

BLAGG ENGINEERING, INC.

P.O. Box 87, Bloomfield, New Mexico 87413
Phone: (505) 632-1199 Fax: (505) 632-3903

January 31, 2000

Mr. Denny G. Foust -Environmental Geologist
New Mexico Oil Conservation Division - (NMOCD)
1000 Rio Brazos Road
Aztec, New Mexico 87410

**RE: Cross Timbers Oil Co. Duff GC C # 1 Spill Cleanup Report
Unit M, SEC. 27, T30N, R12W, San Juan County, New Mexico**

Dear Mr. Foust:

On behalf of Cross Timbers Oil Company, Blagg Engineering, Inc. (BEI) respectfully submits the attached report affiliated with the Duff GC C # 1 spill release (approximately 95 barrels) which occurred on October 21, 1999.

In briefly summarizing the cleanup effort which took place between November 2nd and 3rd, 1999, approximately 350 cubic yards of impacted soil was removed and landfarmed on-site. The excavation perimeter was arbitrarily and judgmentally sampled during and upon completion of the excavation activity (refer to Figure 1 for sample locations). In reviewing the field and analytical results, it appears that vertical extent has been established on the west side of the excavation (surface gradient direction) where the majority of the release settled (utilizing test hole boring: TH-1 @ 13 ft. information). In addition, sandstone bedrock was encountered during the investigation at varying depths primarily on the west side (refer to Figure 1). The following table discloses the significant field and laboratory results:

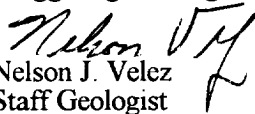
SAMPLE ID	OVN (ppm)	TPH (ppm)	BENZENE (ppb)	TOTAL BTEX (ppb)
TH-1 @ 13 ft.	803	958	645	49,380
PBE @ 13 ft.	337	3,000	417	15,390
SSWC @ 7 ft.	386	1,230	104	11,190
closure standards	100 ppm	1,000 ppm	10,000 ppb	50,000 ppb

OVN = organic vapor meter; TPH = total petroleum hydrocarbons; BTEX = benzene, toluene, ethylbenzene, total xylenes.
ppm = parts per million; ppb = parts per billion; PBE = pit bottom east side; SSWC = south sidewall 5 point composite.

Based upon the attached information given, Cross Timbers Oil Company is requesting closure based on risk assessment. Any remaining soil contamination does not appear to pose a present or future threat to groundwater (estimated at a depth greater than 50 feet), health, or the environment.

If you have any questions or comments concerning this report, please contact myself or Jeff Blagg at the address or phone number listed above. Thank you for your cooperation.

Respectfully submitted,
Blagg Engineering, Inc.


