# JICARILLA APACHE TRIBE ENVIRONMENTAL PROTECTION OFFICE P.O. BOX 507

**DULCE, NEW MEXICO 87528** 

SEST SO Y S K - D C AVO SUBMIT 1 COPY TO NATURAL RESOURCE DEPT AND OIL A GAS ADMINISTRATION

DIVU

PIT REMEDIATION AND CLOSURE REPORT

		Challer						
Operator: AMOCO PRODUCTION COMPANY	Telephon	( 505) ( 2) ( F) 200						
Address: 200 Amoco Court, Farmington, NM 87401								
	Facility or Well Name:							
Location: Unit or Qtr/Qtr Sec_P Sec_6 T25		AKRIBA						
Pit Type: Separator Dehydrator Other	LOW							
Land Type:								
Pit Location: Pit dimensions: length	55', width 55'	_, depth3 /						
(Attach diagram)  Reference: wellhead X,	other							
Footage from reference: /83		N 1						
Direction from reference: 53	· · · · · · · · · · · · · · · · · · ·	Ji						
	West	South						
Depth To Groundwater: (Vertical distance from contaminants to seasonal high water elevation of groundwater)	Less than 50 feet 50 feet to 99 feet Greater than 100 feet	(20 points) (10 points) ( 0 points)						
Distance to an Ephemeral Stream (Downgradient dry wash greater than ten feet in width)	Less than 100 feet Greater than 100 feet	(10 points) (0 points)						
Distance to Nearest Lake, Playa, or Watering Pond (Downgradient lakes, playas and livestock or wildlife watering ponds)	Less than 100 feet Greater than 100 feet	(10 points) $\bigcirc$						
Wellhead Protection Area: (Less than 200 feet from a private domestic water source, or: less than 1000 feet from all other water sources)	Yes No	(20 points) ( 0 points)						
Distance To SurfaceWater:  (Horizontal distance to perennial lakes, ponds, rivers, streams, creeks, regation canals and ditches)	Less than 100 feet 100 feet to 1000 feet Greater than 1000 feet	(20 points) (10 points) ( 0 points)						

RANKING SCORE (TOTAL POINTS):

			B5602	RLOW PIT		
Date Remediation Sta	nrted:			8/11/98		
emediation Method:	Excavation	Approx. cu	ibic yards _	225		
heck all appropriate sections)	Landfarmed	Insitu Bior	remediation _			
	Other					
Remediation Location (i.e. landfarmed onsite, name and location of offsite facility)	-		· .	0		
General Description (	of Remedial Action: Exca	vation. BEORJE)	K Bossom	1 . KISK ASSESSED.		
Groundwater Encount	tered: No <u>×</u> Y	res Depth				
Final Pit: Closure Sampling: (if multiple samples,	Sample location see Att	ached Documents				
H	Sample depth	WORTH SIDEWALL)				
	Sample date $\frac{3/11/98}{}$ Sample time $\frac{0845}{}$					
N	Sample Results					
II	Soil: Benzene (p	pm) W	Vater: Benze	ene (ppb)		
	Total BTEX (p	ppm)	Tolue	ene (ppb)		
	Field Headspace (p	ppm) 10.0	Ethyll	benzene (ppb)		
	ТРН (р	pm) 0.0	Total	Xylenes (ppb)		
Groundwater Sample:	Yes No	(If yes, attach	sample resul	lts)		
I HEREBY CERTIFY KNOWLEGE AND BI	THAT THE INFORMATION	ABOVE IS TRUE AN	ND COMPLE	ETE TO THE BEST OF M		
DATE	$\frac{8/11\sqrt{98}}{2\sqrt{1000}}$ PRIN'	FED NAME Buddy	D. Shaw	7		
SIGNATURE BLQ.	ly S. Shaw AN	D TITLE Envir	onmental	Coordinator		
AFTER REVIEW OF	THE PIT CLOSURE INFORM APACHE TRIBE PIT CLOSU	MATION, PIT CLOSU URE ORDINANCE.	RE IS APPE	ROVED IN ACCORDANG		
APPROVED: YES _	NO (REASON) _	R.A. AHa	ched	· .		

