

District I

P.O. Box 1980, Hobbs, NM

District II

P.O. Drawer DD, Artesia, NM 88211

District III

30 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 OFFICE

PIT REMEDIATION AND CLOSURE REPORT

80334

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

Address: 200 Amoco Court, Farmington, New Mexico 87401

Facility Or: BOLACK A1
Well Name

Location: Unit or Qtr/Qtr Sec B Sec 2 T 27N R 11W County SAN JUAN

Pit Type: Separator Dehydrator Other BLOW

Land Type: BLM X, State , Fee , Other COM. AGMT.

Pit Location: Pit dimensions: length 40', width 40', depth 25'
(Attach diagram)

Reference: wellhead X, other

Footage from reference: 130'

Direction from reference: 75 Degrees X East North
of
 West South X

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: _____ Date Completed: 3-1-96

Remediation Method: Excavation X Approx. cubic yards 1400
 (Check all appropriate sections) Landfarmed X Insitu Bioremediation _____
 Other COMPOST

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

General Description Of Remedial Action: _____
 Excavation

Ground Water Encountered: No X 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 25'
 Sample date 3-1-96 Sample time _____

Sample Results

Benzene(ppm) ND
 Total BTEX(ppm) ND
 Field headspace(ppm) 181
 TPH 260 ppm

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 4-9-96

SIGNATURE

B. Shaw

PRINTED NAME
AND TITLE

Buddy D. Shaw
Environmental Coordinator

CLIENT: <u>Amoco</u>	BLAGG ENGINEERING, INC. P.O. BOX 87, BLOOMFIELD, NM 87413 (505) 632-1199	LOCATION NO: <u>B0334</u> C.O.C. NO: _____
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FIELD REPORT: PIT CLOSURE VERIFICATION		
PIT LOCATION: <u>BOLACK A1</u>		PIT TYPE: <u>BLOW</u>
QUAD/UNIT: <u>B SEC 2 TWP 27N RNG 11W BM NH CNTY SJ ST NH</u>		DATE STARTED: <u>2-14-96</u> DATE FINISHED: <u>3-1-96</u>
QTR/FOOTAGE: <u>NW/NE</u>		CONTRACTOR: <u>L+L OILFIELD/ETC</u>
EXCAVATION APPROX. <u>40</u> FT. x <u>40</u> FT. x <u>25</u> FT. DEEP.		CUBIC YARDS: <u>1400</u>
DISPOSAL FACILITY: <u>ONSITE</u>		REMEDIAL METHOD: <u>LAND FARM</u>
LAND USE: <u>RANGE</u>		LEASE: <u>SF-078306-A</u>
		ENVIRONMENTAL SPECIALIST: <u>REO</u>

FIELD NOTES & REMARKS:	PIT LOCATED APPROXIMATELY <u>130</u> FEET <u>S75°E</u> FROM WELLHEAD.
DEPTH TO GROUNDWATER: <u>>100'</u>	NEAREST WATER SOURCE: <u>>1000'</u>
NEAREST SURFACE WATER: <u>>1000'</u>	
NMOC RANKING SCOPE: <u>0</u>	NMOC TPH CLOSURE STD: <u>5000</u> PPM

SOIL AND EXCAVATION DESCRIPTION:	PIT DISPOSITION: <u>ABANDONED</u>
SURFACE OF PIT PRIOR TO EXCAVATION CONTAINED HYDROCARBONS - PARAFFIN + DARK OIL. SIDEWALLS MOIST, BROWN, SAND. BOTTOM IS GRAY SANDS. ADDITIONAL EXCAVATION DOWN + TO EAST COMPLETED BEFORE FINAL SAMPLING ON 3/1/96.	

FIELD 418.1 CALCULATIONS

SAMPLE I.D.	LAB No:	WEIGHT (g)	mL. FREON	DILUTION	READING	CALC. ppm
2/28 CB @ 22'	1686	10.0	20.0	10	277	5540
3/1 CB @ 25'	1688	10.0	20.0	1	130	260

CLOSE PIT

SCALE



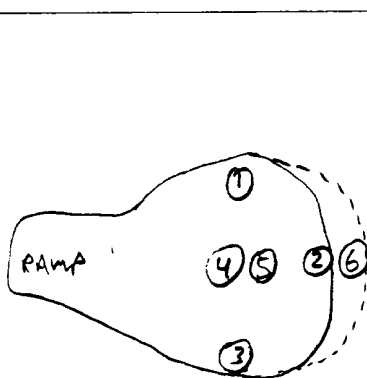
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FT

PIT PERIMETER

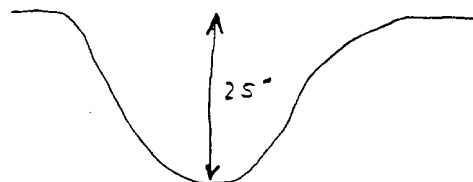
OVM
RESULTS

PIT PROFILE

SURFACE
GROUNDWATER

SAMPLE ID	FIELD HEADSPACE PID (ppm)
1 NS-15	0
2 ES-15	508
3 SS-15	0
4 CB-22	494
5 CB-25	181
6 ES-20	0
LAB SAMPLES	
CB @ 25'	8 TEX

2/28



TRAVEL NOTES:

CALLOUT: 2-13-96ONSITE: 2-14-962-28-96, 3-1-96

FORM REVISED 7/95

BLAGG ENGINEERING, INC.

