9-5-13-1 FTW-01-02-022-2-035-07-006

ARR1-787362046

Transfer#: PT-412-2009-5225 **Box:11 CC:S6**

Asset#: AAC1-145041840 **Whole Container: N**

Created: 9/4/2013

C/F: GARY AIR FORCE TX00000453

THOUSE General Reference Temporary Loan of Records

Standard Other (contact FRC to arrange) BILL OUR UPS ACCOUNT

To: PATRICIA VINCENT
EPA / DALLAS , 1445 ROSS AVE., SUITE 1200
DALLAS, TX, 75202
P : (214) 665-6532 F :

015A, TX.00000453.0002
GARY AFB

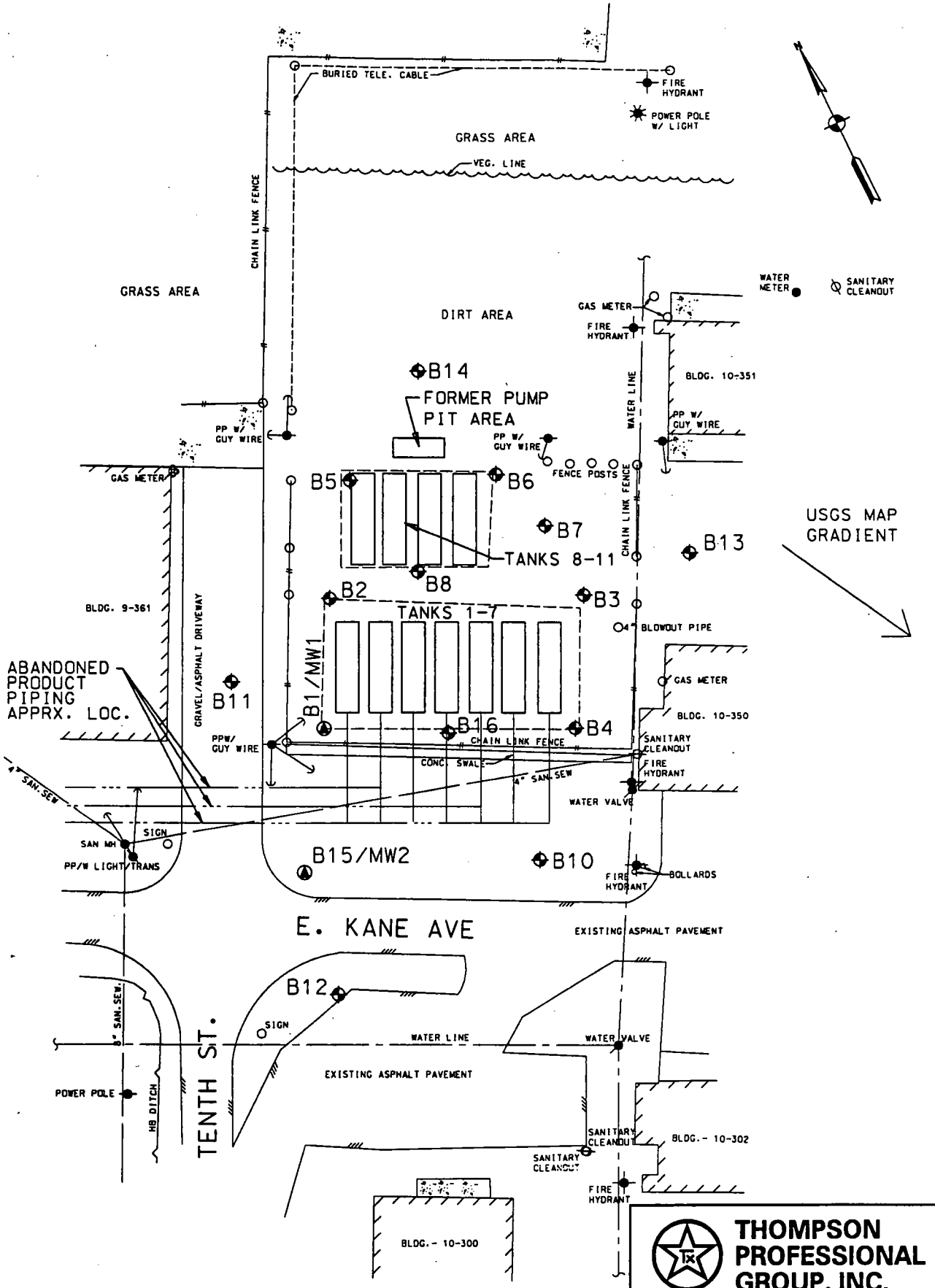
$00333332

$00333332 /HZ/SF/FD/

ENF

9525544

Attachment 1
Site Plan



SCALE: 1" = 60'

THOMPSON PROFESSIONAL GROUP, INC.

FORMER GARY AFB
SAN MARCOS, CALDWELL COUNTY, TEXAS
ATTACHMENT 1
COMPREHENSIVE SITE PLAN

5:30:05
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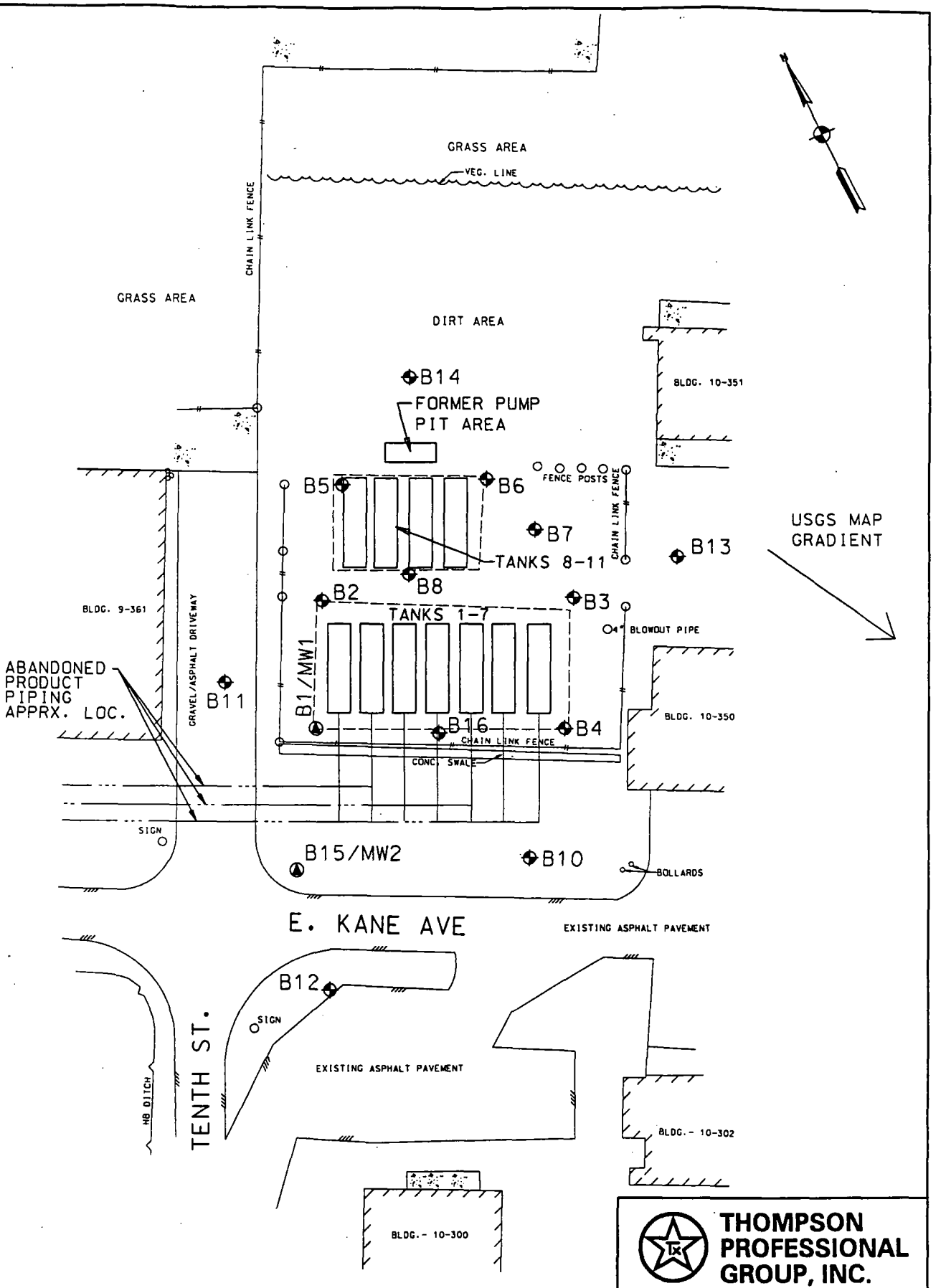
User: $(USERNAME)
Plotted On: 02 DEC
FILENAME: d:\project

Attachment 2
Vicinity Map

Attachment 3
USGS Map with Water Well Locations

Attachment 4
Well Completion Details

Attachment 5
Sampling Locations



SCALE: 1" = 60'

THOMPSON PROFESSIONAL GROUP, INC.

FORMER GARY AFB
SAN MARCOS, CALDWELL COUNTY, TEXAS
ATTACHMENT 5
SAMPLING LOCATIONS

5:45:40
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User: $(USERNAME)
Plotted On: 02 Dec
FILENAME: d:\project

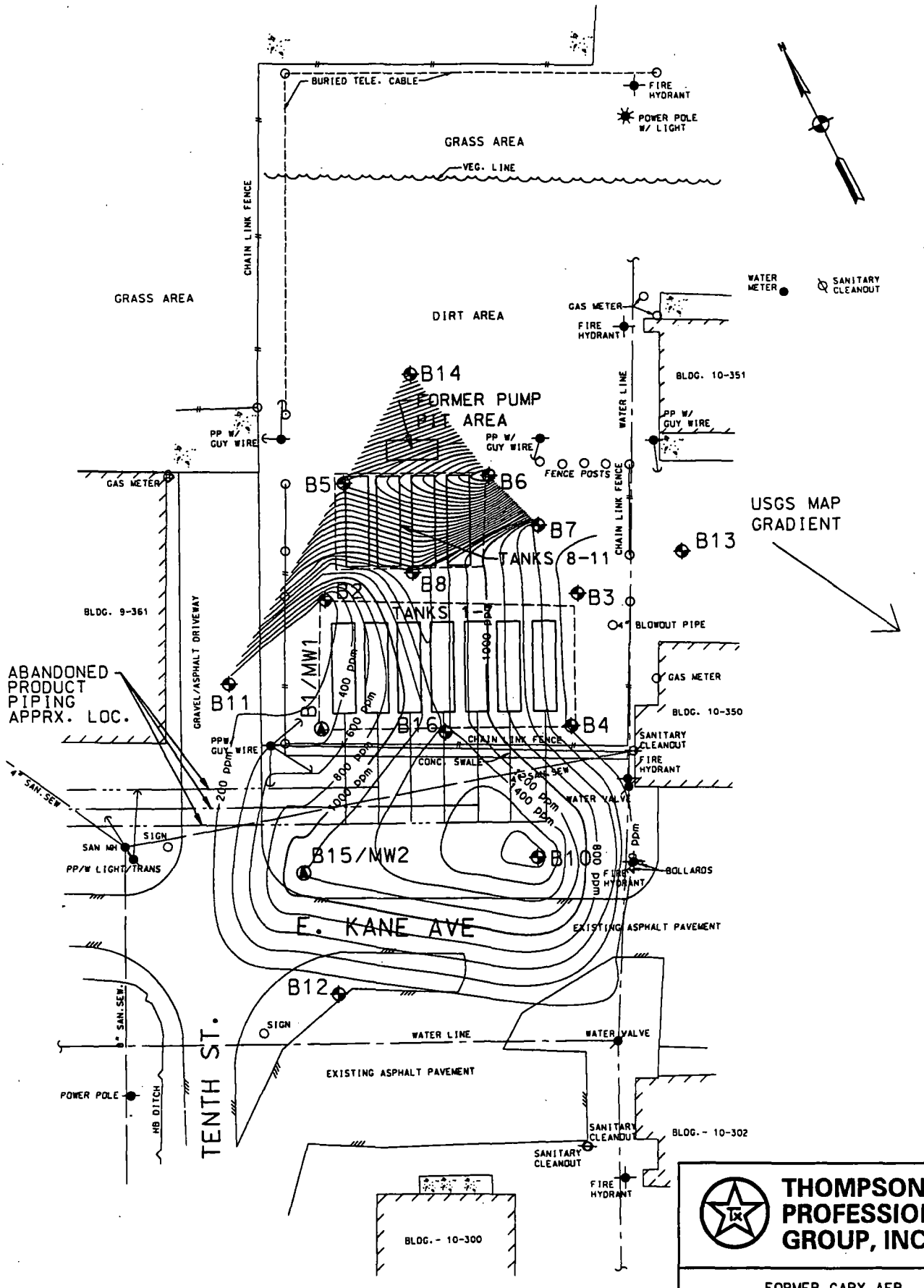
NAME	LAT.	LONG.	ELEV.
B1/MW1	29°53'22.49747"N	097°51'34.78142"W	573.06 (TOC)
B2	29°53'23.01825"N	097°51'37.55867"W	571.39
B3	29°53'22.54020"N	097°51'36.43703"W	571.02
B4	29°53'22.03825"N	097°51'36.77647"W	571.48
B5	29°53'23.43550"N	097°51'37.20427"W	571.55
B6	29°53'23.17596"N	097°51'36.55129"W	571.72
B7	29°53'22.88338"N	097°51'36.45201"W	571.14
B8	29°53'22.95155"N	097°51'37.11283"W	571.55
B10	29°53'21.59931"N	097°51'37.22742"W	572.33
B11	29°53'22.89112"N	097°51'38.19054"W	572.57
B12	29°53'21.47680"N	097°51'38.40835"W	572.42
B13	29°53'22.49891"N	097°51'35.88034"W	569.05
B14	29°53'23.74336"N	097°51'36.65329"W	572.75
B15/MW2	29°53'22.00597"N	097°51'38.28617"W	572.49 (TOC)
B16	29°53'22.27692"N	097°51'37.33649"W	571.63

User: $(USERNAME)
Plotted On: 02 DEC 9, 13:41
FILENAME: d:\projects\b. .dgn\barlation.dgn

THOMPSON PROFESSIONAL GROUP, INC.

FORMER GARY AFB
SAN MARCOS, CALDWELL COUNTY, TEXAS
ATTACHMENT 5
SAMPLING POINT COORDINATES

Attachment 6
Soil TPH Contamination Concentration Map



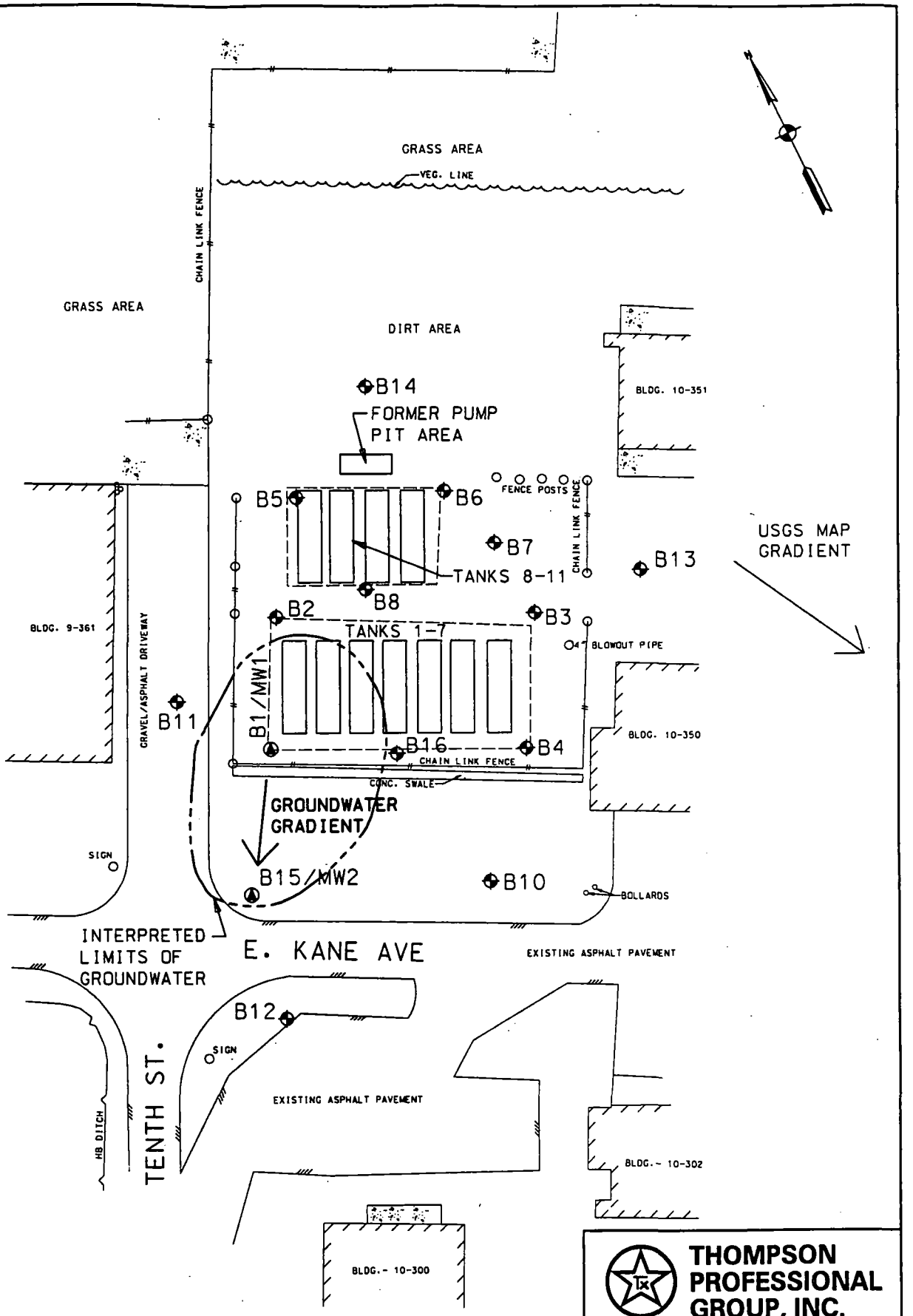
SCALE: 1" = 60'

THOMPSON PROFESSIONAL GROUP, INC.

FORMER GARY AFB
SAN MARCOS, CALDWELL CO. TEXAS
ATTACHMENT 6
SOIL TPH CONTAMINATION CONCENTRATION MAP

User: $(_USTN_USER)
Plotted On: $DATE$
FILENAME: $FILE$

Attachment 7
Groundwater Gradient Maps



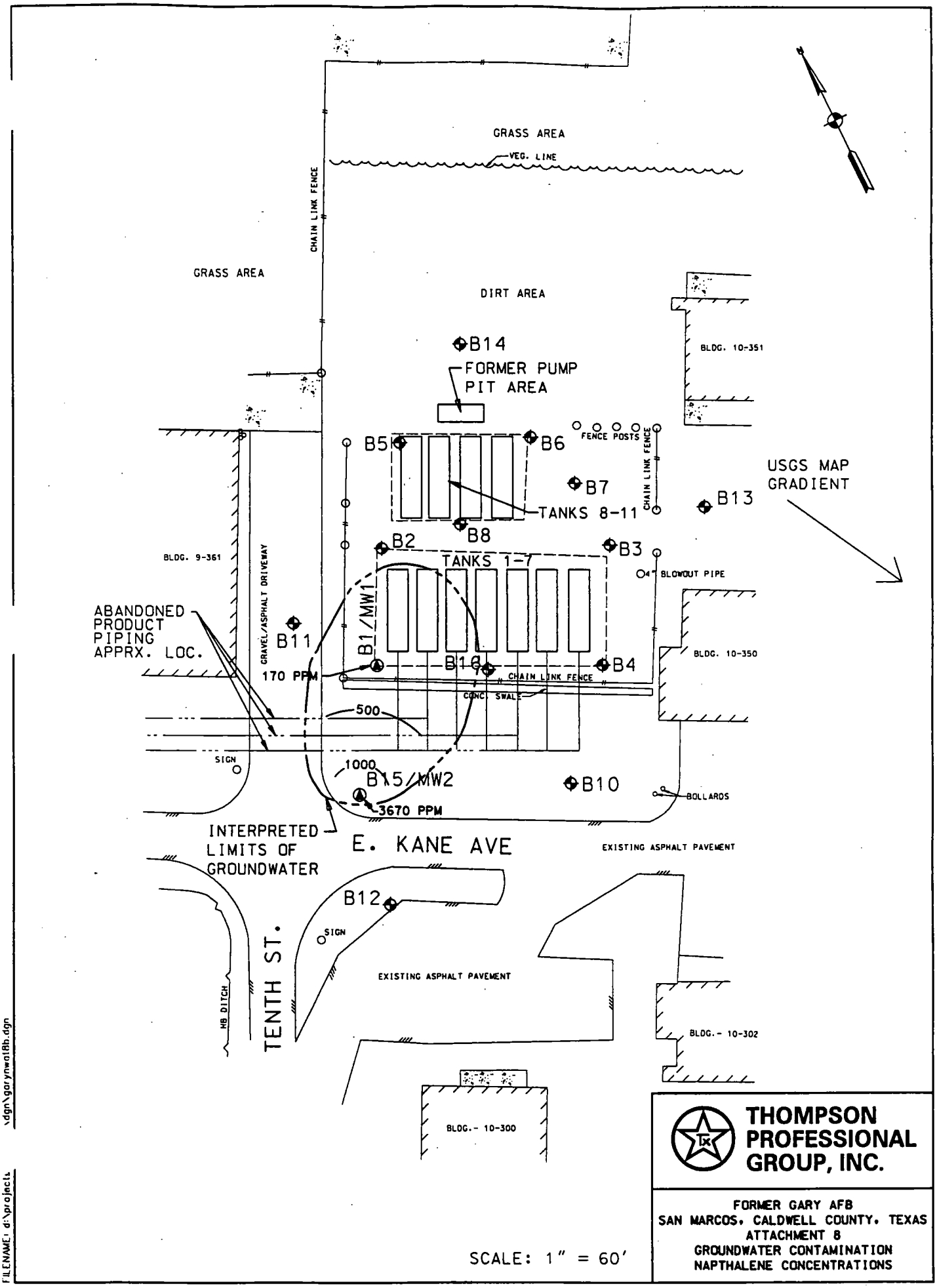
SCALE: 1" = 60'

THOMPSON PROFESSIONAL GROUP, INC.

FORMER GARY AFB
SAN MARCOS, CALDWELL COUNTY, TEXAS
ATTACHMENT 7
Groundwater Gradient Map

User: $(USERNAME)
Plotted On: 03 DEC
FILENAME: D:\PROJEC
J:26:14
.01\DGN\garynwatt7.dgn

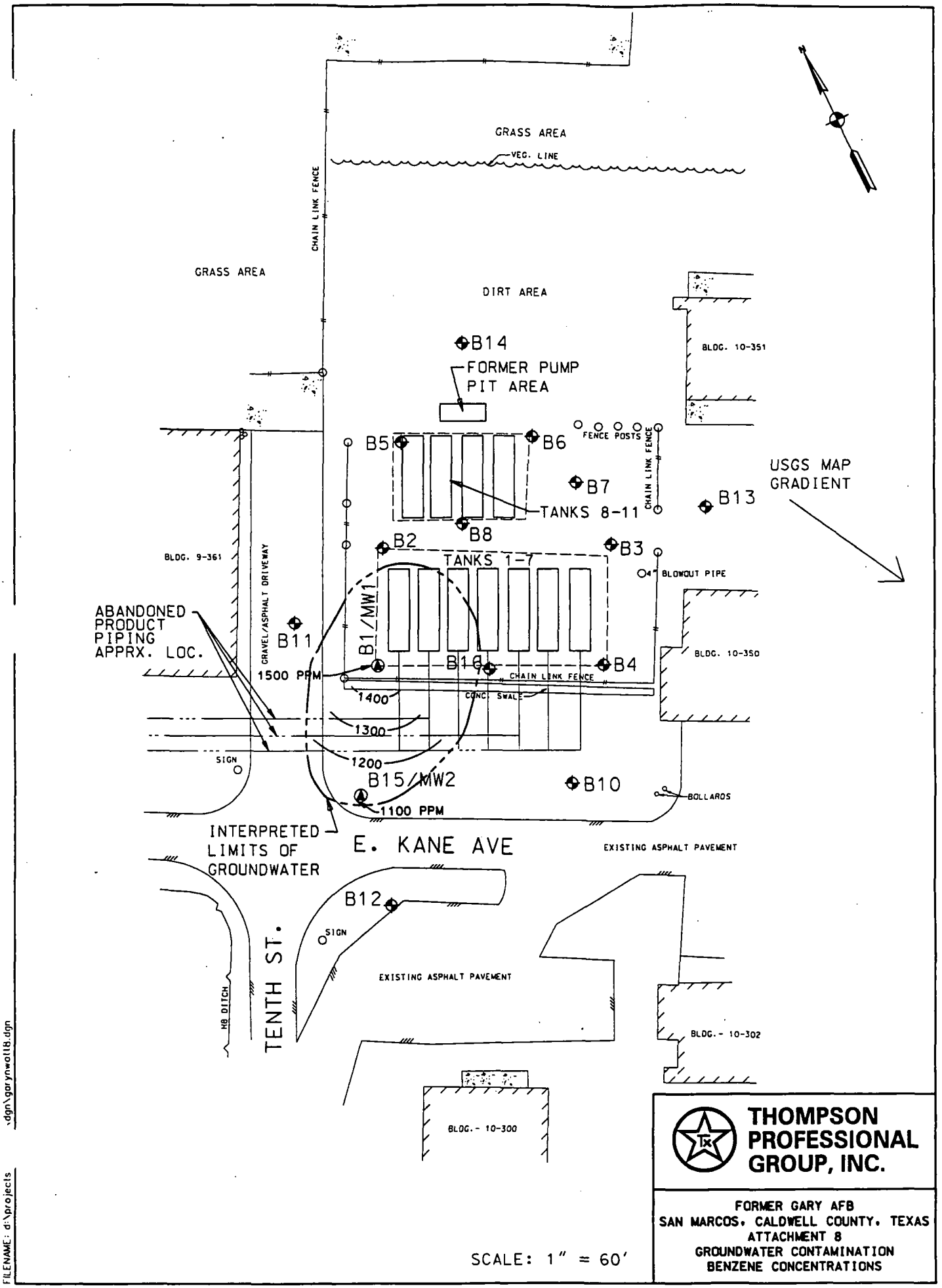
Attachment 8
Groundwater Contaminant Concentration Maps



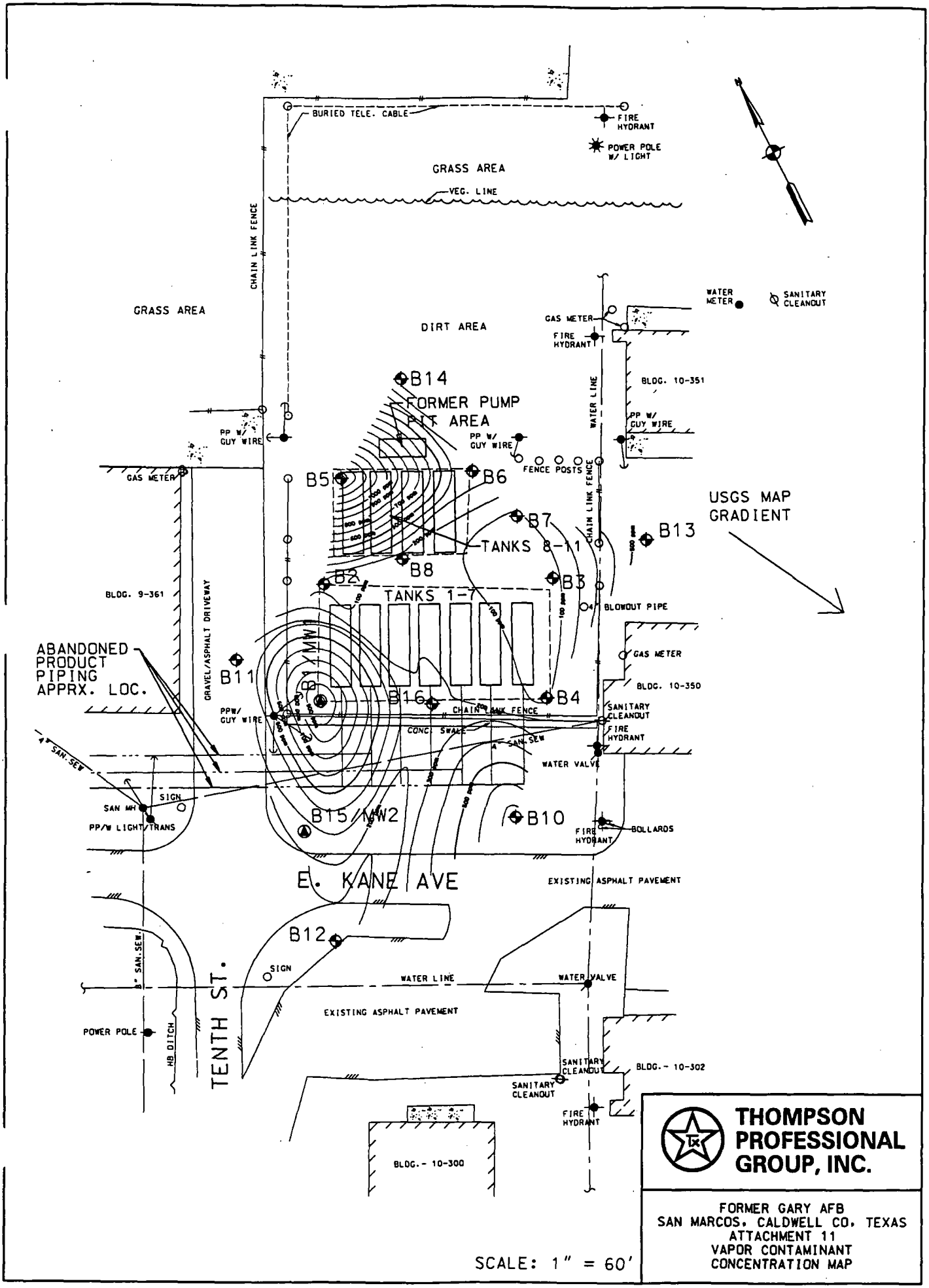
THOMPSON PROFESSIONAL GROUP, INC.

FORMER GARY AFB
SAN MARCOS, CALDWELL COUNTY, TEXAS
ATTACHMENT 8
GROUNDWATER CONTAMINATION
NAPTHALENE CONCENTRATIONS

User: $USERNAME
Plotted On: 03 Dec
FILENAME: d:\projects\dgn\garynwat8b.dgn
1:29:28


GRASS AREA
VEG. LINE
CHAIN LINK FENCE
GRASS AREA
DIRT AREA
B14
FORMER PUMP PIT AREA
BLDG. 10-351
B5
B6
FENCE POSTS
CHAIN LINK FENCE
USGS MAP GRADIENT
B7
B13
TANKS 8-11
B8
B2
B3
BLDG. 9-361
TANKS 1-7
4" BLOWOUT PIPE
GRAVEL/ASPHALT DRIVEWAY
ABANDONED PRODUCT PIPING APPRX. LOC.
B11
B1/MW1
B16
B4
BLDG. 10-350
1500 PPM
CHAIN LINK FENCE
1400
CONC. SWALE
1300
1200
SIGN
B15/MW2
B10
BOLLARDS
1100 PPM
INTERPRETED LIMITS OF GROUNDWATER
E. KANE AVE
EXISTING ASPHALT PAVEMENT
B12
SIGN
TENTH ST.
EXISTING ASPHALT PAVEMENT
HB DITCH
BLDG.- 10-302
BLDG.- 10-300
SCALE: 1" = 60'
THOMPSON PROFESSIONAL GROUP, INC.
FORMER GARY AFB
SAN MARCOS, CALDWELL COUNTY, TEXAS
ATTACHMENT 8
GROUNDWATER CONTAMINATION
BENZENE CONCENTRATIONS

Attachment 11
Soil Vapor Contaminant Concentration Map

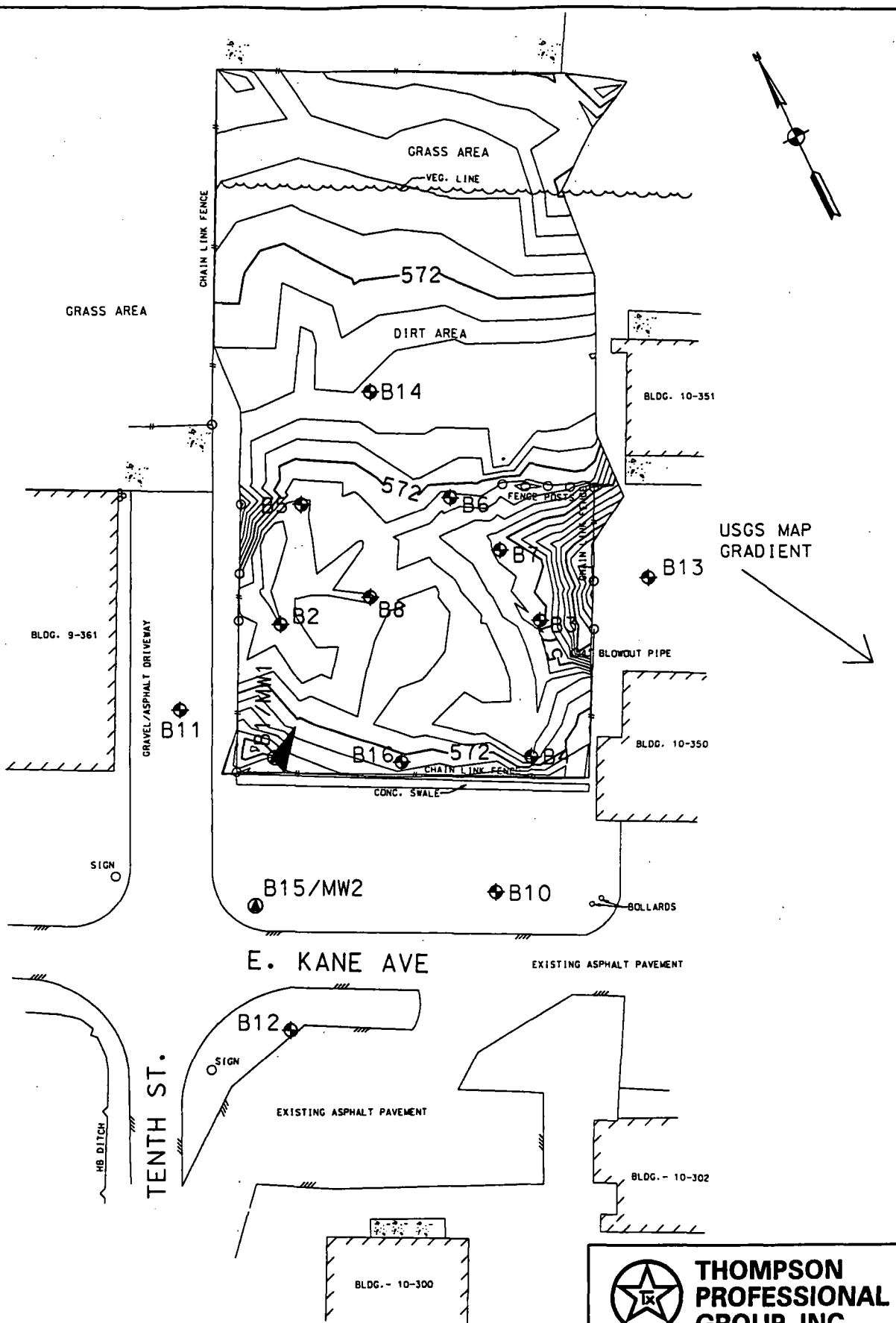


THOMPSON PROFESSIONAL GROUP, INC.

FORMER GARY AFB
SAN MARCOS, CALDWELL CO, TEXAS
ATTACHMENT 11
VAPOR CONTAMINANT
CONCENTRATION MAP

Usor: $(_USIN_U
Plotted On: $DATE
FILENAME: $FILE$
TIME$

Attachment 13
Surface Water Runoff



SCALE: 1" = 60'

THOMPSON PROFESSIONAL GROUP, INC.

