

*Denny E. Faust*  
DEPUTY OIL & GAS INSPECTOR

JICARILLA APACHE TRIBE  
ENVIRONMENTAL PROTECTION OFFICE  
P.O. BOX 507  
DULCE, NEW MEXICO 87528

2 pits BJ 420  
SUBMIT 1 COPY TO  
NATURAL RESOURCE DEPT  
AND OIL & GAS ADMINISTRATION

AUG 13 1999

**PIT REMEDIATION AND CLOSURE REPORT**

*Approved*

Operator: AMOCO PRODUCTION COMPANY Telephone: (505) 326-9200  
Address: 200 Amoco Court, Farmington, NM 87401  
Facility or Well Name: JICARILLA C #3  
Location: Unit or Qtr/Qtr Sec I Sec 23 T 26N R 5W County RIO ARIZONA  
Pit Type: Separator    Dehydrator    Other BLOW  
Land Type: RANGE

Pit Location: Pit dimensions: length   , width   , depth     
(Attach diagram) Reference: wellhead X, other     
Footage from reference: 120  
Direction from reference: 30 Degrees X East of North     
   West of South K

**Depth To Groundwater:**

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

Less than 50 feet	(20 points)	
50 feet to 99 feet	(10 points)	
Greater than 100 feet	(0 points)	<u>10</u>

**Distance to an Ephemeral Stream**

(Downgradient dry wash greater than  
ten feet in width)

Less than 100 feet	(10 points)	
Greater than 100 feet	(0 points)	<u>0</u>

**Distance to Nearest Lake, Playa, or Watering Pond**

(Downgradient lakes, playas and  
livestock or wildlife watering ponds)

Less than 100 feet	(10 points)	
Greater than 100 feet	(0 points)	<u>0</u>

**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)	<u>0</u>

**Distance To Surface Water:**

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

Less than 100 feet	(20 points)	
100 feet to 1000 feet	(10 points)	
Greater than 1000 feet	(0 points)	<u>0</u>

**RANKING SCORE (TOTAL POINTS):** 10

Date Remediation Started: \_\_\_\_\_ Date Completed: 8-29-96

mediation Method: Excavation X Approx. cubic yards N/A  
(Check all appropriate sections) Landfarmed \_\_\_\_\_ Insitu Bioremediation \_\_\_\_\_  
Other TEST HOLE

Remediation Location: Onsite \_\_\_\_\_ Offsite \_\_\_\_\_  
(i.e. landfarmed onsite, name and location of offsite facility)

General Description of Remedial Action: Excavation - TEST HOLE - NO CONTAMINATION

Groundwater 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 8-29-96 Sample time \_\_\_\_\_

Sample Results

Soil: Benzene (ppm)	_____	Water: Benzene (ppb)	_____
Total BTEX (ppm)	_____	Toluene (ppb)	_____
Field Headspace (ppm)	<u>2</u>	Ethylbenzene (ppb)	_____
TPH (ppm)	<u>24</u>	Total Xylenes (ppb)	_____

Groundwater 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 8-29-96 PRINTED NAME Buddy D. Shaw  
SIGNATURE Buddy D. Shaw AND TITLE Environmental Coordinator

AFTER REVIEW OF THE PIT CLOSURE INFORMATION, PIT CLOSURE IS APPROVED IN ACCORDANCE TO THE JICARILLA APACHE TRIBE PIT CLOSURE ORDINANCE.

APPROVED: YES X NO \_\_\_\_\_ (REASON) \_\_\_\_\_

SIGNED: [Signature] DATE: 8-29-96

CLIENT: <u>AMOCO</u>	BLAGG ENGINEERING, INC. P.O. BOX 87, BLOOMFIELD, NM 87413 (505) 632-1199	LOCATION NO: <u>B5425</u> C.D.C. NO: _____
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## FIELD REPORT: PIT CLOSURE VERIFICATION

LOCATION: JICARILLA C #3	PIT TYPE: Blow	DATE STARTED: 8-29-96
QUAD/UNIT: I SEC: 23 TWP: 26 N	RNG: SW BM: NM CNTY: RA ST: NM	DATE FINISHED: _____
QTR/FOOTAGE: NE/SE	CONTRACTOR: PAUL	ENVIRONMENTAL SPECIALIST: RFO

EXCAVATION APPROX.      FT. x      FT. x      FT. DEEP. CUBIC YARDS: N/A  
DISPOSAL FACILITY: N/A REMEDIATION METHOD: N/A  
LAND USE: RANGE LEASE: # 108 FORMATION:     

FIELD NOTES & REMARKS: PIT LOCATED APPROXIMATELY 120 FEET S 30° E FROM WELLHEAD.  
DEPTH TO GROUNDWATER: 250' NEAREST WATER SOURCE: 21000' NEAREST SURFACE WATER: 21000'  
NMOC RANKING SCORE: 10 NMOC TPH CLOSURE STD: 1000 PPM

SOIL AND EXCAVATION DESCRIPTION: PIT DISPOSITION: ABANDONED

TEST HOLE DUG IN PIT BOTTOM - NO CONTAMINATION APPARENT.