P.O. Box 87, Bloomfield, New Mexico 87413

Phone: (505)632-1199 Fax: (505)632-3903

**FIELD MODIFIED EPA METHOD 418.1
TOTAL PETROLEUM HYDROCARBONS**

Client: Amoco
Sample ID: Center Bottom @ 22'
Project Location: Bolack A 1
Laboratory Number: TPH-1686

Project #:
Date Analyzed: 2-28-96
Date Reported: 2-28-96
Sample Matrix: Soil

Parameter -----	Result, mg/kg -----	Detection Limit, mg/kg -----
Total Recoverable Petroleum Hydrocarbons	5,500	100

ND = Not Detectable at stated detection limits.

QA/QC:	QA/QC Sample TPH mg/kg -----	Duplicate TPH mg/kg -----	% *Diff. -----
	8,440	8,640	2

*Administrative Acceptance limits set at 30%.

Method: Modified Method 418.1, Petroleum Hydrocarbons, Total
Recoverable, Chemical Analysis of Water and Waste,
USEPA Storet No.4551, 1978

Comments: Blow Pit - B0334

R. E. O'Neill
Analyst

Heleen V. J. 11/4/96
Review

BLAGG ENGINEERING, INC.

P.O. Box 87, Bloomfield, New Mexico 87413

Phone: (505)632-1199 Fax: (505)632-3903

Field TPH-Worksheet

Max Characters:

Client:

Amoco

Project #:

Sample ID:

Center Bottom @ 22'

Date Analyzed:

2-28-96

Project Location:

Bolack A 1

Date Reported:

2-28-96

Laboratory Number:

TPH-1686

Sample Matrix:

Soil

Sample Weight: 10.00 grams
Volume Freon: 20.00 mL
Dilution Factor: 10 (unitless)
TPH Reading: 277 mg/kg

TPH Result: 5540.0 mg/kg
Reported TPH Result: 5500.0 mg/kg
Actual Detection Limit: 100.0 mg/kg
Reported Detection Limit 100 mg/kg

QA/QC:

Original
TPH mg/kg

Duplicate
TPH mg/kg

%
Diff.

8440

8640

2

Comments:

*****Max Characters*****

Comments:

Blow Pit - B0334

BLAGG ENGINEERING, INC.

P.O. Box 87, Bloomfield, New Mexico 87413

Phone: (505)632-1199 Fax: (505)632-3903

**FIELD MODIFIED EPA METHOD 418.1
TOTAL PETROLEUM HYDROCARBONS**

Client:	Amoco	Project #:	
Sample ID:	Center Bottom @ 25'	Date Analyzed:	3-1-96
Project Location:	Bolack A1	Date Reported:	3-1-96
Laboratory Number:	TPH-1688	Sample Matrix:	Soil

Parameter -----	Result, mg/kg -----	Detection Limit, mg/kg -----
Total Recoverable Petroleum Hydrocarbons	260	10

ND = Not Detectable at stated detection limits.

QA/QC:	QA/QC Sample TPH mg/kg -----	Duplicate TPH mg/kg -----	% *Diff. -----
	8,440	8,640	2

*Administrative Acceptance limits set at 30%.

Method: Modified Method 418.1, Petroleum Hydrocarbons, Total
Recoverable, Chemical Analysis of Water and Waste,
USEPA Storet No.4551, 1978

Comments: Blow Pit - B0334

R. E. O'Neill
Analyst

William J. [Signature] 11/4/96
Review

BLAGG ENGINEERING, INC.

P.O. Box 87, Bloomfield, New Mexico 87413

Phone: (505)632-1199 Fax: (505)632-3903

Field TPH-Worksheet

Max Characters:

Client:

Amoco

Project #:

Sample ID:

Center Bottom @ 25'

Date Analyzed:

3-1-96

Project Location:

Bolack A1

Date Reported:

3-1-96

Laboratory Number:

TPH-1688

Sample Matrix:

Soil

Sample Weight: 10.00 grams
Volume Freon: 20.00 mL
Dilution Factor: 1 (unitless)
TPH Reading: 130 mg/kg

TPH Result: 260.0 mg/kg
Reported TPH Result: 260.0 mg/kg
Actual Detection Limit: 10.0 mg/kg
Reported Detection Limit: 10 mg/kg

QA/QC:

Original
TPH mg/kg

Duplicate
TPH mg/kg

%
Diff.

8440

8640

2

Comments:

*****Max Characters*****

Comments:

Blow Pit - B0334

VOLATILE AROMATIC HYDROCARBONS

Blagg Engineering, Inc.

Project ID: Bolack A1
Sample ID: CB @ 25' Blow Pit
Lab ID: 2779
Sample Matrix: Soil
Preservative: Cool
Condition: Intact

Report Date: 03/07/96
Date Sampled: 03/01/96
Date Received: 03/01/96
Date Extracted: 03/05/96
Date Analyzed: 03/05/96

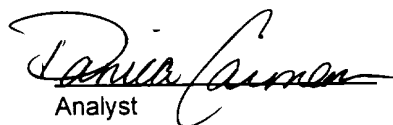
Target Analyte	Concentration (ug/kg)	Detection Limit (ug/kg)
Benzene	ND	23.1
Toluene	ND	23.1
Ethylbenzene	ND	23.1
m,p-Xylenes	ND	46.3
o-Xylene	ND	23.1

ND - Analyte not detected at the stated detection limit.