Nelson J. Velez
Staff Geologist

Attachments: Spill Cleanup Report

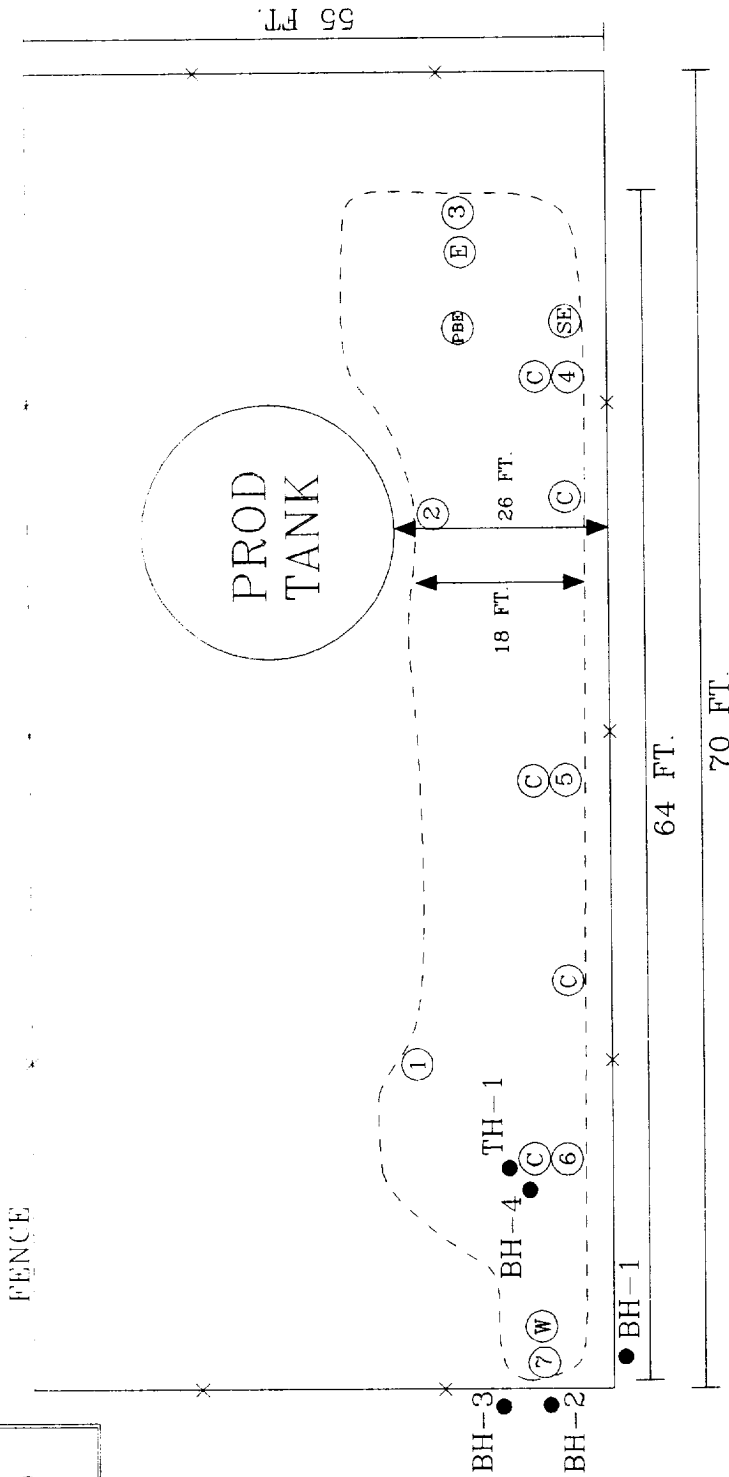
xc: Bill Olson, Hydrologist, NMOCD, Santa Fe Office, NM
Terry Matthews, Regional Supervisor, Cross Timbers Oil Co., Farmington, NM

NJV/njv

DUFF-C1.CVL

FIGURE 1

SCHEMATIC
NOT TO
SCALE



BH-1, BH-2, & BH-3 ALL
ENCOUNTERED BEDROCK @
6 FT. BELOW GRADE.
BH-4 ENCOUNTERED BED-
ROCK @ 12 FT. BELOW
GRADE.
TH-1 SEE ATTACHED
SITE ASSESSMENT SHEET.

NOV. 2, 1999

SAMP.	PT. ID	OVM	READING (ppm)
E	@ 7 FT.		296
SE	@ 9 FT.		245
W	@ 8 FT.		192

NOTES : (C) DENOTES SAMPLE AREA FOR SSWC
5 FT. COMPOSITE OVM AND LAB
ANALYSIS [TPH (8015) & BTEX (8021)].
SSWC = SOUTH SIDEWALL COMPOSITE.
PBE = PIT BOTTOM AT EAST SIDE.

NOV. 3, 1999

SAMP.	PT. ID	OVM	READING (ppm)
1	@ 7 FT.		86.5
2	@ 8 FT.		320
3	@ 7 FT.		290
4	@ 7 FT.		289
5	@ 7 FT.		8.0
6	@ 7 FT.		290
7	@ 7 FT.		64.9
PBE	@ 13 FT.		337
SSWC	@ 7 FT.		386

CROSS TIMBERS OIL COMPANY

DUFF GC C #1

SW/4 SW/4 SEC. 27, T30N, R12W

SAN JUAN COUNTY, NEW MEXICO

BLAGG ENGINEERING, INC.

CONSULTING PETROLEUM / RECLAMATION SERVICES

P.O. BOX 87

BLOOMFIELD, NEW MEXICO 87413

PHONE: (505) 632-1199

PROJECT: SPILL CLEAN UP

DRAWN BY: NJV

FILENAME: DUFF--MAP.SKD

SITE
MAP

11/99

PIT NO: 7513
C.O.C. NO: 7442

JOB No: _____
PAGE No: 1 of _____

DATE STARTED: 10/26/99
DATE FINISHED: _____
ENVIRO. SPCLT: JCB
OPERATOR: REP

FIELD NOTES & REMARKS: PIT IS LOCATED APPROXIMATELY _____ FEET _____ OF WELLHEAD.
DEPTH TO G.W.: <100' NEAREST WATER SOURCE: >1000' NEAREST SURFACE WATER >1000'
RANKING SCORE: 10 CLOSURE STD: 1000

[illegible]

TH#1: SILTY SAND 0' - 11'. YELLOW TAN, NON COHESIVE, Dry to moist.
STRONG HC ODOR, NO STAIN.
LITH CHANGE @ 11' TO BROWN TAN clayey silt,
lightly cohesive, moist. STRONG HC ODOR,
NO STAIN.