SOIL CONSISTS OF MOIST, BROWN, SILTY SAND.

FIELD 418.1 CALCULATIONS						
SAMPLE I.D.	LAB No:	WEIGHT (g)	mL. FREON	DILUTION	READING	CALC. ppm
TH1@12'	1809	10.0	20.0	1	12	24

CL 50A

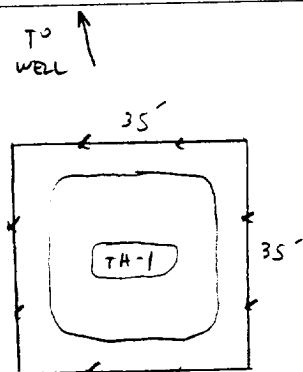
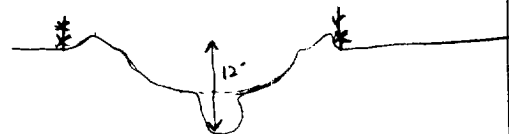
SCALE

0 10 20 FT

# PIT PERIMETER

## OVM RESULTS

# PIT PROFILE

[illegible]

TRAVEL NOTES: CALLOUT: 8-29-96 ONSITE: 8-29-96 1000 FORM REVISED 7/88

**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:	TH-1 @ 12'	Date Analyzed:	8-29-96
Project Location:	Jicarilla C #3	Date Reported:	8-30-96
Laboratory Number:	TPH #1809	Sample Matrix:	Soil

Parameter -----	Result, mg/kg -----	Detection Limit, mg/kg -----
Total Recoverable Petroleum Hydrocarbons	<b>24</b>	<b>10</b>

ND = Not Detectable at stated detection limits.

QA/QC:	QA/QC Sample TPH mg/kg -----	Duplicate TPH mg/kg -----	% *Diff. -----
	1,420	1,344	5

\*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 - BJ425

R. E. O'Neil  
Analyst

Nelson Veliz 11/4/96  
Review

**AND OIL & GAS ADMINISTRATION**

**RANKING SCORE (TOTAL POINTS):** 10

BJ 425

SEP. PIT

Date Remediation Started: \_\_\_\_\_ Date Completed: 9/3/96

Remediation Method: Excavation ☒  
(Check all appropriate sections) Landfarmed ☒  
Other \_\_\_\_\_

Approx. cubic yards 150

In situ Bioremediation \_\_\_\_\_

Remediation Location: Onsite ☒ Offsite \_\_\_\_\_  
(i.e. landfarmed onsite,  
name and location of  
offsite facility)

General Description of Remedial Action: Excavation

Groundwater Encountered: No ☒ 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 14'

Sample date 8/29/96 Sample time 1058

Sample Results

Soil: Benzene	(ppm)	<u>0.116</u>	Water: Benzene	(ppb)	_____
Total BTEX	(ppm)	<u>4.800</u>	Toluene	(ppb)	_____
Field Headspace	(ppm)	<u>513</u>	Ethylbenzene	(ppb)	_____
TPH	(ppm)	<u>5.1</u>	Total Xylenes	(ppb)	_____

Groundwater 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 9/3/96 PRINTED NAME Buddy D. Shaw

SIGNATURE Buddy D. Shaw AND TITLE Environmental Coordinator

AFTER REVIEW OF THE PIT CLOSURE INFORMATION, PIT CLOSURE IS APPROVED IN ACCORDANCE TO THE JICARILLA APACHE TRIBE PIT CLOSURE ORDINANCE.