Quality Control:	<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptance Limits</u>
	Trifluorotoluene	106	81 -117%
	Bromofluorobenzene	104	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

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

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Energy, Minerals and Natural Resources Department

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

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APPROPRIATE
DISTRICT OFFICE
AND 1 COPY TO
SANTA FE OFFICE

PIT REMEDIATION AND CLOSURE REPORT

80334

Operator: Amoco Production Company Telephone: (505) - 326-9200
Address: 200 Amoco Court, Farmington, New Mexico 87401
Facility Or: BO LACK A1
Well Name
Location: Unit or Qtr/Qtr Sec B Sec 2 T 27N R 11W County SAN JUAN
Pit Type: Separator ☒ Dehydrator ☒ Other _____
Land Type: BLM ☒ State _____ Fee _____ other COM. AGMT.

Pit Location: Pit dimensions: length 35', width 30', depth 21'
(Attach diagram) Reference: wellhead ☒ other _____
Footage from reference: 110
Direction from reference: 45 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) 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: _____ Date Completed: 3-5-96

Remediation Method: Excavation X Approx. cubic yards 800
(Check all appropriate sections) Landfarmed X Insitu Bioremediation _____

Other COMPOST

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

General Description Of Remedial Action: _____

Excavation

Ground Water Encountered: No X Yes _____ Depth _____

Final Pit:

Closure Sampling:

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

Sample location see Attached Documents

Sample depth 21'

Sample date 3-5-96 Sample time _____

Sample Results

Benzene(ppm) 0.0557

Total BTEX(ppm) 30.870

Field headspace(ppm) 652

TPH 1400 ppm

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 4-9-96

SIGNATURE

B.D. Shaw

PRINTED NAME
AND TITLE

Buddy D. Shaw
Environmental Coordinator

CLIENT: <u>Amoco</u>	BLAGG ENGINEERING, INC. P.O. BOX 87, BLOOMFIELD, NM 87413 (505) 632-1199	LOCATION NO: <u>80334</u> C.D.C. NO: <u> </u>
----------------------	--	---

FIELD REPORT: PIT CLOSURE VERIFICATION

P+A Location

LOCATION: <u>BOLACK A1</u>	PIT TYPE: <u>SEP./DEHY.</u>	DATE STARTED: <u>2-14-96</u>
QUAD/UNIT <u>B</u> SEC: <u>2</u> TWP: <u>27N</u> RNG: <u>11W</u> BM: <u>NM</u> CNTY: <u>SJ</u> ST: <u>NM</u>		DATE FINISHED: <u>3-5-96</u>
DIR/FOOTAGE: <u>NW/NE</u>	CONTRACTOR: <u>L+L OILFIELD/ERC</u>	ENVIRONMENTAL SPECIALIST: <u>REG</u>

EXCAVATION APPROX. 30 FT. x 35 FT. x 21 FT. DEEP. CUBIC YARDS: 800

DISPOSAL FACILITY: ON SITE REMEDIATION METHOD: COMPOST

LAND USE: RANGE LEASE: SF-078 306-A FORMATION:

FIELD NOTES & REMARKS: PIT LOCATED APPROXIMATELY 110 FEET S45°W FROM WELLHEAD.

DEPTH TO GROUNDWATER: 7100' NEAREST WATER SOURCE: >1000' NEAREST SURFACE WATER: >1000'

NMOCD RANKING SCORE: 0 NMOCD TPH CLOSURE STD: 5000 PPM

SOIL AND EXCAVATION DESCRIPTION: PIT DISPOSITION: AS ABANDONED

SURFACE OF PIT PRIOR TO EXCAVATION CONTAINED HYDROCARBONS - PARAFFIN + DARK OIL, ADDITIONAL EXCAVATION NECESSARY. 2/28 - NORTH SIDE + BOTTOM STILL BAD - ADDITIONAL EXCAVATION WILL BE DONE. DUG TO 18' AND TPH ANAL. BTEX SAMPLE COLLECTED. PIT DUG TO 21' + NORTH SIDE WALL CLEANED OUT.

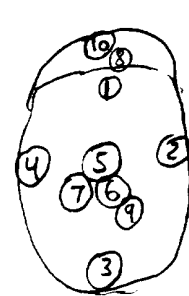
CLOSE PIT

FIELD 418.1 CALCULATIONS

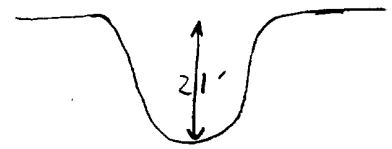
SAMPLE I.D.	LAB No:	WEIGHT (g)	mL. FREON	DILUTION	READING	CALC. ppm
2/15 CB@12'	1681	10.0	20.0	10	422	8440
"	Duplicate	10.0	20.0	10	432	8640
CB@18'	1684	10.0	20.0	10	210	4200
CB@21'	1689	10.0	20.0	1	698	1396

SCALE: 0 10 20 FT

PIT PERIMETER RESULTS PIT PROFILE



SAMPLE ID	FIELD HEADSPACE PID (ppm)
1 NS-12'	461
2 ES-12'	0
3 SS-12'	5
4 WS-12'	0
5 CB-17'	900
2/15 CB-12'	327
2/28 6 CB-18'	789
7 CB-21'	457
8 NS-15'	677
3/15 9 CB-21'	652
10 NS-15'	2
LAB SAMPLES	
2/28 CB@18'	BTEX
3/15 CB@21'	BTEX



TRAVEL NOTES: CALLOUT: 2-13-96 ONSITE: 2-14-96, 2-25-96

BLAGG ENGINEERING, INC.