FORMER GARY AFB
SAN MARCOS, CALDWELL COUNTY, TEXAS
ATTACHMENT 13
SURFACE WATER RUNOFF

User: $(USERNAME)
Plotted On: 04 DE-
FILENAME: D:\PROJEC

17:53:25
.01\DGN\garynwatt13.dgn

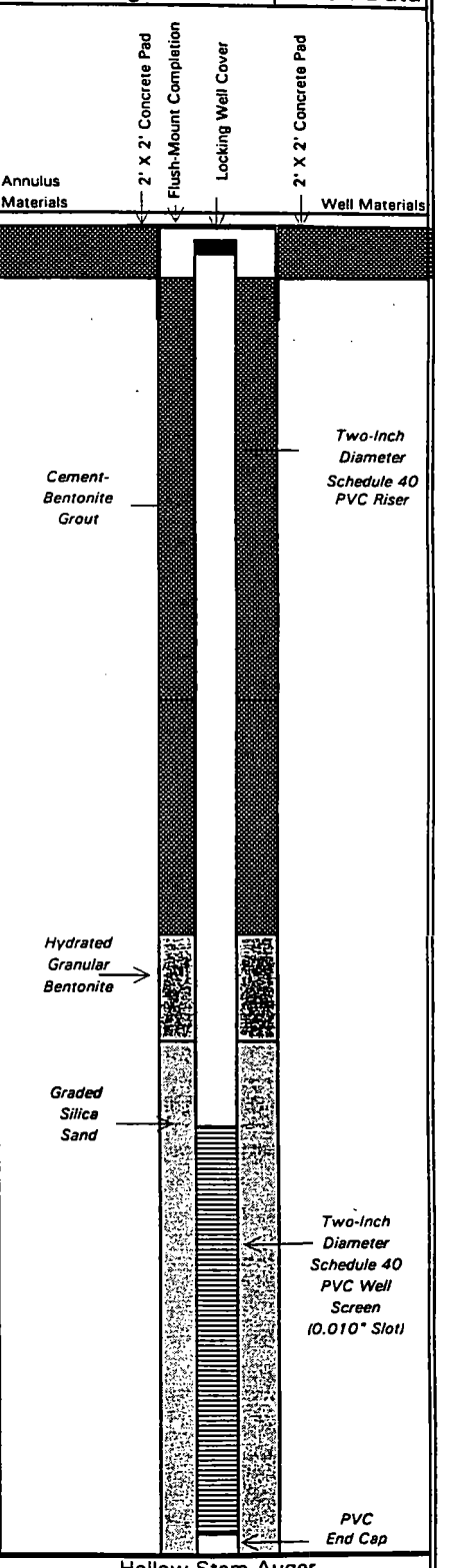
Attachment 14
Soil Boring Logs

LOG OF BORING 15/MONITORING WELL NO. MW-2

Boring Data

Depth in Feet	Stratigraphy	Sample Method/ Ft. Rec(*)	DESCRIPTION OF STRATUM	Submitted For Analysis(*)	Pocket Penetrometer	Odor(*)	Depth in Feet
0							0
		ss 1.3	Grass and base material of sand and clayey gravel.				
		ss 1.4	SILTY CLAY - high to medium plasticity, hard, dry to moist, very dark gray. SIMILAR TO ABOVE (STA) - moist, trace of fine-grained gravel.		5.0+		
5		ss 2.0	STA - moist.		5.0+		5
		ss 2.0	SILTY, SANDY CLAY with GRAVEL -medium stiff, moist to dry, very pale brown to white.				
		ss 2.0	SILTY, SANDY CLAY to SILTY, CLAYEY SAND - medium to high plasticity, very fine-grained sand, uniform, hard, medium gray mottled pale brown, gravel layer 8 to 8.5 feet, trace of calcified zones, sandy clayey layer 9.5 feet to 10 feet.				
10		ss 2.0	CLAYEY SAND - loose, moist, very pale brown, no gravel, remains very clayey.				10
		ss 2.0	SANDY CLAY - medium stiff, moist, very pale brown, no gravel.		4.0		
		ss 2.0	SANDY CLAY with GRAVEL - medium to high plasticity in clay, very fine-grained sand, fine to coarse-grained gravel, loose, moist to dry, very pale brown, gravel is rounded chert. STA - moist to dry.				
15		ss 1.3	SANDY CLAY - medium to high plasticity, very fine-grained sand, soft, moist, very pale brown.		2.0		15
		ss 2.0	STA - soft, moist, few sand pockets <1" in diameter which are moist.				
20		ss 1.5	SILTY CLAY with GRAVEL - low to medium plasticity, stiff, moist, light gray to white to rust, weathered calcified appearance, gravel is weathered limestone.				20
		ss 1.5	Grades to SILTY, SANDY CLAY with GRAVEL - stiff, dry to moist, very pale brown, no calcified zones, slight hydrocarbon odor 20 feet to 22 feet.	*		*	
		ss 2.0	SANDY CLAY - low to medium plasticity, very fine-grained sand, soft, moist, light gray to very pale brown, slight hydrocarbon odor 22 feet to 24 feet, few sand partings, increase percent sand at 23.5 feet.	*	2.0	*	
25		ss 2.0	SANDY, GRAVELLY CLAY - medium to high plasticity, very fine-grained sand, fine to coarse grained gravel, stiff, moist to wet at 25.5 to 26 feet, moderate to strong hydrocarbon odor 24 to 26 feet.			*	25
		ss 2.0	SILTY CLAY - high plasticity, very stiff, moist, very pale brown mottled rust, blocky texture, no odors, few silt/sand partings, black dendritic iron-oxide staining.	*	3.0-4.0		
30		ss 2.0	STA - moist, blocky.				30

Monitoring Well Completion Data



Client:	Thompson Professional Group	Drilling Method:	Hollow Stem Auger
Project No:	1409704622.00	Top of Casing Elev:	572.49
Date Drilled:	9/23/97	Groundwater Data	Date: 9-26-97 Elev: 550.27
Driller:	Geo Projects International	Comments:	Logged by JDH-Maxim
Total Depth:	30 feet	*ss=split spoon rc=rock core st=shelby tube	

LOG OF BORING NO. SB-10

Depth in Feet	Stratigraphy	Sample Method/ Ft. Rec(*)	DESCRIPTION OF STRATUM	Submitted For Analysis(*)	Pocket Penetrometer	Odor (*)	Depth in Feet	Remarks
0							0	
		ss 1.3	SILTY CLAY - high to medium plasticity, hard, dry, very dark gray, blocky texture, grass roots, gravel lense one-inch thick at 0.5 feet.		5.0+			
		ss 2.0	SIMILAR TO ABOVE (STA) - dry, trace of fine-grained gravel, roots.		5.0+			
5		ss 2.0	STA - dry.				5	
		ss 2.0	SILTY, SANDY CLAY - high to medium plasticity, very fine-grained sand, hard, dry, very pale brown to white, homogeneous, abundant calcified zones, few sand partings.		5.0+			
		ss 2.0	STA - dry to moist, trace of iron-oxide staining.		4.0			
10		ss 2.0	STA				10	
		ss 2.0	CLAYEY GRAVEL - 0.2 feet thick, dry.					Fine to Coarse-grained chert gravel.
		ss 2.0	CLAYEY SAND TO SANDY CLAY - low plasticity, uniform sand, very fine-grained sand, loose, dry to moist, very pale brown.		2.0			Trace of clay lenses < 1/4 inch thick. Pockets of clay and sand.
15		ss 2.0	STA - dry to moist.		2.5-5.0+		15	Trace of fine to coarse-grained gravel.
		ss 2.0	SANDY CLAY - high plasticity, very fine-grained sand, medium stiff, very moist to moist, very pale brown mottled very dark brown.		2.0-3.0	* * * * *		Slight Hydrocarbon odor 15.5'-16.0' Probe refusal at 16.0 feet. Slight hydrocarbon odor 16.0'-18.0'
20		ss 2.0	SANDY, CLAYEY GRAVEL TO SANDY, GRAVELLY CLAY - high plasticity, fine to coarse-grained gravel, hard, moist, very pale brown, gravel is well rounded chert.	*	5.0	* * * *	20	Slight hydrocarbon odor 18.0' to 24.0' Few sand lenses < 1/4 inch thick.
		ss 1.5	STA - dry to moist.			* * * *		
		ss 2.0	CLAYEY SAND - low plasticity, uniform, loose, moist to very moist, very pale brown.		1.0-2.0	* * * *		
25		ss 2.0	STA - very moist.		1.0	* * * *	25	Very slight hydrocarbon odor 24.0' to 26.0'
		ss 2.0	STA - moist to very moist.					
			SANDY CLAYEY GRAVEL TO SANDY GRAVELLY CLAY - medium to high plasticity, very stiff, moist.		4.0-5.0	* *		Slight hydrocarbon odor 27.0' to 28.0'
30		ss 2.0	SILTY CLAY - high plasticity, very stiff, moist, very pale brown mottled rust, blocky texture.		5.0		30	No odor, few iron-oxide partings
		ss 2.0	STA - few sand partings, moist, black dendritic staining (pyrolusite).					
		ss 2.0	STA - grades to SANDY, SILTY CLAY - medium to low plasticity, very fine-grained sand, medium stiff, moist, very pale brown mottled light gray to rust, becoming less blocky.		3.5			No odor.
35		ss 1.0	STA - moist, few sand partings.	*			35	

Client:	Thompson Professional Group, Inc.	Drilling Method:	Direct Push and Hollow Stem Auger
Project No:	1409704622	Comments:	Boring left open for approximately 1.5 hours with no groundwater accumulation.
Date Drilled:	9/22/97		
Driller:	Geo Projects International		Logged by JDH-Maxim
Total Depth:	35 feet	ss=split spoon rc=rock core st=shelby tube	

LOG OF BORING NO. SB-11

Depth in Feet	Stratigraphy	Sample Method/ Ft. Rec(*)	DESCRIPTION OF STRATUM	Submitted For Analysis(*)	Pocket Penetrometer	Odor (*)	Depth in Feet	Remarks
0							0	
		ss 0.5	*Asphalt and clayey gravel road base material.* SILTY CLAY - high plasticity, hard, moist, very dark brown, homogenous, grass roots.		5.0+			
		ss 2.0	SIMILAR TO ABOVE (STA) - stiff, moist.		4.0			
5		ss 2.0	STA - grades to SILTY CLAY with GRAVEL at 5.0 feet. SILTY CLAY with GRAVEL - medium to high plasticity, stiff, moist, very pale brown to white, fine to coarse-grained gravel, calcified zones.		4.0		5	
		ss 2.0	STA - decrease percent gravel at 7.0 feet.					
		ss 2.0	STA - very little gravel, moist, very pale brown, trace black dendritic staining (pyrolusite).		4.0			
10				*			10	
		ss 1.0	SANDY CLAY TO CLAYEY SAND - medium plasticity, uniform, very fine-grained sand, loose, moist, very pale brown to rust.		1.0			Trace of clay lenses <1/4 inch thick
		ss 1.0	STA - moist.					
15		ss 1.2	STA - moist.		1.0		15	
		ss 1.8	STA - grades to CLAYEY SAND - uniform, very fine-grained, loose, moist.		0.5-1.0			
20		ss 1.0	SANDY, CLAYEY GRAVEL TO SANDY, GRAVELLY CLAY - high plasticity, very fine-grained sand, fine to coarse grained gravel, hard, moist, pale brown, with gray mottling.		4.5	*	20	Gravel is rounded chert and limestone. Slight hydrocarbon odor 20.0' to 26.0'
		ss 2.0	STA - moist.		3.0	*		
		ss 2.0	STA - decrease percent gravel, grades to SANDY CLAY TO CLAYEY SAND - medium stiff, moist.			*		
25		ss 2.0	STA - gravel layer 25.5' to 26.0 ', medium stiff, moist, grades to greenish gray.		3.0	*	25	
		ss 1.9	Grades to SANDY CLAY TO CLAY - medium plasticity, medium stiff, moist, pale brown to gray, black iron-oxide lenses.		3.5			No odor
30		ss 1.5	CLAY - high plasticity, hard, moist to dry, pale brown to gray.		5.0		30	No odor
		ss 2.0	CLAY TO SILT CLAY - high to medium plasticity, hard, moist to dry, pale brown to gray.		5.0			Few sand partings, no odor
		ss 2.0	STA - dry to moist.					No odor
35		ss 1.0	STA - dry to moist.	*			35	

Client:	Thompson Professional Group, Inc.	Drilling Method:	Hollow Stem Auger
Project No:	1409704622	Comments:	
Date Drilled:	9/22/97		
Driller:	Geo Projects International		Logged by JDH-Maxim
Total Depth:	35 feet	ss = split spoon rc = rock core st = shelby tube	

LOG OF BORING NO. SB-12

Depth in Feet	Stratigraphy	Sample Method/ Ft. Rec(*)	DESCRIPTION OF STRATUM	Submitted For Analysis(*)	Pocket Penetrometer	Odor (*)	Depth in Feet	Remarks
0							0	
		ss 0.5	Asphalt and road base material. SILTY CLAY - high plasticity, hard, moist, very dark gray, grass roots.		5.0+			
		ss 1.9	SIMILAR TO ABOVE (STA) - decrease percent silt, moist, medium gray, trace of fine-grained gravel.		5.0+			
5		ss 2.0	STA Grades to SILTY CLAY WITH GRAVEL - high plasticity, fine-grained gravel, hard, moist, medium gray, gravel is calcified and weathered.		5.0+		5	
		ss 1.2	SILTY, SANDY, CLAY with GRAVEL - high to medium plasticity, very fine-grained sand, medium stiff, dry to moist, very pale brown to white.		3.0			Abundant calcified zones. Possible slight hydrocarbon odor 6.5' to 8.0'.
10		ss 2.0	STA - decrease percent gravel, moist, STA		5.0+		10	Decrease percent calcified zones. No odor.
		ss 2.0	Grades to SANDY CLAY to CLAYEY SAND - moist, very pale brown, fine to coarse-grained *chert and limestone gravel.*		2.0			Possible slight hydrocarbon odor 11.0' 12.0'. *No odor.*
15		ss 2.0	STA - abundant fine to coarse-grained gravel, medium stiff to soft, moist, chert and limestone rounded to angular gravel, few clay seams.				15	
		ss 0.8	STA - moist.					
		ss 1.0	STA with slight increase in percent sand with abundant gravel, high plasticity, very fine-grained sand, soft, moist, color change to grayish brown at 16.0 feet.		4.0			Possible slight hydrocarbon odor 16.0' to 32.0'
20		ss 2.0	SANDY CLAYEY GRAVEL TO SANDY GRAVELLY CLAY - high plasticity, very fine-grained sand, very stiff, moist, greenish gray to grayish green, abundant sand partings.	*			20	Brownish yellow mottled in part.
		ss 2.0	SILTY CLAY - high to medium plasticity, very stiff, dry, light gray to greenish gray.		4.0			
		ss 1.5	STA - grades to SILTY, SANDY CLAY - medium plasticity, moist to dry, light gray mottled rust, abundant sand partings.					
25		ss 2.0	SANDY, GRAVELLY CLAY - fine to coarse-grained sand, stiff, moist, very pale brown. CLAY TO SILTY CLAY - high plasticity, hard, moist, very pale brown mottled light gray,		5.0+		25	
		ss 1.0	STA - moist, blocky texture.		5.0+			
30		ss 2.0	STA - moist, few silt/sand partings.	*			30	
		ss 2.0	STA - moist, rust mottling, abundant iron-oxide staining.		5.0			
35			Terminate boring at 32 feet due to soil sampling mechanism malfunction.				35	

Client:	Thompson Professional Group, Inc.	Drilling Method:	Hollow Stem Auger
Project No:	1409704622	Comments:	
Date Drilled:	9/23/97		
Driller:	Geo Projects International		Logged by JDH-Maxim
Total Depth:	32 feet	ss = split spoon rc = rock core st = shelby tube	

LOG OF BORING NO. SB-13

Depth in Feet	Stratigraphy	Sample Method/ Ft. Rec(*)	DESCRIPTION OF STRATUM	Submitted For Analysis(*)	Pocket Penetrometer	Odor (*)	Depth in Feet	Remarks
0							0	
		ss 1.5	Grass and gravelly clay base material. SILTY CLAY with GRAVEL - high to medium plasticity, fine to coarse-grained gravel, hard, dry.		5.0+			
		ss 0.5	SILTY SANDY CLAY with GRAVEL - medium to high plasticity, very fine-grained sand, hard, dry, very pale brown to white, abundant calcified zones.					
5		ss 1.0	SIMILAR TO ABOVE (STA) - increase percent clay, decrease percent gravel, dry to moist, few silt/sand partings.		5.0+		5	
		ss 1.5	STA - grades to SILTY, SANDY CLAY - moist, very pale brown to yellowish red, no gravel, few silt/sand partings.					
10		ss 2.0	STA - increase percent sand, low to medium plasticity, very fine-grained sand, soft, moist,		2.0		10	
		ss 2.0	STA - decrease percent sand to SILTY, SANDY CLAY - few sand partings, trace of fine grained-limestone gravel, trace of iron-oxide staining.					
		ss 2.0	STA - increase percent sand to SILTY, CLAYEY, SAND TO SILTY, SANDY CLAY - low to high plasticity, soft, moist.					
15		ss 2.0	STA - increase percent clay, moist. SILTY CLAY - low to medium plasticity, medium stiff, dry, light gray mottled rust, trace of gravel.		3.0		15	
		ss 2.0	SANDY CLAY TO CLAYEY SAND - none to low plasticity, uniform very fine-grained sands, loose, moist, very pale brown to yellowish red.					Possible slight hydrocarbon odor 16.0' to 17.5'.
		ss 2.0	SILTY CLAY (17.8') - medium to high plasticity, stiff to very stiff, moist, light gray mottled very pale brown, few iron-oxide stainings.		4.0			No odor.
20		ss 2.0	SILTY CLAY TO CLAY - slight shaley appearance.				20	
		ss 2.0	STA - moist, blocky texture, few black iron-oxide staining.					
		ss 1.5	STA - moist.					
25		ss 1.0	STA - moist.				25	
		ss 2.0	STA - hard, moist, blocky texture, trace white calcified pockets <1/2" diameter.		4.5			
		ss 2.0	STA - few silt partings.					
30		ss 2.0	STA.		5.0		30	
		ss 2.0	STA - low to medium plasticity, very stiff to stiff, moist, few silt partings.		4.0-4.5			
35		ss 2.0	STA - very stiff to hard, moist, few iron-oxide pockets <1/2" diameter.	*			35	

Client:	Thompson Professional Group, Inc.	Drilling Method:	Hollow Stem Auger
Project No:	1409704622	Comments:	
Date Drilled:	9/23/97		
Driller:	Geo Projects International		Logged by JDH-Maxim
Total Depth:	50 feet	ss=split spoon rc=rock core st=shelby tube	

LOG OF BORING NO. SB-13

Depth in Feet	Stratigraphy	Sample Method/ Ft. Rec(*)	DESCRIPTION OF STRATUM	Submitted For Analysis(*)	Pocket Penetrometer	Odor (*)	Depth in Feet	Remarks
35							35	
		ss 2.0	SILTY CLAY - moist, blocky texture,		3.5-5.0			
		ss 2.0	STA - moist					
		ss 2.0	STA - moist, few calcified pockets <1/2" diameter, few horizontal gypsum seams <1/4" thick.					
40							40	
		ss 2.0	STA - few silt/sand partings, dry.					
		ss 2.0	STA - few bivalves present.					
45		ss 2.0	SILTY CLAY - low to medium plasticity, hard to stiff, dry to moist, color change to dark gray, blocky texture, alternating layers of light gray and pale brown with dark gray.				45	
		ss 2.0	STA - low plasticity, hard, dry to moist, dark gray, blocky texture, shaley appearance.	*				
		ss 2.0	STA - low plasticity.					
50							50	

Client:	Thompson Professional Group, Inc.	Drilling Method:	Hollow Stem Auger
Project No:	1409704622	Comments:	
Date Drilled:	9/23/97		
Driller:	Geo Projects International		Logged by JDH-Maxim
Total Depth:	50 feet	ss=split spoon rc=rock core st=shelby tube	

LOG OF BORING NO. SB-14

Depth in Feet	Stratigraphy	Sample Method/ Ft. Rec(")	DESCRIPTION OF STRATUM	Submitted For Analysis(")	Pocket Penetrometer	Odor (")	Depth in Feet	Remarks
0							0	
		ss 1.0	SILTY CLAY with GRAVEL - fill material.					
		ss 0.8	SILTY CLAY - medium to high plasticity, hard, dry, very dark brown with rust mottling. SIMILAR TO ABOVE (STA) - dry.		5.0+			
5		ss 2.0	STA - dry to moist.				5	Trace of fine-grained gravel
		ss 2.0	SILTY, SANDY CLAY - medium to high plasticity, very fine-grained sand, very stiff, dry, very pale brown to white, trace of fine-grained gravel, abundant calcified zones, few sand/silt partings.		4.0-5.0+			
10		ss 2.0	STA - decrease percent sand and silt, dry to moist, few sand and silt partings.				10	
		ss 2.0	STA - increase percent sand and silt partings, very stiff, moist, decrease percent calcified zones.		4.0			
		ss 1.5	STA - stiff, moist, no calcified zones.					
15		ss 2.0	STA with GRAVEL - low to medium plasticity, fine to coarse-grained chert and limestone gravel, soft, moist.		2.0		15	
		ss 2.0	STA.					
20		ss 2.0	SILTY CLAY - high to medium plasticity, very stiff to hard, moist, very pale brown and light gray mottling, calcified pockets <1/4" diameter, few silt partings.		4.0-5.0+		20	
		ss 2.0	STA - moist.					
		ss 2.0	STA - increase percent silt, very stiff, moist, abundant silt partings.	*				
25		ss 2.0	SILTY, SANDY CLAY - moist, tan. SANDY CLAYEY GRAVEL to SANDY GRAVELLY CLAY - medium to high plasticity, very fine-grained sand, very stiff, moist, very pale brown.				25	Possible very slight hydrocarbon odor 22 feet to 24 feet.
		ss 2.0	SILTY CLAY - medium to high plasticity, very stiff, moist, very pale brown and light gray mottling, blocky texture, few iron-oxide pockets <1/4" diameter.					
30		ss 2.0	STA - moist, few coarse-grained gravel.				30	
		ss 2.0	STA - moist.					
		ss 1.0	STA - moist, few bivalves.	*				
35		ss 1.0	STA - moist.				35	

Client:	Thompson Professional Group, Inc.	Drilling Method:	Hollow Stem Auger
Project No:	1409704622	Comments:	
Date Drilled:	9/24/97		
Driller:	Geo Projects International		Logged by JDH-Maxim
Total Depth:	35 feet	ss=split spoon rc=rock core st=shelby tube	

LOG OF BORING NO. SB-16

Depth in Feet	Stratigraphy	Sample Method/ Ft. Rec(*)	DESCRIPTION OF STRATUM	Submitted For Analysis(*)	Pocket Penetrometer	Odor (*)	Depth in Feet	Remarks
0							0	
		ss 2.0	Grass and top soil (loam).					
		ss 1.1	SILTY CLAY with SAND - low to medium plasticity, very fine-grained sand, hard, dry to moist, very pale brown to yellowish red, trace of fine-grained gravel and gastropods, few white calcified pockets <1/4" diameter.		5.0+			
5		ss 2.0	STA - increase percent sand, dry to moist, abundant sand/silt partings, gastropods and bivalves.		5.0+		5	
		ss 1.3	STA. SILTY, CLAYEY GRAVEL to SILTY, GRAVELLY CLAY - medium to high plasticity, fine to coarse-grained gravel, very stiff, moist, dark brown with rust and very dark gray mottling, few sand partings, gravel is rounded chert and limestone.		4.0			
10		ss 2.0	STA.				10	
		ss 2.0	SILTY, SANDY CLAY - medium to high plasticity, very fine-grained sand, soft to medium stiff, moist, very pale brown to dark brown, trace of fine-grained gravel, abundant sand/silt partings.		2.0-3.0			
		ss 2.0	STA - increase percent sand, soft, moist.					
15		ss 2.0	SILTY, SANDY CLAY with trace of GRAVEL - medium to high plasticity, soft, moist to very moist, dark brown with very pale brown mottling.			*	15	Moderate hydrocarbon odor 15 feet to 18 feet with possible black hydrocarbon stain.
		ss 2.0	Increase percent sand at 17 feet to SANDY CLAY TO CLAYEY SAND - fine-grained sand, soft, very moist 17 feet to 18 feet.			*		
20		ss 1.2	CLAYEY, GRAVELLY SAND TO CLAYEY, SANDY GRAVEL - uniform, fine-grained sand, fine to coarse-grained gravel, loose, moist, lt. green to pale brown.	*		*	20	Sand pockets 1" to 3" diameter. Moderate to strong hydrocarbon odor. CLAY seam 19 feet to 19.3 feet.
		ss 1.1	SILTY, SANDY CLAY with GRAVEL - low plasticity, very fine-grained sand, fine to coarse-grained gravel, loose, dry, very pale brown.			*		Moderate hydrocarbon odor 20 feet to 23 feet.
		ss 2.0	STA - moist, (very moist 22.5 feet to 23 feet).			*		
25		ss 2.0	SILTY CLAY - medium to high plasticity, very stiff, moist, very pale brown mottled gray to rust, blocky texture.		4.0		25	No hydrocarbon odor.
		ss 2.0	STA - stiff, moist, abundant sand/silt partings.					
		ss 2.0	STA - moist, trace black iron-oxide staining.					
30		ss 2.0	STA - moist.	*			30	
35							35	

Client:	Thompson Professional Group, Inc.	Drilling Method:	Hollow Stem Auger
Project No:	1409704622	Comments:	
Date Drilled:	9/24/97		
Driller:	Geo Projects International		Logged by JDH-Maxim
Total Depth:	30 feet	ss = split spoon rc = rock core st = shelby tube	

SOIL BORING FIELD SCREENING RESULTS
PID READINGS - Organic Vapors in PPM

Sampling Interval	Soil Boring B10	B11	B12	B13	B14	B15*	B16
0' - 2'	0.0	4.8	0.0	0.0	0.4	0.4	0.0
2' - 4'	0.0	376.0	0.0	0.0	0.1	0.6	7.8
4' - 6'	0.0	90.0	0.0	0.0	1.3	0.8	0.0
6' - 8'	0.0	180.0	0.0	25.0	1.0	0.7	0.0
8' - 10'	0.0	119.0	0.0	28.5	3.1	0.5	0.0
10' - 12'	0.0	138.0	0.0	50.0	1.3	0.1	0.0
12' - 14'	8.7	107.0	0.0	72.5	1.8	0.6	5.4
14' - 16'	110.0	88.0	0.0	79.0	5.4	0.3	5.7
16' - 18'	178.2	83.0	0.0	128.5	3.2	0.1	33.0
18' - 20'	698.5	78.0	0.0	162.0	0.7	0.1	1.1
20' - 22'	757.0	75.0	0.0	171.1	0.0	0.0	228.0
22' - 24'	250.0	71.5	0.0	33.4	12.3	0.0	110.0
24' - 26'	75.0	69.5	0.0	180.2	0.5	0.0	3.1
26' - 28'	356.0	66.5	0.0	157.3	0.2	0.0	1.8
28' - 30'	80.2	65.0	0.0	45.3	0.0	0.0	6.5
30' - 32'	199.5	64.4	0.0	140.3	0.0		
32' - 34'	320.0	65.3		72.5	0.3		
34' - 36'	657.0	66.0		580.1			
36' - 38'				76.2			
38' - 40'				70.5			
40' - 42'				59.5			
42' - 44'				50.5			
44' - 46'				41.2			
46' - 48'				20.7			
48' - 50'				52.5			

* Suspected instrument malfunction

Send original copy by certified mail to: TDLR, P.O. Box 12157, Austin, TX 78711

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ATTENTION OWNER: *Confidentiality Privilege Notice on Reverse Side*

State of Texas WELL REPORT

Texas Water Well Drillers Advisory Council
P.O. Box 12157
Austin, Tx. 78711
1 800 803 9202 EXT. 9

OWNER (NAME): U.S. ARMY CORPS OF ENGINEERS
ADDRESS (Street or RFD): 819 TAYLOR STREET
(City): FT. WORTH (State): TX (Zip): 76102

2) ADDRESS OF WELL:
County: CALDWELL
(Street or RFD): FORMER GARY AIR FORCE BASE ON HWY 21
(City): SAM MARCOS (State): TX (Zip): 78617
STATE GRID #: 67-02-7

3) TYPE OF WORK (Check):
[X] New Well [ ] Deepening
[ ] Reconditioning [ ] Plugging

4) PROPOSED USE (Check): [ ] Monitor [X] Environmental Soil Boring [ ] Domestic
[ ] Industrial [ ] Irrigation [ ] Injection [ ] Public Supply [ ] De-watering [ ] Testwell
If Public Supply well, were plans submitted to the TNRCC ? [ ] Yes [ ] No

5)

6) WELL LOG: SB-10
Date Drilling
Started: 9/22 19 97
Completed: 9/22 19 97

DIAMETER OF HOLE		
Dia. (in.)	From (ft.)	To (ft.)
8	0.0	35.0

7) DRILLING METHOD (Check): [ ] Driven
[ ] Air Rotary [ ] Mud Rotary [ ] Bored
[ ] Air Hammer [ ] Cable Tool [ ] Jetted
[X] Other HSA

From(ft.)	To(ft.)	Description and color of formation material
0.0	5.0	SILTY CLAY, DARK GREY
5.0	10.0	SILTY SANDY CLAY, VERY PALE BROWN
10.0	11.0	CLAYEY GRAVEL
11.0	18.0	CLAYEY SAND TO SANDY CLAY, VERY PALE BROWN
18.0	22.0	GRAVEL WITH SAND AND CLAY, VERY PALE BROWN
22.0	27.0	CLAYEY SAND, VERY PALE BROWN
27.0	28.0	GRAVEL WITH SAND AND CLAY, VERY PALE BROWN
28.0	35.0	SILTY CLAY, VERY PALE BROWN

8) Borehole Completion (Check): N/A [ ] Open Hole [ ] Straight Wall
[ ] Underreamed [ ] Gravel Packed [ ] Other
If gravel packed give interval ... from ____ ft. to ____ ft.

CASING, BLANK PIPE, AND WELL SCREEN DATA:

Dia. (in.)	New or Used	Steel, Plastic, etc. Perf., Slotted, etc. Screen Mfg., if Commercial	Setting (ft.) From	Setting (ft.) To	Gage Casing Screen

9) CEMENTING DATA [RULE 338.44(1)]
Cemented from 0.0 ft. to 35.0 ft. No. of sacks used ____
____ ft. to ____ ft. No. of sacks used ____
Method used ____
Cemented by BENNY HINOJOSA
Distance to septic system field lines ____ ft.
Method of verification of above distance ____

13) TYPE PUMP: N/A
[ ] Turbine [ ] Jet [ ] Submersible [ ] Cylinder
[ ] Other
Depth to pump bowls, cylinder, jet, etc., ____ ft.

10) SURFACE COMPLETION
[ ] Specified Surface Slab Installed [Rule 338.44(2)(A)]
[ ] Specified Steel Sleeve Installed [Rule 338.44(3)(A)]
[ ] Pitless Adapter Used [Rule 338.44(3)(b)]
[X] Approved Alternative Procedure Used [Rule 338.71]

14) WELL TESTS: N/A
Type test: [ ] Pump [ ] Bailer [ ] Jetted [ ] Estimated
Yield: ____ gpm with ____ ft. drawdown after ____ hrs.

11) WATER LEVEL: N/A
Static level ____ ft. below land surface Date ____
Artesian flow ____ gpm. Date ____

15) WATER QUALITY:
Did you knowingly penetrate any strata which contained undesirable constituents?
[ ] Yes [X] No If yes, submit "REPORT OF UNDESIRABLE WATER"
Type of water? ____ Depth of strata ____
Was a chemical analysis made? [ ] Yes [ ] No

12) PACKERS: N/A Type Depth

I hereby certify that this well was drilled by me (or under my supervision) and that each and all of the statements herein are true to the best of my knowledge and belief. I understand that failure to complete items 1 thru 15 will result in the log(s) being returned for completion and resubmittal.

COMPANY NAME (Type or print): GEOPROJECTS INTERNATIONAL INC.
WELL DRILLER'S LICENSE NO. 3127M

ADDRESS (Street or RFD): 8834 CIRCLE DRIVE
(City): AUSTIN (State): TX (Zip): 78736

(Signed) BENNY HINOJOSA (Licensed Well Driller)
(Signed) ____ (Registered Driller Trainee)

Please attach electric log, chemical analysis, and other pertinent information, if available.

TNRCC-0199 (Rev. 09-01-93) TNRCC COPY

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State of Texas WELL REPORT

Texas Water Well Drillers Advisory Council
P.O. Box 12157
Austin, Tx. 78711
1 800 803 9202 EXT. 9

1) OWNER: U.S. ARMY CORPS OF ENGINEERS (NAME) ADDRESS: 819 TAYLOR STREET (Street or RFD) FT. WORTH (City) TX (State) 76102 (Zip)

2) ADDRESS OF WELL: County CALDWELL; FORMER GARY AIR FORCE BASE ON HWY 21 (Street or RFD) SAM MARCOS (City) TX (State) 78617 (Zip) STATE GRID # 67-02-7

3) TYPE OF WORK (Check): [X] New Well [ ] Deepening [ ] Reconditioning [ ] Plugging

4) PROPOSED USE (Check): [ ] Monitor [X] Environmental Soil Boring [ ] Domestic [ ] Industrial [ ] Irrigation [ ] Injection [ ] Public Supply [ ] De-watering [ ] Testwell
If Public Supply well, were plans submitted to the TNRCC ? [ ] Yes [ ] No

5)

6) WELL LOG: SB-11
Date Drilling Started: 9/22 19 97
Completed: 9/22 19 97

DIAMETER OF HOLE Dia. (in.)	From (ft.)	To (ft.)
8	0.0	35.0

7) DRILLING METHOD (Check): [ ] Driven [ ] Air Rotary [ ] Mud Rotary [ ] Bored [ ] Air Hammer [ ] Cable Tool [ ] Jetted [X] Other HSA

From(ft.)	To(ft.)	Description and color of formation material
0.0	0.5	ASPHALT
0.5	10.5	SILTY CLAY, SOME GRAVEL WITH DEPTH, BROWN
10.5	18.5	SANDY CLAY TO CLAYEY SAND, PALE BROWN TO RUST
18.5	29.0	SANDY CLAYEY GRAVEL TO SANDY CLAY TO CLAY
29.0	35.0	CLAY TO SILTY CALY, PALE BROWN TO GREY

8) Borehole Completion (Check): N/A [ ] Open Hole [ ] Straight Wall [ ] Underreamed [ ] Gravel Packed [ ] Other
If gravel packed give interval ... from ____ ft. to ____ ft.

CASING, BLANK PIPE, AND WELL SCREEN DATA:

Dia. (in.)	New or Used	Steel, Plastic, etc. Perf., Slotted, etc. Screen Mfg., if Commercial	Setting (ft.) From	Setting (ft.) To	Gage Casting Screen

9) CEMENTING DATA [RULE 338.44(1)]
Cemented from 0.0 ft. to 35.0 ft. No. of sacks used ____
____ ft. to ____ ft. No. of sacks used ____
Method used ____
Cemented by BENNY HINOJOSA
Distance to septic system field lines ____ ft.
Method of verification of above distance ____

10) SURFACE COMPLETION
[ ] Specified Surface Slab Installed [Rule 338.44(2)(A)]
[ ] Specified Steel Sleeve Installed [Rule 338.44(3)(A)]
[ ] Pitless Adapter Used [Rule 338.44(3)(b)]
[X] Approved Alternative Procedure Used [Rule 338.71]

11) WATER LEVEL: N/A
Static level ____ ft. below land surface Date ____
Artesian flow ____ gpm. Date ____

12) PACKERS: N/A Type Depth

13) TYPE PUMP: N/A
[ ] Turbine [ ] Jet [ ] Submersible [ ] Cylinder
[ ] Other ____
Depth to pump bowls, cylinder, jet, etc., ____ ft.

14) WELL TESTS: N/A
Type test: [ ] Pump [ ] Bailer [ ] Jetted [ ] Estimated
Yield: ____ gpm with ____ ft. drawdown after ____ hrs.

15) WATER QUALITY:
Did you knowingly penetrate any strata which contained undesirable constituents?
[ ] Yes [X] No If yes, submit "REPORT OF UNDESIRABLE WATER"
Type of water? ____ Depth of strata ____
Was a chemical analysis made? [ ] Yes [ ] No

I hereby certify that this well was drilled by me (or under my supervision) and that each and all of the statements herein are true to the best of my knowledge and belief. I understand that failure to complete items 1 thru 15 will result in the log(s) being returned for completion and resubmittal.

COMPANY NAME: GEOPROJECTS INTERNATIONAL INC. (Type or print) WELL DRILLER'S LICENSE NO. 3127M

ADDRESS: 8834 CIRCLE DRIVE (Street or RFD) AUSTIN (City) TX (State) 78736 (Zip)

(Signed) BENNY HINOJOSA (Licensed Well Driller) (Signed) ____ (Registered Driller Trainee)

Please attach electric log, chemical analysis, and other pertinent information, if available.

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State of Texas
WELL REPORT

Texas Water Well Drillers Advisory Council
P.O. Box 12157
Austin, Tx. 78711
1 800 803 9202 EXT. 9

1) OWNER U.S. ARMY CORPS OF ENGINEERS (NAME) ADDRESS 819 TAYLOR STREET (Street or RFD) FT. WORTH (City) TX (State) 76102 (Zip)

2) ADDRESS OF WELL: County CALDWELL FORMER GARY AIR FORCE BASE ON HWY 21 (Street or RFD) SAM MARCOS (City) TX (State) 78617 (Zip) STATE GRID # 67-02-7

3) TYPE OF WORK (Check):
[X] New Well [ ] Deepening
[ ] Reconditioning [ ] Plugging

4) PROPOSED USE (Check): [ ] Monitor [X] Environmental Soil Boring [ ] Domestic
[ ] Industrial [ ] Irrigation [ ] Injection [ ] Public Supply [ ] De-watering [ ] Testwell
If Public Supply well, were plans submitted to the TNRCC ? [ ] Yes [ ] No

5)

6) WELL LOG: SB-12
Date Drilling
Started: 9/23 19 97
Completed: 9/23 19 97

DIAMETER OF HOLE		
Dia. (in.)	From (ft.)	To (ft.)
8	0.0	32.0

7) DRILLING METHOD (Check): [ ] Driven
[ ] Air Rotary [ ] Mud Rotary [ ] Bored
[ ] Air Hammer [ ] Cable Tool [ ] Jetted
[X] Other HSA

N

From(ft.)	To(ft.)	Description and color of formation material
0.0	0.5	ASPHALT
0.5	11.0	SILTY CLAY, SOME GRAVEL/SAND WITH DEPTH,GREY/BROWN
11.0	18.0	SANDY CLAY TO CLAYEY SAND, VERY PALE BROWN
18.0	20.0	SANDY CLAYEY GRAVEL TO GRAVELLY SANDY CLAY
20.0	24.0	SILTY CLAY, LIGHT GREY/GREENISH
24.0	25.0	SANDY GRAVELLY CLAY, VERY PALE BROWN
25.0	32.0	CLAY TO SILTY CLAY, LIGHT GREY

8) Borehole Completion (Check): N/A [ ] Open Hole [ ] Straight Wall
[ ] Underreamed [ ] Gravel Packed [ ] Other
If gravel packed give interval ... from ____ ft. to ____ ft.

CASING, BLANK PIPE, AND WELL SCREEN DATA:

Dia. (in.)	New or Used	Steel, Plastic, etc. Perf., Slotted, etc. Screen Mfg., if Commercial	Setting (ft.) From	Setting (ft.) To	Gage Casting Screen

9) CEMENTING DATA [RULE 338.44(1)]
Cemented from 0.0 ft. to 32.0 ft. No. of sacks used ____
____ ft. to ____ ft. No. of sacks used ____
Method used
Cemented by BENNY HINOJOSA
Distance to septic system field lines ____ ft.
Method of verification of above distance

10) SURFACE COMPLETION
[ ] Specified Surface Slab Installed [Rule 338.44(2)(A)]
[ ] Specified Steel Sleeve Installed [Rule 338.44(3)(A)]
[ ] Pitless Adapter Used [Rule 338.44(3)(b)]
[X] Approved Alternative Procedure Used [Rule 338.71]

11) WATER LEVEL: N/A
Static level ____ ft. below land surface Date
Artesian flow ____ gpm. Date

12) PACKERS: N/A Type Depth

13) TYPE PUMP: N/A
[ ] Turbine [ ] Jet [ ] Submersible [ ] Cylinder
[ ] Other
Depth to pump bowls, cylinder, jet, etc., ____ ft.

14) WELL TESTS: N/A
Type test: [ ] Pump [ ] Bailer [ ] Jetted [ ] Estimated
Yield: ____ gpm with ____ ft. drawdown after ____ hrs.

15) WATER QUALITY:
Did you knowingly penetrate any strata which contained undesirable constituents?
[ ] Yes [X] No If yes, submit "REPORT OF UNDESIRABLE WATER"
Type of water? Depth of strata
Was a chemical analysis made? [ ] Yes [ ] No

I hereby certify that this well was drilled by me (or under my supervision) and that each and all of the statements herein are true to the best of my knowledge and belief. I understand that failure to complete items 1 thru 15 will result in the log(s) being returned for completion and resubmittal.

COMPANY NAME GEOPROJECTS INTERNATIONAL INC. (Type or print) WELL DRILLER'S LICENSE NO. 3127M

ADDRESS 8834 CIRCLE DRIVE (Street or RFD) AUSTIN (City) TX (State) 78736 (Zip)

(Signed) BENNY HINOJOSA (Licensed Well Driller) (Signed) (Registered Driller Trainee)

Please attach electric log, chemical analysis, and other pertinent information, if available.

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State of Texas WELL REPORT

Texas Water Well Drillers Advisory Council
P.O. Box 12157
Austin, Tx. 78711
1 800 803 9202 EXT. 9

1) OWNER U.S. ARMY CORPS OF ENGINEERS (NAME) ADDRESS 819 TAYLOR STREET (Street or RFD) FT. WORTH (City) TX (State) 76102 (Zip)

2) ADDRESS OF WELL: County CALDWELL FORMER GARY AIR FORCE BASE ON HWY 21 (Street or RFD) SAM MARCOS (City) TX (State) 78617 (Zip) STATE GRID # 67-02-7

3) TYPE OF WORK (Check): [X] New Well [ ] Deepening [ ] Reconditioning [ ] Plugging

4) PROPOSED USE (Check): [ ] Monitor [X] Environmental Soil Boring [ ] Domestic [ ] Industrial [ ] Irrigation [ ] Injection [ ] Public Supply [ ] De-watering [ ] Testwell
If Public Supply well, were plans submitted to the TNRCC ? [ ] Yes [ ] No

5)

6) WELL LOG: SB-13
Date Drilling Started: 9/23 19 97 Completed: 9/23 19 97

DIAMETER OF HOLE		
Dia. (in.)	From (ft.)	To (ft.)
8	0.0	50.0

7) DRILLING METHOD (Check): [ ] Driven [ ] Air Rotary [ ] Mud Rotary [ ] Bored [ ] Air Hammer [ ] Cable Tool [ ] Jetted [X] Other HSA

N

From(ft.)	To(ft.)	Description and color of formation material
0.0	0.5	TOP SOIL AND BASE MATERIALS
0.5	15.0	SILTY SANDY CLAY WITH GRAVEL DECREASING W/ DEPTH
15.0	16.0	SILTY CLAY
16.0	17.0	SANDY CLAY TO CLAYEY SAND
17.0	50.0	SILTY CLAY TO CLAY TO SILTY CLAY

8) Borehole Completion (Check): N/A [ ] Open Hole [ ] Straight Wall [ ] Underreamed [ ] Gravel Packed [ ] Other
If gravel packed give interval ... from ____ ft. to ____ ft.

CASING, BLANK PIPE, AND WELL SCREEN DATA:

Dia. (in.)	New or Used	Steel, Plastic, etc. Perf., Slotted, etc. Screen Mfg., if Commercial	Setting (ft.) From	Setting (ft.) To	Gage Casting Screen

9) CEMENTING DATA [RULE 338.44(1)]
Cemented from 0.0 ft. to 50.0 ft. No. of sacks used ____
____ ft. to ____ ft. No. of sacks used ____
Method used ____
Cemented by BENNY HINOJOSA
Distance to septic system field lines ____ ft.
Method of verification of above distance ____

13) TYPE PUMP: N/A
[ ] Turbine [ ] Jet [ ] Submersible [ ] Cylinder
[ ] Other ____
Depth to pump bowls, cylinder, jet, etc., ____ ft.

10) SURFACE COMPLETION
[ ] Specified Surface Slab Installed [Rule 338.44(2)(A)]
[ ] Specified Steel Sleeve Installed [Rule 338.44(3)(A)]
[ ] Pitless Adapter Used [Rule 338.44(3)(b)]
[X] Approved Alternative Procedure Used [Rule 338.71]

14) WELL TESTS: N/A
Type test: [ ] Pump [ ] Bailer [ ] Jetted [ ] Estimated
Yield: ____ gpm with ____ ft. drawdown after ____ hrs.

11) WATER LEVEL: N/A
Static level ____ ft. below land surface Date ____
Artesian flow ____ gpm. Date ____

15) WATER QUALITY:
Did you knowingly penetrate any strata which contained undesirable constituents?
[ ] Yes [X] No If yes, submit "REPORT OF UNDESIRABLE WATER"
Type of water? ____ Depth of strata ____
Was a chemical analysis made? [ ] Yes [ ] No

12) PACKERS: N/A Type Depth

I hereby certify that this well was drilled by me (or under my supervision) and that each and all of the statements herein are true to the best of my knowledge and belief. I understand that failure to complete items 1 thru 15 will result in the log(s) being returned for completion and resubmittal.

COMPANY NAME GEOPROJECTS INTERNATIONAL INC. (Type or print) WELL DRILLER'S LICENSE NO. 3127M

ADDRESS 8834 CIRCLE DRIVE (Street or RFD) AUSTIN (City) TX (State) 78736 (Zip)

(Signed) BENNY HINOJOSA (Licensed Well Driller) (Signed) ____ (Registered Driller Trainee)

Please attach electric log, chemical analysis, and other pertinent information, if available.

TNRCC-0199 (Rev. 09-01-93) TNRCC COPY

Send original copy by certified mail to: TDLR, P.O. Box 12157, Austin, TX 78711

Please use black ink.

ATTENTION OWNER: *Confidentiality Privilege Notice on Reverse Side*

State of Texas WELL REPORT

Texas Water Well Drillers Advisory Council
P.O. Box 12157
Austin, Tx. 78711
1 800 803 9202 EXT. 9

1) OWNER U.S. ARMY CORPS OF ENGINEERS (NAME) ADDRESS 819 TAYLOR STREET (Street or RFD) FT. WORTH (City) TX (State) 76102 (Zip)

2) ADDRESS OF WELL: County CALDWELL FORMER GARY AIR FORCE BASE ON HWY 21 (Street or RFD) SAM MARCOS (City) TX (State) 78617 (Zip) STATE GRID # 87-02-7

3) TYPE OF WORK (Check): [X] New Well [ ] Deepening [ ] Reconditioning [ ] Plugging

4) PROPOSED USE (Check): [ ] Monitor [X] Environmental Soil Boring [ ] Domestic [ ] Industrial [ ] Irrigation [ ] Injection [ ] Public Supply [ ] De-watering [ ] Testwell
If Public Supply well, were plans submitted to the TNRCC ? [ ] Yes [ ] No

5)

6) WELL LOG: SB-14
Date Drilling Started: 9/24 19 97 Completed: 9/24 19 97

DIAMETER OF HOLE		
Dia. (in.)	From (ft.)	To (ft.)
8	0.0	35.0

7) DRILLING METHOD (Check): [ ] Driven [ ] Air Rotary [ ] Mud Rotary [ ] Bored [ ] Air Hammer [ ] Cable Tool [ ] Jetted [X] Other HSA

N

From(ft.)	To(ft.)	Description and color of formation material
0.0	0.5	SILTY CLAY, GRAVEL FILL MATERIAL
0.5	6.0	SILTY CLAY, VERY DARK BROWN
6.0	18.5	SILTY SANDY CLAY, SOME GRAVEL WITH DEPTH
18.5	24.0	SILTY CLAY, PALE BROWN
24.0	25.0	SILTY SANDY CLAY, TAN
25.0	26.0	SANDY CLAYEY GRAVEL
26.0	35.0	SILTY CLAY, PALE BROWN

8) Borehole Completion (Check): N/A [ ] Open Hole [ ] Straight Wall [ ] Underreamed [ ] Gravel Packed [ ] Other
If gravel packed give interval ... from ____ ft. to ____ ft.