APPROVED: YES ☒ NO \_\_\_\_\_ (REASON) \_\_\_\_\_

SIGNED: Kew C. Mammill DATE: 9-3-96

CLIENT: <u>Amoco</u>	BLAGG ENGINEERING, INC. P.O. BOX 87, BLOOMFIELD, NM 87413 (505) 632-1199	LOCATION NO: <u>85425</u> C.O.C. NO: <u>4898</u>
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## FIELD REPORT: PIT CLOSURE VERIFICATION

LOCATION: J1 CARILLA C # 3	PIT TYPE: Sep.	DATE STARTED: 8-29-96
QUAD/UNIT: I SEC: 23 TWP: 26 N	RNG: 5 W BM: NM CNTY: RA ST: NM	DATE FINISHED: _____
QTR/FOOTAGE: NE / SE	CONTRACTOR: PAUL	ENVIRONMENTAL SPECIALIST: RSO

EXCAVATION APPROX. 20' FT. x 15' FT. x 13' FT. DEEP. CUBIC YARDS: 150  
DISPOSAL FACILITY: ON SITE REMEDIATION METHOD: LANDFARM  
LAND USE: RANGE LEASE: CONTRACT # 108 FORMATION: \_\_\_\_\_

FIELD NOTES & REMARKS: PIT LOCATED APPROXIMATELY 130 FEET N 50° E FROM WELLHEAD.  
DEPTH TO GROUNDWATER: >50' NEAREST WATER SOURCE: >10.0' NEAREST SURFACE WATER: >1000'  
NMOCB RANKING SCORE: 10 NMOCB TPH CLOSURE STD: 1000 PPM  
SOIL AND EXCAVATION DESCRIPTION: PIT DISPOSITION: Abandoned

SOIL CONSISTS OF MOIST, BROWN, SILTY SAND - SLIGHT STAIN IN BOTTOM.

FIELD 418.1 CALCULATIONS						
SAMPLE I.D.	LAB No:	WEIGHT (g)	mL. FREON	DILUTION	READING	CALC. ppm

Close

SCALE

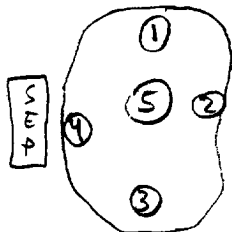


0 5 10 FT

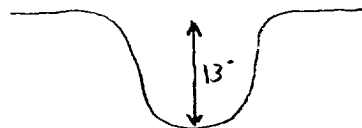
PIT PERIMETER

## OVM RESULTS

# PIT PROFILE



TO  
WELL

[illegible]

TRAVEL NOTES: CALLOUT: 8-29-96 ONSITE: 8-29-96 1040 FORM REVISED 7/88

# ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

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

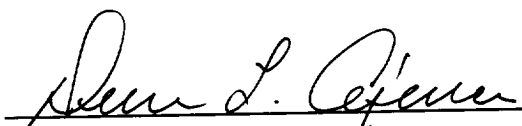
Client:	Amoco / Blagg	Project #:	04034
Sample ID:	C.B. @ 14'	Date Reported:	08-30-96
Laboratory Number:	A514	Date Sampled:	08-29-96
Chain of Custody No:	4898	Date Received:	08-30-96
Sample Matrix:	Soil	Date Extracted:	08-30-96
Preservative:	Cool	Date Analyzed:	08-30-96
Condition:	Cool and Intact	Analysis Requested:	8015 TPH


Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	5.1	0.2
Diesel Range (C10 - C28)	ND	0.1
Total Petroleum Hydrocarbons	5.1	0.2

ND - Parameter not detected at the stated detection limit.

References: Method 8015, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.

Comments: Jicarilla C #3 Sep. Pit.

  
Analyst

  
Review



# ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

## EPA METHOD 8020 AROMATIC VOLATILE ORGANICS

Client:	Amoco / Blagg	Project #:	04034
Sample ID:	C.B. @ 14'	Date Reported:	08-30-96
Laboratory Number:	A514	Date Sampled:	08-29-96
Chain of Custody:	4898	Date Received:	08-30-96
Sample Matrix:	Soil	Date Analyzed:	08-30-96
Preservative:	Cool	Date Extracted:	08-30-96
Condition:	Cool & Intact	Analysis Requested:	BTEX

Parameter	Concentration (ug/Kg)	Det. Limit (ug/Kg)
Benzene	116	17.5
Toluene	130	16.7
Ethylbenzene	183	15.2
p,m-Xylene	3,390	21.6
o-Xylene	985	10.4
Total BTEX	4,800	

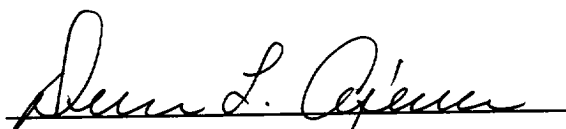
ND - Parameter not detected at the stated detection limit.