P.O. Box 87, Bloomfield, New Mexico 87413

Phone: (505)632-1199 Fax: (505)632-3903

**FIELD MODIFIED EPA METHOD 418.1
TOTAL PETROLEUM HYDROCARBONS**

Client:	Amoco	Project #:	
Sample ID:	Center Bottom @ 12'	Date Analyzed:	2-15-96
Project Location:	Bolack A 1	Date Reported:	2-15-96
Laboratory Number:	TPH-1681	Sample Matrix:	Soil

Parameter	Result, mg/kg	Detection Limit, mg/kg
Total Recoverable Petroleum Hydrocarbons	8,400	100

ND = Not Detectable at stated detection limits.

QA/QC:	QA/QC Sample TPH mg/kg	Duplicate TPH mg/kg	% *Diff.
	8,440	8,640	2

*Administrative Acceptance limits set at 30%.

Method: Modified Method 418.1, Petroleum Hydrocarbons, Total Recoverable, Chemical Analysis of Water and Waste, USEPA Storet No.4551, 1978

Comments: Separator / Dehydrator Pit - B0334

R. E. O'Neil
Analyst

Robert J. Blagg 11/14/96
Review

BLAGG ENGINEERING, INC.

P.O. Box 87, Bloomfield, New Mexico 87413

Phone: (505)632-1199 Fax: (505)632-3903

Field TPH-Worksheet

Max Characters:

Client:

Amoco

Project #:

Sample ID:

Center Bottom @ 12'

Date Analyzed:

2-15-96

Project Location:

Bolack A 1

Date Reported:

2-15-96

Laboratory Number:

TPH-1681

Sample Matrix:

Soil

Sample Weight: 10.00 grams
Volume Freon: 20.00 mL
Dilution Factor: 10 (unitless)
TPH Reading: 422 mg/kg

TPH Result: 8440.0 mg/kg
Reported TPH Result: 8400.0 mg/kg
Actual Detection Limit: 100.0 mg/kg
Reported Detection Limit: 100 mg/kg

QA/QC:

Original
TPH mg/kg

Duplicate
TPH mg/kg

%
Diff.

8440

8640

2

Comments:

*****Max Characters*****

Comments:

Separator / Dehydrator Pit - B0334

BLAGG ENGINEERING, INC.

P.O. Box 87, Bloomfield, New Mexico 87413

Phone: (505)632-1199 Fax: (505)632-3903

**FIELD MODIFIED EPA METHOD 418.1
TOTAL PETROLEUM HYDROCARBONS**

Client:	Amoco	Project #:	
Sample ID:	Center Bottom @ 12'	Date Analyzed:	2-15-96
Project Location:	Bolack A 1	Date Reported:	2-15-96
Laboratory Number:	TPH-1681 Duplicate	Sample Matrix:	Soil

Parameter -----	Result, mg/kg -----	Detection Limit, mg/kg -----
Total Recoverable Petroleum Hydrocarbons	8,600	100

ND = Not Detectable at stated detection limits.

QA/QC:	QA/QC Sample TPH mg/kg -----	Duplicate TPH mg/kg -----	% *Diff. -----
	8,440	8,640	2

*Administrative Acceptance limits set at 30%.

Method: Modified Method 418.1, Petroleum Hydrocarbons, Total
Recoverable, Chemical Analysis of Water and Waste,
USEPA Storet No.4551, 1978

Comments: Separator / Dehydrator Pit - B0334

R. E. O'Neill
Analyst

H. J. [Signature] 11/4/96
Review

BLAGG ENGINEERING, INC.

P.O. Box 87, Bloomfield, New Mexico 87413

Phone: (505)632-1199 Fax: (505)632-3903

Field TPH-Worksheet

Max Characters:

Client:

Amoco

Project #:

Sample ID:

Center Bottom @ 12'

Date Analyzed:

2-15-96

Project Location:

Bolack A 1

Date Reported:

2-15-96

Laboratory Number:

TPH-1681 Duplicate

Sample Matrix:

Soil

Sample Weight: 10.00 grams
Volume Freon: 20.00 mL
Dilution Factor: 10 (unitless)
TPH Reading: 432 mg/kg

TPH Result: 8640.0 mg/kg
Reported TPH Result: 8600.0 mg/kg
Actual Detection Limit: 100.0 mg/kg
Reported Detection Limit: 100 mg/kg

QA/QC:

Original
TPH mg/kg

Duplicate
TPH mg/kg

%
Diff.

8440

8640

2

Comments:

*****Max Characters*****

Comments:

Separator / Dehydrator Pit - B0334

BLAGG ENGINEERING, INC.

P.O. Box 87, Bloomfield, New Mexico 87413

Phone: (505)632-1199 Fax: (505)632-3903

**FIELD MODIFIED EPA METHOD 418.1
TOTAL PETROLEUM HYDROCARBONS**

Client: Amoco
Sample ID: Center Bottom @ 18'
Project Location: Bolack A 1
Laboratory Number: TPH-1684

Project #:
Date Analyzed: 2-28-96
Date Reported: 2-28-96
Sample Matrix: Soil

Parameter -----	Result, mg/kg -----	Detection Limit, mg/kg -----
Total Recoverable Petroleum Hydrocarbons	4,200	100

ND = Not Detectable at stated detection limits.