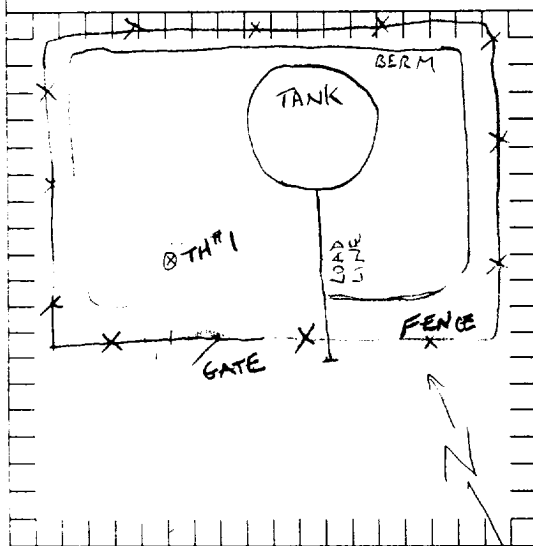
[illegible]

SOIL TYPE: C - Clay, M - Silt, S - Sand, G - Gravel Plasticity: L - None, H - Plastic Grading: P - Poorly, W - Well

— 32 —

0 FEET

SITE DIAGRAM



ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

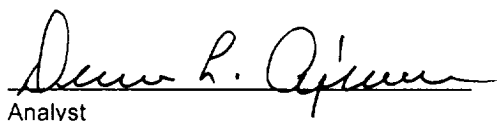
Client:	Blagg / Cross Timbers	Project #:	403410
Sample ID:	TH #1 @ 13'	Date Reported:	10-27-99
Laboratory Number:	G241	Date Sampled:	10-26-99
Chain of Custody No:	7513	Date Received:	10-26-99
Sample Matrix:	Soil	Date Extracted:	10-27-99
Preservative:	Cool	Date Analyzed:	10-27-99
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	881	0.2
Diesel Range (C10 - C28)	76.9	0.1
Total Petroleum Hydrocarbons	958	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: **Duff GC C #1.**


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8015 Modified Nonhalogenated Volatile Organics Total Petroleum Hydrocarbons

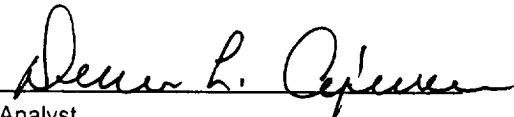
Client:	Blagg / Cross Timbers	Project #:	403410
Sample ID:	PBE @ 13'	Date Reported:	11-07-99
Laboratory Number:	G368	Date Sampled:	11-03-99
Chain of Custody No:	7442	Date Received:	11-03-99
Sample Matrix:	Soil	Date Extracted:	11-03-99
Preservative:	Cool	Date Analyzed:	11-04-99
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

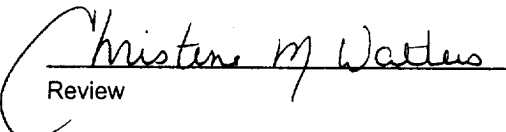
Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	2,770	0.2
Diesel Range (C10 - C28)	227	0.1
Total Petroleum Hydrocarbons	3,000	0.2

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: **Duff GC C #1 Tank Spill.**


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

**EPA METHOD 8015 Modified
Nonhalogenated Volatile Organics
Total Petroleum Hydrocarbons**

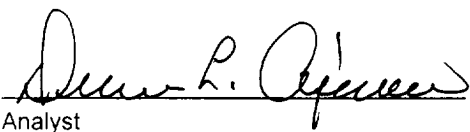
Client:	Blagg / Cross Timbers	Project #:	403410
Sample ID:	SSWC @ 7'	Date Reported:	11-07-99
Laboratory Number:	G369	Date Sampled:	11-03-99
Chain of Custody No:	7442	Date Received:	11-03-99
Sample Matrix:	Soil	Date Extracted:	11-03-99
Preservative:	Cool	Date Analyzed:	11-04-99
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