Surrogate Recoveries:	Parameter	Percent Recovery
	Trifluorotoluene	98 %
	Bromofluorobenzene	100 %

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: Jicarilla C #3 Sep. Pit.

  
Analyst

  
Review



8J425

**JICARILLA APACHE TRIBE  
ENVIRONMENTAL PROTECTION OFFICE  
P.O. BOX 507  
DULCE, NEW MEXICO 87528**

SUBMIT 1 COPY TO  
NATURAL RESOURCE DEPT  
AND OIL & GAS ADMINISTRATION

**ON-SITE SOIL REMEDIATION REPORT**

<b>Operator:</b> <u>AMOCO PRODUCTION COMPANY</u>		<b>Telephone:</b> <u>(505) 326-9200</u>
<b>Address:</b> <u>200 Amoco Court, Farmington, NM 87401</u>		
<b>Facility or Well Name:</b> <u>JICARILLA C # 3</u>		
<b>Location:</b> Unit or Qtr/Qtr Sec <u>I</u> Sec <u>23</u> T <u>26N</u> R <u>5W</u> County <u>RIO ARIZONA</u>		
<b>Land Type:</b> <u>RANGE</u>		
<b>Date Remediation Started:</b> <u>8/29/96</u>		<b>Date Completed:</b> <u>8/27/97</u>
<b>Remediation Method:</b> Landfarmed <input checked="" type="checkbox"/> Composted <input type="checkbox"/> Other <input type="checkbox"/>		<b>Approx. cubic yards</b> <u>150</u>
<b>Depth To Groundwater:</b> (pts.) <u>10</u>		<b>Final Closure Sampling:</b> <b>Sampling Date:</b> <u>8/25/97</u> <b>Time:</b> <u>1115</u> <b>Sample Results:</b> Field Headspace (ppm) <u>0.0</u> TPH (ppm) <u>37.5</u> Method <u>8015</u> Other <input type="text"/>
<b>Distance to an Ephemeral Stream</b> (pts.) <u>0</u>		
<b>Distance to Nearest Lake, Playa, or Watering Pond</b> (pts.) <u>0</u>		
<b>Wellhead Protection Area:</b> (pts.) <u>0</u>		
<b>Distance To Surface Water:</b> (pts.) <u>0</u>		
<b>RANKING SCORE (TOTAL POINTS):</b> <u>10</u>		
<b>I HEREBY CERTIFY THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY KNOWLEDGE AND BELIEF</b>		
<b>DATE</b> <u>8/27/97</u>		<b>PRINTED NAME</b> <u>Buddy D. Shaw</u>
<b>SIGNATURE</b> <u>Buddy D. Shaw</u>		<b>AND TITLE</b> <u>Environmental Coordinator</u>
<b>AFTER REVIEW OF THE SOIL REMEDIATION INFORMATION, ON-SITE REMEDIATION IS APPROVED IN ACCORDANCE TO THE JICARILLA APACHE TRIBE PIT CLOSURE ORDINANCE.</b>		
<b>APPROVED:</b> YES <input checked="" type="checkbox"/> NO <input type="checkbox"/> (REASON) <input type="text"/>		
<b>SIGNED:</b> <u>Kenn C. Mamm</u>		<b>DATE:</b> <u>9-2-97</u>

CLIENT: <u>AMOCO</u>	BLAGG ENGINEERING, INC. P.O. BOX 87, BLOOMFIELD, NM 87413 (505) 632-1199	LOCATION NO: <u>BJ425</u> C.O.C. NO: <u>5400</u>
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## FIELD REPORT LANDFARM/COMPOST PILE CLOSURE VERIFICATION

LOCATION: NAME <u>JICARUA</u>	C WELL #: <u>3</u>	PITS:	DATE STARTED: <u>8/25/97</u>
QUAD/UNIT: <u>I</u>	SEC: <u>23</u>	TWP: <u>26N</u>	RNG: <u>5W</u>
PM: <u>NM</u>	CNTY: <u>RA</u>	ST: <u>NM</u>	DATE FINISHED:
APPROX. FOOTAGE: <u>NE 1/4</u>	<u>SE 1/4</u>	CONTRACTOR: <u>P+S</u>	ENVIRONMENTAL SPECIALIST: <u>NV</u>

### FIELD REMEDIATION:

REMEDICATION SYSTEM: LANDFARMED

APPROX. CUBIC YARDAGE: 150

LAND USE: RANGE

LIFT DEPTH (ft): 12"