QA/QC:	QA/QC Sample TPH mg/kg -----	Duplicate TPH mg/kg -----	% *Diff. -----
	8,440	8,640	2

*Administrative Acceptance limits set at 30%.

Method: Modified Method 418.1, Petroleum Hydrocarbons, Total
Recoverable, Chemical Analysis of Water and Waste,
USEPA Storet No.4551, 1978

Comments: Separator / Dehydrator Pit - B0334

R. E. O'Neil
Analyst

Nelson Velazquez 11/4/96
Review

BLAGG ENGINEERING, INC.

P.O. Box 87, Bloomfield, New Mexico 87413

Phone: (505)632-1199 Fax: (505)632-3903

Field TPH-Worksheet

Max Characters:

Client:

Amoco

Project #:

Sample ID:

Center Bottom @ 18'

Date Analyzed:

2-28-96

Project Location:

Bolack A 1

Date Reported:

2-28-96

Laboratory Number:

TPH-1684

Sample Matrix:

Soil

Sample Weight:	10.00	grams
Volume Freon:	20.00	mL
Dilution Factor:	10	(unitless)
TPH Reading:	210	mg/kg

TPH Result:	4200.0	mg/kg
Reported TPH Result:	4200.0	mg/kg
Actual Detection Limit:	100.0	mg/kg
Reported Detection Limit	100	mg/kg

QA/QC:

Original
TPH mg/kgDuplicate
TPH mg/kg%
Diff.-----
8440-----
8640-----
2

Comments:

*****Max Characters*****

Comments:

Separator / Dehydrator Pit - B0334

VOLATILE AROMATIC HYDROCARBONS

Blagg Engineering, Inc.

Project ID: Bolack A1
Sample ID: Sep/Dehy Pit CB @ 18'
Lab ID: 2774
Sample Matrix: Soil
Preservative: Cool
Condition: Intact

Report Date: 03/07/96
Date Sampled: 02/28/96
Date Received: 02/29/96
Date Extracted: 03/02/96
Date Analyzed: 03/02/96

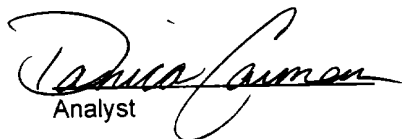
Target Analyte	Concentration (mg/kg)	Detection Limit (mg/kg)
Benzene	ND	0.43
Toluene	4.51	0.43
Ethylbenzene	8.16	0.43
m,p-Xylenes	85.6	1.71
o-Xylene	18.9	0.85

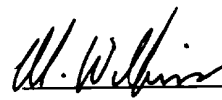
ND - Analyte not detected at the stated detection limit.

Quality Control:	<u>Surrogate</u>	<u>Percent Recovery</u>	<u>Acceptance Limits</u>
	Trifluorotoluene	100	81 -117%
	Bromofluorobenzene	114	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

BLAGG ENGINEERING, INC.

P.O. Box 87, Bloomfield, New Mexico 87413

Phone: (505)632-1199 Fax: (505)632-3903

**FIELD MODIFIED EPA METHOD 418.1
TOTAL PETROLEUM HYDROCARBONS**

Client:	Amoco	Project #:	
Sample ID:	Center Bottom @ 21'	Date Analyzed:	3-1-96
Project Location:	Bolack A1	Date Reported:	3-1-96
Laboratory Number:	TPH-1689	Sample Matrix:	Soil

Parameter -----	Result, mg/kg -----	Detection Limit, mg/kg -----
Total Recoverable Petroleum Hydrocarbons	1,400	10

ND = Not Detectable at stated detection limits.

QA/QC:	QA/QC Sample TPH mg/kg -----	Duplicate TPH mg/kg -----	% *Diff. -----
	8,440	8,640	2

*Administrative Acceptance limits set at 30%.

Method: Modified Method 418.1, Petroleum Hydrocarbons, Total
Recoverable, Chemical Analysis of Water and Waste,
USEPA Storet No.4551, 1978

Comments: Separator / Dehydrator Pit - B0334

R. E. O'Neill
Analyst

Heleen Velt 11/4/96
Review

BLAGG ENGINEERING, INC.

P.O. Box 87, Bloomfield, New Mexico 87413

Phone: (505)632-1199 Fax: (505)632-3903

Field TPH-Worksheet

Max Characters:

Client:

Sample ID:

Project Location:

Laboratory Number:

Amoco

Center Bottom @ 21'

Bolack A1

TPH-1689

Project #:

Date Analyzed:

Date Reported:

Sample Matrix:

3-1-96

3-1-96

Soil

Sample Weight: 10.00 grams
Volume Freon: 20.00 mL
Dilution Factor: 1 (unitless)
TPH Reading: 698 mg/kg

TPH Result: 1396.0 mg/kg
Reported TPH Result: 1400.0 mg/kg
Actual Detection Limit: 10.0 mg/kg
Reported Detection Limit: 10 mg/kg

QA/QC:	Original TPH mg/kg	Duplicate TPH mg/kg	% Diff.
	8440	8640	2

Comments: *****Max Characters*****

Comments: Separator / Dehydrator Pit - B0334

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8020 AROMATIC VOLATILE ORGANICS

Client:	Blagg / Amoco	Project #:	04034
Sample ID:	CB. @ 21'	Date Reported:	03-06-96
Laboratory Number:	A028	Date Sampled:	03-05-96
Chain of Custody:	4735	Date Received:	03-05-96
Sample Matrix:	Soil	Date Analyzed:	03-06-96
Preservative:	Cool	Date Extracted:	03-06-96
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	55.7	22.3
Toluene	669	24.1
Ethylbenzene	1,950	18.9
p,m-Xylene	22,600	35.3
o-Xylene	5,600	23.0
Total BTEX	30,870	

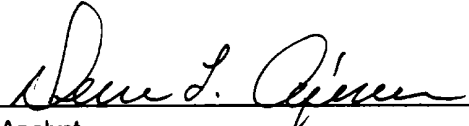
ND - Parameter not detected at the stated detection limit.