CASING, BLANK PIPE, AND WELL SCREEN DATA:

Dia. (in.)	New or Used	Steel, Plastic, etc. Perf., Slotted, etc. Screen Mfg., if Commercial	Setting (ft.) From	Setting (ft.) To	Gage Casting Screen

9) CEMENTING DATA [RULE 338.44(1)]
Cemented from 0.0 ft. to 35.0 ft. No. of sacks used ____
____ ft. to ____ ft. No. of sacks used ____
Method used ____
Cemented by BENNY HINOJOSA
Distance to septic system field lines ____ ft.
Method of verification of above distance ____

13) TYPE PUMP: N/A
[ ] Turbine [ ] Jet [ ] Submersible [ ] Cylinder
[ ] Other ____
Depth to pump bowls, cylinder, jet, etc., ____ ft.

10) SURFACE COMPLETION
[ ] Specified Surface Slab Installed [Rule 338.44(2)(A)]
[ ] Specified Steel Sleeve Installed [Rule 338.44(3)(A)]
[ ] Pitless Adapter Used [Rule 338.44(3)(b)]
[X] Approved Alternative Procedure Used [Rule 338.71]

14) WELL TESTS: N/A
Type test: [ ] Pump [ ] Bailer [ ] Jetted [ ] Estimated
Yield: ____ gpm with ____ ft. drawdown after ____ hrs.

11) WATER LEVEL: N/A
Static level ____ ft. below land surface Date ____
Artesian flow ____ gpm. Date ____

15) WATER QUALITY:
Did you knowingly penetrate any strata which contained undesirable constituents?
[ ] Yes [X] No If yes, submit "REPORT OF UNDESIRABLE WATER"
Type of water? ____ Depth of strata ____
Was a chemical analysis made? [ ] Yes [ ] No

12) PACKERS: N/A Type Depth

I hereby certify that this well was drilled by me (or under my supervision) and that each and all of the statements herein are true to the best of my knowledge and belief. I understand that failure to complete items 1 thru 15 will result in the log(s) being returned for completion and resubmittal.

COMPANY NAME GEOPROJECTS INTERNATIONAL INC. (Type or print) WELL DRILLER'S LICENSE NO. 3127M

ADDRESS 8834 CIRCLE DRIVE (Street or RFD) AUSTIN (City) TX (State) 78736 (Zip)

(Signed) BENNY HINOJOSA (Licensed Well Driller) (Signed) ____ (Registered Driller Trainee)

Please attach electric log, chemical analysis, and other pertinent information, if available.

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Send original copy by certified mail to: TDLR, P.O. Box 12157, Austin, TX 78711

Please use black ink.

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State of Texas WELL REPORT

Texas Water Well Drillers Advisory Council
P.O. Box 12157
Austin, Tx. 78711
1 800 803 9202 EXT. 9

1) OWNER U.S. ARMY CORPS OF ENGINEERS (NAME) ADDRESS 819 TAYLOR STREET (Street or RFD) FT. WORTH (City) TX (State) 76102 (Zip)

2) ADDRESS OF WELL: County CALDWELL FORMER GARY AIR FORCE BASE ON HWY 21 (Street or RFD) SAM MARCOS (City) TX (State) 78617 (Zip) STATE GRID # 67-02-7

3) TYPE OF WORK (Check): [X] New Well [ ] Deepening [ ] Reconditioning [ ] Plugging

4) PROPOSED USE (Check): [X] Monitor [ ] Environmental Soil Boring [ ] Domestic [ ] Industrial [ ] Irrigation [ ] Injection [ ] Public Supply [ ] De-watering [ ] Testwell
If Public Supply well, were plans submitted to the TNRCC ? [ ] Yes [ ] No

5)

6) WELL LOG: MW-2
Date Drilling
Started: 9/24 19 97
Completed: 9/24 19 97

DIAMETER OF HOLE		
Dia. (in.)	From (ft.)	To (ft.)
8	0.0	40.0

7) DRILLING METHOD (Check): [ ] Driven [ ] Air Rotary [ ] Mud Rotary [ ] Bored [ ] Air Hammer [ ] Cable Tool [ ] Jetted [X] Other HSA

N

From(ft.)	To(ft.)	Description and color of formation material
0.0	1.5	SOILS AND BASE MATERIALS
1.5	6.0	SILTY CLAY, DARK GREY
6.0	10.0	SILTY, SANDY CLAY WITH GRAVEL, PALE BROWN TO WHITE
10.0	11.0	CLAYEY SAND, VERY PALE BROWN
11.0	18.5	SANDY CLAY, SOME GRAVEL, VERY PALE BROWN
18.5	22.0	SILTY CLAY WITH GRAVEL SOME SAND WHITE -PALE BROWN
22.0	26.0	SANDY CLAY TURNS GRAVELLY, LT. GREY-PALE BROWN
26.0	30.0	SILTY CLAY, VERY PALE BROWN

8) Borehole Completion (Check): [ ] Open Hole [ ] Straight Wall [ ] Underreamed [X] Gravel Packed [ ] Other
If gravel packed give interval ... from 18.0 ft. to 30.0 ft.

CASING, BLANK PIPE, AND WELL SCREEN DATA:

Dia. (in.)	New or Used	Steel, Plastic, etc. Perf., Slotted, etc. Screen Mfg., if Commercial	Setting (ft.) From	Setting (ft.) To	Gage Casting Screen
2.0	N	SCH 40 PVC RISER	0.0	20.0	
2.0	N	SCH 40 PVC RISER	20.0	30.0	0.010

9) CEMENTING DATA [RULE 338.44(1)]
Cemented from 0.0 ft. to 15.5 ft. No. of sacks used
HOLE PLUG 15.5 ft. to 18.0 ft. No. of sacks used
Method used
Cemented by BENNY HINOJOSA
Distance to septic system field lines ft.
Method of verification of above distance

13) TYPE PUMP: N/A
[ ] Turbine [ ] Jet [ ] Submersible [ ] Cylinder
[ ] Other
Depth to pump bowls, cylinder, jet, etc., ft.

10) SURFACE COMPLETION
[ ] Specified Surface Slab Installed [Rule 338.44(2)(A)]
[ ] Specified Steel Sleeve Installed [Rule 338.44(3)(A)]
[ ] Pitless Adapter Used [Rule 338.44(3)(b)]
[X] Approved Alternative Procedure Used [Rule 338.71]

14) WELL TESTS: N/A
Type test: [ ] Pump [ ] Bailer [ ] Jetted [ ] Estimated
Yield: gpm with ft. drawdown after hrs.

11) WATER LEVEL: N/A
Static level ft. below land surface Date
Artesian flow gpm. Date

15) WATER QUALITY:
Did you knowingly penetrate any strata which contained undesirable constituents?
[ ] Yes [X] No If yes, submit "REPORT OF UNDESIRABLE WATER"
Type of water? Depth of strata
Was a chemical analysis made? [ ] Yes [ ] No

12) PACKERS: N/A Type Depth

I hereby certify that this well was drilled by me (or under my supervision) and that each and all of the statements herein are true to the best of my knowledge and belief. I understand that failure to complete items 1 thru 15 will result in the log(s) being returned for completion and resubmittal.

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ADDRESS 8834 CIRCLE DRIVE (Street or RFD) AUSTIN (City) TX (State) 78736 (Zip)

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State of Texas WELL REPORT

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3) TYPE OF WORK (Check): [X] New Well [ ] Deepening [ ] Reconditioning [ ] Plugging

4) PROPOSED USE (Check): [ ] Monitor [X] Environmental Soil Boring [ ] Domestic [ ] Industrial [ ] Irrigation [ ] Injection [ ] Public Supply [ ] De-watering [ ] Testwell
If Public Supply well, were plans submitted to the TNRCC ? [ ] Yes [ ] No

5)

6) WELL LOG: SB-16
Date Drilling
Started: 9/24 19 97
Completed: 9/24 19 97

DIAMETER OF HOLE

Dia. (in.)	From (ft.)	To (ft.)
8	0.0	30.0

7) DRILLING METHOD (Check): [ ] Driven [ ] Air Rotary [ ] Mud Rotary [ ] Bored [ ] Air Hammer [ ] Cable Tool [ ] Jetted [X] Other HSA

N

From(ft.)	To(ft.)	Description and color of formation material
0.0	0.5	TOP SOIL
0.5	6.5	SILTY CLAY WITH SAND
6.5	10.0	SILTY CLAYEY GRAVEL TO SITY GRAVELLY CLAY
10.0	18.5	SILTY SANDY CLAY, SOME GRAVEL AT DEPTH
18.5	20.0	CLAYEY GRAVELLY SAND TO CLAYEY SANDY GRAVEL
20.0	23.0	SILTY SANDY CLAY, WITH GRAVEL, PALE BROWN
23.0	30.0	SILTY CLAY, PALE BROWN TO RUST

8) Borehole Completion (Check): N/A [ ] Open Hole [ ] Straight Wall [ ] Underreamed [ ] Gravel Packed [ ] Other
If gravel packed give interval ... from ____ ft. to ____ ft.

CASING, BLANK PIPE, AND WELL SCREEN DATA:

Dia. (In.)	New or Used	Steel, Plastic, etc. Perf., Slotted, etc. Screen Mfg., if Commercial	Setting (ft.) From	Setting (ft.) To	Gage Casting Screen

9) CEMENTING DATA [RULE 338.44(1)]
Cemented from 0.0 ft. to 30.0 ft. No. of sacks used ____
____ ft. to ____ ft. No. of sacks used ____
Method used
Cemented by BENNY HINOJOSA
Distance to septic system field lines ____ ft.
Method of verification of above distance

13) TYPE PUMP: N/A
[ ] Turbine [ ] Jet [ ] Submersible [ ] Cylinder
[ ] Other
Depth to pump bowls, cylinder, jet, etc., ____ ft.

10) SURFACE COMPLETION
[ ] Specified Surface Slab Installed [Rule 338.44(2)(A)]
[ ] Specified Steel Sleeve Installed [Rule 338.44(3)(A)]
[ ] Pitless Adapter Used [Rule 338.44(3)(b)]
[X] Approved Alternative Procedure Used [Rule 338.71]

14) WELL TESTS: N/A
Type test: [ ] Pump [ ] Bailer [ ] Jetted [ ] Estimated
Yield: ____ gpm with ____ ft. drawdown after ____ hrs.

11) WATER LEVEL: N/A
Static level ____ ft. below land surface Date
Artesian flow ____ gpm. Date

15) WATER QUALITY:
Did you knowingly penetrate any strata which contained undesirable constituents?
[ ] Yes [X] No If yes, submit "REPORT OF UNDESIRABLE WATER"
Type of water? ____ Depth of strata ____
Was a chemical analysis made? [ ] Yes [ ] No

12) PACKERS: N/A Type Depth

I hereby certify that this well was drilled by me (or under my supervision) and that each and all of the statements herein are true to the best of my knowledge and belief. I understand that failure to complete items 1 thru 15 will result in the log(s) being returned for completion and resubmittal.

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Please attach electric log, chemical analysis, and other pertinent information, if available.

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Attachment 15
Sample Summary Tables

Soil Sample Tables - Risk-Based Site Assessment*

*Compiled from data gathered by Thompson Professional Group, Inc., from samples collected May 16, 1996 through July 17, 1996, and September 22-25, 1997.

Phase 1 Soil Sample Descriptions
LPST 108133

Boring Location	Depth (ft. BGS)	Field ID#	Lab ID#	Date Sampled	Time Sampled	Parameters Analyzed	PID Reading
Boring 1	22	B1-1022	9605D61-01	5/14/96	10:58 AM	BTEX, TPH, PAHs	1041ppm
Boring 1	26.5	B1-1026	9605D61-03	5/14/96	11:04 AM	BTEX, TPH, PAHs	836 ppm
Boring 1	35	B1-1035	9605D61-02	5/14/96	11:20 AM	BTEX, TPH, PAHs	195 ppm
Boring 2	17	B2-2117	9605D61-05	5/15/96	11:43 AM	BTEX, TPH, PAHs	34.7 ppm
Boring 2	21.5	B2-2121	9605D61-06	5/15/96	9:15 AM	BTEX, TPH, PAHs	51.2 ppm
Boring 2	30	B2-2130	9605D61-04	5/15/96	11:25 AM	BTEX, TPH, PAHs	4.4 ppm
Boring 3	17	B3-3217	9605D61-08	5/15/96	3:34 PM	BTEX, TPH, PAHs	5.9 ppm
Boring 3	22	B3-3222	9605D61-09	5/15/96	3:35 PM	BTEX, TPH, PAHs	15.6 ppm
Boring 3	30	B3-3230	9605D61-07	5/15/96	11:25 AM	BTEX, TPH, PAHs	4.2 ppm
Boring 4	16	B4-4316	9605D61-11	5/15/96	4:25 PM	BTEX, TPH, PAHs	42.0 ppm
Boring 4	18.5	B4-43.8	9605D61-12	5/15/96	2:50 PM	BTEX, TPH, PAHs	70.9 ppm
Boring 4	30	B4-4330	9605D61-10	5/15/96	3:10 PM	BTEX, TPH, PAHs	25.5 ppm
Boring 5	14	B5-5414	9605D61-15	5/16/96	8:55 AM	BTEX, TPH, PAHs	686 ppm
Boring 5	17	B5-5417	9605D61-14	5/16/96	11:44 AM	BTEX, TPH, PAHs	1437 ppm
Boring 5	20.5	B5-5420	9605D61-16	5/16/96	9:15 AM	BTEX, TPH, PAHs	124 ppm
Boring 5	30	B5-5430	9605D61-13	5/16/96	10:55 AM	BTEX, TPH, PAHs	49.1 ppm
Boring 6	17	B6-6517	9605D61-18	5/16/96	1:37 PM	BTEX, TPH, PAHs	178 ppm
Boring 6	20	B6-6520	9605D61-19	5/16/96	10:55 AM	BTEX, TPH, PAHs	382 ppm
Boring 6	30 ft.	B6-6530	9605D61-17	5/16/96	10:45 AM	BTEX, TPH, PAHs	42.8 ppm
Boring 7	17	B7-7617	9605952-03	5/16/96	5:08 PM	BTEX, TPH, PAHs	31.0 ppm
Boring 7	22	B7-7622	9605952-01	5/16/96	2:33 PM	BTEX, TPH, PAHs	68.7 ppm
Boring 7	30	B7-7630	9605952-02	5/16/96	2:47 PM	BTEX, TPH, PAHs	23.6 ppm
Boring 8	5	B8-8705	9605952-07	5/17/96	8:45 AM	BTEX, TPH, PAHs	150 ppm
Boring 8	17	B8-8717	9605952-05	5/16/96	5:50 PM	BTEX, TPH, PAHs	75 ppm
Boring 8	20.5	B8-8720	9605952-06	5/16/96	4:30 PM	BTEX, TPH, PAHs	52 ppm
Boring 8	30	B7-8730	9605952-04	5/16/96	4:47 PM	BTEX, TPH, PAHs	9 ppm

Phase 2 Soil Sample Descriptions
LPST 108133

Boring Location	Depth (ft. BGS)	Field ID#	Lab ID#	Date Sampled	Time Sampled	Parameters Analyzed	PID Reading
Boring 10	20	SB10-20	31153.01	9/22/97	4:35 PM	BTEX, TPH	757 ppm
Boring 10	35	SB10-35	31153.02	9/22/97	1:37 PM	BTEX, TPH	657 ppm
Boring 11	10	SB11-10	31175.01	9/23/97	11:55 AM	BTEX, TPH	138 ppm
Boring 11	35	SB11-35	31153.03	9/22/97	3:20 PM	BTEX, TPH	66 ppm
Boring 12	20	SB12-20	31175.02	9/23/97	4:23 PM	BTEX, TPH	0 ppm
Boring 12	30	SB12-30	31175.03	9/23/97	4:25 PM	BTEX, TPH	0 ppm
Boring 13	34	SB13-34	31175.04	9/23/97	3:20 PM	BTEX, TPH	580 ppm
Boring 13	34 (Dup.)	SB13-56	31175.05	9/23/97	3:25 PM	BTEX, TPH	580 ppm
Boring 13	48	SB13-48	31175.06	9/23/97	2:45 PM	BTEX, TPH	52.5 ppm
Boring 14	22	SB14-22	31189.06	9/24/97	4:15 PM	BTEX, TPH	12.3 ppm
Boring 14	22 (Dup.)	SB14-24	31189.07	9/24/97	4:15 PM	BTEX, TPH	12.3 ppm
Boring 14	34	SB14-34	31179.08	9/24/97	3:15 PM	BTEX, TPH	0.3 ppm
Boring 15	22	SB15-22	31189.02	9/24/97	8:45 AM	BTEX, TPH	
Boring 15	24	SB15-24	31189.01	9/24/97	8:55 AM	BTEX, TPH	
Boring 15	28	SB15-28	31189.03	9/24/97	10:05 AM	BTEX, TPH	
Boring 16	20	SB16-20	31189.05	9/24/97	2:55 PM	BTEX, TPH	228 ppm
Boring 16	28	SB16-28	31189.04	9/24/97	12:20 PM	BTEX, TPH	6.5 ppm

Phase 1 Ground Water Sample Descriptions
LPST 108133

Monitoring Well	Field ID#	Lab ID#	Date Sampled	Time Sampled	Other Notes	Parameters Analyzed
MW 1	G1-1234	9605D61-20	5/16/96	11:05 AM	Inital Well Sample	BTEX
MW 1	G1-3234	9605D61-21	5/16/96	3:15 PM	Rinsate Blank	BTEX
MW 1	G1-4234	9605D61-22	5/16/96	11:25 AM	Rinsate Blank	BTEX
MW 1	G1-5234	9605D61-23	5/16/96	11:10 AM	Inital Well Sample	TPH
MW 1	G1-7234	9605D61-24	5/16/96	3:20 PM	Rinsate Blank	TPH
MW 1	G1-8234	9605D61-25	5/16/96	11:25 AM	Rinsate Blank	TPH
MW 1	MW-1-7471	9605F42-01	5/30/96	1:13 PM	Well Sample	BTEX
MW 1	MW-1-7472	9605F42-02	5/30/96	1:15 PM	Duplicate of 7471	BTEX
MW 1	MW-1-7473	9605F42-03	5/30/96	1:18 PM	Well Sample	PAHs
MW 1	MW1-7480	9607861-01	7/17/96	2:30 PM	Blank	TDS
MW 1	MW1-7481	9607861-02	7/17/96	3:00 PM	Well Sample	TDS

Phase 2 Ground Water Sample Descriptions
LPST 108133

Monitoring Well	Field ID#	Lab ID#	Date Sampled	Time Sampled	Other Notes	Parameters Analyzed
MW 2	MW2-25	31204.03	9/25/97	2:04 PM	Well Sample	BTEX, TPH, PAH, TDS
MW 2	MW2-30	31204.04	9/25/97	2:05 PM	Duplicate of MW2-25	BTEX, TPH, PAH, TDS
MW 2	TB-1	31204.01	9/25/97	2:06 PM	Trip Blank	BTEX
MW 2	MW2-35	31204.02	9/25/97	2:06 PM	Equipment Blank	BTEX, TPH, PAH, TDS

SOIL & GROUNDWATER SAMPLING ANALYTICAL RESULTS

Former Gary Air Force Base LPST # 108133				Soil Boring No.1/Ground Water Monitoring Well No. 1								Caldwell County, Texas
Compound	Soil Samples			Groundwater Samples								
	B1-1022	B1-1035	B1-1026	G1-1234	Rinsate	Rinsate	G1-5234	Rinsate	Rinsate	MW-1-7471	Duplicate	MW-1-7473
BTEX	[µg/kg]	[µg/kg]	[µg/kg]	[µg/L]	[µg/L]	[µg/L]				[µg/L]	[µg/L]	
Benzene	< 1	39	300	1500	<1	<1				1000	1100	
Toluene	< 1	<5	<50	8	<1	<1				9	7	
Ethylbenzene	2	180	1700	170	<1	<1				110	110	
Total Xylene	6	77	1750	<5	<1	1				<5	<5	
Total BTEX	8	296	3750	1678	<1	1				1119	1217	
TPH	[mg/kg]	[mg/kg]	[mg/kg]				[mg/L]	[mg/L]	[mg/L]			
	17	34	270				7	<0.5	<0.5			
PAH	[µg/kg]	[µg/kg]	[µg/kg]									
Naphthalene	<60	32	900									170
Acenaphthylene	<30	< 1.5	<150									<10
Acenaphthene	<100	< 5	<500									<20
Fluorene	<112	< 5.6	<560									<40
Phenanthrene	<104	< 5.2	<520									<40
Anthracene	<90	< 4.5	<450									<20
Fluoranthene	<76	< 3.8	<380									<20
Pyrene	<70	< 3.5	<350									<20
Chrysene	<54	< 2.7	<270									<16
Benzo a anthracene	<54	< 2.7	<270									<16
Benzo b fluoranthene	<44	< 2.2	<220									<12
Benzo k fluoranthene	<48	< 2.4	<240									<14
Benzo a pyrene	<22	< 1.1	<110									<6
Dibenzo a,h anthracene	<48	< 2.4	<240									<14
Benzo g,h,i perylene	<70	< 3.5	<350									<20
Indeno 1,2,3-cd pyrene	<52	< 2.6	<260									<16

SOIL & GROUNDWATER SAMPLING ANALYTICAL RESULTS

Former Gary Air Force Base LPST # 108133				Soil Boring No. 2	Caldwell County, Texas
Compound	Soil Samples			Groundwater Samples	
	B2-2130	B2-2117	B2-2121		
BTEX	[µg/kg]	[µg/kg]	[µg/kg]		
Benzene	< 1	2	< 1		
Toluene	< 1	2	< 1		
Ethylbenzene	< 1	4	< 1		
Total Xylene	< 1	3	< 1		
Total BTEX	< 1	11	< 1		
TPH	[mg/kg]	[mg/kg]	[mg/kg]		
	13	32	<10		
PAH	[µg/kg]	[µg/kg]	[µg/kg]		
Naphthalene	< 3	< 3	< 3		
Acenaphthylene	< 1.5	< 1.5	< 1.5		
Acenaphthene	< 5	< 5	< 5		
Fluorene	< 5.6	< 5.6	< 5.6		
Phenanthrene	< 5.2	< 5.2	< 5.2		
Anthracene	< 4.5	< 4.5	< 4.5		
Fluoranthene	< 3.8	< 3.8	< 3.8		
Pyrene	< 3.5	< 3.5	< 3.5		
Chrysene	< 2.7	< 2.7	< 2.7		
Benzo a anthracene	< 2.7	< 2.7	< 2.7		
Benzo b fluoranthene	< 2.2	< 2.2	< 2.2		
Benzo k fluoranthene	< 2.4	< 2.4	< 2.4		
Benzo a pyrene	< 1.1	< 1.1	< 1.1		
Dibenzo a,h anthracene	< 2.4	< 2.4	< 2.4		
Benzo g,h,i perylene	< 3.5	< 3.5	< 3.5		
Indeno 1,2,3-cd pyrene	< 2.6	< 2.6	< 2.6		

SOIL & GROUNDWATER SAMPLING ANALYTICAL RESULTS

Former Gary Air Force Base LPST # 108133				Soil Boring No. 3	Caldwell County, Texas
Compound	Soil Samples			Groundwater Samples	
	B3-3230	B3-3217	B3-3222		
BTEX	[µg/kg]	[µg/kg]	[µg/kg]		
Benzene	< 1	< 1	< 1		
Toluene	< 1	< 1	< 1		
Ethylbenzene	< 1	< 1	2		
Total Xylene	< 1	< 1	ND		
Total BTEX	< 1	< 1	2		
TPH	[mg/kg]	[mg/kg]	[mg/kg]		
	<10	<10	<10		
PAH	[µg/kg]	[µg/kg]	[µg/kg]		
Naphthalene	< 3	< 15	< 15		
Acenaphthylene	< 1.5	< 7.5	< 7.5		
Acenaphthene	< 5	< 25	< 25		
Fluorene	< 5.6	< 28.0	< 28.0		
Phenanthrene	< 5.2	< 26.0	< 26.0		
Anthracene	< 4.5	< 22.5	< 22.5		
Fluoranthene	< 3.8	< 19.0	< 19.0		
Pyrene	< 3.5	< 17.5	< 17.5		
Chrysene	< 2.7	< 13.5	< 13.5		
Benzo a anthracene	< 2.7	< 13.5	< 13.5		
Benzo b fluoranthene	< 2.2	< 11.0	< 11.0		
Benzo k fluoranthene	< 2.4	< 12.0	< 12.0		
Benzo a pyrene	< 1.1	< 5.5	< 5.5		
Dibenzo a,h anthracene	< 2.4	< 12.0	< 12.0		
Benzo g,h,i perylene	< 3.5	< 17.5	< 17.5		
Indeno 1,2,3-cd pyrene	< 2.6	< 13.0	< 13.0		

SOIL & GROUNDWATER SAMPLING ANALYTICAL RESULTS

Former Gary Air Force Base LPST # 108133				Soil Boring No. 4	Caldwell County, Texas
Compound	Soil Samples			Groundwater Samples	
	B4-4330	B4-4316	B4-4318		
BTEX	[µg/kg]	[µg/kg]	[µg/kg]		
Benzene	< 1	< 1	<5		
Toluene	< 1	< 1	<5		
Ethylbenzene	< 1	< 1	110		
Total Xylene	2	< 1	135		
Total BTEX	2	< 1	245		
TPH	[mg/kg]	[mg/kg]	[mg/kg]		
	<10	12	150		
PAH	[µg/kg]	[µg/kg]	[µg/kg]		
Naphthalene	< 15	< 3	<60		
Acenaphthylene	< 7.5	< 1.5	<30		
Acenaphthene	< 25	< 5	<100		
Fluorene	< 28.0	< 5.6	<112		
Phenanthrene	< 26.0	< 5.2	<104		
Anthracene	< 22.5	< 4.5	<90		
Fluoranthene	< 19.0	< 3.8	<76		
Pyrene	< 17.5	< 3.5	<70		
Chrysene	< 13.5	< 2.7	120		
Benzo a anthracene	< 13.5	< 2.7	<54		
Benzo b fluoranthene	< 11.0	< 2.2	<44		
Benzo k fluoranthene	< 12.0	< 2.4	<48		
Benzo a pyrene	< 5.5	< 1.1	<22		
Dibenzo a,h anthracene	< 12.0	< 2.4	<48		
Benzo g,h,i perylene	< 17.5	< 3.5	<70		
Indeno 1,2,3-cd pyrene	< 13.0	< 2.6	<52		

SOIL & GROUNDWATER SAMPLING ANALYTICAL RESULTS

Former Gary Air Force Base LPST # 108133					Soil Boring No. 5	Caldwell County, Texas
Compound	Soil Samples				Groundwater Samples	
	B5-5430	B5-5417	B5-5414	B5-5420		
BTEX	[µg/kg]	[µg/kg]	[µg/kg]	[µg/kg]		
Benzene	18	630	67	10		
Toluene	19	1700	660	<10		
Ethylbenzene	5	11000	580	160		
Total Xylene	25	20200	2100	1880		
Total BTEX	67	33530	3407	2050		
TPH	[mg/kg]	[mg/kg]	[mg/kg]	[mg/kg]		
	<10	4300	62	610		
PAH	[µg/kg]	[µg/kg]	[µg/kg]	[µg/kg]		
Naphthalene	< 15	2000	<300	1700		
Acenaphthylene	< 7.5	<30	<150	<30		
Acenaphthene	< 25	<100	<500	<100		
Fluorene	< 28.0	<112	<560	<112		
Phenanthrene	< 26.0	<104	1900	<104		
Anthracene	< 22.5	<90	480	<90		
Fluoranthene	< 19.0	<76	2200	<76		
Pyrene	< 17.5	<70	1300	<70		
Chrysene	< 13.5	74	590	<54		
Benzo a anthracene	< 13.5	<54	780	<54		
Benzo b fluoranthene	< 11.0	<44	500	<44		
Benzo k fluoranthene	< 12.0	<48	<240	<48		
Benzo a pyrene	< 5.5	<22	<110	<22		
Dibenzo a,h anthracene	< 12.0	<48	<240	<48		
Benzo g,h,i perylene	< 17.5	<70	<350	<70		
Indeno 1,2,3-cd pyrene	< 13.0	<52	<260	<52		

SOIL & GROUNDWATER SAMPLING ANALYTICAL RESULTS

Former Gary Air Force Base LPST # 108133				Soil Boring No. 6	Caldwell County, Texas
Compound	Soil Samples			Groundwater Samples	
	B6-6530	B6-6517	B6-6520		
BTEX	[µg/kg]	[µg/kg]	[µg/kg]		
Benzene	15	<10	60		
Toluene	<5	<10	<50		
Ethylbenzene	<5	14	2500		
Total Xylene	<5	41	2630		
Total BTEX	15	55	5190		
TPH	[mg/kg]	[mg/kg]	[mg/kg]		
	15	190	6300		
PAH	[µg/kg]	[µg/kg]	[µg/kg]		
Naphthalene	4	<150	2100		
Acenaphthylene	< 1.5	<75	<375		
Acenaphthene	< 5	<250	<1250		
Fluorene	< 5.6	<280	<1400		
Phenanthrene	< 5.2	<260	<1300		
Anthracene	< 4.5	<225	<1125		
Fluoranthene	< 3.8	<190	<950		
Pyrene	< 3.5	<175	<875		
Chrysene	< 2.7	<135	<675		
Benzo a anthracene	< 2.7	<135	<675		
Benzo b fluoranthene	< 2.2	<110	<550		
Benzo k fluoranthene	< 2.4	<120	<600		
Benzo a pyrene	< 1.1	<55	<275		
Dibenzo a,h anthracene	< 2.4	<120	<600		
Benzo g,h,i perylene	< 3.5	<175	<875		
Indeno 1,2,3-cd pyrene	< 2.6	<130	<650		

SOIL & GROUNDWATER SAMPLING ANALYTICAL RESULTS

Former Gary Air Force Base LPST # 108133				Soil Boring No. 7	Caldwell County, Texas
Compound	Soil Samples			Groundwater Samples	
	B7-7622	B7-7630	B7-7617		
BTEX	[µg/kg]	[µg/kg]	[µg/kg]		
Benzene	<10	< 1	< 1		
Toluene	24	< 1	< 1		
Ethylbenzene	190	< 1	3		
Total Xylene	230	< 1	8		
Total BTEX	444	< 1	11		
TPH	[mg/kg]	[mg/kg]	[mg/kg]		
	330	<10	<10		
PAH	[µg/kg]	[µg/kg]	[µg/kg]		
Naphthalene	< 3	< 3	< 3		
Acenaphthylene	< 1.5	< 1.5	< 1.5		
Acenaphthene	< 5	< 5	< 5		
Fluorene	< 5.6	< 5.6	< 5.6		
Phenanthrene	< 5.2	< 5.2	< 5.2		
Anthracene	< 4.5	< 4.5	< 4.5		
Fluoranthene	< 3.8	< 3.8	< 3.8		
Pyrene	< 3.5	< 3.5	< 3.5		
Chrysene	< 2.7	< 2.7	< 2.7		
Benzo a anthracene	< 2.7	< 2.7	< 2.7		
Benzo b fluoranthene	< 2.2	< 2.2	< 2.2		
Benzo k fluoranthene	< 2.4	< 2.4	< 2.4		
Benzo a pyrene	< 1.1	< 1.1	< 1.1		
Dibenzo a,h anthracene	< 2.4	< 2.4	< 2.4		
Benzo g,h,i perylene	10	< 3.5	< 3.5		
Indeno 1,2,3-cd pyrene	< 2.6	< 2.6	< 2.6		

SOIL & GROUNDWATER SAMPLING ANALYTICAL RESULTS

Former Gary Air Force Base LPST # 108133					Soil Boring No. 8	Caldwell County, Texas
Compound	Soil Samples				Groundwater Samples	
	B8-8730	B8-8717	B8-8720	B8-8705		
BTEX	[µg/kg]	[µg/kg]	[µg/kg]	[µg/kg]		
Benzene	< 1	<10	<200	<5		
Toluene	32	<10	790	<5		
Ethylbenzene	2	<10	44000	<5		
Total Xylene	3	<10	25000	<5		
Total BTEX	37	<10	69790	<5		
TPH	[mg/kg]	[mg/kg]	[mg/kg]	[mg/kg]		
	<10	130	1800	46		
PAH	[µg/kg]	[µg/kg]	[µg/kg]	[µg/kg]		
Naphthalene	< 15	<30	6200	<3000		
Acenaphthylene	< 7.5	<15	<750	<1500		
Acenaphthene	< 25	<50	<2500	<5000		
Fluorene	< 28.0	<56	<2800	<5600		
Phenanthrene	< 26.0	<52	<2600	<5200		
Anthracene	< 22.5	<45	<2250	<4500		
Fluoranthene	27	<38	<1900	<3800		
Pyrene	24	<35	<1750	3600		
Chrysene	< 13.5	<27	<1350	<2700		
Benzo a anthracene	< 13.5	<27	<1350	<2700		
Benzo b fluoranthene	< 11.0	<22	<1100	5900		
Benzo k fluoranthene	< 12.0	<24	<1200	3100		
Benzo a pyrene	< 5.5	<11	<550	<1100		
Dibenzo a,h anthracene	< 12.0	<24	<1200	<2400		
Benzo g,h,i perylene	< 17.5	<35	<1750	3500		
Indeno 1,2,3-cd pyrene	< 13.0	<26	<1300	<2600		

SOIL & GROUNDWATER SAMPLING ANALYTICAL RESULTS

Former Gary Air Force Base LPST # 108133			Soil Boring No. 10	Caldwell County, Texas
Compound	Soil Samples		Groundwater Samples	
	SB10-20	SB10-35		
BTEX	[µg/kg]	[µg/kg]		
Benzene	189	1.3 U		
Toluene	517	0.65 J		
Ethylbenzene	1540	1.3 U		
Total Xylene	1300	1.17 J		
Total BTEX	NR	NR		
TPH	[mg/kg]	[mg/kg]		
	1920	13 U		
PAH	[µg/kg]	[µg/kg]		
Naphthalene	NA	NA		
Acenaphthylene	NA	NA		
Acenaphthene	NA	NA		
Fluorene	NA	NA		
Phenanthrene	NA	NA		
Anthracene	NA	NA		
Fluoranthene	NA	NA		
Pyrene	NA	NA		
Chrysene	NA	NA		
Benzo a anthracene	NA	NA		
Benzo b fluoranthene	NA	NA		
Benzo k fluoranthene	NA	NA		
Benzo a pyrene	NA	NA		
Dibenzo a,h anthracene	NA	NA		
Benzo g,h,i perylene	NA	NA		
Indeno 1,2,3-cd pyrene	NA	NA		

U = Under PQL, J = Estimated Value, Under PQL, NR = Not Reported, NA = Not Analyzed.

SOIL & GROUNDWATER SAMPLING ANALYTICAL RESULTS

Former Gary Air Force Base LPST # 108133			Soil Boring No. 11	Caldwell County, Texas
Compound	Soil Samples		Groundwater Samples	
	SB11-35	SB11-10		
BTEX	[µg/kg]	[µg/kg]		
Benzene	1.28 U	1.2 U		
Toluene	1.28 U	1.2 U		
Ethylbenzene	1.28U	1.2U		
Total Xylene	1.15 J	1.2 U		
Total BTEX	NR	NR		
TPH	[mg/kg]	[mg/kg]		
	12.8 U	11.9 U		
PAH	[µg/kg]	[µg/kg]		
Naphthalene	NA	NA		
Acenaphthylene	NA	NA		
Acenaphthene	NA	NA		
Fluorene	NA	NA		
Phenanthrene	NA	NA		
Anthracene	NA	NA		
Fluoranthene	NA	NA		
Pyrene	NA	NA		
Chrysene	NA	NA		
Benzo a anthracene	NA	NA		
Benzo b fluoranthene	NA	NA		
Benzo k fluoranthene	NA	NA		
Benzo a pyrene	NA	NA		
Dibenzo a,h anthracene	NA	NA		
Benzo g,h,i perylene	NA	NA		
Indeno 1,2,3-cd pyrene	NA	NA		

U = Under PQL, J = Estimated Value, Under PQL, NR = Not Reported, NA = Not Analyzed.

SOIL & GROUNDWATER SAMPLING ANALYTICAL RESULTS

Former Gary Air Force Base LPST # 108133			Soil Boring No.12	Caldwell County, Texas
Compound	Soil Samples		Groundwater Samples	
	SB12-20	SB12-30		
BTEX	[µg/kg]	[µg/kg]		
Benzene	1.1 U	1.4		
Toluene	1.1 U	1.2 U		
Ethylbenzene	1.1 U	1.4		
Total Xylene	1.1 U	0.72 J		
Total BTEX	NR	NR		
TPH	[mg/kg]	[mg/kg]		
	11.5 U	12 U		
PAH	[µg/kg]	[µg/kg]		
Naphthalene	NA	NA		
Acenaphthylene	NA	NA		
Acenaphthene	NA	NA		
Fluorene	NA	NA		
Phenanthrene	NA	NA		
Anthracene	NA	NA		
Fluoranthene	NA	NA		
Pyrene	NA	NA		
Chrysene	NA	NA		
Benzo a anthracene	NA	NA		
Benzo b fluoranthene	NA	NA		
Benzo k fluoranthene	NA	NA		
Benzo a pyrene	NA	NA		
Dibenzo a,h anthracene	NA	NA		
Benzo g,h,i perylene	NA	NA		
Indeno 1,2,3-cd pyrene	NA	NA		

U = Under PQL, J = Estimated Value, Under PQL, NR = Not Reported, NA = Not Analyzed.

SOIL & GROUNDWATER SAMPLING ANALYTICAL RESULTS

Former Gary Air Force Base LPST # 108133				Soil Boring No. 13	Caldwell County, Texas
Compound	Soil Samples			Groundwater Samples	
	SB13-56	SB13-48	SB13-34		
BTEX	[µg/kg]	[µg/kg]	[µg/kg]		
Benzene	1.3 U	0.75 J	1.2 U		
Toluene	1.3 U	3	1.2 U		
Ethylbenzene	1.3 U	2.7	1.2 U		
Total Xylene	1.3 U	7	1.2 U		
Total BTEX	NR	NR	NR		
TPH	[mg/kg]	[mg/kg]	[mg/kg]		
	13.4	12.4 U	12.1 U		
PAH	[µg/kg]	[µg/kg]	[µg/kg]		
Naphthalene	NA	NA	NA		
Acenaphthylene	NA	NA	NA		
Acenaphthene	NA	NA	NA		
Fluorene	NA	NA	NA		
Phenanthrene	NA	NA	NA		
Anthracene	NA	NA	NA		
Fluoranthene	NA	NA	NA		
Pyrene	NA	NA	NA		
Chrysene	NA	NA	NA		
Benzo a anthracene	NA	NA	NA		
Benzo b fluoranthene	NA	NA	NA		
Benzo k fluoranthene	NA	NA	NA		
Benzo a pyrene	NA	NA	NA		
Dibenzo a,h anthracene	NA	NA	NA		
Benzo g,h,i perylene	NA	NA	NA		
Indeno 1,2,3-cd pyrene	NA	NA	NA		

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SOIL & GROUNDWATER SAMPLING ANALYTICAL RESULTS

Former Gary Air Force Base LPST # 108133				Soil Boring No. 14	Caldwell County, Texas
Compound	Soil Samples			Groundwater Samples	
	SB14-22	SB14-34	SB14-24		
BTEX*	[µg/kg]	[µg/kg]	[µg/kg]		
Benzene	1.26 U	1.2 U	1.28 U		
Toluene	1.26 U	1.2 U	1.28 U		
Ethylbenzene	1.26 U	1.2 U	1.28 U		
Total Xylene	1.26 U	1.2 U	1.28 U		
Total BTEX	NR	NR	NR		
TPH	[mg/kg]	[mg/kg]	[mg/kg]		
	163	23.6	171		
PAH	[µg/kg]	[µg/kg]	[µg/kg]		
Naphthalene	NA	NA	NA		
Acenaphthylene	NA	NA	NA		
Acenaphthene	NA	NA	NA		
Fluorene	NA	NA	NA		
Phenanthrene	NA	NA	NA		
Anthracene	NA	NA	NA		
Fluoranthene	NA	NA	NA		
Pyrene	NA	NA	NA		
Chrysene	NA	NA	NA		
Benzo a anthracene	NA	NA	NA		
Benzo b fluoranthene	NA	NA	NA		
Benzo k fluoranthene	NA	NA	NA		
Benzo a pyrene	NA	NA	NA		
Dibenzo a,h anthracene	NA	NA	NA		
Benzo g,h,i perylene	NA	NA	NA		
Indeno 1,2,3-cd pyrene	NA	NA	NA		

U = Under PQL, J = Estimated Value, Under PQL, NR = Not Reported, NA = Not Analyzed.

* BTEX analyzed by laboratory outside of recommended hold time.