### FIELD NOTES & REMARKS:

DEPTH TO BEDROCK: <100' NEAREST WATER SOURCE: >1000' NEAREST SURFACE WATER: >1000'

WIND DRAINAGE COEFF: 10 NMED. TPH CLOSURE STD: 1000 PPM

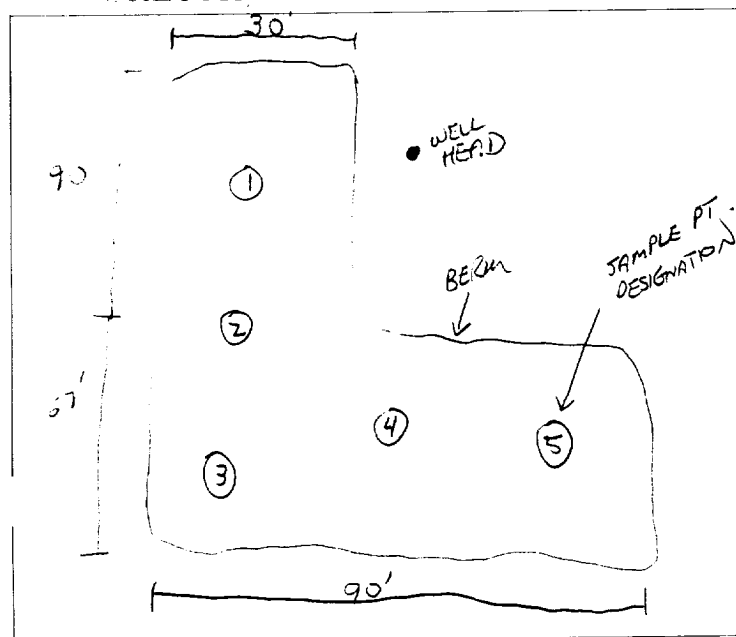
DR. YELL. BROWN SAND, NON COHESIVE, SLIGHTLY MOIST, FIRM, NO APPARENT STAINING OBSERVED @ ANY OF THE SAMPLE PTS., NO APPARENT HC ODOR IN OVM SAMPLE, 5 PT. COMPOSITE COLLECTED FOR LAB ANALYSIS.

**CLOSED**

### FIELD DATA CALCULATIONS

SAMP. TIME	SAMPLE ID	LAB No.	WEIGHT (g)	ML. FREQ.	DILUTION	READING	CALC. ppm

### SKETCH/SAMPLE LOCATIONS



### OVM RESULTS

### LAB SAMPLES

SAMPLE ID	FIELD HEADSPACE PID (ppm)	SAMPLE ID	ANALYSIS	TIME	RESULT
LF-1	0.0	LF-1	TPH (8015)	1115	37.5

SCALE

0 FT

TRAVEL NOTES:

CALLOUT: NA

ONSITE: 8/25/97

# ENVIROTECH LABS

PRACTICAL SOLUTIONS FOR A BETTER TOMORROW

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

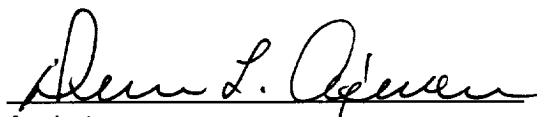
Client:	Blagg / AMOCO	Project #:	04034-10
Sample ID:	LF - 1	Date Reported:	08-26-97
Laboratory Number:	B929	Date Sampled:	08-25-97
Chain of Custody No:	5400	Date Received:	08-25-97
Sample Matrix:	Soil	Date Extracted:	08-25-97
Preservative:	Cool	Date Analyzed:	08-26-97
Condition:	Cool and Intact	Analysis Requested:	8015 TPH

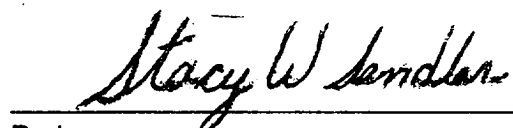
Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	2.3	0.2
Diesel Range (C10 - C28)	35.2	0.1
Total Petroleum Hydrocarbons	37.5	0.2

ND - Parameter not detected at the stated detection limit.

References: Method 8015, Nonhalogenated Volatile Organics, Test Methods for Evaluating Solid Waste, SW-846, USEPA, July 1992.

Comments: Jicarilla C #3 Landfarm. 5 Pt. Composite.

  
Analyst

  
Review

**ENVIROTECH INC.**