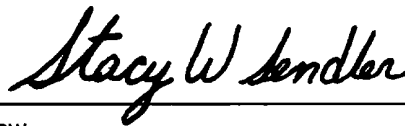
Surrogate Recoveries:	Parameter	Percent Recovery
	Trifluorotoluene	100 %
	Bromofluorobenzene	99 %

References: Method 5030, Purge-and-Trap, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.

Method 8020, Aromatic Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, Sept. 1994.

Comments: Bolack A1 Sep/Dehy Pit.


Analyst


Review

District I
P.O. Box 1980, Hobbs, NM
District II
P.O. Drawer DD, Artesia, NM 88211
District III
10 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 OFFICE

PIT REMEDIATION AND CLOSURE REPORT

80334

Operator: Amoco Production Company Telephone: (505) - 326-9200
Address: 200 Amoco Court, Farmington, New Mexico 87401
Facility Or: BOLACK A1
Well Name
Location: Unit or Qtr/Qtr Sec B Sec 2 T 27N R 11W County SAN JUAN
Pit Type: Separator Dehydrator Other TANK DRAIN
Land Type: BLM X, State , Fee , Other COM. AGMT.

Pit Location: Pit dimensions: length 35', width 25', depth 17'
(Attach diagram) Reference: wellhead X, other
Footage from reference: 290
Direction from reference: 70 Degrees East North
of
X West South X

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: _____ Date Completed: 2-28-96

Remediation Method: Excavation X Approx. cubic yards 500
 (Check all appropriate sections) Landfarmed X Insitu Bioremediation _____
 Other COMPOST

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

General Description Of Remedial Action: _____

Excavation TO SAND STONE Bottom + SIDE WALLS

Ground Water Encountered: No X 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 12"

Sample date 2-28-96 Sample time _____

Sample Results

Benzene(ppm) _____

Total BTEX(ppm) _____

Field headspace(ppm) 573

TPH 1524 ppm

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 4-9-96

SIGNATURE

B. Shaw

PRINTED NAME
AND TITLE

Buddy D. Shaw
ENVIRONMENTAL COORDINATOR

BLAGG ENGINEERING, INC.

P.O. Box 87, Bloomfield, New Mexico 87413

Phone: (505)632-1199 Fax: (505)632-3903

**FIELD MODIFIED EPA METHOD 418.1
TOTAL PETROLEUM HYDROCARBONS**

Client: Amoco
Sample ID: East Side @ 12'
Project Location: Bolack A 1
Laboratory Number: TPH-1683

Project #:
Date Analyzed: 2-28-96
Date Reported: 2-28-96
Sample Matrix: Soil

Parameter -----	Result, mg/kg -----	Detection Limit, mg/kg -----
Total Recoverable Petroleum Hydrocarbons	10,500	100

ND = Not Detectable at stated detection limits.

QA/QC:	QA/QC Sample TPH mg/kg -----	Duplicate TPH mg/kg -----	% *Diff. -----
	8,440	8,640	2

*Administrative Acceptance limits set at 30%.

Method: Modified Method 418.1, Petroleum Hydrocarbons, Total
Recoverable, Chemical Analysis of Water and Waste,
USEPA Storet No.4551, 1978

Comments: Tank Drain Pit - B0334

R. E. O'Neill
Analyst

Robert J. [Signature] 11/4/96
Review

BLAGG ENGINEERING, INC.

P.O. Box 87, Bloomfield, New Mexico 87413

Phone: (505)632-1199 Fax: (505)632-3903

Field TPH-Worksheet

Max Characters:

Client:

Amoco

Project #:

Sample ID:

East Side @ 12'

Date Analyzed:

2-28-96

Project Location:

Bolack A 1

Date Reported:

2-28-96

Laboratory Number:

TPH-1683

Sample Matrix:

Soil

Sample Weight: 10.00 grams
Volume Freon: 20.00 mL
Dilution Factor: 10 (unitless)
TPH Reading: 525 mg/kg

TPH Result: 10500.0 mg/kg
Reported TPH Result: 10500.0 mg/kg
Actual Detection Limit: 100.0 mg/kg
Reported Detection Limit: 100 mg/kg

QA/QC:

Original
TPH mg/kg

Duplicate
TPH mg/kg

%
Diff.

8440

8640

2

Comments:

*****Max Characters*****

Comments:

Tank Drain Pit - B0334

BLAGG ENGINEERING, INC.

P.O. Box 87, Bloomfield, New Mexico 87413

Phone: (505)632-1199 Fax: (505)632-3903

**FIELD MODIFIED EPA METHOD 418.1
TOTAL PETROLEUM HYDROCARBONS**

Client: Amoco
Sample ID: East Side @ 12'
Project Location: Bolack A 1
Laboratory Number: TPH-1685

Project #:
Date Analyzed: 2-28-96
Date Reported: 2-28-96
Sample Matrix: Soil

Parameter -----	Result, mg/kg -----	Detection Limit, mg/kg -----
Total Recoverable Petroleum Hydrocarbons	1,500	10

ND = Not Detectable at stated detection limits.