DATE: 9-9-98

SIGNED: Ken C Mall

30039 2 20 86 \_\_\_\_\_ BLAGG ENGINEERING, INC. LOCATION NO: 8760 2 CLIENT: AMOCO P.O. BOX 87, BLOOMFIELD, NM 87413 C.D.C. ND: \_\_\_\_ (505) 632-1199FIELD REPORT: CLOSURE VERIFICATION PAGE No: / of / DATE STARTED: 8/11/98 LOCATION: NAME: JICA. CONTR. 147 WELL #: 3E PIT: BLOW DATE FINISHED: \_ QUAD/UNIT: P SEC: 6 TWP: 25N RNG: 5W PMNM CNTY: AP ST: NM ENVIRONMENTAL P 45 SPECIALIST: QTR/FOOTAGE: 970 FSL 1140 FEL CONTRACTOR: EXCAVATION APPROX. SS FT. x SS FT. x S FT. DEEP. CUBIC YARDAGE: ZZS DISPOSAL FACILITY: ON-SITE REMEDIATION METHOD: LANDFRRM LAND USE: RANGE LEASE: TIC 147 FORMATION: DK FIELD NOTES & REMARKS: PIT LOCATED APPROXIMATELY 183 FT. N53E FROM WELLHEAD DEPTH TO GROUNDWATER: 300 NEAREST WATER SOURCE: 3/000 NEAREST SURFACE WATER: 3/000 CHECK ONE: NMOCD RANKING SCORE: O NMOCD TPH CLOSURE STD: 500 PPM \_\_\_ STEEL TANK INSTALLED SOIL AND EXCAVATION DESCRIPTION: \_ FIBERGLASS TANK INSTALLED SIDEWALLS -MOSTLY DIX, YELL GRANGE TO WILLIAM THUS NON COHESTIE SUCHTLY MOIST FIRM NO APPARENT THINING OR HE DISK SASERLED DETECTED WIN EXCIL-ATION, NO APPRRENT HE BOTTOM - BEDICOCK (SANOSTONE) VERY HARD, PARAFFIN LIKE STAINING OBJERVED IN ISOLATED PATCHES, STRONG HE ODOR IN DUM SAMPLE. RISK ASSESSED BENRXK FIELD 418.1 CALCULATIONS SAMPLE I.D. LAB No: WEIGHT (g) ML. FREON DILUTION READING CALC. ppm 1) e 1' TPH-2013 SCALE 0845 FT PIT PROFILE PIT PERIMETER 12 OVM A RESULTS FIELD HEADSPACE PID (ppm) 55 0.0 3 S. 0 BENOCK 8.015 WELL LAB SAMPLES HEAD CALLOUT: 8/5/98 - mozN. ONSITE: 8/11/98 - mozN. TRAVEL NOTES:

Well Name:
Well Site location:

Pit Type:

Producing Formation:

Pit Category:

Horizonal Distance to Surface Water:

Vicinity Groundwater Depth:

Jicarilla Contract 147 #3E Unit P. Sec. 6, T25N, R5W

P, Sec. 6, 125N, R5W Blow Pit Basin Dakota Non Vulnerable

> 1000 ft. > 100 ft.

### **RISK ASSESSMENT (non-vulnerable area)**

Pit remediation activities were terminated when trackhoe encountered sandstone bedrock at 3 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 a relatively shallow sandstone bedrock located 3 feet below grade. Groundwater levels located on or close to the well pad are estimated to be at a much greater depth below sandstone 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 (pit abandoned). Prior discharge into the pit is believed to be under 5 barrels per day.
- 4. Well site located within the <u>non-vulnerable area</u> and is approximately 1.12 miles southeast of the nearest vulnerable area boundary (Tapacito Creek).

(Refer to Gonzales Mesa Quadrangle, New Mexico - Rio Arriba County, 7.5 Minute Series (Topographic), 1963, (vulnerable area boundary developed by Mr. William C. Olson, Hydrogeologist, Environmental Bureau, New Mexico Oil Conservation Division).

Based upon the information given, we conclude that the sandstone bottom creates enough of an impermeable barrier as to subdue impact to groundwater below it (please refer to AMOCO's report "Post Excavation Pit Closure Investigation Summary, July, 1995", with cover letter dated November 30, 1995). AMOCO requests pit closure approval on this location.

### 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:

Project #:

1 @ 1'

Date Analyzed:

08-11-98

Project Location:

Jicarilla Contract # 147 - 3E

Date Reported:

08 - 11 - 98

%

\*Diff.

6.78

Laboratory Number:

TPH-2010

Sample Matrix:

Soil

Parameter	Result, mg/kg	Detection Limit, mg/kg
Total Recoverable Petroleum Hydrocarbons	ND	20

ND = Not Detectable at stated detection limits.

