PID (ppm)
1 @ 2'	0.0
2 @ 2'	81.5 RK
3 @ 2'	1609 RK
4 @ 2'	204.3
5 @ 5'	129.2 RK

LAB SAMPLES

SAMPLE ID	ANALYSIS	TIME
4 @ 2'	TPH (8015)	0925
"	RTX (8021)	"
BOTH PASSED		

PIT PROFILE



TRAVEL NOTES:

CALLOUT: 9/20/00 - MORN.ONSITE: 9/20/00 - MORN.

Well Name:

Well Site location:

Pit Type:

Producing Formation:

Pit Category:

Horizontal Distance to Surface Water:

Vicinity Groundwater Depth:

Day #2E

Unit I, Sec. 8, T29N, R8W

Abandoned Dehydrator Pit

Basin Dakota

Vulnerable

> 1000 ft.

< 100 ft.

RISK ASSESSMENT

Pit remediation activities were terminated when backhoe encountered competent sandstone bedrock at 5 feet below grade.

No past or future threat to surface water or groundwater is likely based on the following considerations:

1. Past production fluids were contained locally by the relatively shallow sandstone bedrock. Groundwater levels located on or close to the well pad are estimated to be at a much greater depth below the bedrock.
2. Topographic information does not indicate off site lateral fluid migration near the earthen pit.
3. Daily discharge into the earthen pit has been terminated (abandoned). Prior discharge into the pit is believed to be under 5 barrels per day.
4. Field headspace readings (OVM/PID) on Basin Dakota type locations do not reflect direct correlation to total BTEX per US EPA Method 8021 concentrations. Listed below are several typical and formerly owned BP AMOCO Basin Dakota pit soil analyses comparing headspace to Benzene and total BTEX results.

LOCATION	HEADSPACE (ppm)	BENZENE (ppm)	TOTAL BTEX (ppm)
Frost, Jack B 1E	1100	0.011	5.889
Berger A 1	482	0.084	0.681
Mudge Com B 1E	684	0.017	16.438
L.C. Kelly 5	1235	0.643	13.908

The comparisons listed above demonstrates that headspace testing is not an accurate measurement to Benzene or total BTEX concentrations when above standards for Basin Dakota type pits.

Based upon the information given, we conclude that the subsurface vertical and lateral impact from the earthen pit is very limited and that the sandstone bottom creates enough of a impermeable barrier as to subdue impact to groundwater below it (please refer to BP AMOCO's (formerly Amoco Production Company) report "Post Excavation Pit Closure Investigation Summary, July, 1995", with cover letter dated November 30, 1995). BP AMOCO therefore request pit closure approval on this location.

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

Client:	Blagg / BP	Project #:	403410
Sample ID:	4 @ 2'	Date Reported:	09-21-00
Laboratory Number:	18198	Date Sampled:	09-20-00
Chain of Custody No:	7496	Date Received:	09-20-00
Sample Matrix:	Soil	Date Extracted:	09-20-00
Preservative:	Cool	Date Analyzed:	09-21-00
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

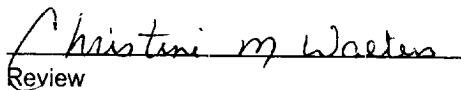
Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	41.7	0.2
Diesel Range (C10 - C28)	11.6	0.1
Total Petroleum Hydrocarbons	53.3	0.1

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Day #2E Abandoned Dehydrator Pit.**


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8021 AROMATIC VOLATILE ORGANICS

Client:	Blagg / BP	Project #:	403410
Sample ID:	4 @ 2'	Date Reported:	09-21-00
Laboratory Number:	18198	Date Sampled:	09-20-00
Chain of Custody:	7496	Date Received:	09-20-00
Sample Matrix:	Soil	Date Analyzed:	09-21-00
Preservative:	Cool	Date Extracted:	09-20-00
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	ND	1.8
Toluene	ND	1.7
Ethylbenzene	26.3	1.5
p,m-Xylene	73.3	2.2
o-Xylene	58.1	1.0
Total BTEX	158	

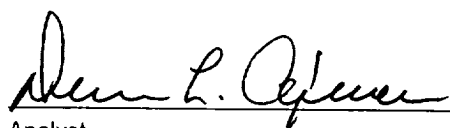
ND - Parameter not detected at the stated detection limit.