SOIL & GROUNDWATER SAMPLING ANALYTICAL RESULTS

Former Gary Air Force Base LPST # 108133				Soil Boring No. 15/Groundwater Monitoring Well #2				Caldwell County, Texas
Compound	Soil Samples			Groundwater Samples				
	SB15-24	SB15-22	SB15-28	MW2-25	MW2-30	Trip Blank	Eq. Blank	
BTEX*	[µg/kg]	[µg/kg]	[µg/kg]	[µg/l]	[µg/l]	[µg/l]	[µg/l]	
Benzene	11.3*	1.24 U	1.33 U	1100	850	1 U	1 U	
Toluene	52.1*	0.8 J	1.33 U	30 J	25 U	1 U	1 U	
Ethylbenzene	26.2*	1.24 U	1.33 U	50 U	25 U	1 U	1 U	
Total Xylene	21.8*	1.24 U	1.33 U	50 U	25 U	1 U	1 U	
Total BTEX	NR	NR	NR	NR	NR	NR	NR	
TPH	[mg/kg]	[mg/kg]	[mg/kg]	[mg/L]	[mg/L]	[µg/L]	[µg/L]	
	1240	31	16.6	203	287	NA	10	
PAH	[µg/kg]	[µg/kg]	[µg/kg]	[µg/L]	[µg/L]	[µg/L]	[µg/L]	
Naphthalene	NA	NA	NA	3670	90 U	NA	90 U	
Acenaphthylene	NA	NA	NA	85 U	85 U	NA	85 U	
Acenaphthene	NA	NA	NA	90 U	90 U	NA	90 U	
Fluorene	NA	NA	NA	39.4	10.5 U	NA	10.5 U	
Phenanthrene	NA	NA	NA	20 U	20 U	NA	20 U	
Anthracene	NA	NA	NA	0.5 U	0.5 U	NA	0.5 U	
Fluoranthene	NA	NA	NA	9.5 U	9.5 U	NA	9.5 U	
Pyrene	NA	NA	NA	13.5 U	13.5 U	NA	13.5 U	
Chrysene	NA	NA	NA	7.5 U	7.5 U	NA	7.5 U	
Benzo a anthracene	NA	NA	NA	0.65 U	0.65 U	NA	0.65 U	
Benzo b fluoranthene	NA	NA	NA	0.9 U	0.9 U	NA	0.9 U	
Benzo k fluoranthene	NA	NA	NA	0.85 U	0.85 U	NA	0.85 U	
Benzo a pyrene	NA	NA	NA	1.15 U	1.15 U	NA	1.15 U	
Dibenzo a,h anthracene	NA	NA	NA	4.35 U	4.35 U	NA	NA	
Benzo g,h,i perylene	NA	NA	NA	3.6 U	3.6 U	NA	3.6 U	
Indeno 1,2,3-cd pyrene	NA	NA	NA	3.6 U	3.6 U	NA	3.6 U	

U = Under PQL, J = Estimated Value, Under PQL, NR = Not Reported, NA = Not Analyzed.

* BTEX analyzed by laboratory outside of recommended hold time.

SOIL & GROUNDWATER SAMPLING ANALYTICAL RESULTS

Former Gary Air Force Base LPST # 108133			Soil Boring No. 16	Caldwell County, Texas
Compound	Soil Samples		Groundwater Samples	
	SB16-28	SB16-20		
BTEX*	[µg/kg]	[µg/kg]		
Benzene	1.32 U	140 U		
Toluene	1.32 U	317		
Ethylbenzene	1.32 U	965		
Total Xylene	1.32 U	1200		
Total BTEX	NR	NR		
TPH	[mg/kg]	[mg/kg]		
	27.6	1450		
PAH	[µg/kg]	[µg/kg]		
Naphthalene	NA	NA		
Acenaphthylene	NA	NA		
Acenaphthene	NA	NA		
Fluorene	NA	NA		
Phenanthrene	NA	NA		
Anthracene	NA	NA		
Fluoranthene	NA	NA		
Pyrene	NA	NA		
Chrysene	NA	NA		
Benzo a anthracene	NA	NA		
Benzo b fluoranthene	NA	NA		
Benzo k fluoranthene	NA	NA		
Benzo a pyrene	NA	NA		
Dibenzo a,h anthracene	NA	NA		
Benzo g,h,i perylene	NA	NA		
Indeno 1,2,3-cd pyrene	NA	NA		

U = Under PQL, J = Estimated Value, Under PQL, NR = Not Reported, NA = Not Analyzed.

* BTEX analyzed by laboratory outside of recommended hold time.

Attachment 16
Summary Tables of Gauging Data

Groundwater Gauging Data for LPST 108133

Well	Date	Time	Total Depth	Depth to Water	Depth to Product	Product Thickness	Casing Elevation	Water Elevation
MW 1	5/15/96	14:10	36.47	27.70	NA	NA	576.11	548.41
MW 1	5/16/96	10:00	36.53	27.73	NA	NA	576.11	548.38
MW 1	5/16/96	13:59	36.53	27.74	NA	NA	576.11	548.37
MW 1	5/30/96	10:18	36.55	27.85	NA	NA	576.11	548.26
MW 1	9/24/97	13:00	36.24	27.78	27.09	0.69	576.11	548.33
MW 2	9/25/97	10:56	29.97	22.22	NA	NA	572.49	550.27
MW 2	11/12/97	9:50	29.97	24.33	NA	NA	572.49	548.16
MW 1	11/12/97	10:00	36.24	27.66	27.16	0.60	576.11	548.45
MW 1	11/12/97	13:39	36.24	27.19	27.18	0.01	576.11	548.92
MW 2	11/12/97	13:56	29.97	24.31	NA	NA	572.49	548.18
MW 2	12/1/97	12:01	29.97	24.35	NA	NA	572.49	548.14
MW1	12/1/97	12:26	36.24	27.10	27.01	0.09	576.11	549.01

Attachment 17
Analytical Report Data

Analytical Report Data – Risk-Based Site Assessment*

*Compiled from data gathered by Thompson Professional Group, Inc., from samples collected May 16, 1996 through July 17, 1996, and September 22-25, 1997.

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

November 14, 1997

Mr. Jason Miller
THOMPSON PROFESSIONAL GROUP, INC.
6110 Clarkson Lane
Houston, TX 77055

Project: FORMER GARY AFB
SWLO #: 31204.01 - 31204.04

Dear Mr. Miller:

Enclosed, please find the analytical results and diskette deliverable for your samples received in our laboratory on September 27, 1997, for the above captioned project.

If, in your review, you should have any questions or require additional information, please do not hesitate to call.

Sincerely,

Mike Butler
Project Officer

MB/crl

Enclosures

1700 West Albany • Broken Arrow, OK 74012-1421 • Office (918) 251-2858 • Fax (918) 251-2599

SOUTHWEST LABORATORY OF OKLAHOMA
CASE NARRATIVE
November 13, 1997

CLIENT : TPGINC
EPISODE(S): 31204
FRACTION : PAH
SAMPLE(S) : MW2-35, MW2-25, MW2-30

This case consisted of 3 water samples for PAH analysis. The samples, blanks and spikes were extracted and analyzed according to EPA protocol, SW-846, method 8310.

Variable programmable UV detector and a Fluorescence detector were used for this method whereby the detectors were connected in a series and one detector was used for confirmation of another detector. Compounds which are within 40 % D between the two detectors are reported as confirmed compounds. All the samples were diluted by a factor of two prior to analysis in order to be the same consistency as the mobile phase.

"P" flags were used when the appropriate compound with sufficient onse exceeded 40% deviation, possibly due to interference between uantitation and confirmation detectors.

The first five eluted compounds have good UV absorbance but somewhat poor fluorescent absorbance. The remainder of the compounds have good fluorescent response and somewhat good UV absorbance.

Throughout the package the UV detector has been distinguished by three i.e. 2AH1024 and the fluorescence detector has been distinguished by 4AH1024.

The first five compounds including the surrogate 2-Fluorobiphenyl are reported from the UV detector. The remaining of the analytes are reported from the fluorescence detector.

CASE SUMMARY:

Naphthalene was detected above the linear calibration range in the sample MW2-25. Since the sample required 10X dilution, the remainder of the samples were inadvertently diluted by a factor of . Therfore, all of the samples are reported based on 10X dilution ution.

Due to low recovery of both surrogates in the sample MW2-30, the sample has been re-extracted which the data for the re-extracted sample will be reported at a later date. In the same sample, [illegible]halene was detected above the PQL. However, the analyte was not [illegible]irmed in the fluorescence detector.

In the sample MW2-35, Terphenyl (fluorescence detector surrogate) was out of the QC limits. However, the other surrogate 2-Fluorobiphenyl(UV detector surrogate) was within the QC limits.

We use the following flags where appropriate. "J" - indicates a quantitated result which is below the quantitation limit, but above the detection limit and has been confirmed by the second column. "E"- indicates an out of range value, i.e., a peak that is off-scale or out of the linear calibration range of the detector. The value reported is not to be used. The sample must be diluted and re-run. "D" - indicates a value derived from a secondary dilution. "U" - indicates the compound that is undetected above the quantitation limit. "X" - indicates a comment which is explained in the case narrative. "P" flag indicates the compound exceeded 40 % deviation between the UV and the fluorescence detectors.

TAR SHAHREZA

Thompson Professional Group, Inc.
6110 Clarkson Lane
Houston, Texas 77055
(713) 956-4100
www.thompson-grp.com

Analysis Request and Chain of Custody Record
Former Gary Air Force Base, LPST # 108133
Caldwell County, Texas

~~Soil Boring~~/Ground Water Monitoring Well No. 2

Project Number: 887-01 | TPG Contact: Jason Miller | Phone Number: (713) 956-4100

Sample ID	Date Taken	Time Taken	Sample Type (Soil, Waste, Groundwater)	Grab Sample	Comp	Number of Containers	Preservative	TPH by 418.1	BTEX by 8020	TDS by 160.1	PAH by 8310		Remarks
MW 2-35	9-25-97	2:06 P	Groundwater	✓		5	HCL	✓	✓	✓	✓		

Sampler Signature: [signature]	Relinquished by: (Signature) [signature]	Date: 9-26-97 Time: 11:00A	Received by: (Signature) (Fed Ex)	Date: 9-26-97 Time:	Intact?
Affiliation: Thompson Professional Group, Inc.	Relinquished by: (Signature)	Date: Time:	Received by: (Signature)	Date: Time:	Intact?
Sampler Remarks:			Laboratory Receipt: (Signature) [signature]	Date: 9-27-97 Time: 0915	Intact?
Seal Number	Shipping Agency: Fed Ex UPS Lone Star Other:		Laboratory Remarks:		

2

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Houston, Texas 77055
(713) 956-4100
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Analysis Request and Chain of Custody Record
Former Gary Air Force Base, LPST # 108133
Caldwell County, Texas

~~Soil Boring~~/Ground Water Monitoring Well No. 2

Project Number: 887-01 | TPG Contact: Jason Miller | Phone Number: (713) 956-4100

Sample ID	Date Taken	Time Taken	Sample Type (Soil, Waste, Groundwater)	Grab Sample	Comp	Number of Containers	Preservative	TPH by 418.1	BTEX by 8020	TDS by 160.1	PAH by 8310		Remarks
MW2-25	9-25-97	2:04P	Groundwater	✓		5	HCL	✓	✓	✓	✓		
MW 2-30	"	2:05P	"	✓		5	HCL	✓	✓	✓	✓		

Sampler Signature: [signature] | Relinquished by: (Signature) [signature] | Date: 9-26-97 Time: 11:00A | Received by: (Signature) (Fed Ex) | Date: 9-26-97 Time: | Intact?

Affiliation: Thompson Professional Group, Inc. | Relinquished by: (Signature) | Date: Time: | Received by: (Signature) | Date: Time: | Intact?

Sampler Remarks: | Laboratory Receipt: (Signature) [signature] | Date: 9-27-97 Time: 0915 | Intact?

Seal Number | Shipping Agency: Fed Ex UPS Lone Star Other: | Laboratory Remarks:

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Houston, Texas 77055
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Analysis Request and Chain of Custody Record
Former Gary Air Force Base, LPST # 108133
Caldwell County, Texas

~~Soil Boring~~/Ground Water Monitoring Well No. 2

Project Number: 887-01 | TPG Contact: Jason Miller | Phone Number: (713) 956-4100

Sample ID	Date Taken	Time Taken	Sample Type (Soil, Waste, Groundwater)	Grab Sample	Comp	Number of Containers	Preservative	TPH by 418.1	BTEX by 8020	TDS by 160.1	PAH by 8310		Remarks
TB-1	9-25-97	2067	water	x		3	HCL		✓				Prepped By Lab

Sampler Signature: [signature]	Relinquished by: (Signature) [signature]	Date: 9-26-97 Time: 11:00 A	Received by: (Signature) (Fed Ex)	Date: 9-26-97 Time:	Intact?
Affiliation: Thompson Professional Group, INC.	Relinquished by: (Signature)	Date: Time:	Received by: (Signature)	Date: Time:	Intact?
Sampler Remarks: TRIP Blanks filled in Laboratory, Shipped with Empty Containers and went with Volatile Samples (groundwater)			Laboratory Receipt: (Signature) [signature]	Date: 9-27-97 Time: 915	Intact?
Seal Number	Shipping Agency: Fed Ex UPS Lone Star Other:		Laboratory Remarks:		

SAMPLE LOG-IN SHEET

Lab Name: SOUTHWEST LABORATORY OF OKLAHOMA Page 1 of 1

Received By (Print Name): KIM WILLISON/SARAH HODSON Log-in Date: 9-27-97

Received By: (Signature): Sarah Hodson.

Case Number:

Sample Delivery Group No:

SAS Number:

REMARKS:

1. Custody Seal(s) Present/Absent* Intact/Broken
2. Custody Seal Nos.:
3. Chain-of-Custody Records Present/Absent*
4. Traffic Reports or Packing List Present/Absent*
   bill Airbill/Sticker Present/Absent*
5. Airbill No: 32365.30916
7. Sample Tags Present/Absent
   Sample Tag Numbers Listed/Not Listed on Chain-of-Custody
8. Sample Condition: Intact/Broken*/Leaking
9. Does information on custody records, traffic reports, and sample tags agree? Yes/No*
10. Date Received at Lab 9-27-97
11. Time Received 9:15

Sample Transfer

Fraction:

Area #: ~~9 Shtt~~ Shtt

On:

EPA SAMPLE #	CORRESPONDING SAMPLE TAG #	CORRESPONDING ASSIGNED LAB #	REMARKS: CONDITION OF SAMPLE SHIPMENT, ETC.
TB-1		31204.01	Intact 2°
MW2-35		.02	
MW2-25		.03	
MW2-30		.04	

* Contact SMO and attach record of resolution

Received By:

Date:

Logbook No:

Logbook Page No:

FORM DC-1

SOUTHWEST LABORATORY OF OKLAHOMA, INC.
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SOUTHWEST LABORATORY OF OKLAHOMA, INC.

METHODOLOGY

SM = Standard Methods, 17th Edition, 1989
EPA = #EPA600/4-79-020, March 1983
SW = EPA Methodology, "#SW846", 3rd Edition, July, 1992

GENERAL QUALIFIER FLAGS

B — Analyte is detected in blank as well as sample.
J — Estimated value: concentration is below limit of quantitation
T — Trace Amount.
U — Not detected above quantitation limit
> — Concentration greater than value reported
E — Compound exceeds calibration range
D — Sample dilution run or surrogates diluted out sample run at secondary dilution
I — Not quantifiable due to matrix interference
* — Surrogate outside of QC limits on both original and re-analysis

TEST SPECIFIC FOOTNOTES

TPH 8015

1 — Analysis shows miscellaneous peaks which cannot be identified as any specific pattern. Response factor for nearest eluting hydrocarbon standard was used to calculate concentration. Numbers indicate the approximate carbon chain length.
2 — Pattern is similar to, but not identical to standard.
3 — May be a weathered gasoline.

APPENDIX IX SEMIVOLATILES

1 — Detected as Diphenylamine
2 — Coelute on GC Column

TCLP SEMIVOLATILES

1 — 2-Methyl Phenol
2 — Compounds Co-elute (3&4-Methylphenol)
3 — Combination of O,M, & P Cresols

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THOMPSON PROFESSIONAL GROUP
6110 CLARKSON LANE
HOUSTON, TX 77055
Attn: JASON MILLER

REPORT: 31204.01

DATE: 11/14/97

SWLO # : 31204.01
SAMPLE #: TB-1
SAMPLE MATRIX : WATER
PROJECT : FORMER GARY AFG
LOCATION:
METHOD REFERENCE: SW 8020

DEPTH FROM : 0.00
DEPTH TO : 0.00
DATE SAMPLED : 09/25/97
DATE RECEIVED : 09/27/97
DATE PREPARED :
DATE ANALYZED : 10/01/97
DILUTION FACTOR: 1.00

BTEX
RESULTS REPORT IN ug/l

PARAMETER	RESULTS**		PARAMETER	RESULTS**	
BENZENE	1	U	ETHYLBENZENE	1	U
TOLUENE	1	U	XYLENE (TOTAL)	1	U

QA/QC SURROGATE RECOVERIES

BROMOFLUOROBENZENE	(71-127)	85%

..ESULTS REPORTED TO A MAXIMUM OF 3 SIGNIFICANT FIGURES

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THOMPSON PROFESSIONAL GROUP
6110 CLARKSON LANE
HOUSTON, TX 77055
Attn: JASON MILLER

REPORT: 31204.02

DATE: 11/14/97

SWLO # : 31204.02
SAMPLE #: MW2-35
SAMPLE MATRIX : WATER
PROJECT : FORMER GARY AFG
LOCATION:
METHOD REFERENCE: SW 8020

DEPTH FROM : 0.00
DEPTH TO : 0.00
DATE SAMPLED : 09/25/97
DATE RECEIVED : 09/27/97
DATE PREPARED :
DATE ANALYZED : 09/30/97
DILUTION FACTOR: 1.00

BTEX
RESULTS REPORT IN ug/l

PARAMETER	RESULTS**		PARAMETER	RESULTS**	
BENZENE	1	U	ETHYLBENZENE	1	U
TOLUENE	1	U	XYLENE (TOTAL)	1	U

QA/QC SURROGATE RECOVERIES

BROMOFLUOROBENZENE	(71-127)	92%

ESULTS REPORTED TO A MAXIMUM OF 3 SIGNIFICANT FIGURES

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THOMPSON PROFESSIONAL GROUP
6110 CLARKSON LANE
HOUSTON, TX 77055
Attn: JASON MILLER

REPORT: 31204.02

DATE: 11/14/97

SWLO # : 31204.02
SAMPLE #: MW2-35
SAMPLE MATRIX : WATER
PROJECT : FORMER GARY AFG
LOCATION:

DEPTH FROM : 0.00
DEPTH TO : 0.00
DATE SAMPLED : 09/25/97
DATE RECEIVED : 09/27/97

MISCELLANEOUS

PARAMETER	RESULTS**		UNITS	DATE PREPARED	DATE ANALYZED	REFERENCE METHOD
TOTAL PETROLEUM HYDROCARBONS	10		mg/l	10/24/97	10/24/97	EPA 418.1
TDS	10	U	mg/l	/ /	10/13/97	EPA 160.1

.SULTS REPORTED TO A MAXIMUM OF 3 SIGNIFICANT FIGURES

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THOMPSON PROFESSIONAL GROUP
6110 CLARKSON LANE
HOUSTON, TX 77055
Attn: JASON-MILLER

REPORT: 31204.02

DATE: 11/14/97

SWLO # : 31204.02
SAMPLE #: MW2-35
SAMPLE MATRIX : WATER
PROJECT : FORMER GARY AFG
LOCATION:
METHOD REFERENCE: SW846-8310

DEPTH FROM : 0.00
DEPTH TO : 0.00
DATE SAMPLED : 09/25/97
DATE RECEIVED : 09/27/97
DATE PREPARED : 09/29/97
DATE ANALYZED : 10/23/97
DILUTION FACTOR: 10.00

POLYNUCLEAR AROMATIC HYDROCARBONS
RESULTS REPORT IN ug/l

PARAMETER	RESULTS**		PARAMETER	RESULTS**	
NAPHTHALENE	90	U	BENZO(A)ANTHRACENE	0.65	U
ACENAPHTHYLENE	85	U	CHRYSENE	7.5	U
ACENAPHTHENE	90	U	BENZO(B)FLUORANTHENE	0.9	U
FLUORENE	10.5	U	BENZO(K)FLUORANTHENE	0.85	U
PHENANTHRENE	20	U	BENZO(A)PYRENE	1.15	U
ACENE	0.5	U	BENZO(G,H,I)PERYLENE	3.6	U
ANTHENE	9.5	U	INDENO(1,2,3-CD)PYRENE	3.6	U
RENE	13.5	U			

QA/QC SURROGATE RECOVERIES

2-FLUOROBIPHENYL	(20-131)	43%	P-TERPHENYL	(43-139)	29% *

RESULTS REPORTED TO A MAXIMUM OF 3 SIGNIFICANT FIGURES

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

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THOMPSON PROFESSIONAL GROUP
6110 CLARKSON LANE
HOUSTON, TX 77055
Attn: JASON MILLER

REPORT: 31204.03

DATE: 11/14/97

SWLO # : 31204.03
SAMPLE #: MW2-25
SAMPLE MATRIX : WATER
PROJECT : FORMER GARY AFG
LOCATION:
METHOD REFERENCE: SW846-8310

DEPTH FROM : 0.00
DEPTH TO : 0.00
DATE SAMPLED : 09/25/97
DATE RECEIVED : 09/27/97
DATE PREPARED : 09/29/97
DATE ANALYZED : 10/24/97
DILUTION FACTOR: 10.00

POLYNUCLEAR AROMATIC HYDROCARBONS
RESULTS REPORT IN ug/l

PARAMETER	RESULTS**		PARAMETER	RESULTS**	
NAPHTHALENE	3670	P	BENZO(A)ANTHRACENE	0.65	U
ACENAPHTHYLENE	85	U	CHRYSENE	7.5	U
ACENAPHTHENE	90	U	BENZO(B)FLUORANTHENE	0.9	U
FLUORENE	39.4		BENZO(K)FLUORANTHENE	0.85	U
PHENANTHRENE	20	U	BENZO(A)PYRENE	1.15	U
ANTHRACENE	0.5	U	DIBENZ(A,H)ANTHRACENE	4.35	U
FLUORANTHENE	9.5	U	BENZO(G,H,I)PERYLENE	3.6	U
PYRENE	13.5	U	INDENO(1,2,3-CD)PYRENE	3.6	U

QA/QC SURROGATE RECOVERIES

2-FLUOROBIPHENYL	(20-131)	0% I	P-TERPHENYL	(43-139)	101%

RESULTS REPORTED TO A MAXIMUM OF 3 SIGNIFICANT FIGURES

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

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THOMPSON PROFESSIONAL GROUP
6110 CLARKSON LANE
HOUSTON, TX 77055
Attn: JASON MILLER

REPORT: 31204.03

DATE: 11/14/97

SWLO # : 31204.03
SAMPLE #: MW2-25
SAMPLE MATRIX : WATER
PROJECT : FORMER GARY AFG
LOCATION:
METHOD REFERENCE: SW 8020

DEPTH FROM : 0.00
DEPTH TO : 0.00
DATE SAMPLED : 09/25/97
DATE RECEIVED : 09/27/97
DATE PREPARED :
DATE ANALYZED : 09/30/97
DILUTION FACTOR: 50.00

BTEX
RESULTS REPORT IN ug/l

PARAMETER	RESULTS**		PARAMETER	RESULTS**	
BENZENE	1100		ETHYLBENZENE	50	U
TOLUENE	30	J	XYLENE (TOTAL)	50	U

QA/QC SURROGATE RECOVERIES

BROMOFLUOROBENZENE	(71-127)	93%

..ESULTS REPORTED TO A MAXIMUM OF 3 SIGNIFICANT FIGURES

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

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THOMPSON PROFESSIONAL GROUP
6110 CLARKSON LANE
HOUSTON, TX 77055
Attn: JASON MILLER

REPORT: 31204.03

DATE: 11/14/97

SWLO # : 31204.03
SAMPLE #: MW2-25
SAMPLE MATRIX : WATER
PROJECT : FORMER GARY AFG
LOCATION:

DEPTH FROM : 0.00
DEPTH TO : 0.00
DATE SAMPLED : 09/25/97
DATE RECEIVED : 09/27/97

MISCELLANEOUS

PARAMETER	RESULTS**	UNITS	DATE PREPARED	DATE ANALYZED	REFERENCE METHOD
TOTAL PETROLEUM HYDROCARBONS	203	mg/l	10/24/97	10/24/97	EPA 418.1
TDS	137	mg/l	/ /	10/02/97	EPA 160.1

..SULTS REPORTED TO A MAXIMUM OF 3 SIGNIFICANT FIGURES

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THOMPSON PROFESSIONAL GROUP
6110 CLARKSON LANE
HOUSTON, TX 77055
Attn: JASON MILLER

REPORT: 31204.04

DATE: 11/14/97

SWLO # : 31204.04
SAMPLE #: MW2-30
SAMPLE MATRIX : WATER
PROJECT : FORMER GARY AFG
LOCATION:
METHOD REFERENCE: SW846-8310

DEPTH FROM : 0.00
DEPTH TO : 0.00
DATE SAMPLED : 09/25/97
DATE RECEIVED : 09/27/97
DATE PREPARED : 09/29/97
DATE ANALYZED : 10/23/97
DILUTION FACTOR: 10.00

POLYNUCLEAR AROMATIC HYDROCARBONS
RESULTS REPORT IN ug/l

PARAMETER	RESULTS**		PARAMETER	RESULTS**	
NAPHTHALENE	90	U	BENZO(A)ANTHRACENE	0.65	U
ACENAPHTHYLENE	85	U	CHRYSENE	7.5	U
ACENAPHTHENE	90	U	BENZO(B)FLUORANTHENE	0.9	U
FLUORENE	10.5	U	BENZO(K)FLUORANTHENE	0.85	U
PHENANTHRENE	20	U	BENZO(A)PYRENE	1.15	U
ANTHRACENE	0.5	U	DIBENZ(A,H)ANTHRACENE	4.35	U
FLUORANTHENE	9.5	U	BENZO(G,H,I)PERYLENE	3.6	U
PYRENE	13.5	U	INDENO(1,2,3-CD)PYRENE	3.6	U

QA/QC SURROGATE RECOVERIES

2-FLUOROBIPHENYL	(20-131)	17% *	P-TERPHENYL	(43-139)	8% *

RESULTS REPORTED TO A MAXIMUM OF 3 SIGNIFICANT FIGURES

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THOMPSON PROFESSIONAL GROUP
6110 CLARKSON LANE
HOUSTON, TX 77055
Attn: JASON MILLER

REPORT: 31204.04

DATE: 11/14/97

SWLO # : 31204.04
SAMPLE #: MW2-30
SAMPLE MATRIX : WATER
PROJECT : FORMER GARY AFG
LOCATION:
METHOD REFERENCE: SW 8020

DEPTH FROM : 0.00
DEPTH TO : 0.00
DATE SAMPLED : 09/25/97
DATE RECEIVED : 09/27/97
DATE PREPARED :
DATE ANALYZED : 10/02/97
DILUTION FACTOR: 25.00

BTEX
RESULTS REPORT IN ug/l

PARAMETER	RESULTS**		PARAMETER	RESULTS**	
BENZENE	850		ETHYLBENZENE	25	U
TOLUENE	25	U	XYLENE (TOTAL)	25	U

QA/QC SURROGATE RECOVERIES

BROMOFLUOROBENZENE	(71-127)	94%

..ESULTS REPORTED TO A MAXIMUM OF 3 SIGNIFICANT FIGURES

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

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THOMPSON PROFESSIONAL GROUP
6110 CLARKSON LANE
HOUSTON, TX 77055
Attn: JASON MILLER

REPORT: 31204.04

DATE: 11/14/97

SWLO # : 31204.04
SAMPLE #: MW2-30
SAMPLE MATRIX : WATER
PROJECT : FORMER GARY AFG
LOCATION:

DEPTH FROM : 0.00
DEPTH TO : 0.00
DATE SAMPLED : 09/25/97
DATE RECEIVED : 09/27/97

MISCELLANEOUS

PARAMETER	RESULTS**	UNITS	DATE PREPARED	DATE ANALYZED	REFERENCE METHOD
TOTAL PETROLEUM HYDROCARBONS	287	mg/l	10/24/97	10/24/97	EPA 418.1
TDS	44	mg/l	/ /	10/02/97	EPA 160.1

ESULTS REPORTED TO A MAXIMUM OF 3 SIGNIFICANT FIGURES

SOUTHWEST LABORATORY OF OKLAHOMA, INC.
1700 West Albany • Broken Arrow, Oklahoma 74012 • Office (918) 251-2858 • Fax (918) 251-2599

QUALITY CONTROL SECTION

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

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THOMPSON PROFESSIONAL GROUP
6110 CLARKSON LANE
HOUSTON, TX 77055
Attn: JASON MILLER

REPORT: 31204

DATE: 11/14/97

SWLO QAQC#: BB0929WF
SAMPLE #: PAH BLK LB1
SAMPLE MATRIX : WATER
PROJECT : FORMER GARY AFG
LOCATION: LABQC
METHOD REFERENCE: SW846-8310

DEPTH FROM : 0.00
DEPTH TO : 0.00
DATE SAMPLED : / /
DATE RECEIVED : / /
DATE PREPARED : 09/29/97
DATE ANALYZED : 10/23/97
DILUTION FACTOR: 10.00

POLYNUCLEAR AROMATIC HYDROCARBONS
RESULTS REPORT IN ug/l

PARAMETER	RESULTS**		PARAMETER	RESULTS**	
NAPHTHALENE	90	U	BENZO(A)ANTHRACENE	0.65	U
ACENAPHTHYLENE	85	U	CHRYSENE	7.5	U
ACENAPHTHENE	90	U	BENZO(B)FLUORANTHENE	0.9	U
FLUORENE	9.5	U	BENZO(K)FLUORANTHENE	0.85	U
PHENANTHRENE	20	U	BENZO(A)PYRENE	1.15	U
ACENE	0.5	U	DIBENZ(A,H)ANTHRACENE	4.35	U
ANTHENE	9.5	U	BENZO(G,H,I)PERYLENE	3.6	U
FLUORENE	13.5	U	INDENO(1,2,3-CD)PYRENE	3.6	U

QA/QC SURROGATE RECOVERIES

2-FLUOROBIPHENYL	(20-131)	93%	P-TERPHENYL	(43-139)	105%

ESULTS REPORTED TO A MAXIMUM OF 3 SIGNIFICANT FIGURES

SOUTHWEST LABORATORY OF OKLAHOMA
LIQUID CHROMATOGRAPHY LABORATORY

PAH LABORATORY CONTROL SPIKE RECOVERY FORM

CLIENT : TPGINC
CLIENT SAMPLE ID: LD0929WF

LAB CONTROL SPIKE INFO:

CLIENT ID : LD0929WF
SWOK SAMPLE ID : LD0929WF
FILENAME : 2 2AH1024,12,1
SAMPLE MATRIX : WATER
AMT. EXTRACTED : 1000
EXT. VOLUME : 5
DILUTION FACTOR : 10
DATE EXTRACTED : 09/29/97
DATE ANALYZED : 11/12/97

RECOVERY DATA

	SPIKE ADDED ug/L	AMT FOUND SMP. ug/L	AMT FOUND LCS ug/L	%REC. LCS	QC LIMITS
NAPHTHALENE	12.5	0	13.2	106	10-139
ACENAPHTHYLENE	12.5	0	12.10	97	32-136
ACENAPHTHENE	25.0	0	24.7	99	34-138
FLUORENE	2.50	0	1.51	60	27-141
PHENANTHRENE	2.50	0	2.47	99	40-132
ANTHRACENE	.125	0	.116	93	16-126
FLUORANTHENE	1.25	0	1.21	97	58-128
PYRENE	5.00	0	4.98	100	50-136
BENZO(a)ANTHRACENE	1.25	0	1.02	82	45-144
CHRYSENE	3.75	0	3.51	94	55-147
BENZO(b)FLUORANTHENE	.500	0	.789	158	34-165
BENZO(k)FLUORANTHENE	.125	0	.105	84	45-123
BENZO(a)PYRENE	1.00	0	.845	85	24-123
DIBENZO(a,h)ANTHRACENE	5.00	0	4.70	94	26-160
BENZO(g,h,i)PERYLENE	5.00	0	4.79	96	40-145
INDENO(1,2,3-cd)PYRENE	1.25	0	1.13	90	59-130

		LCS	
2-FLUOROBIPHENYL SURROGATE REC	=	91	(20-131)
p-TERPHENYL SURROGATE REC	=	99	(43-139)

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 West Albany • Broken Arrow, Oklahoma 74012 • Office (918) 251-2858 • Fax (918) 251-2599

THOMPSON PROFESSIONAL GROUP
6110 CLARKSON LANE
HOUSTON, TX 77055
Attn: JASON MILLER

REPORT: 31204

DATE: 11/13/97

SWLO QAQC#: 6B093097
SAMPLE #: BTEX BLK1 LB1
SAMPLE MATRIX : WATER
PROJECT : FORMER GARY AFG
LOCATION: LABQC
METHOD REFERENCE: SW846-8020

DEPTH FROM : 0.00
DEPTH TO : 0.00
DATE SAMPLED : / /
DATE RECEIVED : / /
DATE PREPARED :
DATE ANALYZED : 09/30/97
DILUTION FACTOR: 1.00

BTEX
RESULTS REPORT IN ug/l

PARAMETER	RESULTS**		PARAMETER	RESULTS**	
BENZENE	1	U	ETHYLBENZENE	1	U
TOLUENE	1	U	XYLENE (TOTAL)	1	U

QA/QC SURROGATE RECOVERIES

BROMOFLUOROBENZENE	(71-127)	84%

ESULTS REPORTED TO A MAXIMUM OF 3 SIGNIFICANT FIGURES

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THOMPSON PROFESSIONAL GROUP
6110 CLARKSON LANE
HOUSTON, TX 77055
Attn: JASON MILLER

REPORT: 31204

DATE: 11/13/97

PROJECT : FORMER GARY AFG
PREPARED: / /
SAMPLE : BTEX BLK1
SPIKE SAMPLE : BTEX LCS1
SPIKE DUP SAMPLE: BTEX LCSD1

SAMPLE MATRIX : WATER
ANALYZED: 09/30/97

BTEX
SPIKE/SPIKE DUPLICATE RECOVERY

Parameter (ug/l)	SPIKE AMOUNT	SAMPLE CONC.	SPIKE CONC.	SPIKE %Rec	SPIKE DUP.	DUP %Rec	RPD	MAX RPD	LIMITS %Rec.
BENZENE	20	0	20.4	102	20.9	105	2.42	12	76-129
TOLUENE	20	0	19.9	100	20.2	102	1.5	13	78-122
ETHYLBENZENE	20	0	19.9	100	20.6	104	3.46	13	82-124
XYLENE (TOTAL)	60	0	60.7	102	63.3	106	4.19	14	83-127

QA/QC Surrogates

Parameter	SPK %Rec	DUP %Rec	LIMITS
BROMOFLUOROBENZENE	98	100	71-127

* = VALUES OUTSIDE OF QC LIMITS

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THOMPSON PROFESSIONAL GROUP
6110 CLARKSON LANE
HOUSTON, TX 77055
Attn: JASON MILLER

REPORT: 31204

DATE: 11/13/97

SWLO QAQC#: 6B100197
SAMPLE #: BTEX BLK2 LB1
SAMPLE MATRIX : WATER
PROJECT : FORMER GARY AFG
LOCATION: LABQC
METHOD REFERENCE: SW846-8020

DEPTH FROM : 0.00
DEPTH TO : 0.00
DATE SAMPLED : / /
DATE RECEIVED : / /
DATE PREPARED :
DATE ANALYZED : 10/01/97
DILUTION FACTOR: 1.00

BTEX
RESULTS REPORT IN ug/l

PARAMETER	RESULTS**		PARAMETER	RESULTS**	
BENZENE	1	U	ETHYLBENZENE	1	U
TOLUENE	1	U	XYLENE (TOTAL)	1	U

QA/QC SURROGATE RECOVERIES

BROMOFLUOROBENZENE	(71-127)	86%

SULTS REPORTED TO A MAXIMUM OF 3 SIGNIFICANT FIGURES

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THOMPSON PROFESSIONAL GROUP
6110 CLARKSON LANE
HOUSTON, TX 77055
Attn: JASON MILLER

REPORT: 31204

DATE: 11/13/97

PROJECT : FORMER GARY AFG
PREPARED: / /
SAMPLE : BTEX BLK2
SPIKE SAMPLE : BTEX LCS2
SPIKE DUP SAMPLE: BTEX LCSD2

SAMPLE MATRIX : WATER
ANALYZED: 10/01/97

BTEX
SPIKE/SPIKE DUPLICATE RECOVERY

Parameter (ug/l)	SPIKE AMOUNT	SAMPLE CONC.	SPIKE CONC.	SPIKE %Rec	SPIKE DUP.	DUP %Rec	RPD	MAX RPD	LIMITS %Rec.
BENZENE	20	0	20.4	102	20.2	102	< 1	12	76-129
TOLUENE	20	0	20.2	102	19.9	100	1.5	13	78-122
ETHYLBENZENE	20	0	20.5	103	20.2	102	1.47	13	82-124
XYLENE (TOTAL)	60	0	62.1	104	61.8	104	< 1	14	83-127

QA/QC Surrogates

Parameter	SPK %Rec	DUP %Rec	LIMITS
BROMOFLUOROBENZENE	94	94	71-127

* = VALUES OUTSIDE OF QC LIMITS

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THOMPSON PROFESSIONAL GROUP
6110 CLARKSON LANE
HOUSTON, TX 77055
Attn: JASON MILLER

REPORT: 31204

DATE: 11/13/97

SWLO QAQC#: 6B100297
SAMPLE #: BTEX BLK3 LB1
SAMPLE MATRIX : WATER
PROJECT : FORMER GARY AFG
LOCATION: LABQC
METHOD REFERENCE: SW846-8020

DEPTH FROM : 0.00
DEPTH TO : 0.00
DATE SAMPLED : / /
DATE RECEIVED : / /
DATE PREPARED :
DATE ANALYZED : 10/02/97
DILUTION FACTOR: 1.00

BTEX
RESULTS REPORT IN ug/l

PARAMETER	RESULTS**		PARAMETER	RESULTS**	
BENZENE	1	U	ETHYLBENZENE	1	U
TOLUENE	1	U	XYLENE (TOTAL)	1	U

QA/QC SURROGATE RECOVERIES

BROMOFLUOROBENZENE	(71-127)	89%

ULTS REPORTED TO A MAXIMUM OF 3 SIGNIFICANT FIGURES

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THOMPSON PROFESSIONAL GROUP
6110 CLARKSON LANE
HOUSTON, TX 77055
Attn: JASON MILLER

REPORT: 31204

DATE: 11/13/97

PROJECT : FORMER GARY AFG
PREPARED: / /
SAMPLE : BTEX BLK3
SPIKE SAMPLE : BTEX LCS3
SPIKE DUP SAMPLE: BTEX LCSD3

SAMPLE MATRIX : WATER
ANALYZED: 10/02/97

BTEX
SPIKE/SPIKE DUPLICATE RECOVERY

Parameter (ug/l)	SPIKE AMOUNT	SAMPLE CONC.	SPIKE CONC.	SPIKE %Rec	SPIKE DUP.	DUP %Rec	RPD	MAX RPD	LIMITS %Rec.
BENZENE	20	0	20.7	104	20.9	105	< 1	12	76-129
TOLUENE	20	0	20.2	102	20.1	101	< 1	13	78-122
ETHYLBENZENE	20	0	20.6	104	20.5	103	< 1	13	82-124
XYLENE (TOTAL)	60	0	62.4	105	63	106	< 1	14	83-127

QA/QC Surrogates

Parameter	SPK %Rec	DUP %Rec	LIMITS
BROMOFLUOROBENZENE	94	98	71-127

* = VALUES OUTSIDE OF QC LIMITS

IN122/07-11-97

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

GENERAL CHEMISTRY
INORGANICS QUALITY CONTROL DATA SHEET

LCS/LCSD

MATRIX WATER

EPISODE 31204
CLIENT TPGINC

PARAMETER	TEST CODE	UNITS	METHOD BLANK AMT. FOUND	METHOD BLANK DET. LIMIT	LCS KNOWN CONC.	LCS AMT. FOUND	LCS % REC	LCS %REC LIMITS		LCS FLAG	LCS DUPLICATE AMT. FOUND	LCS DUPLICATE %REC.	LCS DUPLICATE FLAG	RPD RPD	RPD LIMIT	RPD FLAG	BATCHID	DATE ANALYZED	ANALYST INI.
TDS	IN270	mg/l	<10.0	10.0	396.0	388.0	98	80	120		394.0	99		1.5	20		9710022701	02-Oct-97	JMS
TDS	IN270	mg/l	<10.0	10.0	396.0	388.0	98	80	120		388.0	98		0.0	20		9710132701	13-Oct-97	JMS
TPH	IN210	mg/l	<0.5	0.5	20.0	18.1	91	80	120		17.0	85		6.3	20		97242101	24-Oct-97	PHP

NARRATIVE: TDS Batch 9710022701 is assoicated with samples 31204.03 and 31204.04 / Batch 9710132701 is assoicated with sample 31204.02

* = OUTSIDE QC LIMITS

31204
/GLCSW REV 4.2
14-Nov-97 jr

IN126/07-11-97

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

GENERAL CHEMISTRY
INORGANICS QUALITY CONTROL DATA SHEET

MATRIX **WATER** **DUPLICATE PRECISION**

EPISODE 31204
CLIENT TPGINC

SAMPLE# 31205.11
DUPLICATE # 31205.14

PARAMETER	TEST CODE	UNITS	METHOD BLANK		SAMPLE CONC.	DUPL. CONC.	RPD			BATCHID	DATE ANALYZED	ANALYST INITIALS
			</FOUND	DET LIMIT			RPD	LIMIT	FLAG			
TDS	IN270	mg/l	<10.0	10.0	400.0	418.0	4.4	20		9710022701	02-Oct-97	JMS

NARRATIVE:
* = OUTSIDE QC LIMITS

31204
/GDUPW REV 4.2
21-Oct-97 BL

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

November 06, 1997

Mr. Jason Miller
THOMPSON PROFESSIONAL GROUP, INC.
6110 Clarkson Lane
Houston, TX 77055

Project: FORMER GARY AFB
SWLO #: 31189.01 - 31189.08

Dear Mr. Miller:

Enclosed, please find the analytical results and diskette deliverable for your samples received in our laboratory on September 26, 1997, for the above captioned project.

Per our conversation, the BTEX analysis was performed outside of the required hold time. Due to this oversight, we are providing these results to you at no cost. We apologize for any inconvenience.

If, in your review, you should have any questions or require additional information, please do not hesitate to call.