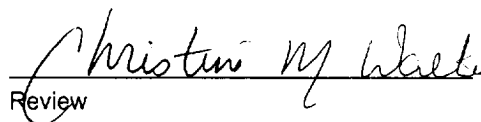
Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	1,100	0.2
Diesel Range (C10 - C28)	132	0.1
Total Petroleum Hydrocarbons	1,230	0.2

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: **Duff GC C #1 Tank Spill.**


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8021 AROMATIC VOLATILE ORGANICS

Client:	Blagg / Cross Timbers	Project #:	403410
Sample ID:	TH #1 @ 13'	Date Reported:	10-27-99
Laboratory Number:	G241	Date Sampled:	10-26-99
Chain of Custody:	7513	Date Received:	10-26-99
Sample Matrix:	Soil	Date Analyzed:	10-27-99
Preservative:	Cool	Date Extracted:	10-27-99
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	645	8.8
Toluene	1,530	8.4
Ethylbenzene	5,980	7.6
p,m-Xylene	25,790	10.8
o-Xylene	15,440	5.2
Total BTEX	49,380	

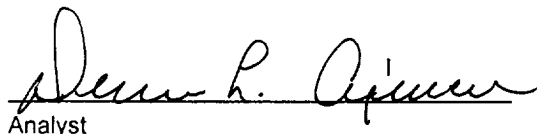
ND - Parameter not detected at the stated detection limit.

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: Duff GC C #1.


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8021 AROMATIC VOLATILE ORGANICS

Client:	Blagg / Cross Timbers	Project #:	403410
Sample ID:	PBE @ 13'	Date Reported:	11-07-99
Laboratory Number:	G368	Date Sampled:	11-03-99
Chain of Custody:	7442	Date Received:	11-03-99
Sample Matrix:	Soil	Date Analyzed:	11-04-99
Preservative:	Cool	Date Extracted:	11-03-99
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	417	8.8
Toluene	830	8.4
Ethylbenzene	1,470	7.6
p,m-Xylene	8,540	10.8
o-Xylene	4,130	5.2
Total BTEX	15,390	

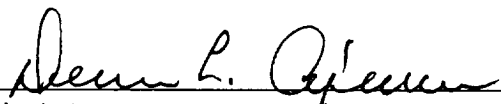
ND - Parameter not detected at the stated detection limit.

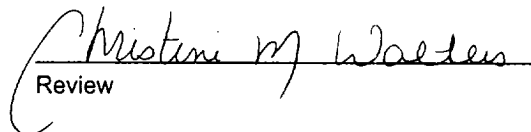
Surrogate Recoveries:	Parameter	Percent Recovery
	Trifluorotoluene	100 %
	Bromofluorobenzene	100 %

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: Duff GC C #1 Tank Spill.


Analyst


Review

ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

EPA METHOD 8021 AROMATIC VOLATILE ORGANICS

Client:	Blagg / Cross Timbers	Project #:	403410
Sample ID:	SSWC @ 7'	Date Reported:	11-07-99
Laboratory Number:	G369	Date Sampled:	11-03-99
Chain of Custody:	7442	Date Received:	11-03-99
Sample Matrix:	Soil	Date Analyzed:	11-04-99
Preservative:	Cool	Date Extracted:	11-03-99
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	104	8.8
Toluene	1,040	8.4
Ethylbenzene	171	7.6
p,m-Xylene	9,430	10.8
o-Xylene	443	5.2
Total BTEX	11,190	

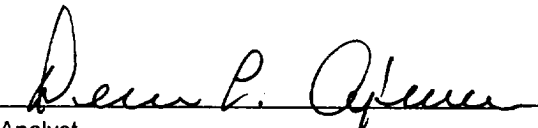
ND - Parameter not detected at the stated detection limit.

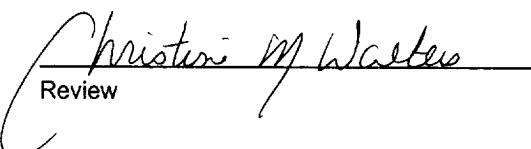
Surrogate Recoveries:	Parameter	Percent Recovery
	Trifluorotoluene	100 %
	Bromofluorobenzene	100 %

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: Duff GC C #1 Tank Spill.


Analyst


Review

7513

[illegible]

7442

[illegible]