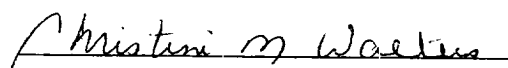
Surrogate Recoveries:	Parameter	Percent Recovery
	Trifluorotoluene	100 %
	Bromofluorobenzene	100 %

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: Day # 2E Abandoned Dehydrator Pit.


Analyst


Review

Date Remediation Started: _____ Date Completed: 9/21/00

Remediation Method: Excavation ☒ Approx. cubic yards 80
 (Check all appropriate sections) Landfarmed _____ Insitu Bioremediation _____
 Other COMPOSTED

Remediation Location: Onsite _____ Offsite NYE GC B #1E (E-7-29-9)
 (ie. landfarmed onsite, name and location of offsite facility) TRANSPORTED TO CROWN MESA 3/01.

General Description Of Remedial Action: _____
 Excavation. BEDROCK BOTTOM. RISK ASSESSED. DUPLICATE SAMPLE
 COLLECTED FROM NORTH SIDEWALL (1 @ 4') FOR LAB QA/QC - SEE
 CHAIN OF CUSTODY # 7497 (FAKE WELL NAME GIVEN - DAY # 2.0).

Ground Water Encountered: No ☒ Yes _____ Depth _____

Final Pit: Sample location see Attached Documents

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

Sample depth 4' (NORTH SIDEWALL)

Sample date 9/20/00 Sample time 0950

Sample Results

Benzene (ppm) 0.295

Total BTEX (ppm) 6.730

Field headspace (ppm) 2223 / 3217 PIT Bottom

TPH 2,630 ppm

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 9/21/00

SIGNATURE

B. Shaw

PRINTED NAME
AND TITLE

Buddy D. Shaw
ENVIRONMENTAL COORDINATOR

CLIENT: AMOCOBLAGG ENGINEERING, INC.
P.O. BOX 87, BLOOMFIELD, NM 87413
(505) 632-1199LOCATION NO: 80795C.O.C. NO: 7496
7497

FIELD REPORT: CLOSURE VERIFICATION

PAGE No: 1 of 1LOCATION: NAME: DAY WELL #: ZE PIT/ABAND. PROD. TANKQUAD/UNIT: I SEC: 8 TWP: 29N RNG: 8W PM: NM CNTY: SJ ST: NMQTR/FOOTAGE: 1750'S / 1000'ENESE CONTRACTOR: FLINTDATE STARTED: 9/20/00

DATE FINISHED: _____

ENVIRONMENTAL
SPECIALIST: NVEXCAVATION APPROX. 18 FT. x 17 FT. x 8 FT. DEEP. CUBIC YARDAGE: 80DISPOSAL FACILITY: ME GC BIE (E-7-29-9) REMEDIATION METHOD: COMPOSTEDLAND USE: RANGE LEASE: 5F-078414 FORMATION: OK

FIELD NOTES & REMARKS:

PIT LOCATED APPROXIMATELY 129 FT. N54W FROM WELLHEADDEPTH TO GROUNDWATER: <100' NEAREST WATER SOURCE: >1000' NEAREST SURFACE WATER: >1000'NMOC D RANKING SCORE: 10 NMOC D TPH CLOSURE STD: 1000 PPM

CHECK ONE:

SOIL AND EXCAVATION

OVM CALIB. READ. 53.2 ppmTIME: 0810 @/pm 9/20/00☒ PIT ABANDONED☐ STEEL TANK INSTALLED☐ FIBERGLASS TANK INSTALLED

DESCRIPTION:

SIDEWALLS - MOSTLY MOD. YELL. BROWN SAND NON COHESIVE SLIGHTLY MOIST FIRM
NO APPARENT DISCOLORATION OBSERVED, STRONG HC ODOR IN NORTH & WEST
SIDEWALL OUM SAMPLESBOTTOM - BEDROCK (SANDSTONE), LT. MED. GRAY, VERY HARD, STRONG HC ODOR IN OUM
SAMPLE.BEDROCK
BOTTOM

(SS)