Sincerely,

Mike Butler
Project Officer

MB/krs

Enclosures

1700 West Albany • Broken Arrow, OK 74012-1421 • (918) 251-2858 • Fax (918) 251-2599

SAMPLE LOG-IN SHEET

Lab Name: SOUTHWEST LABORATORY OF OKLAHOMA

Page 1 of 1

Received By (Print Name): KIM WILLISON/SARAH HODSON

Log-in Date: 9-26-97

Received By: (Signature): Sarah Hodson

Case Number:

Sample Delivery Group No:

SAS Number:

REMARKS:

1. Custody Seal(s) Present/Absent* Intact/Broken
2. Custody Seal Nos.:
3. Chain-of-Custody Records Present/Absent*
4. Traffic Reports or Packing List Present/Absent*
5. Airbill Sticker Present/Absent*
6. Airbill No: 3236530920
7. Sample Tags Present/Absent
   Sample Tag Numbers Listed/Not Listed on Chain-of-Custody
8. Sample Condition: Intact/Broken*/Leaking
9. Does information on custody records, traffic reports, and sample tags agree? Yes/No*
10. Date Received at Lab 9/24/97
11. Time Received 10:15

Sample Transfer

Fraction:

Area #: SLA SLA

On:

EPA SAMPLE #	CORRESPONDING SAMPLE TAG #	CORRESPONDING ASSIGNED LAB #	REMARKS: CONDITION OF SAMPLE SHIPMENT, ETC.
SB15-24		31189.01	26
SB15-22		.02	
SB15-28		.03	
SB16-28		.04	
SB16-20		.05	
SB14-22		.06	
SB14-34		.07	
SB14-24		.08	

* Contact SMO and attach record of resolution

Received By:

Date:

Logbook No:

Logbook Page No:

FORM DC-1

Thompson Professional Group, Inc.
6110 Clarkson Lane
Houston, Texas 77055
(713) 956-4100
www.thompson-grp.com

Analysis Request and Chain of Custody Record

Former Gary Air Force Base, LPST # 108133
Caldwell County, Texas

Soil Boring/~~Ground Water Monitoring Well~~ No. 16

Project Number: 887-01 | TPG Contact: Jason Miller | Phone Number: (713) 956-4100

Sample ID	Date Taken	Time Taken	Sample Type (Soil, Waste, Groundwater)	Grab Sample	Comp	Number of Containers	Preservative	TPH by 418.1	BTEX by 8020	TDS by 160.1	PAH by 8310		Remarks
SB16-28	9-24-97	12:20P	Soil	✓		2	None	✓	✓				
SB16-20	"	2:55P	"	✓		2	"	✓	✓				

Sampler Signature: [signature]	Relinquished by: (Signature) [signature]	Date: 9-25-97 Time: 7:30A	Received by: (Signature) (Fed Ex)	Date: 9-25-97 Time:	Intact?
Affiliation: Thompson Professional Group	Relinquished by: (Signature)	Date: Time:	Received by: (Signature)	Date: Time:	Intact?
Sampler Remarks:			Laboratory Receipt: (Signature) [signature]	Date: 9-26-97 Time: 1015	Intact?
Seal Number	Shipping Agency: Fed Ex UPS Lone Star Other:		Laboratory Remarks:		

Thompson Professional Group, Inc.
6110 Clarkson Lane
Houston, Texas 77055
(713) 956-4100
www.thompson-grp.com

Analysis Request and Chain of Custody Record
Former Gary Air Force Base, LPST # 108133
Caldwell County, Texas

Soil Boring/~~Ground Water Monitoring Well~~ No. 15

Project Number: 887-01 | TPG Contact: Jason Miller | Phone Number: (713) 956-4100

Sample ID	Date Taken	Time Taken	Sample Type (Soil, Waste, Groundwater)	Grab Sample	Comp	Number of Containers	Preservative	TPH by 418.1	BTEX by 8020	TDS by 160.1	PAH by 8310		Remarks
SB15-24	9-24-97	8:55A	Soil	✓		2	None	✓	✓				
SB15-22	"	8:45A	"	✓		2	"	✓	✓				
SB15-28	"	10:05A	"	✓		2	"	✓	✓				

Sampler Signature: [signature]	Relinquished by: (Signature) [signature]	Date: 9-25-97 Time: 7:30A	Received by: (Signature) (Fed Ex)	Date: 9-25-97 Time:	Intact?
Affiliation: Thompson Professional Group	Relinquished by: (Signature)	Date: Time:	Received by: (Signature)	Date: Time:	Intact?
Sampler Remarks:			Laboratory Receipt: (Signature) [signature]	Date: 9-26-97 Time: 1015	Intact?
Seal Number	Shipping Agency: Fed Ex UPS Lone Star Other:		Laboratory Remarks:		

Thompson Professional Group, Inc.
6110 Clarkson Lane
Houston, Texas 77055
(713) 956-4100
www.thompson-grp.com

Analysis Request and Chain of Custody Record
Former Gary Air Force Base, LPST # 108133
Caldwell County, Texas

Soil Boring/~~Ground Water Monitoring Well~~ No. 14

Project Number: 887-01 | TPG Contact: Shawn Miller | Phone Number: (713) 956-4100

Sample ID	Date Taken	Time Taken	Sample Type (Soil, Waste, Groundwater)	Grab Sample	Comp	Number of Containers	Preservative	TPH by 418.1	BTEX by 8020	TDS by 160.1	PAH by 8310		Remarks
SB14-22	9-24-97	4:15P	Soil	✓		2	None	✓	✓				
SB14-34	"	3:50P	"	✓		2	"	✓	✓				
SB14-24	"	4:20P	"	✓		2	"	✓	✓				

Sampler Signature: [signature]	Relinquished by: (Signature) [signature]	Date: 9-25-97 Time: 7:30A	Received by: (Signature) (Fed Ex)	Date: 9-25-97 Time:	Intact?
Affiliation: Thompson Professional Group	Relinquished by: (Signature)	Date: Time:	Received by: (Signature)	Date: Time:	Intact?
Sampler Remarks:			Laboratory Receipt: (Signature)	Date: Time:	Intact?
Seal Number	Shipping Agency: Fed Ex UPS Lone Star Other:		Laboratory Remarks:		

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

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THOMPSON PROFESSIONAL GROUP, INC.
6110 CLARKSON LANE
HOUSTON, TX 77055
Attn: JASON MILLER

REPORT: 31189.01

DATE: 11/06/97

SWLO # : 31189.01
SAMPLE #: SB15-24
SAMPLE MATRIX : SOIL
PROJECT : FORMER GARY AFB
LOCATION:
METHOD REFERENCE: SW846-8020

DEPTH FROM : 0.00
DEPTH TO : 0.00
DATE SAMPLED : 09/24/97
DATE RECEIVED : 09/26/97
DATE PREPARED :
DATE ANALYZED : 11/03/97
DILUTION FACTOR: 5.00

BTEX
RESULTS REPORT IN ug/kg ON A DRY WEIGHT BASIS

PARAMETER	RESULTS**	PARAMETER	RESULTS**
BENZENE	11.3	ETHYLBENZENE	26.2
TOLUENE	52.1	XYLENE (TOTAL)	21.8

QA/QC SURROGATE RECOVERIES
BROMOFLUOROBENZENE (23-143) 101%

ESULTS REPORTED TO A MAXIMUM OF 3 SIGNIFICANT FIGURES

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THOMPSON PROFESSIONAL GROUP, INC.
6110 CLARKSON LANE
HOUSTON, TX 77055
Attn: JASON MILLER

REPORT: 31189.01

DATE: 11/06/97

SWLO # : 31189.01
SAMPLE #: SB15-24
SAMPLE MATRIX : SOIL
PROJECT : FORMER GARY AFB
LOCATION:

DEPTH FROM : 0.00
DEPTH TO : 0.00
DATE SAMPLED : 09/24/97
DATE RECEIVED : 09/26/97

MISCELLANEOUS ON A DRY WEIGHT BASIS

PARAMETER	RESULTS**	UNITS	DATE PREPARED	DATE ANALYZED	REFERENCE METHOD
TOTAL PETROLEUM HYDROCARBONS	1240	mg/kg	/ /	10/16/97	EPA 418.1

.ESULTS REPORTED TO A MAXIMUM OF 3 SIGNIFICANT FIGURES

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

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THOMPSON PROFESSIONAL GROUP, INC.
6110 CLARKSON LANE
HOUSTON, TX 77055
Attn: JASON MILLER

REPORT: 31189.02

DATE: 11/06/97

SWLO # : 31189.02
SAMPLE #: SB15-22
SAMPLE MATRIX : SOIL
PROJECT : FORMER GARY AFB
LOCATION:
METHOD REFERENCE: SW846-8020

DEPTH FROM : 0.00
DEPTH TO : 0.00
DATE SAMPLED : 09/24/97
DATE RECEIVED : 09/26/97
DATE PREPARED :
DATE ANALYZED : 11/03/97
DILUTION FACTOR: 1.00

BTEX
RESULTS REPORT IN ug/kg ON A DRY WEIGHT BASIS

PARAMETER	RESULTS**		PARAMETER	RESULTS**	
BENZENE	1.24	U	ETHYLBENZENE	1.24	U
TOLUENE	0.8	J	XYLENE (TOTAL)	1.24	U

QA/QC SURROGATE RECOVERIES

BROMOFLUOROBENZENE	(23-143)	91%

**RESULTS REPORTED TO A MAXIMUM OF 3 SIGNIFICANT FIGURES

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THOMPSON PROFESSIONAL GROUP, INC.
6110 CLARKSON LANE
HOUSTON, TX 77055
Attn: JASON MILLER

REPORT: 31189.02

DATE: 11/06/97

SWLO # : 31189.02
SAMPLE #: SB15-22
SAMPLE MATRIX : SOIL
PROJECT : FORMER GARY AFB
LOCATION:

DEPTH FROM : 0.00
DEPTH TO : 0.00
DATE SAMPLED : 09/24/97
DATE RECEIVED : 09/26/97

MISCELLANEOUS ON A DRY WEIGHT BASIS

PARAMETER	RESULTS**	UNITS	DATE PREPARED	DATE ANALYZED	REFERENCE METHOD
TOTAL PETROLEUM HYDROCARBONS	31	mg/kg	/ /	10/16/97	EPA 418.1

**RESULTS REPORTED TO A MAXIMUM OF 3 SIGNIFICANT FIGURES

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

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THOMPSON PROFESSIONAL GROUP, INC.
6110 CLARKSON LANE
HOUSTON, TX 77055
Attn: JASON MILLER

REPORT: 31189.03

DATE: 11/06/97

SWLO # : 31189.03
SAMPLE #: SB15-28
SAMPLE MATRIX : SOIL
PROJECT : FORMER GARY AFB
LOCATION:
METHOD REFERENCE: SW846-8020

DEPTH FROM : 0.00
DEPTH TO : 0.00
DATE SAMPLED : 09/24/97
DATE RECEIVED : 09/26/97
DATE PREPARED :
DATE ANALYZED : 11/03/97
DILUTION FACTOR: 1.00

BTEX
RESULTS REPORT IN ug/kg ON A DRY WEIGHT BASIS

PARAMETER	RESULTS**		PARAMETER	RESULTS**	
BENZENE	1.33	U	ETHYLBENZENE	1.33	U
TOLUENE	1.33	U	XYLENE (TOTAL)	1.33	U

QA/QC SURROGATE RECOVERIES

BROMOFLUOROBENZENE	(23-143)	70%

.ESULTS REPORTED TO A MAXIMUM OF 3 SIGNIFICANT FIGURES

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

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THOMPSON PROFESSIONAL GROUP, INC.
6110 CLARKSON LANE
HOUSTON, TX 77055
Attn: JASON MILLER

REPORT: 31189.03

DATE: 11/06/97

SWLO # : 31189.03
SAMPLE #: SB15-28
SAMPLE MATRIX : SOIL
PROJECT : FORMER GARY AFB
LOCATION:

DEPTH FROM : 0.00
DEPTH TO : 0.00
DATE SAMPLED : 09/24/97
DATE RECEIVED : 09/26/97

MISCELLANEOUS ON A DRY WEIGHT BASIS

PARAMETER	RESULTS**	UNITS	DATE PREPARED	DATE ANALYZED	REFERENCE METHOD
TOTAL PETROLEUM HYDROCARBONS	16.6	mg/kg	/ /	10/16/97	EPA 418.1

..SULTS REPORTED TO A MAXIMUM OF 3 SIGNIFICANT FIGURES

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THOMPSON PROFESSIONAL GROUP, INC.
6110 CLARKSON LANE
HOUSTON, TX 77055
Attn: JASON MILLER

REPORT: 31189.04

DATE: 11/06/97

SWLO # : 31189.04
SAMPLE #: SB16-28
SAMPLE MATRIX : SOIL
PROJECT : FORMER GARY AFB
LOCATION:
METHOD REFERENCE: SW846-8020

DEPTH FROM : 0.00
DEPTH TO : 0.00
DATE SAMPLED : 09/24/97
DATE RECEIVED : 09/26/97
DATE PREPARED :
DATE ANALYZED : 11/03/97
DILUTION FACTOR: 1.00

BTEX
RESULTS REPORT IN ug/kg ON A DRY WEIGHT BASIS

PARAMETER	RESULTS**		PARAMETER	RESULTS**	
BENZENE	1.32	U	ETHYLBENZENE	1.32	U
TOLUENE	1.32	U	XYLENE (TOTAL)	1.32	U

QA/QC SURROGATE RECOVERIES

BROMOFLUOROBENZENE	(23-143)	86%

**RESULTS REPORTED TO A MAXIMUM OF 3 SIGNIFICANT FIGURES

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 West Albany • Broken Arrow, Oklahoma 74012 • Office (918) 251-2858 • Fax (918) 251-2599

THOMPSON PROFESSIONAL GROUP, INC.
6110 CLARKSON LANE
HOUSTON, TX 77055
Attn: JASON MILLER

REPORT: 31189.04

DATE: 11/06/97

SWLO # : 31189.04
SAMPLE #: SB16-28
SAMPLE MATRIX : SOIL
PROJECT : FORMER GARY AFB
LOCATION:

DEPTH FROM : 0.00
DEPTH TO : 0.00
DATE SAMPLED : 09/24/97
DATE RECEIVED : 09/26/97

MISCELLANEOUS ON A DRY WEIGHT BASIS

PARAMETER	RESULTS**	UNITS	DATE PREPARED	DATE ANALYZED	REFERENCE METHOD
TOTAL PETROLEUM HYDROCARBONS	27.6	mg/kg	/ /	10/16/97	EPA 418.1

.ESULTS REPORTED TO A MAXIMUM OF 3 SIGNIFICANT FIGURES

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 West Albany • Broken Arrow, Oklahoma 74012 • Office (918) 251-2858 • Fax (918) 251-2599

THOMPSON PROFESSIONAL GROUP, INC.
6110 CLARKSON LANE
HOUSTON, TX 77055
Attn: JASON MILLER

REPORT: 31189.05

DATE: 11/06/97

SWLO # : 31189.05
SAMPLE #: SB16-20
SAMPLE MATRIX : SOIL
PROJECT : FORMER GARY AFB
LOCATION:
METHOD REFERENCE: SW846-8020

DEPTH FROM : 0.00
DEPTH TO : 0.00
DATE SAMPLED : 09/24/97
DATE RECEIVED : 09/26/97
DATE PREPARED :
DATE ANALYZED : 11/03/97
DILUTION FACTOR: 125.00

BTEX
RESULTS REPORT IN ug/kg ON A DRY WEIGHT BASIS

PARAMETER	RESULTS**		PARAMETER	RESULTS**
BENZENE	140	U	ETHYLBENZENE	965
TOLUENE	317		XYLENE (TOTAL)	1200

QA/QC SURROGATE RECOVERIES

BROMOFLUOROBENZENE	(23-143)	93%

**RESULTS REPORTED TO A MAXIMUM OF 3 SIGNIFICANT FIGURES

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

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THOMPSON PROFESSIONAL GROUP, INC.
6110 CLARKSON LANE
HOUSTON, TX 77055
Attn: JASON MILLER

REPORT: 31189.05

DATE: 11/06/97

SWLO # : 31189.05
SAMPLE #: SB16-20
SAMPLE MATRIX : SOIL
PROJECT : FORMER GARY AFB
LOCATION:

DEPTH FROM : 0.00
DEPTH TO : 0.00
DATE SAMPLED : 09/24/97
DATE RECEIVED : 09/26/97

MISCELLANEOUS ON A DRY WEIGHT BASIS

PARAMETER	RESULTS**	UNITS	DATE PREPARED	DATE ANALYZED	REFERENCE METHOD
TOTAL PETROLEUM HYDROCARBONS	1450	mg/kg	/ /	10/16/97	EPA 418.1

.ESULTS REPORTED TO A MAXIMUM OF 3 SIGNIFICANT FIGURES

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

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THOMPSON PROFESSIONAL GROUP, INC.
6110 CLARKSON LANE
HOUSTON, TX 77055
Attn: JASON MILLER

REPORT: 31189.06

DATE: 11/06/97

SWLO # : 31189.06
SAMPLE #: SB14-22
SAMPLE MATRIX : SOIL
PROJECT : FORMER GARY AFB
LOCATION:
METHOD REFERENCE: SW846-8020

DEPTH FROM : 0.00
DEPTH TO : 0.00
DATE SAMPLED : 09/24/97
DATE RECEIVED : 09/26/97
DATE PREPARED :
DATE ANALYZED : 11/03/97
DILUTION FACTOR: 1.00

BTEX
RESULTS REPORT IN ug/kg ON A DRY WEIGHT BASIS

PARAMETER	RESULTS**		PARAMETER	RESULTS**	
BENZENE	1.26	U	ETHYLBENZENE	1.26	U
TOLUENE	1.26	U	XYLENE (TOTAL)	1.26	U

QA/QC SURROGATE RECOVERIES

BROMOFLUOROBENZENE	(23-143)	90%

.ESULTS REPORTED TO A MAXIMUM OF 3 SIGNIFICANT FIGURES

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 West Albany • Broken Arrow, Oklahoma 74012 • Office (918) 251-2858 • Fax (918) 251-2599

THOMPSON PROFESSIONAL GROUP, INC.
6110 CLARKSON LANE
HOUSTON, TX 77055
Attn: JASON MILLER

REPORT: 31189.06

DATE: 11/06/97

SWLO # : 31189.06
SAMPLE #: SB14-22
SAMPLE MATRIX : SOIL
PROJECT : FORMER GARY AFB
LOCATION:

DEPTH FROM : 0.00
DEPTH TO : 0.00
DATE SAMPLED : 09/24/97
DATE RECEIVED : 09/26/97

MISCELLANEOUS ON A DRY WEIGHT BASIS

PARAMETER	RESULTS**	UNITS	DATE PREPARED	DATE ANALYZED	REFERENCE METHOD
TOTAL PETROLEUM HYDROCARBONS	163	mg/kg	/ /	10/16/97	EPA 418.1

.ESULTS REPORTED TO A MAXIMUM OF 3 SIGNIFICANT FIGURES

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

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THOMPSON PROFESSIONAL GROUP, INC.
6110 CLARKSON LANE
HOUSTON, TX 77055
Attn: JASON MILLER

REPORT: 31189.07

DATE: 11/06/97

SWLO # : 31189.07
SAMPLE #: SB14-34
SAMPLE MATRIX : SOIL
PROJECT : FORMER GARY AFB
LOCATION:
METHOD REFERENCE: SW846-8020

DEPTH FROM : 0.00
DEPTH TO : 0.00
DATE SAMPLED : 09/24/97
DATE RECEIVED : 09/26/97
DATE PREPARED :
DATE ANALYZED : 11/03/97
DILUTION FACTOR: 1.00

BTEX
RESULTS REPORT IN ug/kg ON A DRY WEIGHT BASIS

PARAMETER	RESULTS**		PARAMETER	RESULTS**	
BENZENE	1.2	U	ETHYLBENZENE	1.2	U
TOLUENE	1.2	U	XYLENE (TOTAL)	1.2	U

QA/QC SURROGATE RECOVERIES

BROMOFLUOROBENZENE	(23-143)	91%

ESULTS REPORTED TO A MAXIMUM OF 3 SIGNIFICANT FIGURES

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

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THOMPSON PROFESSIONAL GROUP, INC.
6110 CLARKSON LANE
HOUSTON, TX 77055
Attn: JASON MILLER

REPORT: 31189.07

DATE: 11/06/97

SWLO # : 31189.07
SAMPLE #: SB14-34
SAMPLE MATRIX : SOIL
PROJECT : FORMER GARY AFB
LOCATION:

DEPTH FROM : 0.00
DEPTH TO : 0.00
DATE SAMPLED : 09/24/97
DATE RECEIVED : 09/26/97

MISCELLANEOUS ON A DRY WEIGHT BASIS

PARAMETER	RESULTS**	UNITS	DATE PREPARED	DATE ANALYZED	REFERENCE METHOD
TOTAL PETROLEUM HYDROCARBONS	23.6	mg/kg	/ /	10/16/97	EPA 418.1

**RESULTS REPORTED TO A MAXIMUM OF 3 SIGNIFICANT FIGURES

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

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THOMPSON PROFESSIONAL GROUP, INC.
6110 CLARKSON LANE
HOUSTON, TX 77055
Attn: JASON MILLER

REPORT: 31189.08

DATE: 11/06/97

SWLO # : 31189.08
SAMPLE #: SB14-24
SAMPLE MATRIX : SOIL
PROJECT : FORMER GARY AFB
LOCATION:
METHOD REFERENCE: SW846-8020

DEPTH FROM : 0.00
DEPTH TO : 0.00
DATE SAMPLED : 09/24/97
DATE RECEIVED : 09/26/97
DATE PREPARED :
DATE ANALYZED : 11/03/97
DILUTION FACTOR: 1.00

BTEX
RESULTS REPORT IN ug/kg ON A DRY WEIGHT BASIS

PARAMETER	RESULTS**		PARAMETER	RESULTS**	
BENZENE	1.28	U	ETHYLBENZENE	1.28	U
TOLUENE	1.28	U	XYLENE (TOTAL)	1.28	U

QA/QC SURROGATE RECOVERIES

BROMOFLUOROBENZENE	(23-143)	84%

ULTS REPORTED TO A MAXIMUM OF 3 SIGNIFICANT FIGURES

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THOMPSON PROFESSIONAL GROUP, INC.
6110 CLARKSON LANE
HOUSTON, TX 77055
Attn: JASON MILLER

REPORT: 31189.08

DATE: 11/06/97

SWLO # : 31189.08
SAMPLE #: SB14-24
SAMPLE MATRIX : SOIL
PROJECT : FORMER GARY AFB
LOCATION:

DEPTH FROM : 0.00
DEPTH TO : 0.00
DATE SAMPLED : 09/24/97
DATE RECEIVED : 09/26/97

MISCELLANEOUS ON A DRY WEIGHT BASIS

PARAMETER	RESULTS**	UNITS	DATE PREPARED	DATE ANALYZED	REFERENCE METHOD
TOTAL PETROLEUM HYDROCARBONS	171	mg/kg	/ /	10/16/97	EPA 418.1

ULTS REPORTED TO A MAXIMUM OF 3 SIGNIFICANT FIGURES

SOUTHWEST LABORATORY OF OKLAHOMA, INC.
1700 West Albany • Broken Arrow, Oklahoma 74012 • Office (918) 251-2858 • Fax (918) 251-2599

QUALITY CONTROL

SECTION

SOUTHWEST LABORATORY OF OKLAHOMA, INC.
1700 W. Albany • Broken Arrow, Oklahoma 74012-1421 • 918-251-2858 • FAX: 918-251-2599

LABORATORY QUALITY CONTROL SEQUENCE

METHOD SW 8020
SEQUENCE DATE 11/03/97
INSTRUMENT ID : 6B

QA Sequence: 6B110397
Page: 1

LABORATORY BLANK

MATRIX : W
SAMPLE ID : BLANK
SAMPLE AMOUNT : 5.0 g
ANALYSIS DATE : 11/03/97
ANALYSIS TIME : 09:12

AATS NO : BLANK
FILENAME : 006R0601.D
DILUTION FACTOR: 1.00

COMPOUND	QUANTITATION LIMIT (ug/Kg)	AMOUNT FOUND (ug/Kg)
BENZENE	1.0	ND
TOLUENE	1.0	ND
ETHYLBENZENE	1.0	ND
TOTAL XYLENES	1.0	ND

SURROGATE RECOVERY (BFB): 89 %

MATRIX SPIKE/MATRIX SPIKE DUPLICATE RESULTS

SPIKE COMPOUND	SPIKE CONC(ug/Kg)	BLANK SAMPLE CONC. (ug/Kg)	CONTROLMS MATRIX SPIKE CONC. (ug/Kg)	MS PERCENT RECOVERY	CONTROLMD SPIKE DUPLICATE CONC. (ug/Kg)	MSD PERCENT RECOVERY	RECOVERY PERCENT DIFFERENCE
BENZENE	20.0	0.0	20.6	103.0	20.4	102.0	0.98 %
TOLUENE	20.0	0.0	19.5	97.5	19.5	97.5	0.00 %
ETHYLBENZENE	20.0	0.0	19.6	98.0	19.8	99.0	1.02 %
TOTAL XYLENES	60.0	0.2	58.8	97.7	59.4	98.7	1.02 %

4 Nov 97

11-4-97

SOUTHWEST LABORATORY OF OKLAHOMA, INC.
1700 W. Albany • Broken Arrow, Oklahoma 74012-1421 • 918-251-2858 • FAX: 918-251-2599

LABORATORY QUALITY CONTROL SEQUENCE

METHOD SW 8020
SEQUENCE DATE 11/03/97
INSTRUMENT ID : 6B

QA Sequence: 6B110397
Page: 1

LABORATORY BLANK

MATRIX : W
SAMPLE ID : BLANK
SAMPLE AMOUNT : 5.0 g
ANALYSIS DATE : 11/03/97
ANALYSIS TIME : 09:12

AATS NO : BLANK
FILENAME : 006R0601.D
DILUTION FACTOR: 1.00

COMPOUND	QUANTITATION LIMIT (ug/Kg)	AMOUNT FOUND (ug/Kg)
BENZENE	1.0	ND
TOLUENE	1.0	ND
ETHYLBENZENE	1.0	ND
TOTAL XYLENES	1.0	ND

SURROGATE RECOVERY (BFB): 89 %

MATRIX SPIKE/MATRIX SPIKE DUPLICATE RESULTS

SPIKE COMPOUND	SPIKE CONC(ug/Kg)	31189.03 SAMPLE CONC. (ug/Kg)	31189.03MS MATRIX SPIKE CONC. (ug/Kg)	MS PERCENT RECOVERY	31189.03MD SPIKE DUPLICATE CONC. (ug/Kg)	MSD PERCENT RECOVERY	RECOVERY PERCENT DIFFERENCE
BENZENE	20.0	0.2	19.0	94.0	20.8	103.0	9.14 %
TOLUENE	20.0	0.2	17.6	87.0	19.7	97.5	11.38 %
ETHYLBENZENE	20.0	0.0	17.8	89.0	19.8	99.0	10.64 %
TOTAL XYLENES	60.0	0.2	53.1	88.2	59.9	99.5	12.08 %

4 Nov 97

11-4-97

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

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THOMPSON PROFESSIONAL GROUP, INC.
6110 CLARKSON LANE
HOUSTON, TX 77055
Attn: JASON MILLER

REPORT: 31189

DATE: 11/06/97

SWLO QAQC#: 9710162101
SAMPLE #: TPH BLK LB1
SAMPLE MATRIX : SOIL
PROJECT : FORMER GARY AFB
LOCATION: LAB QC
METHOD REFERENCE: EPA 418.1

DEPTH FROM : 0.00
DEPTH TO : 0.00
DATE SAMPLED : / /
DATE RECEIVED : / /
DATE PREPARED :
DATE ANALYZED : 10/16/97
DILUTION FACTOR: 1.00

MISCELLANEOUS ON A DRY WEIGHT BASIS

PARAMETER	RESULTS**		UNITS
TOTAL PETROLEUM HYDROCARBONS	10	U	mg/kg

ESULTS REPORTED TO A MAXIMUM OF 3 SIGNIFICANT FIGURES

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 West Albany • Broken Arrow, Oklahoma 74012 • Office (918) 251-2858 • Fax (918) 251-2599

THOMPSON PROFESSIONAL GROUP, INC.
6110 CLARKSON LANE
HOUSTON, TX 77055
Attn: JASON MILLER

REPORT: 31189

DATE: 11/06/97

PROJECT : FORMER GARY AFB
PREPARED: / /
SPIKE SAMPLE : TPH LCS
SPIKE DUP SAMPLE: TPH LCSD

SAMPLE MATRIX : SOIL
ANALYZED: 10/16/97

MISCELLANEOUS
SPIKE/SPIKE DUPLICATE RECOVERY

Parameter (mg/kg)	SPIKE AMOUNT	SAMPLE CONC.	SPIKE CONC.	SPIKE %Rec	SPIKE DUP.	DUP %Rec	RPD	MAX RPD	LIMITS %Rec.
TOTAL PETROLEUM HYDROC	667	0	634	96	630	95	< 1	0	80-120

* = VALUES OUTSIDE OF QC LIMITS

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

October 16, 1997

Mr. Jason Miller
THOMPSON PROFESSIONAL GROUP, INC.
6110 Clarkson Lane
Houston, TX 77055

Project: FORMER GARY AFB
SWLO #: 31175.01 - 31175.06

Dear Mr. Miller:

Enclosed, please find the analytical results and diskette deliverable for your samples eceived in our laboratory on September 25, 1997, for the above captioned project.

If, in your review, you should have any questions or require additional information, please do not hesitate to call.

Sincerely,

Mike Butler
Project Officer

MB/krs

Enclosures

1700 West Albany • Broken Arrow, OK 74012-1421 • (918) 251-2858 • Fax (918) 251-2599

SAMPLE LOG-IN SHEET

Lab Name: SOUTHWEST LABORATORY OF OKLAHOMA Page 1 of 1

Received By (Print Name): KIM WILLISON/SARAH HODSON Log-in Date: 9-25-97

Received By: (Signature): K Willison

Case Number:

Sample Delivery Group No:

SAS Number:

REMARKS: 9-25 KW

1. Custody Seal(s) Present/Absent* Intact/Broken
2. Custody Seal Nos.:
3. Chain-of-Custody Records Present/Absent*
4. Traffic Reports or Packing List Present/Absent*
5. Airbill/Sticker Present/Absent*
5. Airbill No: 3236530942
7. Sample Tags Present/Absent
   Sample Tag Numbers Listed/Not Listed on Chain-of-Custody
8. Sample Condition: Intact/Broken*/Leaking
9. Does information on custody records, traffic reports, and sample tags agree? Yes/No*
10. Date Received at Lab: 9-25-97
11. Time Received 1030

Sample Transfer

Fraction:

Area #:

B

	CORRESPONDING		
EPA SAMPLE #	SAMPLE TAG #	ASSIGNED LAB #	REMARKS: CONDITION OF SAMPLE SHIPMENT, ETC.
SB11-10		31175.01	2°
SB12-20		.02	
SB12-30		.03	
SB13-56		.04	
SB13-48		.05	
SB13-34		.06	

* Contact SMO and attach record of resolution

Received By:

Date:

Logbook No:

Logbook Page No:

FORM DC-1

3/90

Thompson Professional Group, Inc.
6110 Clarkson Lane
Houston, Texas 77055
(713) 956-4100
www.thompson-erp.com

Analysis Request and Chain of Custody Record

Former Gary Air Force Base, LPST # 108133
Caldwell County, Texas

Soil Boring/~~Ground Water Monitoring~~ Well No. 12

Project Number: 887-01 | TPG Contact: Jason Miller | Phone Number: (713) 956-4100

Sample ID	Date Taken	Time Taken	Sample Type (Soil, Waste, Groundwater)	Grab Sample	Comp	Number of Containers	Preservative	TPH by 418.1	BTEX by 8020	TDS by 160.1	PAH by 8310		Remarks
SB12-20	9-23-97	4:30	Soil	✓		2	None	✓	✓				
SB12-30	9-23-97	4:25	"	✓		2	"	✓	✓				

Sampler Signature: [signature]	Relinquished by: (Signature) [signature]	Date: 9-24-97 Time: 7:30A	Received by: (Signature) (Fed Ex)	Date: 9-24-97 Time:	Intact?
Affiliation: Thompson Professional Group	Relinquished by: (Signature)	Date: Time:	Received by: (Signature)	Date: Time:	Intact?
Sampler Remarks:			Laboratory Receipt: (Signature) [signature]	Date: 9-25-97 Time: 1030	Intact?
Seal Number	Shipping Agency: Fed Ex UPS Lone Star Other:		Laboratory Remarks:		

Thompson Professional Group, Inc.
6110 Clarkson Lane
Houston, Texas 77055
(713) 956-4100
www.thompson-grp.com

Analysis Request and Chain of Custody Record
Former Gary Air Force Base, LPST # 108133
Caldwell County, Texas

Soil Boring/~~Ground Water Monitoring Well~~ No. 13

Project Number: 887-01 | TPG Contact: Jason Miller | Phone Number: (713) 956-4100

Sample ID	Date Taken	Time Taken	Sample Type (Soil, Waste, Groundwater)	Grab Sample	Comp	Number of Containers	Preservative	TPH by 418.1	BTEX by 8020	TDS by 160.1	PAH by 8310		Remarks
SB13-56	9-23-97	3:25P	Soil	✓		2	None	✓	✓				
SB13-48	"	2:45P	"	✓		2	"	✓	✓				
SB13-34	"	3:20P	"	✓		2	"	✓	✓				

Sampler Signature: [signature]	Relinquished by: (Signature) [signature]	Date: 9-24-97 Time: 7:30 A	Received by: (Signature) (Fed Ex)	Date: 9-24-97 Time:	Intact?
Affiliation: Thompson Professional Group	Relinquished by: (Signature)	Date: Time:	Received by: (Signature)	Date: Time:	Intact?
Sampler Remarks:			Laboratory Receipt: (Signature) [signature]	Date: 9-25 97 Time: 1030	Intact?
Seal Number	Shipping Agency: Fed Ex UPS Lone Star Other:		Laboratory Remarks:		

2

Thompson Professional Group, Inc.
6110 Clarkson Lane
Houston, Texas 77055
(713) 956-4100
www.thompson-grp.com

Analysis Request and Chain of Custody Record
Former Gary Air Force Base, LPST # 108133
Caldwell County, Texas

Soil Boring/~~Ground Water Monitoring Well~~ No. 11

Project Number: 887-01 | TPG Contact: Jason Miller | Phone Number: (713) 956-4100

Sample Information								Analytical Parameters Requested					
Sample ID	Date Taken	Time Taken	Sample Type (Soil, Waste, Groundwater)	Grab Sample	Comp	Number of Containers	Preservative	TPH by 418.1	BTEX by 8020	TDS by 160.1	PAH by 8310		Remarks
SB11-10	9-23-97	11:55P	Soil	✓		2	None	✓	✓				

Sampler Signature: [signature]	Relinquished by: (Signature) [signature]	Date: 9-24-97 Time: 7:30 A	Received by: (Signature) (Fed Ex)	Date: 9-24-97 Time:	Intact?
Affiliation: Thompson Professional Group	Relinquished by: (Signature)	Date: Time:	Received by: (Signature)	Date: Time:	Intact?
Sampler Remarks:			Laboratory Receipt: (Signature) [signature]	Date: 9.25.97 Time: 1030	Intact?
Seal Number	Shipping Agency: Fed Ex UPS Lone Star Other:		Laboratory Remarks:		

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

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THOMPSON PROFESSIONAL GROUP, INC.
6110 CLARKSON LANE
HOUSTON, TX 77055
Attn: JASON MILLER

REPORT: 31175.01

DATE: 10/16/97

SWLO # : 31175.01
SAMPLE #: SB11-10
SAMPLE MATRIX : SOIL
PROJECT : FORMER GARY AFB
LOCATION:
METHOD REFERENCE: SW 8020

DEPTH FROM : 0.00
DEPTH TO : 0.00
DATE SAMPLED : 09/23/97
DATE RECEIVED : 09/25/97
DATE PREPARED :
DATE ANALYZED : 09/29/97
DILUTION FACTOR: 1.00

BTEX
RESULTS REPORT IN ug/kg ON A DRY WEIGHT BASIS

PARAMETER	RESULTS**		PARAMETER	RESULTS**	
BENZENE	1.2	U	ETHYLBENZENE	1.2	U
TOLUENE	1.2	U	XYLENE (TOTAL)	1.2	U

QA/QC SURROGATE RECOVERIES

BROMOFLUOROBENZENE	(23-143)	89%

ESULTS REPORTED TO A MAXIMUM OF 3 SIGNIFICANT FIGURES

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

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THOMPSON PROFESSIONAL GROUP, INC.
6110 CLARKSON LANE
HOUSTON, TX 77055
Attn: JASON MILLER

REPORT: 31175.01

DATE: 10/16/97

SWLO # : 31175.01
SAMPLE #: SB11-10
SAMPLE MATRIX : SOIL
PROJECT : FORMER GARY AFB
LOCATION:

DEPTH FROM : 0.00
DEPTH TO : 0.00
DATE SAMPLED : 09/23/97
DATE RECEIVED : 09/25/97

MISCELLANEOUS ON A DRY WEIGHT BASIS

PARAMETER	RESULTS**		UNITS	DATE PREPARED	DATE ANALYZED	REFERENCE METHOD
TOTAL PETROLEUM HYDROCARBONS	11.9	U	mg/kg	/ /	10/06/97	EPA 418.1
% MOISTURE	15.9		%	/ /	09/29/97	

RESULTS REPORTED TO A MAXIMUM OF 3 SIGNIFICANT FIGURES

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

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THOMPSON PROFESSIONAL GROUP, INC.
6110 CLARKSON LANE
HOUSTON, TX 77055
Attn: JASON MILLER

REPORT: 31175.02

DATE: 10/16/97

SWLO # : 31175.02
SAMPLE #: SB12-20
SAMPLE MATRIX : SOIL
PROJECT : FORMER GARY AFB
LOCATION:
METHOD REFERENCE: SW 8020

DEPTH FROM : 0.00
DEPTH TO : 0.00
DATE SAMPLED : 09/23/97
DATE RECEIVED : 09/25/97
DATE PREPARED :
DATE ANALYZED : 09/29/97
DILUTION FACTOR: 1.00

BTEX
RESULTS REPORT IN ug/kg ON A DRY WEIGHT BASIS

PARAMETER	RESULTS**		PARAMETER	RESULTS**	
BENZENE	1.1	U	ETHYLBENZENE	1.1	U
TOLUENE	1.1	U	XYLENE (TOTAL)	1.1	U

QA/QC SURROGATE RECOVERIES

BROMOFLUOROBENZENE	(23-143)	64% *

RESULTS REPORTED TO A MAXIMUM OF 3 SIGNIFICANT FIGURES

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

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THOMPSON PROFESSIONAL GROUP, INC.
6110 CLARKSON LANE
HOUSTON, TX 77055
Attn: JASON MILLER

REPORT: 31175.02

DATE: 10/16/97

SWLO # : 31175.02
SAMPLE #: SB12-20
SAMPLE MATRIX : SOIL
PROJECT : FORMER GARY AFB
LOCATION:

DEPTH FROM : 0.00
DEPTH TO : 0.00
DATE SAMPLED : 09/23/97
DATE RECEIVED : 09/25/97

MISCELLANEOUS ON A DRY WEIGHT BASIS

PARAMETER	RESULTS**		UNITS	DATE PREPARED	DATE ANALYZED	REFERENCE METHOD
TOTAL PETROLEUM HYDROCARBONS	11.5	U	mg/kg	/ /	10/06/97	EPA 418.1
% MOISTURE	13.2		%	/ /	09/29/97	

.ESULTS REPORTED TO A MAXIMUM OF 3 SIGNIFICANT FIGURES

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

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THOMPSON PROFESSIONAL GROUP, INC.
6110 CLARKSON LANE
HOUSTON, TX 77055
Attn: JASON MILLER

REPORT: 31175.03

DATE: 10/16/97

SWLO # : 31175.03
SAMPLE #: SB12-30
SAMPLE MATRIX : SOIL
PROJECT : FORMER GARY AFB
LOCATION:
METHOD REFERENCE: SW 8020

DEPTH FROM : 0.00
DEPTH TO : 0.00
DATE SAMPLED : 09/23/97
DATE RECEIVED : 09/25/97
DATE PREPARED :
DATE ANALYZED : 09/29/97
DILUTION FACTOR: 1.00

BTEX
RESULTS REPORT IN ug/kg ON A DRY WEIGHT BASIS

PARAMETER	RESULTS**		PARAMETER	RESULTS**	
BENZENE	1.4		ETHYLBENZENE	1.4	
TOLUENE	1.2	U	XYLENE (TOTAL)	0.72	J

QA/QC SURROGATE RECOVERIES

BROMOFLUOROBENZENE	(23-143)	87%

..SULTS REPORTED TO A MAXIMUM OF 3 SIGNIFICANT FIGURES

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 West Albany • Broken Arrow, Oklahoma 74012 • Office (918) 251-2858 • Fax (918) 251-2599

THOMPSON PROFESSIONAL GROUP, INC.
6110 CLARKSON LANE
HOUSTON, TX 77055
Attn: JASON MILLER

REPORT: 31175.03

DATE: 10/16/97

SWLO # : 31175.03
SAMPLE #: SB12-30
SAMPLE MATRIX : SOIL
PROJECT : FORMER GARY AFB
LOCATION:

DEPTH FROM : 0.00
DEPTH TO : 0.00
DATE SAMPLED : 09/23/97
DATE RECEIVED : 09/25/97

MISCELLANEOUS ON A DRY WEIGHT BASIS

PARAMETER	RESULTS**		UNITS	DATE PREPARED	DATE ANALYZED	REFERENCE METHOD
TOTAL PETROLEUM HYDROCARBONS	12	U	mg/kg	/ /	10/06/97	EPA 418.1
% MOISTURE	17		%	/ /	09/29/97	

ESULTS REPORTED TO A MAXIMUM OF 3 SIGNIFICANT FIGURES

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

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THOMPSON PROFESSIONAL GROUP, INC.
6110 CLARKSON LANE
HOUSTON, TX 77055
Attn: JASON MILLER

REPORT: 31175.04

DATE: 10/16/97

SWLO # : 31175.04
SAMPLE #: SB13-56
SAMPLE MATRIX : SOIL
PROJECT : FORMER GARY AFB
LOCATION:
METHOD REFERENCE: SW 8020

DEPTH FROM : 0.00
DEPTH TO : 0.00
DATE SAMPLED : 09/23/97
DATE RECEIVED : 09/25/97
DATE PREPARED :
DATE ANALYZED : 09/29/97
DILUTION FACTOR: 1.00

BTEX
RESULTS REPORT IN ug/kg ON A DRY WEIGHT BASIS

PARAMETER	RESULTS**		PARAMETER	RESULTS**	
BENZENE	1.3	U	ETHYLBENZENE	1.3	U
TOLUENE	1.3	U	XYLENE (TOTAL)	1.3	U

QA/QC SURROGATE RECOVERIES

BROMOFLUOROBENZENE	(23-143)	83%

ESULTS REPORTED TO A MAXIMUM OF 3 SIGNIFICANT FIGURES

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 West Albany • Broken Arrow, Oklahoma 74012 • Office (918) 251-2858 • Fax (918) 251-2599