QA/QC:

Duplicate QA/QC Sample TPH mg/kg TPH mg/kg 244 228

Method:

Modified Method 418.1, Petroleum Hydrocarbons, Total

Recoverable, Chemical Analysis of Water and Waste,

**USEPA Storet No.4551, 1978** 

Comments:

Blow Pit - BJ602

Mehon VI

<sup>\*</sup>Administrative Acceptance limits set at 30%.

### 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:

1 @ 1'

Date Analyzed:

08-11-98 08-11-98

Project Location:

Jicarilla Contract # 147 - 3E

Date Reported: Sample Matrix:

Soil

Laboratory Number:

TPH-2010

Sample Weight: 5.00 grams

Volume Freon: 20.00 mL

4 (upitles

Dilution Factor:

1 (unitless)

TPH Reading:

4 mg/kg

TPH Result:

16.0 mg/kg

Reported TPH Result:

16 mg/kg

Actual Detection Limit:

20.0 mg/kg

Reported Detection Limit:

20 mg/kg

QA/QC:

Original TPH mg/kg

Duplicate TPH mg/kg % Diff.

228

244

---6.78

Comments:

Comments:

Blow Pit - BJ602

BJGOZ

### 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

### PIT REMEDIATION AND CLOSURE REPORT

	(505)336 0300						
Operator: AMOCO PRODUCTION COMPANY	Telephone: (505)326-9200						
Address: 200 Amoco Court, Farmington, NM 87401							
Facility or Well Name:	2ACT # 1471 - SE						
Location: Unit or Qtr/Qtr Sec ? Sec 6 T25							
Pit Type: Separator Other Other							
Danu Type.							
The Execution.	21', width $21'$ , depth $6'$						
	other						
Footage from reference: 17	<u> </u>						
Direction from reference: 56	6 Degrees X East North						
	West South						
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)						
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)						
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)						
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)						
Distance To SurfaceWater: (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)						
ii ·	RANKING SCORE (TOTAL POINTS):						

BJGOZ SEP. PIT

	Date Completed:8/11 98
	the words 75
`emediation Method: Check all appropriate	T. D. Tiller and distingt
sections)	Landfarmed Insitu Bioremediation
	Other
Remediation Location: (i.e. landfarmed onsite, name and location of offsite facility)	: Onsite X Offsite
Garage Description	of Remedial Action: Excavation. Excavation CONSIST OF MUSTLY
REDRALU TUTOR	FORE NO THE ANOLYSIS WAS CONDUCTED. RISK ASSESSED.
Groundwater Encount	tered: No X Yes Depth
Closure Sampling:	Sample location see Attached Documents
attach sample results	Sample depth 3 (SOUTH SIDEWALL - BEDROCK)  Sample date 8/11/98 Sample time 1000
11	Sample Results
N.	Soil: Benzene (ppm) Water: Benzene (ppb)
	Total BTEX (ppm) Toluene (ppb)
	Field Headspace (ppm) 549 Ethylbenzene (ppb)
	TPH (ppm) $\nearrow A$ Total Xylenes (ppb)
Groundwater Sample	: Yes No _× (If yes, attach sample results)
KNOWLEGE AND B	THAT THE INFORMATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MYELIEF
DATE	9/11/98 PRINTED NAME Buddy D. Shaw  Oly J. Shaw Environmental Coordinator
SIGNATURE Sud	dy Shaw AND TITLE Environmental Coordinator
A PERED DEVIEW OF	THE PIT CLOSURE INFORMATION, PIT CLOSURE IS APPROVED IN ACCORDANCE APACHE TRIBE PIT CLOSURE ORDINANCE.
APPROVED: YES	NO (REASON)
SIGNED:	O Ma DATE: 9-9-98