RISK ASSESSED

★ DUPLICATE COLLECTED @ 2' (COC # 7497) ★

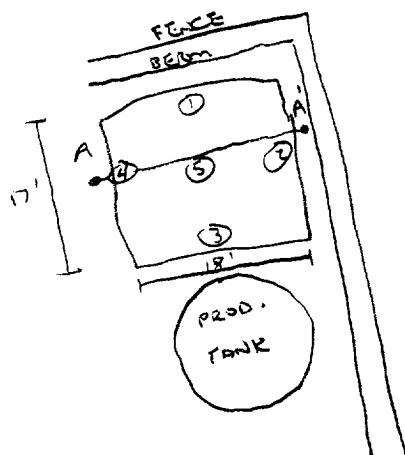
FIELD 418.1 CALCULATIONS

TIME	SAMPLE I.D.	LAB No:	WEIGHT (g)	mL. FREON	DILUTION	READING	CALC. ppm
0950							

SCALE

0 FT

PIT PERIMETER

OVM
RESULTS

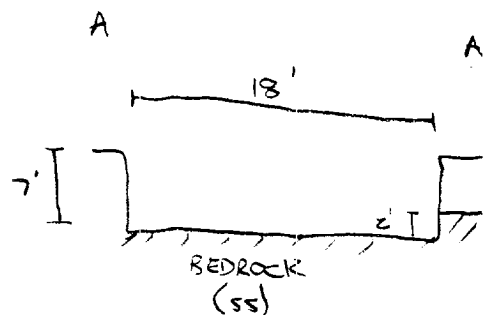
SAMPLE ID	FIELD HEADSPACE PID (ppm)
1 @ 4'	2223
2 @ 4'	16.6
3 @ 3'	0.0
4 @ 5'	816
5 @ 7'	3,217

LAB SAMPLES

SAMPLE ID	ANALYSIS	TIME
1 @ 4'	TPH (8013)	0950
"	BTEX (8021)	"

TPH - FAILED
BTEX - PASSED

PIT PROFILE



TRAVEL NOTES:

CALLOUT: 9/20/00 - MORN.ONSITE: 9/20/00 - MORN.

Well Name:

Well Site location:

Pit Type:

Producing Formation:

Pit Category:

Horizontal Distance to Surface Water:

Vicinity Groundwater Depth:

Day #2E

Unit I, Sec. 8, T29N, R8W

Abandoned Production Tank Pit

Basin Dakota

Vulnerable

> 1000 ft.

< 100 ft.

RISK ASSESSMENT

Pit remediation activities were terminated when backhoe encountered competent sandstone bedrock at 7 feet below grade.

No past or future threat to surface water or groundwater is likely based on the following considerations:

1. Past production fluids were contained locally by the relatively shallow sandstone bedrock. Groundwater levels located on or close to the well pad are estimated to be at a much greater depth below the bedrock.
2. Topographic information does not indicate off site lateral fluid migration near the earthen pit.
3. Daily discharge into the earthen pit has been terminated (abandoned). Prior discharge into the pit is believed to be under 5 barrels per day.

Based upon the information given, we conclude that the subsurface vertical and lateral total petroleum hydrocarbons (TPH) impact from the earthen pit is very limited and that the sandstone bottom creates enough of a impermeable barrier as to subdue impact to groundwater below it (please refer to BP AMOCO's (formerly Amoco Production Company) report "Post Excavation Pit Closure Investigation Summary, July, 1995", with cover letter dated November 30, 1995). BP AMOCO therefore request pit closure approval on this location.

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

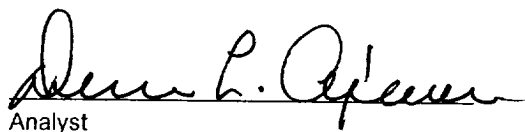
Client:	Blagg / BP	Project #:	403410
Sample ID:	1 @ 4'	Date Reported:	09-21-00
Laboratory Number:	18199	Date Sampled:	09-20-00
Chain of Custody No:	7496	Date Received:	09-20-00
Sample Matrix:	Soil	Date Extracted:	09-20-00
Preservative:	Cool	Date Analyzed:	09-21-00
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

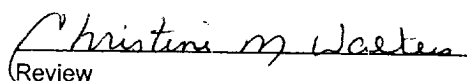
Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	2,580	0.2
Diesel Range (C10 - C28)	51.1	0.1
Total Petroleum Hydrocarbons	2,630	0.1

ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: **Day #2E Abandoned Production Tank Pit.**


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

Client:	Blagg / BP	Project #:	403410
Sample ID:	5 @ 10'	Date Reported:	09-21-00
Laboratory Number:	18201	Date Sampled:	09-20-00
Chain of Custody No:	7497	Date Received:	09-20-00
Sample Matrix:	Soil	Date Extracted:	09-20-00
Preservative:	Cool	Date Analyzed:	09-21-00
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

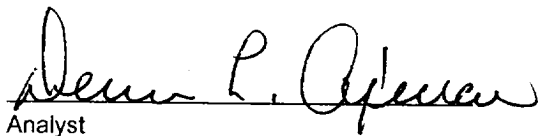
Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	1,730	0.2
Diesel Range (C10 - C28)	31.9	0.1
Total Petroleum Hydrocarbons	1,760	0.1

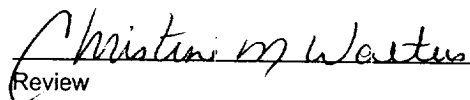
ND - Parameter not detected at the stated detection limit.

References: Method 8015B, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: Day #2D Abandoned Pit (I).

ONLY #2E - PRODUCTION TANK PIT DUPLICATE - 215


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8021 AROMATIC VOLATILE ORGANICS

Client:	Blagg / BP	Project #:	403410
Sample ID:	1 @ 4'	Date Reported:	09-21-00
Laboratory Number:	18199	Date Sampled:	09-20-00
Chain of Custody:	7496	Date Received:	09-20-00
Sample Matrix:	Soil	Date Analyzed:	09-21-00
Preservative:	Cool	Date Extracted:	09-20-00
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	295	1.8
Toluene	719	1.7
Ethylbenzene	473	1.5
p,m-Xylene	3,190	2.2
o-Xylene	2,050	1.0
Total BTEX	6,730	

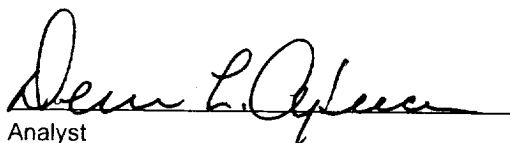
ND - Parameter not detected at the stated detection limit.

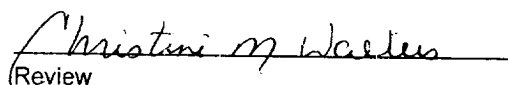
Surrogate Recoveries:	Parameter	Percent Recovery
	Trifluorotoluene	100 %
	Bromofluorobenzene	100 %

References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: Day # 2E Abandoned Production Tank Pit.


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8021 AROMATIC VOLATILE ORGANICS

Client:	Blagg / BP	Project #:	403410
Sample ID:	5 @ 10'	Date Reported:	09-21-00
Laboratory Number:	18201	Date Sampled:	09-20-00
Chain of Custody:	7497	Date Received:	09-20-00
Sample Matrix:	Soil	Date Analyzed:	09-21-00
Preservative:	Cool	Date Extracted:	09-20-00
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	231	1.8
Toluene	570	1.7
Ethylbenzene	465	1.5
p,m-Xylene	2,010	2.2
o-Xylene	1,860	1.0
Total BTEX	5,140	

ND - Parameter not detected at the stated detection limit.

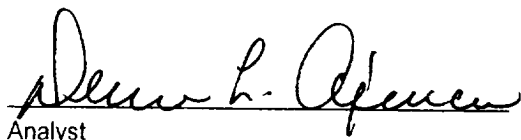
Surrogate Recoveries:	Parameter	Percent Recovery
	Trifluorotoluene	100 %
	Bromofluorobenzene	100 %

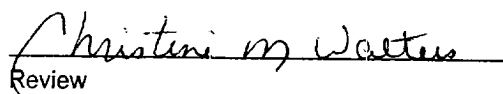
References: Method 5030B, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Method 8021B, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, December 1996.

Comments: Day # 2D Abandoned Pit (I).

DAY # 2E - PRODUCTION TANK PIT DUPLICATE. *nt*


Analyst


Review