THOMPSON PROFESSIONAL GROUP, INC.
6110 CLARKSON LANE
HOUSTON, TX 77055
Attn: JASON MILLER

REPORT: 31175.04

DATE: 10/16/97

SWLO # : 31175.04
SAMPLE #: SB13-56
SAMPLE MATRIX : SOIL
PROJECT : FORMER GARY AFB
LOCATION:

DEPTH FROM : 0.00
DEPTH TO : 0.00
DATE SAMPLED : 09/23/97
DATE RECEIVED : 09/25/97

MISCELLANEOUS ON A DRY WEIGHT BASIS

PARAMETER	RESULTS**		UNITS	DATE PREPARED	DATE ANALYZED	REFERENCE METHOD
TOTAL PETROLEUM HYDROCARBONS	13.4	U	mg/kg	/ /	10/06/97	EPA 418.1
% MOISTURE	25.1		%	/ /	09/29/97	

**RESULTS REPORTED TO A MAXIMUM OF 3 SIGNIFICANT FIGURES

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

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THOMPSON PROFESSIONAL GROUP, INC.
6110 CLARKSON LANE
HOUSTON, TX 77055
Attn: JASON MILLER

REPORT: 31175.05

DATE: 10/16/97

SWLO # : 31175.05
SAMPLE #: SB13-48
SAMPLE MATRIX : SOIL
PROJECT : FORMER GARY AFB
LOCATION:
METHOD REFERENCE: SW 8020

DEPTH FROM : 0.00
DEPTH TO : 0.00
DATE SAMPLED : 09/23/97
DATE RECEIVED : 09/25/97
DATE PREPARED :
DATE ANALYZED : 10/03/97
DILUTION FACTOR: 1.00

BTEX
RESULTS REPORT IN ug/kg ON A DRY WEIGHT BASIS

PARAMETER	RESULTS**		PARAMETER	RESULTS**
BENZENE	0.75	J	ETHYLBENZENE	2.7
TOLUENE	3		XYLENE (TOTAL)	7

QA/QC SURROGATE RECOVERIES

BROMOFLUOROBENZENE	(23-143)	45%

SULTS REPORTED TO A MAXIMUM OF 3 SIGNIFICANT FIGURES

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

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THOMPSON PROFESSIONAL GROUP, INC.
6110 CLARKSON LANE
HOUSTON, TX 77055
Attn: JASON MILLER

REPORT: 31175.05

DATE: 10/16/97

SWLO # : 31175.05
SAMPLE #: SB13-48
SAMPLE MATRIX : SOIL
PROJECT : FORMER GARY AFB
LOCATION:

DEPTH FROM : 0.00
DEPTH TO : 0.00
DATE SAMPLED : 09/23/97
DATE RECEIVED : 09/25/97

MISCELLANEOUS ON A DRY WEIGHT BASIS

PARAMETER	RESULTS**		UNITS	DATE PREPARED	DATE ANALYZED	REFERENCE METHOD
TOTAL PETROLEUM HYDROCARBONS	12.4	U	mg/kg	/ /	10/06/97	EPA 418.1
% MOISTURE	19.6		%	/ /	09/29/97	

**RESULTS REPORTED TO A MAXIMUM OF 3 SIGNIFICANT FIGURES

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

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THOMPSON PROFESSIONAL GROUP, INC.
6110 CLARKSON LANE
HOUSTON, TX 77055
Attn: JASON MILLER

REPORT: 31175.06

DATE: 10/16/97

SWLO # : 31175.06
SAMPLE #: SB13-34
SAMPLE MATRIX : SOIL
PROJECT : FORMER GARY AFB
LOCATION:
METHOD REFERENCE: SW 8020

DEPTH FROM : 0.00
DEPTH TO : 0.00
DATE SAMPLED : 09/23/97
DATE RECEIVED : 09/25/97
DATE PREPARED :
DATE ANALYZED : 09/29/97
DILUTION FACTOR: 1.00

BTEX
RESULTS REPORT IN ug/kg ON A DRY WEIGHT BASIS

PARAMETER	RESULTS**		PARAMETER	RESULTS**	
BENZENE	1.2	U	ETHYLBENZENE	1.2	U
TOLUENE	1.2	U	XYLENE (TOTAL)	1.2	U

QA/QC SURROGATE RECOVERIES

BROMOFLUOROBENZENE	(23-143)	79%

**RESULTS REPORTED TO A MAXIMUM OF 3 SIGNIFICANT FIGURES

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THOMPSON PROFESSIONAL GROUP, INC.
6110 CLARKSON LANE
HOUSTON, TX 77055
Attn: JASON MILLER

REPORT: 31175.06

DATE: 10/16/97

SWLO # : 31175.06
SAMPLE #: SB13-34
SAMPLE MATRIX : SOIL
PROJECT : FORMER GARY AFB
LOCATION:

DEPTH FROM : 0.00
DEPTH TO : 0.00
DATE SAMPLED : 09/23/97
DATE RECEIVED : 09/25/97

MISCELLANEOUS ON A DRY WEIGHT BASIS

PARAMETER	RESULTS**		UNITS	DATE PREPARED	DATE ANALYZED	REFERENCE METHOD
TOTAL PETROLEUM HYDROCARBONS	12.1	U	mg/kg	/ /	10/06/97	EPA 418.1
% MOISTURE	17.6		%	/ /	09/29/97	

.ESULTS REPORTED TO A MAXIMUM OF 3 SIGNIFICANT FIGURES

SOUTHWEST LABORATORY OF OKLAHOMA, INC.
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QUALITY CONTROL

SECTION

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

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THOMPSON PROFESSIONAL GROUP, INC.
6110 CLARKSON LANE
HOUSTON, TX 77055
Attn: JASON MILLER

REPORT: 31175

DATE: 10/16/97

SWLO QAQC#: 6B092997
SAMPLE #: BTEX BLK LB1
SAMPLE MATRIX : WATER
PROJECT : FORMER GARY AFB
LOCATION: LAB QC
METHOD REFERENCE: SW846-8020

DEPTH FROM : 0.00
DEPTH TO : 0.00
DATE SAMPLED : / /
DATE RECEIVED : / /
DATE PREPARED :
DATE ANALYZED : 09/29/97
DILUTION FACTOR: 1.00

BTEX
RESULTS REPORT IN ug/kg

PARAMETER	RESULTS**		PARAMETER	RESULTS**	
BENZENE	1	U	ETHYLBENZENE	1	U
TOLUENE	1	U	XYLENE (TOTAL)	1	U

QA/QC SURROGATE RECOVERIES

BROMOFLUOROBENZENE	(71-127)	84%

.SULTS REPORTED TO A MAXIMUM OF 3 SIGNIFICANT FIGURES

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

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THOMPSON PROFESSIONAL GROUP, INC.
6110 CLARKSON LANE
HOUSTON, TX 77055
Attn: JASON MILLER

REPORT: 31175

DATE: 10/16/97

PROJECT : FORMER GARY AFB
PREPARED: / /
SPIKE SAMPLE : BTEX LCS
SPIKE DUP SAMPLE: BTEX LCSD

SAMPLE MATRIX : SOIL
ANALYZED: 09/29/97

BTEX
SPIKE/SPIKE DUPLICATE RECOVERY

Parameter (ug/kg)	SPIKE AMOUNT	SAMPLE CONC.	SPIKE CONC.	SPIKE %Rec	SPIKE DUP.	DUP %Rec	RPD	MAX RPD	LIMITS %Rec.
BENZENE	20	0	19.7	99	20.2	102	2.51	12	76-129
TOLUENE	20	0	19.2	96	19.6	98	2.06	13	78-122
ETHYLBENZENE	20	0	19.1	96	19.5	98	2.07	13	82-124
XYLENE (TOTAL)	60	0	58.3	98	59.5	100	2.04	14	83-127

QA/QC Surrogates

Parameter	SPK %Rec	DUP %Rec	LIMITS
BROMOFLUOROBENZENE	96	92	23-143

* = VALUES OUTSIDE OF QC LIMITS

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

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THOMPSON PROFESSIONAL GROUP, INC.
6110 CLARKSON LANE
HOUSTON, TX 77055
Attn: JASON MILLER

REPORT: 31175

DATE: 10/16/97

SWLO QAQC#: 6B100397
SAMPLE #: BTEX BLK LB1
SAMPLE MATRIX : WATER
PROJECT : FORMER GARY AFB
LOCATION: LAB QC
METHOD REFERENCE: SW846-8020

DEPTH FROM : 0.00
DEPTH TO : 0.00
DATE SAMPLED : / /
DATE RECEIVED : / /
DATE PREPARED :
DATE ANALYZED : 10/03/97
DILUTION FACTOR: 1.00

BTEX
RESULTS REPORT IN ug/kg

PARAMETER	RESULTS**		PARAMETER	RESULTS**	
BENZENE	1	U	ETHYLBENZENE	1	U
TOLUENE	1	U	XYLENE (TOTAL)	1	U

QA/QC SURROGATE RECOVERIES

BROMOFLUOROBENZENE	(71-127)	84%

RESULTS REPORTED TO A MAXIMUM OF 3 SIGNIFICANT FIGURES

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

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THOMPSON PROFESSIONAL GROUP, INC.
6110 CLARKSON LANE
HOUSTON, TX 77055
Attn: JASON MILLER

REPORT: 31175

DATE: 10/16/97

PROJECT : FORMER GARY AFB
PREPARED: / /
SPIKE SAMPLE : BTEX LCS
SPIKE DUP SAMPLE: BTEX LCSD

SAMPLE MATRIX : SOIL
ANALYZED: 10/03/97

BTEX
SPIKE/SPIKE DUPLICATE RECOVERY

Parameter (ug/kg)	SPIKE AMOUNT	SAMPLE CONC.	SPIKE CONC.	SPIKE %Rec	SPIKE DUP.	DUP %Rec	RPD	MAX RPD	LIMITS %Rec.
BENZENE	20	0	20.4	102	20.3	102	< 1	12	76-129
TOLUENE	20	0	19.3	97	19.3	97	< 1	13	78-122
ETHYLBENZENE	20	0	18.9	95	18.6	94	1.6	13	82-124
XYLENE (TOTAL)	60	0	57.3	96	56.5	95	1.41	14	83-127

QA/QC Surrogates

Parameter	SPK %Rec	DUP %Rec	LIMITS
BROMOFLUOROBENZENE	96	96	23-143

* = VALUES OUTSIDE OF QC LIMITS

THOMPSON PROFESSIONAL GROUP, INC.
6110 CLARKSON LANE
HOUSTON, TX 77055
Attn: JASON MILLER

REPORT: 31175

DATE: 10/16/97

SWLO QAQC#: 9710062101
SAMPLE #: TPH BLK LB1
SAMPLE MATRIX : SOIL
PROJECT : FORMER GARY AFB
LOCATION: LAB QC
METHOD REFERENCE: EPA 418.1

DEPTH FROM : 0.00
DEPTH TO : 0.00
DATE SAMPLED : / /
DATE RECEIVED : / /
DATE PREPARED :
DATE ANALYZED : 10/06/97
DILUTION FACTOR: 1.00

MISCELLANEOUS ON A DRY WEIGHT BASIS

PARAMETER	RESULTS**		UNITS
TOTAL PETROLEUM HYDROCARBONS	10	U	mg/kg

LSULTS REPORTED TO A MAXIMUM OF 3 SIGNIFICANT FIGURES

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 West Albany • Broken Arrow, Oklahoma 74012 • Office (918) 251-2858 • Fax (918) 251-2599

THOMPSON PROFESSIONAL GROUP, INC.
6110 CLARKSON LANE
HOUSTON, TX 77055
Attn: JASON MILLER

REPORT: 31175

DATE: 10/16/97

PROJECT : FORMER GARY AFB
PREPARED: / /
SPIKE SAMPLE : TPH LCS
SPIKE DUP SAMPLE: TPH LCSD

SAMPLE MATRIX : SOIL
ANALYZED: 10/06/97

MISCELLANEOUS
SPIKE/SPIKE DUPLICATE RECOVERY

Parameter (mg/kg)	SPIKE AMOUNT	SAMPLE CONC.	SPIKE CONC.	SPIKE %Rec	SPIKE DUP.	DUP %Rec	RPD	MAX RPD	LIMITS %Rec.
TOTAL PETROLEUM HYDROC	667	0	667	100	654	99	1.97	0	80-120

* - VALUES OUTSIDE OF QC LIMITS

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

October 16, 1997

Mr. Jason Miller
THOMPSON PROFESSIONAL GROUP, INC.
6110 Clarkson Lane
Houston, TX 77055

Project: FORMER GARY AFB
SWLO #: 31153.01 - 31153.03

Dear Mr. Miller:

Enclosed, please find the analytical results and diskette deliverable for your samples received in our laboratory on September 24, 1997, for the above captioned project.

If, in your review, you should have any questions or require additional information, please do not hesitate to call.

Sincerely,

Mike Butler
Project Officer

MB/krs

Enclosures

1700 West Albany • Broken Arrow, OK 74012-1421 • (918) 251-2858 • Fax (918) 251-2599

SAMPLE LOG-IN SHEET

Lab Name: SOUTHWEST LABORATORY OF OKLAHOMA

Page 1 of 1

Received By (Print Name): KIM WILLISON/SARAH HODSON

Log-in Date: 9-24-97

Received By: (Signature): K Willison

Case Number:

Sample Delivery Group No:

SAS Number:

REMARKS:

1. Custody Seal(s) Present/Absent* Intact/Broken
2. Custody Seal Nos.: NA
3. Chain-of-Custody Records Present/Absent*
4. Traffic Reports or Packing List Present/Absent*
   bill Airbill/Sticker Present/Absent*
5. Airbill No: 3236530953
7. Sample Tags Present/Absent
   Sample Tag Numbers Listed/Not Listed on Chain-of-Custody
8. Sample Condition: Intact/Broken*/Leaking
9. Does information on custody records, traffic reports, and sample tags agree? Yes/No*
10. Date Received at Lab: 9-24-97
11. Time Received 1030

Sample Transfer

Fraction:

#:

On:

	CORRESPONDING		
EPA SAMPLE #	SAMPLE TAG #	ASSIGNED LAB #	REMARKS: CONDITION OF SAMPLE SHIPMENT, ETC.
SB10-35		31153.01	1°C
SB10-20		02	
SB11-35		03	

* Contact SMO and attach record of resolution

Received By:

Date:

Logbook No:

Logbook Page No:

FORM DC-1

Thompson Professional Group, Inc.
6110 Clarkson Lane
Houston, Texas 77055
(713) 956-4100
www.thompson-grp.com

Analysis Request and Chain of Custody Record
Former Gary Air Force Base, LPST # 108133
Caldwell County, Texas

Soil Boring/~~Ground Water Monitoring Well~~ No. 11

Project Number: 887-01 | TPG Contact: Jason Miller | Phone Number: (713) 956-4100

Sample ID	Date Taken	Time Taken	Sample Type (Soil, Waste, Groundwater)	Grab Sample	Comp	Number of Containers	Preservative	TPH by 418.1	BTEX by 8020	TDS by 160.1	PAH by 8310		Remarks
SB11-35	9-22-97	3:20P	Soil	✓		2	None	✓	✓				

Sampler Signature:	Relinquished by: (Signature)	Date: 9-23-97 Time: 7:00 AM	Received by: (Signature) (Fed Ex)	Date: 9-23-97 Time:	Intact?
Affiliation: Thompson Professional Group	Relinquished by: (Signature)	Date: Time:	Received by: (Signature) HW 9-24	Date: Time:	Intact?
Sampler Remarks:			Laboratory Receipt: (Signature)	Date: 9-24-97 Time: 1030	Intact?
Seal Number	Shipping Agency: Fed Ex UPS Lone Star Other:		Laboratory Remarks:		

1 of

Thompson Professional Group, Inc.
6110 Clarkson Lane
Houston, Texas 77055
(713) 956-4100
www.thompson-grp.com

Analysis Request and Chain of Custody Record

Former Gary Air Force Base, LPST # 108133
Caldwell County, Texas

Soil Boring/~~Ground Water Monitoring Well No.~~ 10

Project Number: 887-01 | TPG Contact: Jason Miller | Phone Number: (713) 956-4100

Sample ID	Date Taken	Time Taken	Sample Type (Soil, Waste, Groundwater)	Grab Sample	Comp	Number of Containers	Preservative	TPH by 418.1	BTEX by 8020	TDS by 160.1	PAH by 8310		Remarks
SB10-35	9-22-97	1:37P	Soil	✓		2	None	✓	✓				
SB10-20	"	4:35P	"	"		"	"	✓	✓				

Sampler Signature:	Relinquished by: (Signature)	Date: 9-23-97 Time: 7:00 AM	Received by: (Signature) (Fed Ex)	Date: 9-23-97 Time: Intact?
Affiliation: Thompson Professional Group	Relinquished by: (Signature)	Date: Time:	Received by: (Signature)	Date: Time: Intact?
Sampler Remarks:			Laboratory Receipt: (Signature)	Date: 9-24-97 Time: 1030 Intact?
Seal Number	Shipping Agency: Fed Ex UPS Lone Star Other:		Laboratory Remarks:	

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 West Albany • Broken Arrow, Oklahoma 74012 • Office (918) 251-2858 • Fax (918) 251-2599

THOMPSON PROFESSIONAL GROUP, INC.
6110 CLARKSON LANE
HOUSTON, TX 77055
Attn: JASON MILLER

REPORT: 31153.01

DATE: 10/16/97

SWLO # : 31153.01
SAMPLE #: SB10-35
SAMPLE MATRIX : SOIL
PROJECT : FORMER GARY AFB
LOCATION:
METHOD REFERENCE: SW846-8020

DEPTH FROM : 0.00
DEPTH TO : 0.00
DATE SAMPLED : 09/22/97
DATE RECEIVED : 09/24/97
DATE PREPARED :
DATE ANALYZED : 09/29/97
DILUTION FACTOR: 1.00

BTEX
RESULTS REPORT IN ug/kg ON A DRY WEIGHT BASIS

PARAMETER	RESULTS**		PARAMETER	RESULTS**	
BENZENE	1.3	U	ETHYLBENZENE	1.3	U
TOLUENE	0.65	J	XYLENE (TOTAL)	1.17	J

QA/QC SURROGATE RECOVERIES

BROMOFLUOROBENZENE	(23-143)	86%

.ESULTS REPORTED TO A MAXIMUM OF 3 SIGNIFICANT FIGURES

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 West Albany • Broken Arrow, Oklahoma 74012 • Office (918) 251-2858 • Fax (918) 251-2599

THOMPSON PROFESSIONAL GROUP, INC.
6110 CLARKSON LANE
HOUSTON, TX 77055
Attn: JASON MILLER

REPORT: 31153.01

DATE: 10/15/97

SWLO # : 31153.01
SAMPLE #: SB10-35
SAMPLE MATRIX : SOIL
PROJECT : FORMER GARY AFB
LOCATION:

DEPTH FROM : 0.00
DEPTH TO : 0.00
DATE SAMPLED : 09/22/97
DATE RECEIVED : 09/24/97

MISCELLANEOUS ON A DRY WEIGHT BASIS

PARAMETER	RESULTS**		UNITS	DATE PREPARED	DATE ANALYZED	REFERENCE METHOD
TOTAL PETROLEUM HYDROCARBONS	13	U	mg/kg	/ /	09/25/97	EPA 418.1
% MOISTURE	22.8		%	/ /	09/26/97	

.ESULTS REPORTED TO A MAXIMUM OF 3 SIGNIFICANT FIGURES

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

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THOMPSON PROFESSIONAL GROUP, INC.
6110 CLARKSON LANE
HOUSTON, TX 77055
Attn: JASON MILLER

REPORT: 31153.02

DATE: 10/16/97

SWLO # : 31153.02
SAMPLE #: SB10-20
SAMPLE MATRIX : SOIL
PROJECT : FORMER GARY AFB
LOCATION:
METHOD REFERENCE: SW 8020

DEPTH FROM : 0.00
DEPTH TO : 0.00
DATE SAMPLED : 09/22/97
DATE RECEIVED : 09/24/97
DATE PREPARED :
DATE ANALYZED : 09/29/97
DILUTION FACTOR: 125.00

BTEX
RESULTS REPORT IN ug/kg ON A DRY WEIGHT BASIS

PARAMETER	RESULTS**	PARAMETER	RESULTS**
BENZENE	189	ETHYLBENZENE	1540
TOLUENE	517	XYLENE (TOTAL)	1300

QA/QC SURROGATE RECOVERIES

BROMOFLUOROBENZENE	(23-143)	99%

ULTS REPORTED TO A MAXIMUM OF 3 SIGNIFICANT FIGURES

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

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THOMPSON PROFESSIONAL GROUP, INC.
6110 CLARKSON LANE
HOUSTON, TX 77055
Attn: JASON MILLER

REPORT: 31153.02

DATE: 10/15/97

SWLO # : 31153.02
SAMPLE #: SB10-20
SAMPLE MATRIX : SOIL
PROJECT : FORMER GARY AFB
LOCATION:

DEPTH FROM : 0.00
DEPTH TO : 0.00
DATE SAMPLED : 09/22/97
DATE RECEIVED : 09/24/97

MISCELLANEOUS ON A DRY WEIGHT BASIS

PARAMETER	RESULTS**	UNITS	DATE PREPARED	DATE ANALYZED	REFERENCE METHOD
TOTAL PETROLEUM HYDROCARBONS	1920	mg/kg	/ /	09/25/97	EPA 418.1
% MOISTURE	16.9	%	/ /	09/26/97	

ESULTS REPORTED TO A MAXIMUM OF 3 SIGNIFICANT FIGURES

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

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THOMPSON PROFESSIONAL GROUP, INC.
6110 CLARKSON LANE
HOUSTON, TX 77055
Attn: JASON MILLER

REPORT: 31153.03

DATE: 10/16/97

SWLO # : 31153.03
SAMPLE #: SB11-35
SAMPLE MATRIX : SOIL
PROJECT : FORMER GARY AFB
LOCATION:
METHOD REFERENCE: SW846-8020

DEPTH FROM : 0.00
DEPTH TO : 0.00
DATE SAMPLED : 09/22/97
DATE RECEIVED : 09/24/97
DATE PREPARED :
DATE ANALYZED : 09/29/97
DILUTION FACTOR: 1.00

BTEX
RESULTS REPORT IN ug/kg ON A DRY WEIGHT BASIS

PARAMETER	RESULTS**		PARAMETER	RESULTS**	
BENZENE	1.28	U	ETHYLBENZENE	1.28	U
TOLUENE	1.28	U	XYLENE (TOTAL)	1.15	J

QA/QC SURROGATE RECOVERIES

BROMOFLUOROBENZENE	(23-143)	81%

**RESULTS REPORTED TO A MAXIMUM OF 3 SIGNIFICANT FIGURES

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 West Albany • Broken Arrow, Oklahoma 74012 • Office (918) 251-2858 • Fax (918) 251-2599

THOMPSON PROFESSIONAL GROUP, INC.
6110 CLARKSON LANE
HOUSTON, TX 77055
Attn: JASON MILLER

REPORT: 31153.03

DATE: 10/15/97

SWLO # : 31153.03
SAMPLE #: SB11-35
SAMPLE MATRIX : SOIL
PROJECT : FORMER GARY AFB
LOCATION:

DEPTH FROM : 0.00
DEPTH TO : 0.00
DATE SAMPLED : 09/22/97
DATE RECEIVED : 09/24/97

MISCELLANEOUS ON A DRY WEIGHT BASIS

PARAMETER	RESULTS**		UNITS	DATE PREPARED	DATE ANALYZED	REFERENCE METHOD
TOTAL PETROLEUM HYDROCARBONS	12.8	U	mg/kg	/ /	09/25/97	EPA 418.1
% MOISTURE	21.7		%	/ /	09/26/97	

.ESULTS REPORTED TO A MAXIMUM OF 3 SIGNIFICANT FIGURES

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 West Albany • Broken Arrow, Oklahoma 74012 • Office (918) 251-2858 • Fax (918) 251-2599

QUALITY CONTROL

SECTION

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 West Albany • Broken Arrow, Oklahoma 74012 • Office (918) 251-2858 • Fax (918) 251-2599

THOMPSON PROFESSIONAL GROUP, INC.
6110 CLARKSON LANE
HOUSTON, TX 77055
Attn: JASON MILLER

REPORT: 31153

DATE: 10/15/97

SWLO QAQC#: 6B092997
SAMPLE #: BTEX BLK LB1
SAMPLE MATRIX : WATER
PROJECT : FORMER GARY AFB
LOCATION: LAB QC
METHOD REFERENCE: SW846-8020

DEPTH FROM : 0.00
DEPTH TO : 0.00
DATE SAMPLED : / /
DATE RECEIVED : / /
DATE PREPARED :
DATE ANALYZED : 09/29/97
DILUTION FACTOR: 1.00

BTEX
RESULTS REPORT IN ug/l

PARAMETER	RESULTS**		PARAMETER	RESULTS**	
BENZENE	1	U	ETHYLBENZENE	1	U
TOLUENE	1	U	XYLENE (TOTAL)	1	U

QA/QC SURROGATE RECOVERIES

BROMOFLUOROBENZENE	(71-127)	84%

ESULTS REPORTED TO A MAXIMUM OF 3 SIGNIFICANT FIGURES

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 West Albany • Broken Arrow, Oklahoma 74012 • Office (918) 251-2858 • Fax (918) 251-2599

THOMPSON PROFESSIONAL GROUP, INC.
6110 CLARKSON LANE
HOUSTON, TX 77055
Attn: JASON MILLER

REPORT: 31153

DATE: 10/16/97

PROJECT : FORMER GARY AFB
PREPARED: / /
SPIKE SAMPLE : BTEX LCS
SPIKE DUP SAMPLE: BTEX LCSD

SAMPLE MATRIX : SOIL
ANALYZED: 09/29/97

BTEX
SPIKE/SPIKE DUPLICATE RECOVERY

Parameter (ug/kg)	SPIKE AMOUNT	SAMPLE CONC.	SPIKE CONC.	SPIKE %Rec	SPIKE DUP.	DUP %Rec	RPD	MAX RPD	LIMITS %Rec.
BENZENE	20	0	19.7	99	20.2	102	2.51	12	76-129
TOLUENE	20	0	19.2	96	19.6	98	2.06	13	78-122
ETHYLBENZENE	20	0	19.1	96	19.5	98	2.07	13	82-124
XYLENE (TOTAL)	60	0	58.3	98	59.5	100	2.04	14	83-127

QA/QC Surrogates

Parameter	SPK %Rec	DUP %Rec	LIMITS
BROMOFLUOROBENZENE	96	92	23-143

* = VALUES OUTSIDE OF QC LIMITS

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 West Albany • Broken Arrow, Oklahoma 74012 • Office (918) 251-2858 • Fax (918) 251-2599

THOMPSON PROFESSIONAL GROUP, INC.
6110 CLARKSON LANE
HOUSTON, TX 77055
Attn: JASON MILLER

REPORT: 31153

DATE: 10/16/97

SWLO QAQC#: 9709252102
SAMPLE #: TPH BLK LB1
SAMPLE MATRIX : SOIL
PROJECT : FORMER GARY AFB
LOCATION: LAB QC
METHOD REFERENCE: EPA 418.1

DEPTH FROM : 0.00
DEPTH TO : 0.00
DATE SAMPLED : / /
DATE RECEIVED : / /
DATE PREPARED :
DATE ANALYZED : 09/25/97
DILUTION FACTOR: 1.00

MISCELLANEOUS ON A DRY WEIGHT BASIS

PARAMETER	RESULTS**		UNITS
TOTAL PETROLEUM HYDROCARBONS	10	U	mg/kg

.SULTS REPORTED TO A MAXIMUM OF 3 SIGNIFICANT FIGURES

SOUTHWEST LABORATORY OF OKLAHOMA, INC.

1700 West Albany • Broken Arrow, Oklahoma 74012 • Office (918) 251-2858 • Fax (918) 251-2599

THOMPSON PROFESSIONAL GROUP, INC.
6110 CLARKSON LANE
HOUSTON, TX 77055
Attn: JASON MILLER

REPORT: 31153

DATE: 10/16/97

PROJECT : FORMER GARY AFB
PREPARED: / /
SPIKE SAMPLE : TPH LCS
SPIKE DUP SAMPLE: TPH LCSD

SAMPLE MATRIX : SOIL
ANALYZED: 09/25/97

MISCELLANEOUS
SPIKE/SPIKE DUPLICATE RECOVERY

Parameter (mg/kg)	SPIKE AMOUNT	SAMPLE CONC.	SPIKE CONC.	SPIKE %Rec	SPIKE DUP.	DUP %Rec	RPD	MAX RPD	LIMITS %Rec.
TOTAL PETROLEUM HYDROC	667	0	658	99	656	99	< 1	0	80-120

- VALUES OUTSIDE OF QC LIMITS

Attachment 18
Waste Manifest Documentation

ARR: 10:27A
Depart: 11:37A

RECEIVING TICKET

ALAMO PETROLEUM EXCHANGE
OLEDAD, STE. 100
SAN ANTONIO, TX 78205
1-800-322-5085
(210) 225-0888
TXD 987991866 TWC 41654

ALAMO
PETROLEUM EXCHANGE

NO. R 054308

12-1 19 97

P.O. NUMBER _____

WORK ORDER # 30576

START TIME _____ AM/PM

STOP TIME _____ AM/PM

TOTAL TIME _____

GAUGE

OPEN _____ FT. _____ IN.

CLOSE _____ FT. _____ IN.

TOTAL _____ FT. _____ IN.

FROM: Gary Job Corps Ctr.

ADDRESS: _____

CITY: San Marcos

BILL TO: COVEL

LEASE NAME: _____ LEASE#: _____

GROSS BBLS. _____ - BS & W _____ % _____ QTY. = NET BBLS. _____

GROSS GALLONS _____ - BS & W _____ % _____ QTY. = NET GAL. _____

TEMPERATURE _____ GRAVITY _____ FACTOR _____ TANK NO. _____

PRODUCT	GROSS QTY.	NET QTY.	UNIT (G/B/D)	UNIT PRICE	TOTAL
contaminated soil		13	DPI		
decon water		6	" "		
plastic sheeting		2	" "		
contaminated soil		2	" "		

THE ABOVE LISTED PRODUCT(S) HAS BEEN ACCURATELY DESCRIBED TO THE BEST OF MY KNOWLEDGE AND IS NON-HAZARDOUS ACCORDING TO 40 CFR 262.11 AND CONTAINS NO PCBs.

COMPANY REPRESENTATIVE

ALAMO REPRESENTATIVE

60
TRUCK NO.

ALL SALES SUBJECT TO CONDITIONS ON REVERSE SIDE

WHITE - OFFICE CANARY - BILLING PINK - FILE GOLD - CUSTOMER

"I certify that the waste I delivered to this facility on this date does not contain any regulated hazardous, toxic, radioactive wastes or substances, or other non-allowable wastes. I also agree to remove any non-allowable wastes I bring to this facility, or pay all costs for proper removal of such wastes, upon request from this facility."
Recycled paper

DRIVER: PLEASE SIGN HERE

COVEL GARDENS RDF
210-623-8800
3611 COVEL RD
SAN ANTONIO, TX 78252-0000

TICKET REPRINT DATE
Page: 01 of 01

TICKET NUMBER
12/02/97
0702787

REPRINT

MOTOR CARRIER	TRUCK #	OPERATOR	TIME IN	TIME OUT	DATE
ARMY CORP OF ENGINEERS	01	PAUL	1:23PM	2:29PM	12/01/97

ARMY CORP OF ENGINEERS

HOUSTON, TX 00000-0000

ARMY CORP OF ENGINEERS 0004807

I CERTIFY THAT THE WASTE I DELIVERED TO COVEL GARDENS RDF ON THIS DATE DOES NOT CONTAIN ANY REGULATED HAZARDOUS, TOXIC OR RADIOACTIVE WASTES OR SUBSTANCES, OR OTHER NON-ALLOWABLE WASTES.

GROSS LBS : 26,380.00IN-2
TARE LBS : 16,280.00OUT-1
NET LBS : 10,100.00
ADJUSTED LBS : 10,100.00

SOURCES	OTHER INFORMATION
THOMPSON PROFESSIONAL GRP	THOMPSON PROFESSIONAL GRP 01562787 CELL GRID: COVEL GARDENS

Corrected Ticket

MATERIAL CODE/DESCRIPTION	QUANTITY	MEASURE	RATE	AMOUNT
659 -CONT.SOIL (CLASS I)	2.00	DRUMS	$70.000	$140.00
NO TAX				
TOTAL AMOUNT				$140.00

"I certify that the waste I delivered to this facility on this date does not contain any regulated hazardous, toxic, radioactive wastes or substances, or other non-allowable wastes. I also agree to remove any non-allowable wastes I bring to this facility, or pay all costs for proper removal of such wastes, upon request from this facility."
Printed on recycled paper

DRIVER: PLEASE SIGN HERE

COVEL GARDENS RDF
210-623-8800
8611 COVEL RD
SAN ANTONIO, TX 78252-0000

TICKET REPRINT DATE
Page: 01 of 01

TICKET NUMBER
12/01/97
0702790

REPRINT
MANUAL

HAULER NAME	TRUCK #	OPERATOR	TIME IN	TIME OUT	DATE
ARMY CORP OF ENGINEERS	01	TONI	2:29PM	2:31PM	12/01/97

ARMY CORP OF ENGINEERS

HOUSTON, TX 00000-0000

ARMY CORP OF ENGINEERS 0004807

I CERTIFY THAT THE WASTE I DELIVERED TO COVEL GARDENS RDF ON THIS DATE DOES NOT CONTAIN ANY REGULATED HAZARDOUS, TOXIC OR RADIOACTIVE WASTES OR SUBSTANCES, OR OTHER NON-ALLOWABLE WASTES.

GROSS LBS : 26,380.00IN-1
TARE LBS : 16,280.00OUT-0
NET LBS : 10,100.00
ADJUSTED LBS : 10,100.00

SOURCES	OTHER INFORMATION
THOMPSON PROFESSIONAL GRP	THOMPSON PROFESSIONAL GRP
	40125
	CELL GRID: COVEL GARDENS

Corrected Ticket

MATERIAL CODE/DESCRIPTION	QUANTITY	MEASURE	RATE	AMOUNT
681 -FULL DRUMS SPECIAL WASTE	15.00	UNIT	$35.000	$525.00
NO TAX				
TOTAL AMOUNT				$525.00

"I certify that the waste I delivered to this facility on this date does not contain any regulated hazardous, toxic, radioactive wastes or substances, or other non-allowable wastes. I also agree to remove any non-allowable wastes I bring to this facility, or pay all costs for proper removal of such wastes, upon request from this facility."
Printed on recycled paper

DRIVER: PLEASE SIGN HERE

COVEL GARDENS RDF
210-623-8800
8611 COVEL RD
SAN ANTONIO, TX 78252-0000

TICKET REPRINT DATE
Page: 01 of 01

TICKET NUMBER
0702791

REPRINT
MANUAL

HAULER NAME	TRUCK	OPERATOR	TIME IN	TIME OUT	DATE
ARMY CORP OF ENGINEERS	01	TONI	2:31PM	2:31PM	12/01/97

ARMY CORP OF ENGINEERS

HOUSTON, TX 00000-0000

ARMY CORP OF ENGINEERS 0004807

I CERTIFY THAT THE WASTE I DELIVERED TO COVEL GARDENS RDF ON THIS DATE DOES NOT CONTAIN ANY REGULATED HAZARDOUS, TOXIC OR RADIOACTIVE WASTES OR SUBSTANCES, OR OTHER NON-ALLOWABLE WASTES.

GROSS LBS : 26,380.00IN-1
TARE LBS : 16,280.00OUT-
NET LBS : 10,100.00
ADJUSTED LBS : 10,100.00

SOURCES	OTHER INFORMATION
THOMPSON PROFESSIONAL GRP	THOMPSON PROFESSIONAL GRP
	CELL GRID: COVEL GARDENS

Corrected Ticket

MATERIAL CODE/DESCRIPTION	QUANTITY	MEASURE	RATE	AMOUNT
691 -DRUMS (SOLIDIFICATION)	6.00	DRUMS	$45.000	$270.00
NO TAX				
TOTAL AMOUNT				$270.00

CONSERVATION COMMISSION
P.O. Box 13087
Austin, Texas 78711-3087

or print or type. (Form designed for use on elite (12-pitch) typewriter.) Form approved. OMB No. 2050-0039.

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator's US EPA ID No.: N/A
Manifest Document No.
2. Page 1 of
Information in the shaded areas is not required by Federal law.

3. Generator's Name and Mailing Address
Army Corps Of Engineers
10th St. & Kane
San Marcos, TX 78667
4. Generator's Phone (713) 956-4100

A. State Manifest Document Number: 01562787
B. State Generator's ID: N/A
C. State Transporter's ID: 41650
D. Transporter's Phone: (210) 225-0188

5. Transporter 1 Company Name: Alamo Petroleum Exchange
6. US EPA ID Number

7. Transporter 2 Company Name
8. US EPA ID Number

E. State Transporter's ID
F. Transporter's Phone

9. Designated Facility Name and Site Address
Covel GArdens RDF
8611 Covel Rd.
San Antonio, TX 78252
10. US EPA ID Number

G. State Facility's ID: TXD 980 595 220
H. Facility's Phone: (210) 623-3300

11A. RM	11. US DOT Description (including Proper Shipping Name, Hazard Class, ID Number and Packing Group)	12. Containers No.	Type	13. Total Quantity	14. Unit Wt/Vol	I. Waste No.
	a. Contaminated Soil (PETROLEUM)	2	Dm	2	Dm	N/A
	b.					
	c.					
	d.					

GENERATOR

J. Additional Descriptions for Materials Listed Above
K. Handling Codes for Wastes Listed Above

15. Special Handling Instructions and Additional Information
COVEL # 494009

16. GENERATOR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by proper shipping name and are classified, packaged, marked, and labelled/placarded, and are in all respects in proper condition for transport by highway according to applicable international and national government regulations, including applicable state regulations.
If I am a large quantity generator, I certify that I have a program in place to reduce the volume and toxicity of waste generated to the degree I have determined to be economically practicable and that I have selected the practicable method of treatment, storage, or disposal currently available to me which minimizes the present and future threat to human health and the environment; OR, if I am a small quantity generator, I have made a good faith effort to minimize my waste generation and select the best waste management method that is available to me and that I can afford.

Printed/Typed Name: JOHN A. LASER
Signature
Month Day Year: 11 26 97

TRANSPORTER

17. Transporter 1 Acknowledgement of Receipt of Materials
Printed/Typed Name: Domingo Maldonado
Signature
Date: Month Day Year: 11 26 97

18. Transporter 2 Acknowledgement of Receipt of Materials
Printed/Typed Name
Signature
Date: Month Day Year

FACI

19. Discrepancy Indication Space

20. Facility Owner or Operator: Certification of receipt of hazardous materials covered by this manifest except as noted in Item 19.
Covel Gardens RDF
Printed/Typed Name: Sylvia Lopez
Signature
Date: Month Day Year: 11 26 97

TNRCC-0311 (Rev. 07/01/97) White - original Pink-TSD Facility Yellow-Transporter Green-Generator's first copy

Covel Gardens Landfill and Recycling Facility
8611 Covel Road
San Antonio, TX 78252
(210) 623-8800
(210) 623-8780 (Fax)

A Waste Management Company

40125

NON-HAZARDOUS MANIFEST

GENERATOR

Generator Army Corps of Engineers
Address 10th St. & Kane
San Marcos, TX 78667
Phone (713)956-4100

I.D. # N/A
Shipping Location SAME
Address
Phone

Description of Waste Materials	Profile Number	Total Quantity	Unit of Measure	Container Type
Contaminated Soil (PETROLEUM)	494009	13	Drums	
Decontaminated WAter	494009	6	Drums	
Plastic Sheeting	494009	2	Drums	

I hereby certify that the above-described materials are not hazardous wastes as defined by 40 CPR, Part 261 or any applicable state law, have been fully and accurately described, classified and packaged, and are in proper condition for transportation according to applicable regulations.

John Laser
Generator Authorized Agent Name (Print)

[signature] 11-26-97
Signature Delivery Date

TRANSPORTER

Transporter Name Alamo Petroleum Exchange
Address 454 Soledad, Suite 100
San Antonio, TX 78205

Driver Name Domingo Maldonado
Truck Number 60
Truck Type Box

I hereby acknowledge receipt of the above described materials for transport from the generator site listed above.

[signature]
Driver Signature Shipment Date

I hereby acknowledge that the above described materials were received from the generator site were transported without incident to the destination listed below.

[signature] 12-1-97
Driver Signature Delivery Date

DESTINATION

Site Name COVEL GARDENS LANDFILL Phone Number (210) 623-8800
Address 8611 COVEL ROAD, SAN ANTONIO, TX 78252
Disposal Location: North _____ East _____ Level _____

I hereby acknowledge receipt of the above described materials.

Sylvia Lopez
Name of Authorized Agent (Print)

[signature] 12/01/97
Signature Receipt Date

White - Original Canary - Disposer Retain Pink - Transporter Retain Goldenrod - Generator Retain

GRAY BUSINESS FORMS (210) 822-6984 D 37668

Attachment 20
Proposal for Action and Site Closure Request

Proposal for Action
&
Site Closure Request

Based on the results of the site assessment as detailed on Worksheet 12, this site has been assigned a priority of 4.1. Since some NAPL was discovered in the monitoring wells, efforts to remove the NAPL to the most practical extent possible should be continued. Since the groundwater is considered a beneficial use Category IV, after NAPL removal is complete, this exposure pathway should be able to be closed.

Only one of the 15 borings showed a contaminant concentration above Plan A target concentrations, and for only one compound. With an institutional control preventing excavation, this exposure pathway could also be closed. In addition, the concentration is less than the target soil concentration for construction workers based on the RG-36 clarifications and amendments of March 6, 1997.

THOMPSON PROFESSIONAL GROUP INC.