QA/QC:	QA/QC Sample TPH mg/kg -----	Duplicate TPH mg/kg -----	% *Diff -----
	8,440	8,640	2

*Administrative Acceptance limits set at 30%.

Method: Modified Method 418.1, Petroleum Hydrocarbons, Total
Recoverable, Chemical Analysis of Water and Waste,
USEPA Storet No.4551, 1978

Comments: Tank Drain Pit - B0334

R. E. O'Neil
Analyst

Nelson Vef 11/4/96
Review

BLAGG ENGINEERING, INC.

P.O. Box 87, Bloomfield, New Mexico 87413

Phone: (505)632-1199 Fax: (505)632-3903

Field TPH-Worksheet

Max Characters:

Client:

Amoco

Project #:

Sample ID:

East Side @ 12'

Date Analyzed:

2-28-96

Project Location:

Bolack A 1

Date Reported:

2-28-96

Laboratory Number:

TPH-1685

Sample Matrix:

Soil

Sample Weight: 10.00 grams
Volume Freon: 20.00 mL
Dilution Factor: 1 (unitless)
TPH Reading: 762 mg/kg

TPH Result: 1524.0 mg/kg
Reported TPH Result: 1500.0 mg/kg
Actual Detection Limit: 10.0 mg/kg
Reported Detection Limit: 10 mg/kg

QA/QC:

Original
TPH mg/kg

Duplicate
TPH mg/kg

%
Diff.

8440

8640

2

Comments:

*****Max Characters*****

Comments:

Tank Drain Pit - B0334

ENVIRONMENTAL LABORATORY

White/Yellow: Analytica
Pink: Client

28

CLIENT: <u>AMOCO</u>	BLAGG ENGINEERING, INC. P.O. BOX 87, BLOOMFIELD, NM 87413 (505) 632-1199	LOCATION NO: <u>80334</u> C.O.C. NO: <u>6034</u>
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FIELD REPORT: LANDFARM/COMPOST PILE CLOSURE VERIFICATION

LOCATION: NAME: <u>BOLACK</u> A WELL #: <u>1</u> PITS: <u>BLOW, SEP/DENY, PROD.</u>	DATE STARTED: <u>6/24/98</u> DATE FINISHED: _____
QUAD/UNIT: <u>B</u> SEC: <u>2</u> TWP: <u>27N</u> RNG: <u>11W</u> PM: <u>NM</u> CNTY: <u>ST</u> ST: <u>NM</u>	ENVIRONMENTAL SPECIALIST: <u>NV</u>
QTR/FOOTAGE <u>NW/4 NE/4</u> CONTRACTOR: <u>L & L OILFIELD & EPC</u>	

SOIL REMEDIATION:

REMEDIATION SYSTEM: COMPOSTED & LANDFARMED APPROX. CUBIC YARDAGE: 2,700
 LAND USE: RANGE LIFT DEPTH (ft): 12"

FIELD NOTES & REMARKS:

DEPTH TO GROUNDWATER: >100' NEAREST WATER SOURCE: >1000' NEAREST SURFACE WATER: >1000'

NMOC RANKING SCORE 0 NMOC TPH CLOSURE STD: 5000 PPM

SOIL PREDOMINANTLY OK. YELL. BROWN SAND TO SILTY SAND, NOT COHESIVE, SLIGHTLY MOIST, FIRM TO DENSE, NO APPARENT DISCOLORATION OR HC ODOR OBSERVED @ ANY OF THE SAMPLE PTS., SAMPLE DEPTHS FOR LANDFARM AREAS RANGE FROM 4" TO 1', COLLECTED 5 PT. COMPOSITE SAMPLES FOR LAB ANALYSIS.

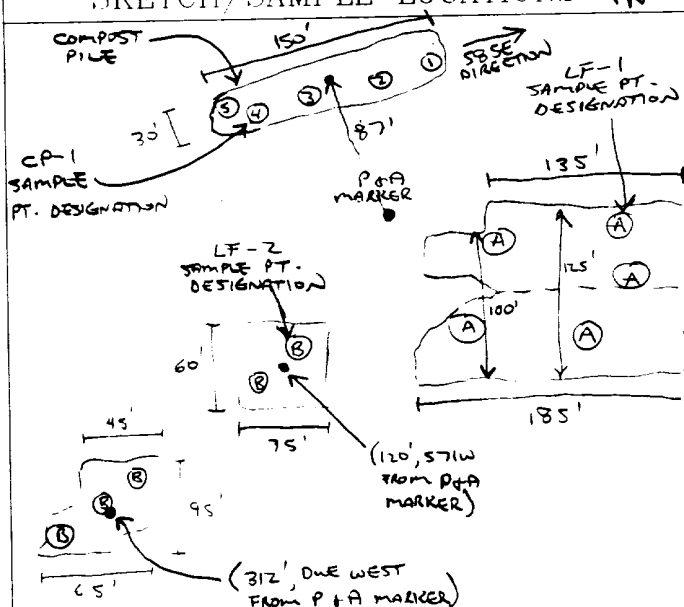
CLOSED

P & A'D 1/23/96

FIELD 418.1 CALCULATIONS

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

SKETCH/SAMPLE LOCATIONS



OVM RESULTS

LAB SAMPLES

SAMPLE ID	FIELD HEADSPACE PID (ppm)	SAMPLE ID	ANALYSIS	TIME	RESULTS
CP-1	0.0	CP-1	TPH (8015)	1330	2.1
LF-1	0.0	LF-1	TPH (8015)	1410	3.5
LF-2	0.0	LF-2	TPH (8015)	1445	36.3