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BLAGG ENGINEERING, INC. P.O. BOX 87, BLOOMFIELD, NM 8741 (505) 632-1199	C.D.C. ND:
FIELD REPORT: CLOSURE VERIFICATION  OCATION: NAME: TICP. CONTR. 147 WELL #: 3E PIT: 5EP  QUAD/UNIT: P SEC: 6 TWP: 25N RNG: 5N PM: NM CNTY: BP ST: N	DATE STARTED: 8/11/98
EXCAVATION APPROX. Z' FT. x ZI FT. x 6 FT. DEEP. CUIDISPOSAL FACILITY: ON - SITE REMEDIATION MET LAND USE: RANGE LEASE: JIC 147	BIC YARDAGE: 75  THOD: LANDFARM FORMATION: DK  556E FROM WELLHEAD
DEPTH TO GROUNDWATER: >100 NEAREST WATER SOURCE: NEAREST SUR  NMOCD RANKING SCORE: NMOCD TPH CLOSURE STD: 5000 PPM  SOIL AND EXCAVATION DESCRIPTION:	CHECK ONE:  PIT ABANDONED  STEEL TANK INSTALLED  FIBERGLASS TANK INSTALLE
EXERCISING CONSIST OF MOSTLY BEDROCK (SHALE) IT.  COLOR SOFT TO VERY HARD NO DISTINCT EVIDENCE  OBSERVED WIND EXCAUATION HE ODOR DETECTED WI  NORTH SOUTH & WEST SIDEWALL OUM SAMPLES, AN  COLLECTED FROM BEDROCK THEKEFURE NO THE AN  CONDUCTED.	E OF STRINING  IN EXCOURTION  LL DUM SAIMPLES  M4515 W75
SCALE 1022	PIT PROFILE
OVM RESULTS  SAMPLE FIELD HEADSPACE PID (ppm)  1 2 3' 468 2 2 2' 0.0 3 2 3' 549 4 2 3' 189.2 5 2 6' 0.0  LAB SAMPLES  SAMPLE ANALYSIS TIME	I z'I
TRAVEL NOTES: CALLOUT: 8/5/98-mord. ONSITE: 8/11/98-	-

Well Name:

Well Site location:

Pit Type:

Producing Formation:

Pit Category:

Horizonal Distance to Surface Water:

Vicinity Groundwater Depth:

Jicarilla Contract 147 #3E

Unit P, Sec. 6, T25N, R5W

Separator Pit

Basin Dakota

Non Vulnerable

> 1000 ft.

> 100 ft.

### RISK ASSESSMENT (non-vulnerable area)

Pit remediation activities were terminated when trackhoe encountered shale bedrock at 6 feet below grade.

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

- Past production fluids were contained locally by a relatively shallow shale bedrock located 6 feet below grade. Groundwater levels located on or close to the well pad are estimated to be at a much greater depth below shale bedrock.
- Topographic information does not indicate off site lateral fluid migration near the earthen pit.
- 3. Daily discharge into the earthen pit has been terminated (pit abandoned). Prior discharge into the pit is believed to be under 5 barrels per day.
- Well site located within the <u>non-vulnerable area</u> and is approximately 1.12 miles southeast of the nearest vulnerable area boundary (Tapacito Creek).

(Refer to Gonzales Mesa Quadrangle, New Mexico - Rio Arriba County, 7.5 Minute Series (Topographic), 1963, (vulnerable area boundary developed by Mr. William C. Olson, Hydrogeologist, Environmental Bureau, New Mexico Oil Conservation Division).

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

# 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

Operator: AMOCO PRODUCTION CO	MPANY Telephone: (505) 326-9200
Address: 200 Amoco Court, F	Farmington, NM 87401
Facility or Well Name: JICARILLA CO	ONTRACT 147 - SE
Location: Unit or Qtr/Qtr Sec_P	Sec 6 T 25N R 5W County PIO APPISA
Land Type: RANGE	
Data Ramadiation Started: 8:11 98	Date Completed: 4/3/99
Remediation Method: Landfarmed	Approx. cubic yards
Composted	
Other	
epth To Groundwater:	(pts.) • Final Closure Sampling:
-	(pts.) Sampling Date:
Distance to Nearest Lake, Playa, or Watering Pond  Wellhead Protection Area:  Distance To SurfaceWater:	(pts.)         0           (pts.)         0           (pts.)         0           (pts.)         0           Other         Other
RANKING SCORE (TOTAL POINTS	S): O COMPLETE TO THE BEST OF MY
I HEREBY CERTIFY THAT THE INFORM KNOWLEGE AND BELIEF	MATION ABOVE IS TRUE AND COMPLETE TO THE BEST OF MY
SIGNATURE Bully D. Si	PRINTED NAME Buddy D. Shaw  AND TITLE Environmental Coordinator
ACCORDANCE TO THE MCARLELA M	DIATION INFORMATION, ON-SITE REMEDIATION IS APPROVED IN PACHE TRIBE PIT CLOSURE ORDINANCE.
APPROVED: YES NO (I	(REASON)
SIGNED:	DATE:

CLIENT: AMOCO

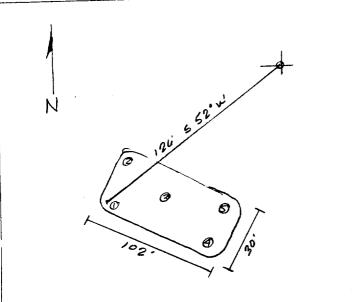
## BLAGG ENGINEERING, INC. P.O. BOX 87, BLOOMFIELD, NM 87413