6110 Clarkson Lane
Houston, Texas 77055
(713) 956-4100
(713) 956-4121 Fax

Engineering
Architecture
Environmental Sciences
Surveying & Mapping

January 30, 1998

Mr. Randy Niebuhr
Corps of Engineers, Fort Worth District
Attn: CESWF-EV-DI (Randy Niebuhr)
P.O. Box 17300
Fort Worth, Texas 76102-0300

Re: Contract No. DACA63-94-D-0009
Task Order No. 0032
Modification No. 0001
Former Gary AFB RBA (Phase 2) Final Report
TNRCC LPST # 108133
San Marcos, Texas

Dear Mr. Niebuhr:

Enclosed you will find four hard copies of those pages of the Former Gary Air Force Base Risk-Based Assessment (RBA) Draft Report which required modification as a result of your review. Replacement of the existing Draft Report pages with these replacement pages will constitute delivery of the Final Report document. Please incorporate the enclosed pages as follows:

Replace the existing LSA Draft Report pages with the new Final Report pages:

1. Worksheet 6.0, TNRCC Form 0562.
2. Log of Boring 15/ Monitoring Well No. MW-2, Attachment 14.
3. Binder Cover Insert.
4. Binder Spine Insert.

The electronic copy of the Final Report will be transmitted to you next week. If you have any questions or require additional information on this subject, please do not hesitate to contact Mr. John Laser or me for assistance at (713) 956-4100.

Very truly yours,

MICHAEL S. KANE, P.E., CAPM (No. 01279)
Corrective Action Project Manager

1/30/98
MICHAEL S. KANE
81350
REGISTERED PROFESSIONAL ENGINEER

JAL:ss
pc: F887-01
Mr. Henry Kasten, P.E., USACE
MSK file
JAL file

U.S. Army Corps of Engineers
Fort Worth District

Risk-Based Assessment Phase 2
TNRCC LPST # 108133
Former Gary Air Force Base
Caldwell County, Texas

Final Report

Contract No. DACA63-94-D-0009
Delivery Order No. 0032
Modification No. 0001

Thompson Professional Group, Inc.
Houston, Texas

January 1998

Thompson
Professional
Group, Inc.

Risk-Based Assessment Phase 2

TNRCC LPST # 108133

Former Gary Air Force Base

Caldwell County, Texas

Final Report: January 1998

U.S. Army Corps of Engineers
Fort Worth District

Risk-Based Assessment Phase 2
TNRCC LPST # 108133
Former Gary Air Force Base
Caldwell County, Texas

Final Report

Contract No. DACA63-94-D-0009
Delivery Order No. 0032
Modification No. 0001

Thompson Professional Group, Inc.
Houston, Texas

January 1998

Thompson
Professional
Group, Inc.

Risk-Based Assessment Phase 2

TNRCC LPST # 108133

Former Gary Air Force Base

Caldwell County, Texas

Final Report: January 1998

TEXAS NATURAL RESOURCE CONSERVATION COMMISSION
PETROLEUM STORAGE TANK DIVISION
ASSESSMENT REPORT FORM

This form should only be submitted when all information has been obtained as outlined in the document entitled *Guidance for Risk-Based Assessments at LPST Sites in Texas.* If the Table of Contents (page 2) is not fully completed, the TNRCC will return this form to the responsible party without review. This document must not be altered in any manner. **Requested information denoted with "*" is beyond the minimal requirements for a site assessment as defined by 30 TAC 334.78(a)(5).** Attach a workplan(s) and preapproval request(s) for those activities on sites eligible for reimbursement for the next appropriate activity.

LPST ID No: 108133 Facility ID No: 22732 Site priority: 4.1

Facility Name: Gary Job Corps Center (Former Gary Air Force Base)

Facility Address: Highway 21 East

City: San Marcos State: TX Zip: 78667

RP Name: US Army Corps of Engineers

RP Address: P.O. Box 17300

City: Fort Worth State: TX Zip: 76102

I certify that all work has been conducted in accordance with accepted industry standards/practices and adhered to TNRCC guidance and rules. I certify that I am aware that misrepresentation of any of the above claims is a violation of 30 TAC 33.4453(b)(1)(E) and that this violation may result in the disciplinary actions set forth in 30 TAC 334.453 and or 334.463 and 334.465.

Thompson Professional Group (Registered Corrective Action Specialist) | 00710 (RCAS Reg. No.) | August 21, 1998 (Expiration date)

(Signature) | 1/8/98 (Date)

(713) 956-4100 (Telephone #) | (713) 956-4121 (FAX #)

Michael Kane (Project Manager) | 01279 (CAPM Reg. No.) | July 30, 1998 (Expiration date)

(Signature) | 1/8/98 (Date)

713) 956-4100 (Telephone #) | (713) 956-4121 (FAX #)

By signature below, I certify that I have reviewed this report for completeness.

(Name of Responsible Party Contact) | (Company)

(Signature) | (Date)

(Telephone #) | (FAX #)

mailing address: TNRCC/PST Division/RPR Section
MC 137
P.O. Box 13087
Austin, TX 78711-3087

TNRCC - 0562

TEXAS NATURAL RESOURCE CONSERVATION COMMISSION
PETROLEUM STORAGE TANK DIVISION
ASSESSMENT REPORT FORM

This form should only be submitted when all information has been obtained as outlined in the document entitled *Guidance for Risk-Based Assessments at LPST Sites in Texas.* If the Table of Contents (page 2) is not fully completed, the TNRCC will return this form to the responsible party without review. This document must not be altered in any manner. **Requested information denoted with "*" is beyond the minimal requirements for a site assessment as defined by 30 TAC 334.78(a)(5).** Attach a workplan(s) and preapproval request(s) for those activities on sites eligible for reimbursement for the next appropriate activity.

LPST ID No: 108133 Facility ID No: 22732 Site priority: 4.1

Facility Name: Gary Job Corps Center (Former Gary Air Force Base)

Facility Address: Highway 21 East

City: San Marcos State: TX Zip: 78667

RP Name: US Army Corps of Engineers

RP Address: P.O. Box 17300

City: Fort Worth State: TX Zip: 76102

I certify that all work has been conducted in accordance with accepted industry standards/practices and adhered to TNRCC guidance and rules. I certify that I am aware that misrepresentation of any of the above claims is a violation of 30 TAC 33.4453(b)(1)(E) and that this violation may result in the disciplinary actions set forth in 30 TAC 334.453 and or 334.463 and 334.465.

Maxim Technologies (Registered Corrective Action Specialist) 00106 (RCAS Reg. No.) 11/97 (Expiration date)

John S. Andrews (Signature) 1/3/97 (Date)

(214) 631-2700 (Telephone #) (214) 920-1818 (FAX #)

John S. Andrews (Project Manager) 001123 (CAPM Reg. No.) 10/10/97 (Expiration date)

John S. Andrews (Signature) 12/3/97 (Date)

(214) 920-1888 (Telephone #) (214) 920-1818 (FAX #)

By signature below, I certify that I have reviewed this report for completeness.

(Name of Responsible Party Contact) (Company)

(Signature) (Date)

(Telephone #) (FAX #)

mailing address: TNRCC/PST Division/RPR Section
MC 137
P.O. Box 13087
Austin, TX 78711-3087

LPST ID: 108133
Site Name: Former Gary Air Force Base
Site Location: Gary Job Corps, Hwy 21 East, San Marcos, Caldwell County

TABLE OF CONTENTS

Item	Title	Page	(■) Completed
Worksheet E	Executive Summary	3	■
Worksheet 1.0	Site Description	4	■
Worksheet 2.0	Land Use	5	■
Worksheet 3.0	Water Well Inventory	6	■
Worksheet 4.0	Receptor Survey	7-8	■
Worksheet 5.0	Site Assessment History	9	■
Worksheet 6.0	Tank System Characterization	10	■
Worksheet 7.0	Soil Assessment	11-12	■
Worksheet 8.0	Groundwater Assessment	13-14	■ NA □
Worksheet 9.0	Vapor Assessment	15	■
Worksheet 10.0	Surface Water Assessment	16	□ NA ■
Worksheet 11.1-5	Plan A Evaluation	17-22	■
Worksheet 12.0	Site Prioritization	23-25	■
Abbreviations		26	
			(■) Enclosed
Attachment 1	Site plan illustrating location of entire former/current UST/AST system(s), subsurface utilities, limits of excavation, system removal or repair, sampling points, and surface cover		■
Attachment 2	Vicinity map or aerial photograph illustrating surrounding land use and receptors identified within a 500-foot radius		■
Attachment 3	USGS topographic map with plotted water well locations		■
Attachment 4	Copies of completion details and water well drillers reports for located wells (0.5 mile radius)		■
Attachment 5	Site plan(s) illustrating former/current UST/AST system(s) and all (i.e., soil, groundwater, vapor, surface water) sampling points		■
Attachment 6	Soil contaminant concentration maps		■
Attachment 7	Groundwater gradient map		■ NA □
Attachment 8	Groundwater contaminant concentration maps		□ NA ■
Attachment 9	Biodegradation Indicator Distribution Map*		□ NA ■
Attachment 10	Soil Gas Survey Maps*		□ NA ■
Attachment 11	Vapor Contaminant Concentration Map		■
Attachment 12	Surface Water Contaminant Concentration Map		□ NA ■
Attachment 13	Surface Water Flow Map		■ NA □
Attachment 14	Soil boring logs to include: lithology, field screening, sample locations, well completion details, TNRCC Form 0019		■
Attachment 15	Summary table of all soil, groundwater, surface water, and vapor analytical results, including from all sampling points, and tank removal or repair activities		■
Attachment 16	Summary tables of all gauging data, water level data, NAPL thickness and corrected water level data and well screen interval (if applicable)		■ NA □
Attachment 17	Copies of all analytical reports including complete chain-of-custody and quality assurance/quality control documentation		■
Attachment 18	Copies of manifests, waste receipts, or other documents necessary to document waste disposition		■
Attachment 19	Photographic documentation		■
Attachment 20	Proposal for next appropriate action and/or Site Closure Request		■

LPST ID: 108133
Site Name: Former Gary Air Force Base
Site Location: Gary Job Corps, Hwy 21 East, San Marcos, Caldwell County

EXECUTIVE SUMMARY

Check all applicable boxes.

UST/AST System Status: ☐ Active ■ Permanently Removed from Service
☐ Temporarily Out of Service ☐ Temporarily Indefinitely Out of Service (Variance Due Date: _____)

Current site land use:
☐ vacant ■ indus./coml. ☐ residential ☐ agricultural ☐ recreational ☐ UST/AST Facility

Sources of Release: ■ tank(s) ☐ piping ☐ spills ■ dispenser ☐ Other: _____

Substance Released:
☐ gasoline ☐ diesel ☐ waste oil ☐ hydraulic fluid ☐ AV gas ■ jet fuel ☐ Other: lube oil, sovents

Site Assessment History:
■ Preliminary/LSA ☐ Groundwater Monitoring ☐ Remedial Action ☐ Emergency Response

Affected environmental media: ☐ surficial soil (<2 ft. BGS) ■ soil (2 to 15 ft. BGS) ■ soil (>15 ft. BGS)
■ groundwater ☐ surface water ☐ air

Identified affected receptors: ☐ water wells ☐ basements/structures ☐ habitat ☐ building ☐ underground utilities
☐ surface water ☐ exposed contaminated soil ☐ Other Distance from site (ft.): _____

Samples collected ■ yes ☐ no Abatement initiated: ■ yes ☐ no Type: Permanent Removal

Identified potential receptors: ☐ water wells ☐ basements/structures ☐ habitat ☐ building ■ underground utilities
☐ surface water ☐ exposed contaminated soil ☐ Other Distance from site (ft.): _____

Depth to first encountered groundwater (ft.) BGS: ☐ >50 ■ 15-50 ☐ 0-15

Presence of NAPLs (ft.):
☐ sheen ☐ 0.1-0.5 ft. ☐ 0.5-2 ft. ☐ 2-5 ft. ☐ >5 ft. ■ none Recovery Initiated: ☐ yes ■ no

Current NAPL extent: ☐ on-site ☐ off-site

Dissolved-phase extent: ☐ on-site ☐ off-site ■ unknown

Groundwater beneficial use category:
☐ Cat. I ■ Cat. II ☐ Cat. III ☐ Cat. IV ☐ Soils only affected, regional beneficial use can not be established.

Contaminants of Concern Exceed Target Concentrations of Affected media:

Soil (Worksheets 7.0, 11.1-5):	■ yes ☐ no
Groundwater (Worksheet 8 & 11.1-4):	■ yes ☐ no
Vapors (Worksheet 9.0):	☐ yes ■ no
Surface Water (Worksheet 10.0):	☐ yes ■ no

Site Priority: 1._____ 2._____ 3._____ 4._1_____

Recommended Actions:

☐ a) Affected Receptors Identified - Propose additional corrective action and/or monitoring program.

☐ b) Site does not exceed Plan A criteria - Submit site closure request form.

☐ c) Site does not exceed Plan A criteria - Propose verification groundwater monitoring program.

☐ d) Site exceeds Plan A criteria - Propose corrective action to achieve Plan A criteria.

■ e) Site exceeds Plan A criteria - Propose Plan B risk assessment and/or evaluation.

LPST ID: 108133

SITE DESCRIPTION

Location Description

Facility Name: Former Gary Air Force Base

Address: Hwy 21 East, Gary Job Corps Center

Cross-Street: E. Kane Avenue

City: San Marcos

County: Caldwell

Current Site Water Supply: City of San Marcos

Notes:

Topography

Terrain: ■ Flat ☐ Steep ☐ Variable

Ground Surface Slope
Direction Southeast Grade (ft./ft.) 0.005 ft/ft

Other Comments:

Discuss any significant onsite or adjacent significant topographic feature.

A small surface storm drainage ditch is located about 700 ft. east of the site. This flows in a southerly direction and into Hemphill Creek.

Local Climate:

Average Annual Rainfall (in.): 32

Within 100 Year Floodplain: ☐ yes / ■ no

Other Comments:

Discuss recent (i.e., within the past year) extreme climatic changes. Discuss engineered modifications to floodplain status or designation.

T ID: 108133

LAND USE

PAST, CURRENT, AND FUTURE USE (check all that apply)

- Past use of site:
  - ■ Commercial/Industrial
  - ☐ Residential
  - ☐ Agricultural
  - ☐ Recreational
  - ☐ Vacant
  - ■ UST/AST Facility
- Past Predominant Land Use of the Area:
  - ■ Commercial/Industrial
  - ☐ Residential

Describe: Former Gary Air Force Base, Gary Job Corps-Department of Labor

- Current use of site:
  - ■ Commercial/Industrial
  - ☐ Residential
  - ☐ Agricultural
  - ☐ Recreational
  - ☐ Vacant
  - ☐ UST/AST Facility
- Current Predominant Land Use of the Area:
  - ■ Commercial/Industrial
  - ☐ Residential
- Type of Residential Area:
  - ☐ Minority/Low Income ☐ Non-minority/Low Income
  - ☐ Other

Describe: Gary Job Corps-Department of Labor

- Future use of site:
  - ■ Commercial/Industrial
  - ☐ Residential
  - ☐ Agricultural
  - ☐ Recreational
  - ☐ Vacant
  - ☐ UST/AST Facility
- Future Predominant Land Use of the Area:
  - ■ Commercial/Industrial
  - ☐ Residential

Describe: Gary Job Corps-Department of Labor

List all facilities (not limited to PST regulated) within 500 feet of the site that could be a source of contaminants:

Facility Name & Type: San Marcos Mun. Airport
Address: Highway 21 East
Facility No.: NA
LPST ID No. NA
Owner/Operator: City of San Marcos

Facility Name & Type: NA
Address: NA
Facility No.: NA
LPST ID No. NA
Owner/Operator: NA

Facility Name & Type: NA
Address: NA
Facility No.: NA
LPST ID No. NA
Owner/Operator: NA

Other Comments:

Additional facilities may be listed and noted on Attachment 2.

LPST ID: 108133

WATER WELL INVENTORY

SUMMARY OF WELLS WITHIN 0.5 MILE RADIUS OF THE SITE

			Downgradient Direction		
	Total No.	Active No.	Total No.	Active No.	No. Screened in Affected Zone
Public/Municipal:	0	0	0	0	0
Industrial:	0	0	0	0	0
Domestic:	0	0	0	0	0
Agricultural:	0	0	0	0	0

POTENTIAL RECEPTOR POINTS

	Closest Downgradient Water Well	Closest Downgradient Well Screened Within Affected Zone
Well No./Designation:	NA	NA
Distance from Site (ft.):	NA	NA
Total Well Depth (ft.):	NA	NA
Current Use of Water:	NA	NA
Screened Interval below Ground Surface (ft):	NA	NA
Year Constructed:	NA	NA

Comments: *(Include discussion of any ordinances which prevent or influence the future installation of water wells at the site or surrounding area.)*

LPST ID: 108133

RECEPTOR SURVEY

Underground Utility Survey

Nearest Underground Utility
Name: NA
Type: Product Piping
Depth of Utility: 15'
Distance & Direction
From Affected Zone: 40 ft. Southwest

Nearest Downgradient Utility
Name: NA
Type: Product Piping
Depth of Utility: 15'
Distance & Direction
From Affected Zone: 40 ft. South

Other Comments:

Discuss other receptors and indicate on Attachment 2. If affected discuss abatement measures.

The abandoned product piping begins at the largest tankhold, runs southwest several feet, then turns in a westerly direction, parallel and adjacent to East Kane Avenue. The final destination of the piping is the location of three former pump islands, which were located north of Building 9-350. During the tank removal, testing was performed for the soils located along the product piping, the results of these tests showed no impact to the native soils. The piping was grouted and abandoned in place.

Building Survey

Nearest Building
Name: Bldg 9-361
Type: Vocational Education
Distance & Direction
From Affected Zone: 80 ft. west

Nearest Downgradient Building
Name: Bldg 10-350
Type: Education Administration
Distance & Direction
From Affected Zone: 100 ft. southeast

Other Comments:

Discuss nearest and other receptors and indicate on Attachment 2. Buildings should include residences, schools, day care facility, nursing home, etc.

The buildings situated near the site are Building 9-361, Vocational Education; Building 10-350, Storage-Support; and Building 10-351, Administration. These buildings are part of Gary Jobs Corps, United States Department of Labor.

Surface Water Hydrology

Nearest Surface Water
Name: NA
Type: Drainage Ditch
Distance & Direction
From Affected Zone: 700 ft. east

Impacted Surface Water
Name: NA
Type: NA
Distance & Direction
From Affected Zone: NA

Nearest Downgradient Surface Water
Name: Hemphill Creek
Type: Creek
Distance & Direction
From Affected Zone: 1 Mile East

Other Comments:

If affected complete Worksheet 10.0. Describe potential for affected storm water or groundwater discharge to surface water feature.

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HABITAT SURVEY

Presence of Sensitive Habitat
Site located within or affects a sensitive or protected habitat? ☐ yes (explain below) ■ no

Name: NA
Location: NA

Discussion: *Provide the habitat type (wildlife sanctuary, wetlands, etc.), condition, regulatory authority, and other information relative to habitat characterization.*

SUMMARY AND RECOMMENDED ACTION

Observed or Potential Impacts	- Recommended Action
☐ None observed or anticipated	- No action required
■ Potential for Significant Impact	- Additional Corrective Action Required (See Attachment 20)
☐ Significant Impact Observed	- Additional Corrective Action Required (See Attachment 20)

Comments: *Discuss any emergency abatement and continued corrective action.*

LPST ID: 108133

SITE ASSESSMENT HISTORY

SUMMARY OF PREVIOUS SITE ACTIVITIES

Typical site activities to be recorded include:
- Preliminary/Limited/Comprehensive Site Assessment
- Emergency Response • Risk/Exposure Assessment • Remedial/Corrective Actions

Types of sampling to be included: • Soil • Groundwater • Surface Water • Vapors

Date Completed	Description of Activity	Sampling and Testing	Result/Impact/Target Cleanup
April 20, 1994	4 UST's removed.	Soil: BTEX, TPH, total lead.	Native soil impacted, overexcavation ordered.
April 30, 1994	Structure housing associated pumps removed, and area below excavated	Soil: BTEX, TPH, total lead.	Native soils impacted.
June 9, 1994	Overexcavations completed.	Soil: BTEX, TPH, total lead.	Native soils near tankhold still impacted. LSA ordered.
July 1, 1994	Excavation lined with impermeable liner, backfilled and restored to original grade. Grass planted.	None.	None.
May 17, 1996	LSA performed.	Soil: BTEX, TPH, PAH Water: BTEX, TPH; PAH	Soils and groundwater impacted.

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UST/AST SYSTEM CHARACTERIZATION

Release Information

UST/AST System Status:
☐ Active ■ Permanently Removed From Service
☐ Temporarily Out of Service
☐ Temporarily/Indefinitely Out of Service (Due Date:_____)

Method of release discovery:
■ UST Removal ☐ Release Detection Equipment
☐ Divestiture Assessment ☐ Inventory Control
☐ System Tightness Testing ☐ Other_____

Substance released (check all that apply):
☐ Gasoline ☐ Diesel ☐ Waste Oil
☐ AV Gas ■ Jet Fuel ☐ Hydraulic Fluid
☐ Other: _____

Source of release(s): Date Discovered:
☐ Spills/overfills _____
☐ Piping _____
■ Dispenser April 30, 1994
■ Tank April 20, 1994
☐ Other _____

Other Comments:

Describe the measures taken to abate the release:

The tanks, pump pit and pump islands were removed from service, overexcavations removed some of the contaminated soils.

Removal Information

Date(s) of removal(s): April 20, and April 30, 1994
Type of removal:
■ Removal from the ground ☐ Closure in place
Water in tankhold during excavation? ☐ yes ☐ no
Depth of water in tankhold (BGS):
☐ <5 ft. ☐ 5-10 ft. ☐ 11-15 ft. ☐ None
NAPL: ☐ yes ■ no Thickness (ft.): NA
Water Evacuated from tankhold: ☐ yes ■ no
Volume (gal.): _____
Groundwater recharged into tankhold: ■ yes ☐ no
Depth (ft. BGS): 22 ft.
Status of excavation(s):
☐ Open with water ☐ Open/dry
■ Backfilled with impervious cover
☐ Backfilled with no impervious cover
Type of fill material:
■ Untreated backfill ☐ Treated backfill ☐ Other
☐ Clean fill - gravel ■ Clean fill - sandy/clay

Other Comments:

Provide the maximum contaminant concentrations milligrams per kilograms (mg/kg) of untreated backfill returned to the tankhold(s): Benzene < 0.6 *TEX* <1.8 *TPH* 480 *OTHER* Total Lead 32 *. If a new UST/AST system was installed describe & indicate on Attachment 1.*

Maximum level of contamination detected in native soils upon completion of removal/repair (mg/kg):

Chemical of Concern	Sample Date	Sample Location/Depth	Laboratory Method Detection Limit	Maximum Concentration (mg/kg)
Benzene	6/9/94	Tank 08, bottom of hold	0.1	4.35
Toluene	6/9/94	Tank 08, bottom of hold	0.1	7.96
Ethylbenzene	6/9/94	Tank 08, bottom of hold	0.1	13.38
Total Xylenes	6/9/94	Tank 08, bottom of hold	0.1	57.35
TPH	6/9/94	Tank 08, bottom of hold	5	16705
Metals	NA	NA	NA	NA
VOC	NA	NA	NA	NA
Other Total Lead	4/20/94	Tank 08, northwest wall	0.1	38

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SOIL ASSESSMENT

SOIL DATA COLLECTION AND EVALUATION

Number of soil sampling points: Eight (8)

Method of determination: ☐ Direct Push ■ Borings ☐ Other: _____

Surface cover over affected soil zone (check all that apply):
☐ Concrete ☐ Asphalt ☐ Gravel ■ Dirt ■ Grass ☐ Other: _____

Percent of affected soil zone covered with impervious cover:
■ 0-25 % ☐ 25-50 % ☐ 50-75 % ☐ 75-100%

If there is no impervious surface cover, is there public access to the affected surface (0-2 ft.) soil? ■ yes ☐ no

Affected soil zone thickness (ft.): Ten (10)

*Affected soil zone surface area dimensions (ft.): _____

Maximum depth of contamination exceeding appropriate Plan A risk-based levels: 5 ft. BGS

*Estimated volume of soil exceeding Plan A target concentration (yd^3): _____

*Minimum distance from affected soil zone to property boundary: ☐ 0-10 ft. ☐ 10-50 ft. ☐ 50-100 ft.
■ 100-300 ft. ☐ 300-500 ft. ☐ >500 ft. ☐ Extends beyond property boundary

Waste disposal: ■ Landfill ☐ On-site treatment ☐ Off-site treatment
☐ Other ☐ Pending ☐ None

Maximum level of contamination detected in native soils (mg/kg):

Chemical of Concern	Sample Date	Sample Depth (ft.)	Sample ID	Laboratory Method Detection Limit	Max Conc. (mg/kg)	Target Cleanup Goals †
Benzene	5/16/96	17	B5-5417	0.001	0.630	0.74
Toluene	5/16/96	17	B5-5417	0.001	1.700	503
Ethylbenzene	5/16/96	20.5	B8-8720	0.001	44.000	835
Total Xylenes	5/16/96	20.5	B8-8720	0.001	25.00	968
TPH	5/16/96	20.75	B6-6520	10	6300	NA
Total Lead	NA	NA	NA	NA	NA	NA
Naphthalene	5/16/96	20.5	B8-8720	0.150	6.200	389
Other: Benzo(B)Fluoran.	5/16/96	5	B8-8705	2.2	5.9	0.877
Other_____				NA		

* Beyond the minimal requirements for a Site Assessment as defined by 30 TAC 334.
† Refer to Worksheets 11.1-5 and *Risk-Based Corrective Action for Leaking Storage Tank Sites*, RG-36, Table A-1.

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* Geotechnical soil parameters:

Parameter	Result	Depth	Location/Sample ID	Method of Determination
Dry Bulk Density (g/m^3):	1.54E6	23-24 ft	B-6 (23.0-24.0')	ASTM D 5084-90
Effective Porosity (%):	42.6	23-24 ft	B-6 (23.0-24.0')	ASTM D 5084-90
Fraction Organic Carbon (g/g):	0.14	23-24 ft	B-6 (23.0-24.0')	Walkey-Blk
Intrinsic Permeability (cm^2):	9.98E-14	23-24 ft	B-6 (23.0-24.0')	ASTM D 5084-90
Water Content (cm^3/cm^3):	0.292*	23-24 ft	B-6 (23.0-24.0')	ASTM D 5084-90
Other	NA	NA	NA	NA

* Biodegradation Indicators:

Present spatial distribution of O_2, CO_2, CH_4, etc. levels on map. (Attachment 9)

Moisture fraction.

LPST ID: 108133

GROUNDWATER ASSESSMENT

GROUNDWATER DATA AND EVALUATION

Groundwater affected by release: ■ yes ☐ no (If no, complete only the Beneficial Groundwater Use Categories on this Worksheet.)

Site Hydrogeology	Upper Most Zone	Other
Depth to groundwater (ft.)	27.8	
Aquifer type (Perched, confined, unconfined)	Perched	
*Estimated Aquifer thickness (ft.)		
*Water level fluctuations (± ft.)	Unknown	
Gradient (ft./ft.)/Direction	Unknown/Unknown	/
*Saturated hydraulic conductivity (ft./day)		
*Approximate well yield (gpd)		
Lithology	Sandy Gravel	
Geologic Formation	Leona Formation	
Major/minor aquifer name	NA - Perched	
Total dissolved solids (mg/ℓ)	530	
Confining layer depth (ft. BGS)	30	
Confining layer thickness (ft.)	5	

Beneficial Groundwater Use Categories

Mark the potential beneficial use category for the impacted zone and indicate the selection criteria. Complete the appropiate worksheet (11.1-5) for the Category indicated.

☐ Category I	■ Category II	☐ Category III	☐ Category IV
☐ Impacted or threatened water supply well(s)‡	■ Affected groundwater zone TDS <3,000 ppm, and no beneficial use† is documented within 0.5 miles of the site.	☐ Affected groundwater zone TDS 3,000 - 10,000 ppm, and no beneficial use† within 0.5 miles of the site.	☐ Affected groundwater zone TDS >10,000 ppm, and no beneficial use† is documented within 0.5 miles of the site.
OR ☐ Affected groundwater zone TDS <3,000 ppm, and water well(s)‡ or water supply spring within 0.5 miles of the site. OR ☐ Soils only affected. Regional groundwater beneficial use† cannot be established.	OR ☐ TDS 3,000 - 10,000 ppm, and beneficial use† is documented within the 0.5 miles of the site.		OR ☐ Well yield <150 gpd (i.e., affected zone is not considered to have a beneficial use†)

‡ If construction details of water well(s) are unknown or can not be proven, the interval is assumed to be connected.
† Applies to a drinking water source producing from the same or connected interval as the affected groundwater zone.

Groundwater Sampling Points

	On-Site (provide well ID)	*Beyond Property Boundary (provide well ID)
Number of Sampling points:	Boring 1/MW-1	
Number of permanent monitoring wells:	MW-1	
Static water levels above screened intervals: ☐ yes ■ no		

LPST ID: 108133

DISSOLVED-PHASE PLUME

*Aerial extent of dissolved-phase plume (ft²): _____

*Distance from edge of plume to property boundary if on-site: ☐ <10 ft. ☐ 10-50 ft. ☐ 50-100 ft. ☐ 100-300 ft. ☐ >300 ft.

*Distance from property boundary to edge of plume if off-site: ☐ <10 ft. ☐ 10-50 ft. ☐ 50-100 ft. ☐ 100-300 ft. ☐ >300 ft.

Maximum level of contamination detected in groundwater (mg/L):

Contaminant	Sample Date	Sample ID	Laboratory Method Detection Limit	Maximum Concentration (mg/ℓ)	Target Cleanup Goals†
Benzene	5/16/96	G1-1234	0.001	1.500	0.0294
Toluene	5/30/96	MW1-7471	0.001	0.009	7.3
Ethylbenzene	5/16/96	G1-1234	0.001	0.170	3.65
Total Xylenes	5/16/96	G1-1234	0.001	<0.005	73
MTBE	NA	NA	NA	NA	NA
TPH	5/16/96	G1-5234	0.5	7	NA
Naphthalene	5/30/96	MW1-7471	0.09	0.17	1.46
Other_____					

† Refer to Worksheet 11.1-3 and the *Risk-Based Correction Action for Leaking Storage Tank Sites*, RG-36, Table A1.

NAPL PLUME

NAPL Present? ☐ yes ■ no

	On-Site (provide well ID)	Thickness (ft.)	*Beyond Property Boundary (provide well ID)	Thickness (ft.)
Current maximum NAPL thickness (ft.):	NA	NA	NA	NA
	NA	NA	NA	NA
	NA	NA	NA	NA
	NA	NA	NA	NA

NAPL recovery method: ☐ hand bail ☐ passive skimmer ☐ sorbent socks ☐ automated system ■ none

Volume recovered to date (gals.): NA

*Aerial extent of NAPL plume: (ft²)_____ ☐ beyond property boundary

*Distance from edge of NAPL plume to property boundary if on-site: ☐<10 ft. ☐ 10-50 ft. ☐ 50-100 ft. ☐ 100-300 ft. ☐>300 ft.

*Distance from edge of NAPL plume from property boundary if off-site: ☐<10 ft. ☐ 10-50 ft. ☐ 50-75 ft. ☐ 75-100 ft. ☐>100 ft.

* Biodegradation Indicators:

Present spatial distribution of dissolved Oxygen, dissolved CO_2, dissolved CH_4, Fe, SO_4, or other alternate electron acceptors on isoconcentration map. (Attachment 9)

LPST ID: 108133

VAPOR ASSESSMENT

VAPOR DATA AND EVALUATION

Known vapor impact: ☐ yes ■ no

Location: ☐ ambient air ☐ utilities ☐ residences ☐ hospital ☐ school/day care ☐ commercial buildings ☐ other:_

Lower Explosive Limit (LEL) concentrations: ☐ not measured ☐ measured ■ calculated[1]

NAPL present or soil concentration near saturation (for calculating soil vapor concentrations, refer to *Risk-Based Correction Action for Leaking Storage Tank Sites*, RG-36): ☐ yes ■ no Depth (ft. BGS):_

Vapor monitoring data:

Sample No.	Location	Depth	% LEL	Total Organic Vapors (ppmv)	Benzene (ppmv)	Other
B5-5417	Boring 5	17 ft.	1.3	1437	0.0452	NA
B8-8720	Boring 8	20.5ft.	1.0	75		7.0836 EB
B5-5417	Boring 5	17 ft.	1.2	1737		0.8340 T
B8-8720	Boring 8	20.5 ft.	1.0	75		15.85 X

If vapor concentrations exceed 25% of the LEL or other potential for explosive vapor exist in surface or subsurface structure, describe affected area, methods of determination, and any abatement measure. Identify and discuss any occupational or indoor air exposures to released contaminants. Provide all calculations for the determination of the target concentrations:

EB = Ethyl benzene
T = Toluene
X = Xylene

Calculations on following page.

[1]LEL% should reflect whole mixture evaluation. If more than one compound is present, actual measurement of vapors will typically be warranted.

Site Specific Soil Vapor Calculations

Sample ID	Sample Depth	Contaminant	Bulk Soil Concentration	Soil Water Partition Coeffecient	Organic Carbon Partition Coefficient	Soil Organic Carbon Fraction	Dry Soil Bulk Density	Total Soil Porosity	Water Content	Air Fill Soil Porosity	Henry's Constant (Demensional Form)	Henry's Constant (Unitless)	Leachate Conc.	Target Soi Conc.	Calculated Soil Vapor Concentration
			C_t	K_d	K_{oc}	F_{oc}	B	Φ	Φ_w	Φ_a	H	H'	C_l	C_t	C_a
B5-5417	17'	Benzene	0.63	0.116	83	0.0014	1.54	0.419	0.1	0.319	0.00559	0.2324	0.5	0.1146	0.6385
B8-8720	20.5'	Ethyl benzene	44	1.54	1100	0.0014	1.54	0.419	0.1	0.319	0.00643	0.2673	70	116.2212	7.0836
B5-5417	17'	Toluene	1.7	0.42	300	0.0014	1.54	0.419	0.1	0.319	0.00637	0.2648	100	53.9787	0.8340
B8-8720	20.5'	Xylenes	25	0.336	240	0.0014	1.54	0.419	0.1	0.319	0.00704	0.2927	1000	461.5560	15.8514

LPST ID: 108133

SURFACE WATER ASSESSMENT

SURFACE WATER DATA AND EVALUATION

Surface water(s) affected: ☐ yes ■ no Name:_____ Type:_____
Name:_____ Type:_____

NAPL present on surface water or run off: ☐ yes ■ no

NAPL recovery method: ☐ passive skimmer ☐ sorbent socks ☐ automated system ☐ booms ☐ other _____ ■ none

Volumes recovered to date (gals.): NA

Aerial extent of NAPL plume (ft.²): NA

Uses of affected surface water: ☐ drinking water ☐ contact recreation ☐ habitat for endangered species ☐ agriculture

Is a public or domestic surface water intake impacted? ☐ yes ■ no

If impacted lake or pond, indicate affected surface area (ft.²): NA

Average depth of surface water (ft.): NA

Maximum level of contamination detected in surface water (mg/ℓ):

Contaminant	Sample Date	Sample Location & ID	Laboratory Method Detection Limit	Maximum Concentration (mg/ℓ)	Target Cleanup Goals†
Benzene	NA	NA	NA	NA	NA
Toluene	NA	NA	NA	NA	NA
Ethylbenzene	NA	NA	NA	NA	NA
Total Xylenes	NA	NA	NA	NA	NA
MTBE	NA	NA	NA	NA	NA
TPH	NA	NA	NA	NA	NA
Naphthalene	NA	NA	NA	NA	NA
Other_____	NA	NA	NA	NA	NA
Other_____	NA	NA	NA	NA	NA

† Refer to 30 TAC, Chapter 307, the MCL or the *Risk-Based Correction Action for Leaking Storage Tank Sites*, RG-36.

Describe affected area, methods of determination and any abatement measures. Discuss the migration pathway between the source of contamination and the surface water body.

LPST ID: 108133

PLAN A EVALUATION

CATEGORY I: Soil and Groundwater Target Cleanup Level Determination

- Complete this worksheet for Category I sites. Indicate the maximum detected concentration for the chemicals of concern.
- If groundwater is >15 feet BGS, calculate groundwater protective soil concentrations using the equilibrium partition equation on Worksheet 11.5 (when site specific geotechnical parameters have been analyzed).
- Check the box for each compound that exceeds the target concentrations. If any boxes are checked, further corrective action (i.e., monitoring, Plan B, CAP) will be required.
- If other chemicals of concern are present but not listed, refer to *Risk-Based Corrective Action for Leaking Storage Tank Sites (RG-36)*.

Chemical of Concern	GROUNDWATER (mg/ℓ)		SOIL (mg/kg)				
			Depth to Affected Soil ≤15 ft.		Depth to Affected Soil >15 ft.		
	TARGET CONC.	MAX. LAB. ANALYZED CONC.	TARGET CONC.	MAX. LAB. ANALYZED CONC.	TARGET CONC.	MAX. LAB. ANALYZED CONC.	GW >15 ft. CALC. SOIL CONC. C_T
BENZENE	☐ 0.005		☐ 0.13		☐ 0.13		
ETHYLBENZENE	☐ 0.7		☐ 160		☐ 160		
TOLUENE	☐ 1		☐ 69		☐ 69		
XYLENE	☐ 10		☐ 568		☐ 568		
ACENAPHTHENE	☐ 2.19		☐ 314		☐ 314		
ANTHRACENE	☐ 11		☐ 13		☐ 13		
BENZO(A)ANTHRACENE	☐ 0.000117		☐ 0.877[H]		☐ 3.2		
BENZO(B)FLUORANTHENE	☐ 0.000117		☐ 0.877[H]		☐ 13		
BENZO(K)FLUORANTHENE	☐ 0.00117		☐ 8.77[H]		☐ 47		
BENZO(A)PYRENE	☐ 0.0002		☐ 0.0877[H]		☐ 220		
CHRYSENE	☐ 0.0117		☐ 7.2		☐ 7.2		
DIBENZO(A,H)ANTHRACENE	☐ 0.0000117		☐ 0.0877[H]		☐ 7.7		
FLUORANTHENE	☐ 1.46		☐ 156		☐ 156		
FLUORENE	☐ 1.46		☐ 247		☐ 247		
INDENO(1,2,3-CD)PYRENE	☐ 0.000117		☐ 0.877[H]		☐ 17		
NAPHTHALENE	☐ 1.46		☐ 389		☐ 389		
PYRENE	☐ 1.1		☐ 99		☐ 99		
OTHER	☐		☐		☐		
OTHER	☐		☐		☐		

H - Value represents health-based concentration

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PLAN A EVALUATION

CATEGORY II: Soil and Groundwater Target Cleanup Level Determination

- Complete this worksheet for Category II sites. Indicate the maximum detected concentration for the chemicals of concern.
- If groundwater is >15 feet BGS, calculate groundwater protective soil concentrations using the equilibrium partition equation on Worksheet 11.5 (when site specific geotechnical parameters have been analyzed).
- Check the box for each compound that exceeds the target concentrations. If any boxes are checked, further corrective action (i.e., monitoring, Plan B, CAP) will be required.
- If other chemicals of concern are present but not listed, refer to *Risk-Based Corrective Action for Leaking Storage Tank Sites (RG-36)*

Chemical of Concern	GROUNDWATER (mg/ℓ)		SOIL (mg/kg)				
			Depth to Affected Soil ≤15 ft.		Depth to Affected Soil >15 ft.		
	TARGET CONC.	MAX. LAB. ANALYZED CONC.	TARGET CONC.	MAX. LAB. ANALYZED CONC.	TARGET CONC.	MAX. LAB. ANALYZED CONC.	GW >15 ft. CALC. SOIL CONC. C_T
BENZENE	■ 0.0294	1.500	☐ 0.74	0.067	☐ 0.74	0.630	0.115
ETHYLBENZENE	☐ 3.65	0.170	☐ 835	0.580	☐ 835	44.000	116
TOLUENE	☐ 7.3	0.009	☐ 503	0.660	☐ 503	1.700	54
XYLENE	☐ 73	<0.005	☐ 968	2.100	☐ 968	25.000	91
ACENAPHTHENE	☐ 2.19	<0.010	☐ 314	<2.500	☐ 314	<5.000	22.25
ANTHRACENE	☐ 11	<0.020	☐ 13	0.480	☐ 13	<2.2	0.885
BENZO(A)ANTHRACENE	☐ 0.00117	<0.014	☐ 0.877[H]	0.780	☐ 32	<1.350	11
BENZO(B)FLUORANTHENE	☐ 0.00117	<0.012	■ 0.877[H]	5.900	☐ 129	<1.100	10.8
BENZO(K)FLUORANTHENE	☐ 0. 0117	<0.014	☐ 8.77[H]	3.100	☐ 47	<1.200	3.311
BENZO(A)PYRENE	☐ 0.000117	<0.006	☐ 0.0877[H]	<0.550	☐ 220	<1.100	23
CHRYSENE	☐ 0. 117	<0.006	☐ 7.2	0.590	☐ 7.2	0.120	0.504
DIBENZO(A,H)ANTHRACENE	☐ 0.000117	<0.014	☐ 0.0877[H]	<2.400	☐ 33	<1.2	2.310
FLUORANTHENE	☐ 1.46	<0.020	☐ 156	2.200	☐ 156	<3.800	11
FLUORENE	☐ 1.46	<0.040	☐ 247	<5.600	☐ 247	<2.800	17.4
INDENO(1,2,3-CD)PYRENE	☐ 0.00117	<0.016	☐ 0.877[H]	<2.600	☐ 17	<1.300	1.19
NAPHTHALENE	☐ 1.46	0.017	☐ 389	<3.000	☐ 389	6.2	56.9
PYRENE	☐ 1.1	<0.020	☐ 99	3.600	☐ 99	0.024	6.924
OTHER	☐		☐		☐		
OTHER	☐		☐		☐		

H - Value represents health-based concentration

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PLAN A EVALUATION

CATEGORY III: Soil and Groundwater Target Cleanup Level Determination

- Complete this worksheet for Category III sites. Indicate the maximum detected concentration for the chemicals of concern.
- If groundwater is >15 feet BGS, calculate groundwater protective soil concentrations using the equilibrium partition equation on Worksheet 11.5 (when site specific geotechnical parameters have been analyzed).
- Check the box for each compound that exceeds the target concentrations. If any boxes are checked, further corrective action (i.e., monitoring, Plan B, CAP) will be required.
- If other chemicals of concern are present but not listed, refer to *Risk-Based Corrective Action for Leaking Storage Tank Sites (RG-36)*

Chemical of Concern	GROUNDWATER (mg/ℓ)		SOIL (mg/kg)				
			Depth to Affected Soil ≤15 ft.		Depth to Affected Soil >15 ft.		
	TARGET CONC.	MAX. LAB. ANALYZED CONC.	TARGET CONC.	MAX. LAB. ANALYZED CONC.	TARGET CONC.	MAX. LAB. ANALYZED CONC.	GW >15 ft. CALC. SOIL CONC. C_T
BENZENE	☐ 0.14		☐ 3.5		☐ 3.5		
ETHYLBENZENE	☐ 5.21		☐ 1193		☐ 1193		
TOLUENE	☐ 10.4		☐ 716		☐ 716		
XYLENE	☐ 104		☐ 968		☐ 968		
ACENAPHTHENE	☐ 3.13		☐ 314		☐ 314		
ANTHRACENE	☐ 13		☐ 13		☐ 13		
BENZO(A)ANTHRACENE	☐ 0.00556		☐ 0.877[H]		☐ 153		
BENZO(B)FLUORANTHENE	☐ 0.00556		☐ 0.877[H]		☐ 154		
BENZO(K)FLUORANTHENE	☐ 0.0556		☐ 8.77[H]		☐ 47		
BENZO(A)PYRENE	☐ 0.000556		☐ 0.0877[H]		☐ 330		
CHRYSENE	☐ 0.556		☐ 7.2		☐ 7.2		
DIBENZO(A,H)ANTHRACENE	☐ 0.000556		☐ 0.0877[H]		☐ 33		
FLUORANTHENE	☐ 2.08		☐ 156		☐ 156		
FLUORENE	☐ 2.08		☐ 247		☐ 247		
INDENO(1,2,3-CD)PYRENE	☐ 0.00556		☐ 0.877[H]		☐ 17		
NAPHTHALENE	☐ 2.08		☐ 389		☐ 389		
PYRENE	☐ 1.56		☐ 99		☐ 99		
OTHER	☐		☐		☐		
OTHER	☐		☐		☐		

H - Value represents health-based concentration

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PLAN A EVALUATION

CATEGORY IV: Soil Target Cleanup Level Determination

- Complete this worksheet for Category IV sites. Check the appropriate column indicating the predominant land use and surface cover.
- Indicate the maximum detected soil concentration for the chemical of concern in the column checked. Check the box for each compound that exceeds the target concentration. If any boxes are checked, further corrective action will be required.
- Dermal exposure should be calculated if depth to groundwater is <15 feet, unless documentation can be provided that surface cover will be maintained and/or construction practices will not encroach upon groundwater[a]. For dermal exposure calculations refer to Chapter 10 of *Dermal Exposure Assessment, Principles and Applications (Interim Report)*, EPA/600/8-91/011B.NTIS PB92205665. Attach and provide all dermal exposure assessment calculations. Provide tables which include result and maximum detected concentrations.
- If other chemicals of concern are present but not listed, refer to *Risk-Based Corrective Action for Leaking Storage Tank Sites (RG-36)*.