SCALE

0 FT

TRAVEL NOTES:

CALLOUT: NA

ONSITE: 6/24/98

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

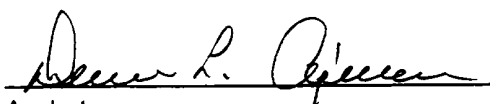
Client:	Blagg / AMOCO	Project #:	04034-10
Sample ID:	CP - 1	Date Reported:	06-29-98
Laboratory Number:	D488	Date Sampled:	06-24-98
Chain of Custody No:	6034	Date Received:	06-25-98
Sample Matrix:	Soil	Date Extracted:	06-26-98
Preservative:	Cool	Date Analyzed:	06-26-98
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

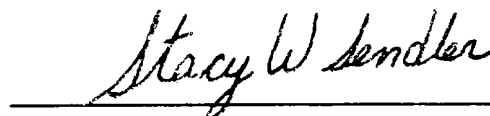
Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	ND	0.2
Diesel Range (C10 - C28)	2.1	0.1
Total Petroleum Hydrocarbons	2.1	0.2

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: **Bolack A #1. 5 Pt. Composite (Compost Pile).**


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

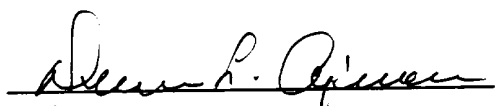
Client:	Blagg / AMOCO	Project #:	04034-10
Sample ID:	LF - 1	Date Reported:	06-29-98
Laboratory Number:	D489	Date Sampled:	06-24-98
Chain of Custody No:	6034	Date Received:	06-25-98
Sample Matrix:	Soil	Date Extracted:	06-26-98
Preservative:	Cool	Date Analyzed:	06-26-98
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

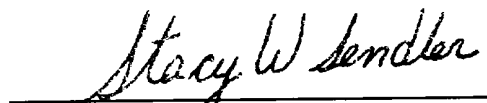
Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	ND	0.2
Diesel Range (C10 - C28)	3.5	0.1
Total Petroleum Hydrocarbons	3.5	0.2

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: **Bolack A #1. 5 Pt. Composite (Landfarm).**


Analyst


Review

EPA METHOD 8015 Modified
Nonhalogenated Volatile Organics
Total Petroleum Hydrocarbons

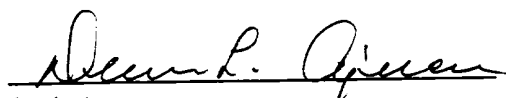
Client:	Blagg / AMOCO	Project #:	04034-10
Sample ID:	LF - 2	Date Reported:	06-29-98
Laboratory Number:	D490	Date Sampled:	06-24-98
Chain of Custody No:	6034	Date Received:	06-25-98
Sample Matrix:	Soil	Date Extracted:	06-26-98
Preservative:	Cool	Date Analyzed:	06-26-98
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

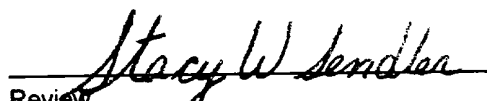
Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	ND	0.2
Diesel Range (C10 - C28)	36.3	0.1
Total Petroleum Hydrocarbons	36.3	0.2

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: **Bolack A #1. 5 Pt. Composite (Landfarm).**


Analyst


Review

CHAIN OF CUSTODY RECORD

6034

Client / Project Name		Project Location		ANALYSIS / PARAMETERS																					
BLAGG / Amoco		BLACK A #1																							
Sampler: NTU		Client No. 0403440																							
Sample No./ Identification	Sample Date	Sample Time	Lab Number	Sample Matrix	No. of Containers	TPH (8015)							Remarks												
CP-1	6/24/98	1330	D488	SOIL	1	✓							ALL SAMPLES PRESERV. - COOL												
LF-1	6/24/98	1410	D489	SOIL	1	✓							5 PT. COMPOSITE (COMPOST PILE)												
LF-2	6/24/98	1450	D490	SOIL	1	✓							5 PT. COMPOSITE (LANDFARM)												
Relinquished by: (Signature) Nelson Velazquez		Date 6/25/98		Time 1334		Received by: (Signature) [Signature]		Date 6/25/98		Time 1334															
Relinquished by: (Signature)						Received by: (Signature)																			
Relinquished by: (Signature)						Received by: (Signature)																			
BP Coc's 8032- 6034 ENVIROTECH INC. 5796 U.S. Highway 64 Farmington, New Mexico 87401 (505) 322-0615																									
Sample Receipt																									
<table border="1"> <tr> <td>Y</td> <td>N</td> <td>N/A</td> </tr> <tr> <td>✓</td> <td></td> <td></td> </tr> <tr> <td>Received Intact</td> <td></td> <td></td> </tr> <tr> <td>Cool - Ice/Blue Ice</td> <td></td> <td></td> </tr> </table>														Y	N	N/A	✓			Received Intact			Cool - Ice/Blue Ice		
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Received Intact																									
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