LOCATION NO: 85602

	P.O. BOX 87	', BLOOMF 505) 632 <sup>.</sup>	TELD, N -1199	IM O 1-3		C.D.C. N(	: <u>USB7</u>
PURI D. DEDART.	LANDFARM			CLOS	JRE '	VERIFICA	ATION
U OCATIONI NAME: T. AAGULA	CONTRACT 147 WE	LL #:3E	PITS: SE	PIBLOW	DA	ATE STARTED:	3.31.47
QUAD/UNIT: P SEC: 4	TWP: 25N RNC	SEW PMIN	JPI CIVII.	RA ST:	NM	NVIRONMENTAL PECIALIST:	
OTR/FOOTAGE: SE/4	SE/4 CONT	RACTON. 199	•				
SOIL REMEDIATION:  REMEDIATION SYS	TEM: <i>LANDFAL</i>			OX. CUE		RDAGE:	100
LAND USE:							
FIELD NOTES & REMAR	RKS: NEAREST WAT	ER SOURCE:	000	NEAREST S	SURFACE	WATER: > 10	00'
NMOCD RANKING SCORE: 0  PALE YELLOWISH BROW  NO APPARENT STAINI  FROM 6" -18" TOOK	NMOCD TPH CL	OSURE STD: <u>50</u> HESIVE, SLIGH	060 PPM TLY MOIST, ANDUNG DE	FIRM FTHS RA	NGE		
CLOSED			OUR ATION	c			
		FIELD 418.1 Co	ALCULATIUN	DILLITION	READING	CALC. ppm	
SAMP. TIME S	SAMPLE I.D. LAB NO	: WEIGHT (g)	ML. FREUN	DILOTION		<del> </del>	-

	FIELD 418.1 CALCULATIONS										
CALAB	TIME	SAMPLE I.D.	LAB	No:	WEIGHT	(g)	mL.	FREON	DILUTION	READING	CALC. ppm
SAMIT.	TIVIL	371111 EE 1.01									
[					ļ		<del> </del>				
							<del> </del>				
							ļ				
			L								

SKETCH/SAMPLE LOCATIONS



OVM F	RESULTS	I	AB SA	AMPL.	ES
SAMPLE ID	FIELD HEADSPACE PID (ppin)	SAMPLE ID	ANALYSIS	TIME	RESULTS
2F-1	25.4	LF-1	(8015)	1145	662
					·
		J L		<u> </u>	

SCALE	
0	FΊ

TRAVEL NOTES:

CALLOUT:

ONSITE: 3.31 99



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

Client: Sample ID: Laboratory Number: Chain of Custody No: Sample Matrix: Preservative: Condition:	Blagg / AMOCO LF - 1 E927 6587 Soil Cool Cool and Intact	Project #: Date Reported: Date Sampled: Date Received: Date Extracted: Date Analyzed: Analysis Requested:	403410 04-03-99 03-31-99 04-01-99 04-03-99 04-03-99 8015 TPH
--	--	---	--

Parameter	Concentration (mg/Kg)	Det. Limit (mg/Kg)
Gasoline Range (C5 - C10)	3.9	0.2
Diesel Range (C10 - C28)	658	0.1
Total Petroleum Hydrocarbons	662	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:

Jicarilla Contract 147 - 3E Landfarm. 5 Pt. Composite.

Analyst L. Ofence

Stacy W Sendler
Review

# CHAIN OF CUSTODY RECORD

SAMPLE PRESENTE  LOCL  LOCL  Date  Pate  Pate  Pate  Pate  Time  V N N/A  Received Intact  Cool - Ice/Blue Ice  Cool - Ice/Blue Ice	Received by: (Signature)	Time 6: 15	Date A.1.99		ature)	Relinquished by (Signature) Relinquished by: (Signature)
COMPOSITE	7	5016	5927	1145	3.31.97 1145	(F-1
	Co		Lab Number	Sample Time	Sample Date	Sample No./ Identification
	ntainers	No. of	Client No. 0403 4-10			Sampler:
ANALYSIS / PARAMETERS	ANALYSIS /	MEM PACT 147-3E	Project Location CANOR		000	Client / Project Name  BLACET / AMC
PARAMETERS  Remarks  SP. Lawres Disserte	Containers TPH (8015)	No. of	cation LANC LLA CON Imber		Sample Date	Client / Project Name  BLACH / AMOCO  Sampler:  Sample No./ Identification  CF. / 3.3