Chemical of Concern	☐ RESIDENTIAL		☐ RESIDENTIAL		☐ COML./INDUSTRIAL	
	☐ Surface to 2 Feet Without Impervious Cover (Soil mg/kg)		☐ 2-15 Feet Without Impervious Cover ☐ Surface to 15 Feet with Impervious Cover (Soil mg/kg)		Surface to 15 feet Regardless of Surface Cover (Soil mg/kg)	
	Target Concentrations Based on Ingestion and Inhalation	Maximum Laboratory Analyzed Concentration	Soil Target Concentrations Based on Ingestion	Maximum Laboratory Analyzed Concentration	Target Concentrations Based on Ingestion/Inhalation	Maximum Laboratory Analyzed Concentration
BENZENE	☐ 6.3		☐ 22		☐ 10	
ETHYLBENZENE	☐ 3357		☐ 3357[b]		☐ 3357	
TOLUENE	☐ 3257		☐ 3257[b]		☐ 3257	
XYLENE	☐ 968		☐ 968[b]		☐ 968	
ACENAPHTHENE	☐ 314		☐ 314[b]		☐ 314	
ANTHRACENE	☐ 13		☐ 13[b]		☐ 13	
BENZO(A)ANTHRACENE	☐ 0.877		☐ 0.877		☐ 7.8	
BENZO(B)FLUORANTHENE	☐ 0.877		☐ 0.877		☐ 7.8	
BENZO(K)FLUORANTHENE	☐ 8.77		☐ 8.77		☐ 47	
BENZO(A)PYRENE	☐ 0.0877		☐ 0.0877		☐ 0.784	
CHRYSENE	☐ 7.2		☐ 87.7		☐ 7.2	
DIBENZO(A,H)ANTHRACENE	☐ 0.0877		☐ 0.0877		☐ 0.784	
FLUORANTHENE	☐ 156		☐ 156[b]		☐ 156	
FLUORENE	☐ 247		☐ 247[b]		☐ 247	
INDENO(1,2,3-CD)PYRENE	☐ 0.877		☐ 0.877		☐ 7.84	
NAPHTHALENE	☐ 782		☐ 782[b]		☐ 782	
PYRENE	☐ 99		☐ 99[b]		☐ 99	
OTHER	☐		☐		☐	
OTHER	☐		☐		☐	

a Written statements, institutional controls must be provided that impermeable surfaces will be maintained.
b Maximum concentration based on pure product saturation limits.

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PLAN A EVALUATION

SOILS ONLY AFFECTED (Regional Groundwater Beneficial Use Can Not Be Established

- Complete this worksheet when groundwater beneficial use can not be established. Check the appropriate land use and indicate the maximum detected soil concentration for the chemicals of concern in the appropriate columns.
- For those chemicals of concern exceeding the default target concentrations, use site specific parameters (if collected) to calculate target soil concentrations using the equilibrium partition equation (on the following page).
- Check the box for each chemical of concern that exceeds the default target concentration and the calculated C_T value (Target Soil Concentration Protective of Groundwater determined by the equilibrium partition equation).
- If any boxes are checked, further corrective action will be required.
- If other chemicals of concern are present but not listed, refer to *Risk-Based Corrective Action for Leaking Storage Tank Sites (RG-36).*

Chemical of Concern	SOIL (mg/kg)								
	Affected Soil ≤15 ft.						Affected Soil >15 ft.		
	☐ RESIDENTIAL			☐ COMMERCIAL / INDUSTRIAL					
	DEFAULT TARGET CONC.	MAX. LAB. ANALYZED CONC.	CALC. SOIL TARGET CONC. C_T	DEFAULT TARGET CONC.	MAX. LAB. ANALYZED CONC.	CALC.SOIL TARGET CONC. C_T	DEFAULT TARGET CONC.	MAX. LAB. ANALYZED CONC.	CALC. SOIL TARGET CONC. C_T
BENZENE	☐ 0.13		☐	☐ 0.13		☐	☐ 0.13		☐
ETHYLBENZENE	☐ 160		☐	☐ 160		☐	☐ 160		☐
TOLUENE	☐ 69		☐	☐ 69		☐	☐ 69		☐
XYLENE	☐ 568		☐	☐ 568		☐	☐ 568		☐
ACENAPHTHENE	☐ 314		☐	☐ 314		☐	☐ 314		☐
ANTHRACENE	☐ 13		☐	☐ 13		☐	☐ 13		☐
BENZO(A)ANTHRACENE	☐ 0.877[H]		☐ 0.877[H]	☐ 3.2		☐	☐ 3.2		☐
BENZO(B)FLUORANTHENE	☐ 0.877[H]		☐ 0.877[H]	☐ 7.8[H]		☐ 7.8[H]	☐ 13		☐
BENZO(K)FLUORANTHENE	☐ 8.77[H]		☐ 8.77[H]	☐ 47		☐	☐ 47		☐
BENZO(A)PYRENE	☐ 0.0877[H]		☐ 0.0877[H]	☐ 0.784[H]		☐ 0.784[H]	☐ 220		☐
CHRYSENE	☐ 7.2		☐	☐ 7.2		☐	☐ 7.2		☐
DIBENZO(A,H)ANTHRACENE	☐ 0.0877[H]		☐ 0.0877[H]	☐ 0.784[H]		☐ 0.784[H]	☐ 7.7		☐
FLUORANTHENE	☐ 156		☐	☐ 156		☐	☐ 156		☐
FLUORENE	☐ 247		☐	☐ 247		☐	☐ 247		☐
INDENO(1,2,3-CD)PYRENE	☐ 0.877[H]		☐ 0.877[H]	☐ 7.84[H]		☐ 7.84[H]	☐ 17		☐
NAPHTHALENE	☐ 389		☐	☐ 389		☐	☐ 389		☐
PYRENE	☐ 99		☐	☐ 99		☐	☐ 99		☐
OTHER	☐		☐	☐		☐	☐		☐
OTHER	☐		☐	☐		☐	☐		☐

H - Value represents health-based concentration. The equilibrium partition equation may only be used when affected soils are >15 feet BGS for these chemicals of concern.

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PLAN A EVALUATION

EQUILIBRIUM PARTITION EQUATION

- Use this section to determine the target soil concentrations protective of groundwater (C_T). The C_T value may be calculated for each chemical of concern under the following conditions:
  - the option is provided on the appropriate column of the site specific category worksheet;
  - default target concentration was exceeded;
  - site specific soil parameters have been collected.
- Provide all calculations for each chemical of concern.

PARAMETERS	REFERENCE VALUES USED TO CALCULATE DEFAULT TARGET CONCENTRATION	SITE SPECIFIC VALUES
C_w = Category I groundwater target concentration (chemical specific) (mg/ℓ)	*Reference worksheet 11.1 for chemical specific category I target concentration.*	
ρ_s = Dry Soil bulk density (g-soil/cm^3-soil)	1.8	1.54
θ_w = Water content (cm^3-H_2O/cm^3-soil)	0.1	Not Measured
θa = Air content (cm^3-air/cm^3-soil)	0.22	0.319
f_{oc} = Faction of organic carbon (g-C/g-soil)	0.002	0.0014
K_{oc} = Carbon-Water sorption coefficient (chemical specific) (g-H_2O/g-soil)	*Reference RG-36, page 55, Table B-1 for chemical specific values.*	See next page
K_d = Soil-Water sorption coefficient $= K_{oc} \times f_{oc}$	Chemical Specific	See next page
H' = Unitless form of Henry's law constant H x 41.57 (at 25°C)	*Reference RG-36 page 55*	See next page
C_l = Leachate Concentration Dilution Factor = 100	= Dilution Factor x C_W	See next page

Use this equation to determine the target soil concentration which is protective of groundwater for each chemical of concern. Use site specific geotechnical parameters to calculate C_T. (Use referenced default values for any parameters not analyzed.)

C_T = Target soil concentration protective of groundwater determined by the equilibrium partition equation

$$C_T = \frac{\left(C_l \times \left[\rho_s K_d + \theta_w + \theta_a H'\right]\right)}{\rho_s}$$

Calculations on following page.

Site Specific Target Soil Calculations

Contaminant	Category 1 Groundwater Target Concentration	Soil-Water Sorption Coefficient	Carbon-Water sorption Coefficient	Fraction of Organic Carbon	Dry Soil Bulk Density	Total Soil Porosity	Water Content	Air Content	Henry's Constant (Demisional)	Henry's Contant (Unitless)	Leachate Concentration	Target Soil Concentration
	C_w	K_d	K_{oc}	F_{oc}	B	θ	θ_w	θ_a	H	H'	C_l	C_t
Benzene	0.005	0.1162	83	0.0014	1.54	0.419	0.1	0.319	0.0056	0.2324	0.5	0.115
Ethyl benzene	0.7	1.54	1100	0.0014	1.54	0.419	0.1	0.319	0.0064	0.2673	70	116.221
Toluene	1	0.42	300	0.0014	1.54	0.419	0.1	0.319	0.0064	0.2648	100	53.979
Xylenes	10	0.336	240	0.0014	1.54	0.419	0.1	0.319	0.007	0.2927	198	91.388
Acenaphthene	2.19	6.44	4600	0.0014	1.54	0.419	0.1	0.319	9E-05	0.0038	3.42	22.250
Anthracene	11	19.6	14000	0.0014	1.54	0.419	0.1	0.319	0.001	0.0424	0.045	0.885
Benzo a anthracene	0.000117	1932	1380000	0.0014	1.54	0.419	0.1	0.319	1E-06	0.0000	0.0057	11.013
Benzo b fluoranthene	0.000117	770	550000	0.0014	1.54	0.419	0.1	0.319	1E-05	0.0005	0.014	10.781
Benzo k fluoranthene	0.00117	770	550000	0.0014	1.54	0.419	0.1	0.319	4E-05	0.0016	0.0043	3.311
Benzo a pyrene	0.0002	7700	5500000	0.0014	1.54	0.419	0.1	0.319	6E-07	0.0000	0.003	23.100
Chrysene	0.0117	280	200000	0.0014	1.54	0.419	0.1	0.319	1E-06	0.0000	0.0018	0.504
Dibenzo(A,H)anthracene	0.0000117	4620	3300000	0.0014	1.54	0.419	0.1	0.319	7E-08	0.0000	0.0005	2.310
Fluoranthene	1.46	53.2	38000	0.0014	1.54	0.419	0.1	0.319	6E-06	0.0003	0.206	10.973
Fluorene	1.46	10.22	7300	0.0014	1.54	0.419	0.1	0.319	6E-05	0.0027	1.69	17.382
Indeno(1,2,3-CD)pyrene	0.000117	2240	1600000	0.0014	1.54	0.419	0.1	0.319	7E-08	0.0000	0.00053	1.187
Naphthalene	1.46	1.82	1300	0.0014	1.54	0.419	0.1	0.319	0.0013	0.0538	30	56.882
Pyrene	1.1	53.2	38000	0.0014	1.54	0.419	0.1	0.319	5E-06	0.0002	0.13	6.924

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SITE PRIORITIZATION

PRIORITY 1 SITES

NAPL present? ☐ **yes** ■ **no** Evaluate all information on site soils, vapors, groundwater, surface water, and other impacts and check all boxes which match site conditions. The lowest value is the site priority. If priority cannot be determined, the assessment is inadequate.

	PRIORITY	ACTIONS
☐ 1.1	Explosive levels, or concentrations of vapors that could cause acute health effects are present in a residence or other building. (Ensure the local fire authority or State Fire Marshal (512/918-7100) and the local TNRCC Region Office have been notified.)	**Emergency Actions:** Notify appropriate authorities, property owners, and potentially affected parties. Mitigate vapor impact. **Additional Actions:** Conduct receptor survey. Conduct assessment of contaminant plumes. Determine target cleanup levels. Conduct remediation as necessary.
☐ 1.2	An active public water supply well, public water supply line, or public surface water intake is affected or immediately threatened by the release. (Ensure the public authority and the local TNRCC Region Office have been notified.)	**Emergency Actions:** Notify appropriate authorities, well users, and property owners. Prevent further migration. Mitigate impact. Discontinue use of water supply. **Additional Actions:** Provide alternative water source†. Conduct receptor survey. Conduct assessment of contaminant plumes in relation to water supply impact. Determine target cleanup levels. Conduct remediation as necessary.
☐ 1.3	A sole-source domestic water supply well or line, or sole-source domestic surface water intake is affected or immediately threatened by the release. (Ensure the well user or surface water user and the local TNRCC Region Office have been notified.)	**Emergency Actions:** Notify appropriate authorities, well users, and property owners. Prevent further migration. Mitigate impact. Discontinue use of water supply. **Additional Actions:** Provide alternative water source†. Conduct receptor survey. Conduct assessment of contaminant plumes in relation to water supply impact. Determine target cleanup levels. Conduct remediation as necessary.
☐ 1.4	Explosive vapors are present in a subsurface utility system, but no building or residence is affected. (Ensure the utility authority and the local TNRCC Region Office have been notified.)	**Emergency Actions:** Notify appropriate authorities, property owners, and affected parties. Mitigate vapor impact. **Additional Actions:** Conduct receptor survey. Conduct assessment of contaminant plumes. Determine target cleanup levels. Conduct remediation as necessary.
☐ 1.5	NAPL is present at the ground surface, on surface water bodies, surface water runoff, or in utilities other than water supply lines. (Ensure the utility authority is notified if utilities are affected. Ensure NAPL is removed as required pursuant to 30 TAC 334.79.)	**Emergency Actions:** Notify appropriate authorities, property owners, and affected parties. Secure area. **Additional Actions:** Conduct NAPL removal activities. Prevent migration of NAPL. Conduct assessment in relation to impact. Conduct receptor survey. Determine target cleanup levels. Conduct remediation as necessary.
☐ 1.6	The Edwards aquifer, recharge zone or transition zone is affected.	**Emergency Actions:** Recover NAPL if present. **Additional Actions:** Initiate assessment activities. Conduct assessment in relation to impact. Conduct receptor survey. Determine target cleanup levels. Conduct remediation as necessary. If NAPL is present, conduct removal activities.
☐ 1.7	Concentrations of vapors/particulates that could cause acute health affects, or safety concerns are present in outdoor air.	**Emergency Actions:** Notify appropriate authorities, property owners, and affected parties. Mitigate immediate impacts. **Additional Actions:** Conduct sufficient assessment to determine exposure pathways, receptors and their locations, and target cleanup goals. If NAPL is present, conduct removal activities.

† Reimbursement is contingent upon 30 TAC 334.308 (c)(3).

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PRIORITY 2 SITES

	PRIORITY	ACTIONS
☐ 2.1	Soils or water contaminated by the release are exposed and unsecured from public access and dwellings, playgrounds, parks, day care centers, schools, or similar use facilities are located within 500 feet of those soils.	Remove, cover, or otherwise secure exposed soils or water. Fill open excavations. Conduct actions necessary to contain contamination or prevent impact or exposure.
☐ 2.2	A former vapor impact is associated with this site, or NAPL is present in close proximity to subsurface utilities or other natural or man-made conduit and there is potential for the accumulation of explosive vapors or vapors that could cause acute effects in a building or other structure.	Remediate/remove vapors, NAPL, or contaminated soils. Determine migration pathways and remove/prevent migration pathways. Conduct assessment of contaminant plumes in relation to the potential vapor pathway. Determine target cleanup levels. Conduct actions necessary to contain contamination or prevent impact or exposure.
☐ 2.3	A domestic water supply well or line, or a domestic surface water intake is affected or immediately threatened by the release, but the user has access to another public or private water supply. (Ensure the user and the local TNRCC Region Office have been notified.)	Notify proper authorities, users, and property owners. Prevent migration to water intake. Provide alternative water supply if necessary. Conduct assessment to identify contaminant plumes and exposure pathways in relation to water intake. Determine appropriate target cleanup goals based on site conditions. Conduct actions necessary to contain contamination or prevent impact or exposure.
☐ 2.4	A non-public or non-domestic water supply well is affected or immediately threatened. (Do not consider monitor wells.) (Ensure the user and the local TNRCC Region Office have been notified.)	Notify proper authorities, well users, and property owners. Prevent migration to water well. Provide alternative water supply if necessary. Plug water well if necessary. Conduct assessment to identify contaminant plumes and exposure pathways in relation to water well. Determine appropriate target cleanup goals based on site conditions. Conduct actions necessary to contain contamination or prevent impact or exposure.
☐ 2.5[1]	Groundwater is affected and a public or domestic water supply well is located within 0.25 miles of the UST/AST system or source area. (Check if a well is present, but the well use is unknown). **(See footnote 1 before responding.)**	Determine completion data and usage of well(s) if not already known. Conduct receptor survey to locate additional wells and other potential receptors (if not already done). Evaluate well impact potential. Determine appropriate cleanup goals based on site conditions. Conduct actions necessary to contain contamination or prevent impact or exposure.
☐ 2.6	Groundwater or storm water runoff is affected and discharges within 500 feet of the known extent of contamination to a surface water body used for human drinking water, contact recreation, habitat to a protected or listed endangered plant and animal species.	Conduct assessment which addresses the contaminant plumes in relation to the surface water. Determine target cleanup levels. Conduct actions necessary to contain contamination or prevent impact or exposure. Notify property owners if impact is documented.
☐ 2.7	A public or domestic water supply well that produces from a groundwater zone which is not affected or threatened is located within the known extent of contamination. (Check if a well is present, but the well use is unknown.)	Notify well users and property owners. Determine completion data and usage of water well(s). Conduct receptor survey to locate additional sensitive receptors. Investigate well impact or cross-contamination potential. Plug well(s) if necessary. Determine target cleanup levels. Conduct actions necessary to contain contamination or prevent impact or exposure. Monitor water well for groundwater quality.

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PRIORITY 3 SITES

	PRIORITY	ACTIONS
☐ 3.1[1]	Groundwater is affected and a public or domestic water supply well is located between 0.25 and 0.5 miles from the UST/AST system or source area. (Check if a well is present in this interval, but the well use is unknown.) (See **footnote 1 before responding.**)	Determine completion data and usage of well(s) if not already known. Conduct receptor survey to locate additional wells and other potential receptors (if not already done). Evaluate well impact potential. Evaluate need for remediation.
☐ 3.2	Groundwater is affected and the affected groundwater zone may discharge between 500 feet and 0.25 miles of the UST/AST or source area to a surface water body used for human drinking water, contact recreation, or habitat to a protected or listed endangered plant and animal species.	Conduct assessment which evaluates potential to impact the surface water. Evaluate need for remediation.
☐ 3.3[1]	Groundwater is affected and a non-public or non-domestic water supply well is located within 0.25 miles of the UST/AST system or source area. (**See footnote 1 before responding.**)	Determine completion data and usage of well(s) if not already known. Conduct receptor survey to locate additional wells and other potential receptors (if not already done). Monitor water well for groundwater quality. Evaluate need for remediation.
☐ 3.4	A non-community or non-domestic water supply well that produces from a groundwater zone which is not affected or threatened is located within the known extent of contamination. (If a well is present, but the use of the well is unknown, check 2.7 instead.)	Notify well users and property owners. Determine completion data and usage of well(s) if not already known. Conduct receptor survey to locate additional wells and other potential receptors (if not already done). Investigate well impact or cross-contamination potential. Monitor water well for groundwater quality. Evaluate need for remediation.
☐ 3.5[2]	A designated major or minor groundwater aquifer is affected or immediately threatened. (**See footnote 2 before responding.**)	Conduct assessment of soil and groundwater contaminant plumes in relation to major or minor aquifer. Conduct receptor survey and water well inventory. Evaluate need for remediation.

PRIORITY 4 SITES

	PRIORITY	ACTIONS
■ 4.1	Groundwater is affected.	Conduct assessment of soil and groundwater contaminant plumes. Conduct receptor survey and water well inventory. Evaluate site conditions to determine need for additional corrective actions.
☐ 4.2	The vertical extent of contamination has been defined and the assessment results document that groundwater is not affected.	Conduct assessment of soil contaminant plume. Conduct receptor survey and water well inventory. Evaluate site conditions to determine need for additional corrective actions.

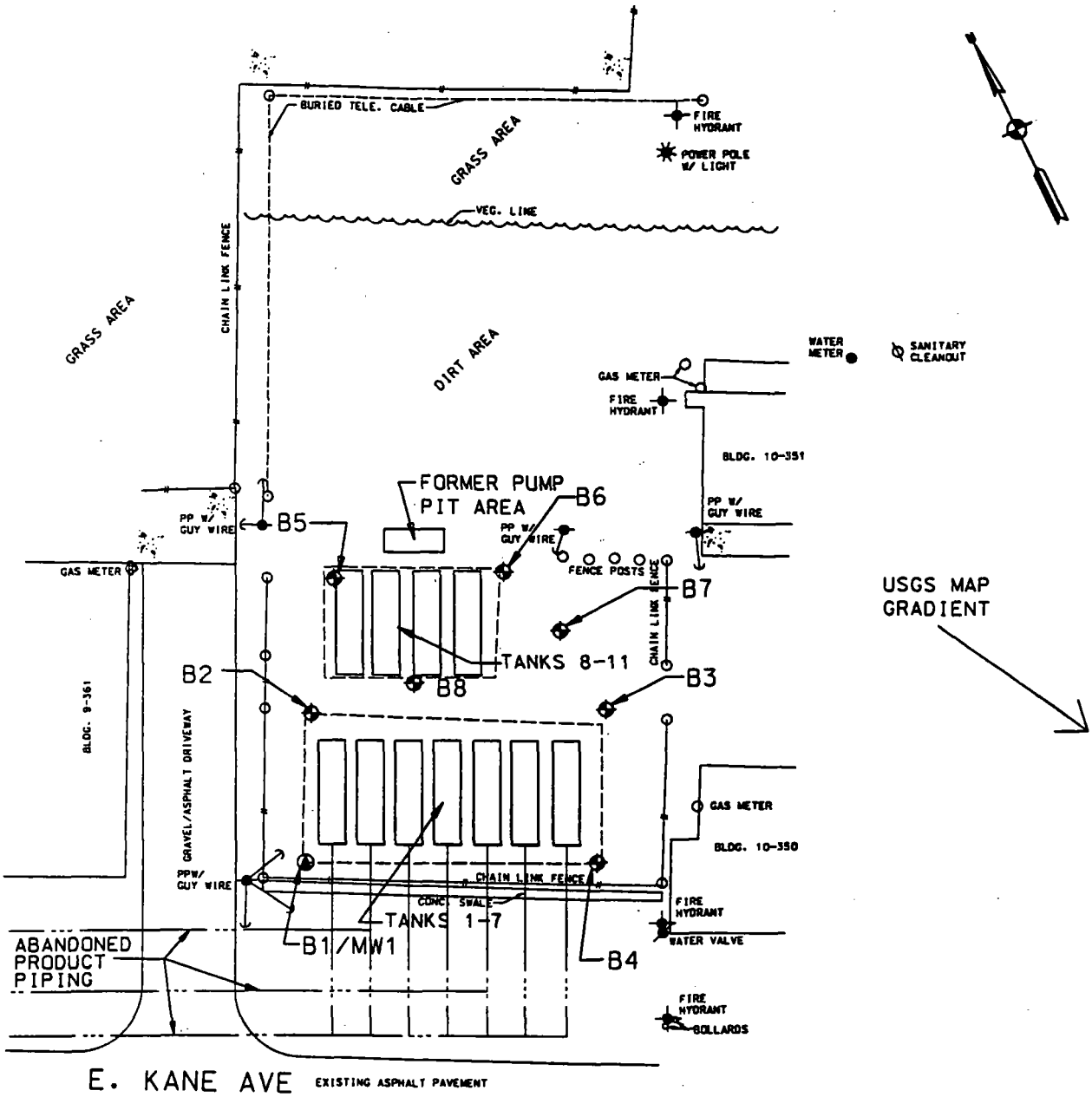
1. Consider only wells producing from the same interval as the affected groundwater zone at the release site, wells which may provide a cross-contamination pathway, or wells where completion details are unknown.

2. Refer to Major and Minor Aquifers of Texas Maps prepared by Texas Water Development Board, September 1990. Do not consider the low permeability Beaumont clays of the Beaumont Formation for the Gulf Coast aquifer. Do not consider a perched groundwater zone overlaying the principal producing portion of the aquifer unless the two are hydrologically connected.

Abbreviations	Definition
%	percent
AST	Aboveground Storage Tank
AV	aviation
BGS	below ground surface
C	celius
CAP	corrective action plan
CAT	category
CH_4	methane
cm	cubic centimeter
cm^2/cm^2	square centimeter per square centimeter
CO_2	carbon dioxide
coml.	commercial
conc.	concentration
cont.	continue
EPA	Environmental Protection Agency
Fe	iron
ft.	feet
$ft.^2$	square feet
gal.	gallons
g/g	gram per gram
g/m^3	gram per cubic meter
gpd	gallons per day
ID	identification
in.	inches
Lab.	laboratory
LPST	Leaking Petroleum Storage Tank
LSA	Limited Site Assessment
Max.	maximum
MCL	maximum contaminant level
mg/kg	milligram per kilogram
mg/ℓ	milligram per liter
NAPL	non-aqueous phase liquids
No.	number
O_2	oxygen
ppm	parts per million
PST	Petroleum Storage Tank
RP	Responsible Party
RPR	Responsible Party Remediation
TAC	Texas Administrative Code
TEX	toluene, ethylbenzene, and total xylenes
TNRCC	Texas Natural Resource Conservation Commission
TPH	total petroleum hydrocarbons
UST	Underground Storage Tank

Attachment 1

Attachment 1
Site Plan



SCALE: 1" = 60'

NAME	LAT.	LONG.	ELEV.
BM1/MW1	29°53'23"N	097°51'38"W	573.06
BORE #2	29°53'23"N	097°51'38"W	571.39
BORE #3	29°53'23"N	097°51'36"W	571.02
BORE #4	29°53'22"N	097°51'37"W	571.48
BORE #5	29°53'23"N	097°51'37"W	571.55
BORE #6	29°53'23"N	097°51'37"W	571.72
BORE #7	29°53'23"N	097°51'36"W	571.14
BORE #8	29°53'23"N	097°51'37"W	571.55

REVISION NO.	ACTION	DATE	DESCRIPTION OF REVISION

THOMPSON PROFESSIONAL GROUP, INC.

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS

DESIGNED BY: JRM
DRAWN BY: MJC
CHECKED BY: JRM

Former Gary AFB
San Marcos, Caldwell County, Texas
Attachment 1
Comprehensive Site Plan

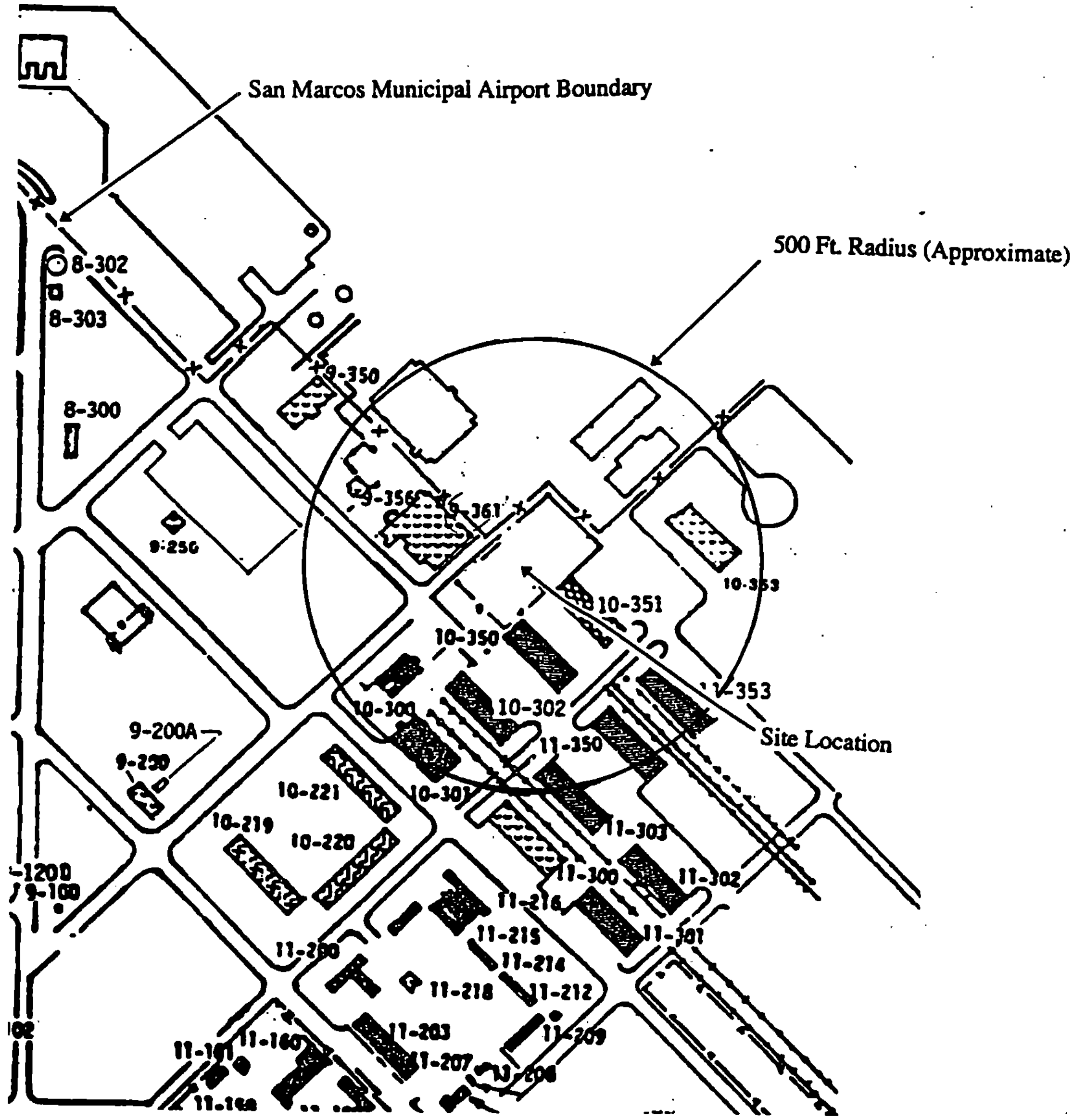
SUBMITTED BY: (ENGINEER) DATE

SOL. NO. DATE:
CONTR. NO.
DRAWING NUMBER SHEET NO OF
SEQUENCE NO.

User: R
Plotted L AN 97 @ 10:34:29
FILENAME: o:\projects\867-09\01\dgn\garyatt1.dgn

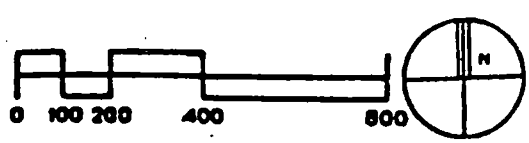
Attachment 2

Attachment 2
Vicinity Map



LEGEND:

- Housing
- Academic Education
- Vocational Education
- Food Service
- Recreation
- Medical-Dental
- Administration
- Storage-Support
- Unoccupied



THOMPSON PROFESSIONAL GROUP, INC.

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS

DESIGNED BY:
DRAWN BY:
CHECKED BY:

Former Gary AFB
San Marcos, Caldwell County, Texas
Attachment 2
Vicinity Map

SUBMITTED BY:
ENGINEER: DATE
SOL. NO.
DATE:
CONTR. NO.
SEQUENCE NO.
DRAWING NUMBER
SHEET NO OF

DEFENSE ENVIRONMENTAL RESTORATION PROGRAM
FOR FORMERLY USED SITES
FINDINGS AND DETERMINATION OF ELIGIBILITY
GARY JOB CORPS PROPERTY
(EDWARD (GARY) AIR FORCE BASE)
SAN MARCOS, TEXAS
PROJECT NO. K06TX023200

FINDINGS OF FACT

1. The former Edward (Gary) Air Force Base is located in Caldwell County about 4 miles east of San Marcos, Texas.

2. The U.S. Government acquired 2,230 acres fee in 1943 for Edward (Gary) Air Force Base.

3. Edward (Gary) Air Force Base was previously known as Gary Air Force Base, San Marcos Air Force Base, and San Marcos Army Airfield. The site was originally established as an Army Air Corps navigation school, then an Air Force Base. When it was redesignated as the Edward (Gary) Air Force Base, it was an advanced aviation school with a flying field and related facilities. The dates of construction are not available. The property was never placed under other than Department of Defense (DOD) control during the period of DOD usage.

4. On 11 September 1964, the site was declared excess to the General Services Administration (GSA), which conveyed 927 acres fee to the Office of Economic Opportunity (Job Corps) in 1965 and 1966. The Office of Economic Opportunity was later transferred to the U.S. Department of Labor, and the Gary Job Corps was assigned the facility and is the current owner. A total of 1,303 acres, which now include the municipal airport, were conveyed to the city of San Marcos, Texas, the current owner, on 14 February 1966. These 1,303 acres are the subject of a separate report.

5. This site, 927 acres, is currently owned and in use by the Gary Job Corps. It is used as a training facility and houses an average of 3,050 personnel, including 850 permanent employees. Mr. Dick Moncure has been employed at the site since 1947, and is currently the manager of the Gary Job Corps. Based on advice from the Environmental Protection Agency (EPA), Mr. Moncure has requested that any ordnance or hazardous or toxic waste be removed under the DERP program. There are two landfills, 10-15 acres each, on the site which have been restored to natural conditions, but Mr. Moncure indicated that only construction refuse and normal trash materials were placed in the

landfill. Mr. Moncure reported that 8.4 ft^3 of tetra-lead scrappings were removed in 1957 from some underground fuel storage tanks. Mr. Moncure thought that the lead was not buried in either of the two former landfills on the Job Corps site, but elsewhere on the former base, which encompasses 2,230 acres. The Ethyl Corporation of Houston, Texas, supervised the removal and disposal of the lead. Mr. Hank Godbey of the Ethyl Corporation stated that they had no record of the tetra-lead burial location. Mr. Godbey indicated that after 30 years the scrappings would have dissipated and would not be recognizable even if they were found. The underground tanks mentioned above have been beneficially used by the Gary Job Corps and are, therefore, not eligible for consideration under the DERP program. There is no evidence of unsafe debris, hazardous or toxic waste, or unexploded ordnance resulting from Department of Defense (DOD) use of the site.

DETERMINATION

Based on the foregoing findings of fact, the site has been determined to have been formerly used by DOD. However, the current owners have beneficially used the site, and there is no evidence of unsafe conditons resulting from DOD use of the site. Therefore, it is determined that a restoration project is not an appropriate undertaking within the purview of the Defense Environmental Restoration Program, established under 10 U.S.C. 2701 et seq., for the reasons stated above.

14 APR 1989
Date

ROBERT C. LEE
Brigadier General, USA
Commanding

U.S. Army Corps of Engineers
Fort Worth District

Limited Site Assessment
Former Gary Air Force Base
Caldwell County, Texas

Final Report

Contract No. DACA63-94-D-0009
Delivery Order No. 0032

Thompson Professional Group, Inc.
Houston, Texas

February 1997

LPST ID: 108133
Site Name: Former Gary Air Force Base
Site Location: Gary Job Corps, Hwy 21 East, San Marcos, Caldwell County

TABLE OF CONTENTS

Item	Title	Page	(■) Completed
Worksheet E	Executive Summary	3	■
Worksheet 1.0	Site Description	4	■
Worksheet 2.0	Land Use	5	■
Worksheet 3.0	Water Well Inventory	6	■
Worksheet 4.0	Receptor Survey	7-8	■
Worksheet 5.0	Site Assessment History	9	■
Worksheet 6.0	Tank System Characterization	10	■
Worksheet 7.0	Soil Assessment	11-12	■
Worksheet 8.0	Groundwater Assessment	13-14	■ NA □
Worksheet 9.0	Vapor Assessment	15	■
Worksheet 10.0	Surface Water Assessment	16	□ NA ■
Worksheet 11.1-5	Plan A Evaluation	17-22	■
Worksheet 12.0	Site Prioritization	23-25	■
Abbreviations		26	
			(■) Enclosed
Attachment 1	Site plan illustrating location of entire former/current UST/AST system(s), subsurface utilities, limits of excavation, system removal or repair, sampling points, and surface cover		■
Attachment 2	Vicinity map or aerial photograph illustrating surrounding land use and receptors identified within a 500-foot radius		■
Attachment 3	USGS topographic map with plotted water well locations		■
Attachment 4	Copies of completion details and water well drillers reports for located wells (0.5 mile radius)		■
Attachment 5	Site plan(s) illustrating former/current UST/AST system(s) and all (i.e., soil, groundwater, vapor, surface water) sampling points		■
Attachment 6	Soil contaminant concentration maps		■
Attachment 7	Groundwater gradient map		■ NA □
Attachment 8	Groundwater contaminant concentration maps		■ NA □
Attachment 9	Biodegradation Indicator Distribution Map*		□ NA ■
Attachment 10	Soil Gas Survey Maps*		□ NA ■
Attachment 11	Vapor Contaminant Concentration Map		■
Attachment 12	Surface Water Contaminant Concentration Map		□ NA ■
Attachment 13	Surface Water Flow Map		■ NA □
Attachment 14	Soil boring logs to include: lithology, field screening, sample locations, well completion details, TNRCC Form 0019		■
Attachment 15	Summary table of all soil, groundwater, surface water, and vapor analytical results, including from all sampling points, and tank removal or repair activities		■
Attachment 16	Summary tables of all gauging data, water level data, NAPL thickness and corrected water level data and well screen interval (if applicable)		■ NA □
Attachment 17	Copies of all analytical reports including complete chain-of-custody and quality assurance/quality control documentation		■
Attachment 18	Copies of manifests, waste receipts, or other documents necessary to document waste disposition		■
Attachment 19	Photographic documentation		■
Attachment 20	Proposal for next appropriate action and/or Site Closure Request		■

LPST ID: 108133
Site Name: Former Gary Air Force Base
Site Location: Gary Job Corps, Hwy 21 East, San Marcos, Caldwell County

EXECUTIVE SUMMARY

Check all applicable boxes.

UST/AST System Status: ☐ Active ■ Permanently Removed from Service
☐ Temporarily Out of Service ☐ Temporarily Indefinitely Out of Service (Variance Due Date:_____)

Current site land use:
■ vacant ☐ indus./coml. ■ residential ☐ agricultural ☐ recreational ☐ UST/AST Facility

Sources of Release: ■ tank(s) ■ piping ☐spills ■ dispenser ☐ Other:_____

Substance Released:
☐ gasoline ☐ diesel ☐ waste oil ☐ hydraulic fluid ☐ AV gas ■ jet fuel ☐ Other:

Site Assessment History:
■ Preliminary/LSA ☐ Groundwater Monitoring ■ Remedial Action ☐ Emergency Response

Affected environmental media: ☐ surficial soil (<2 ft. BGS) ■ soil (2 to 15 ft. BGS) ■ soil (>15 ft. BGS)
■ groundwater ☐ surface water ☐ air

Identified affected receptors: ☐ water wells ☐ basements/structures ☐ habitat ☐ building ☐ underground utilities
☐ surface water ☐ exposed contaminated soil ☐ Other Distance from site (ft.):_____

Samples collected ■ yes ☐ no Abatement initiated: ■ yes ☐ no Type: Permanent Removal

Identified potential receptors: ☐ water wells ☐ basements/structures ☐ habitat ☐ building ■ underground utilities
☐ surface water ☐ exposed contaminated soil ☐ Other Distance from site (ft.):_____

Depth to first encountered groundwater (ft.) BGS: ☐ >50 ■ 15-50 ☐ 0-15

Presence of NAPLs (ft.):
☐ sheen ■ 0.1-0.5 ft. ☐ 0.5-2 ft. ☐ 2-5 ft. ☐ >5 ft. ☐ none Recovery Initiated: ■ yes ☐ no

Current NAPL extent: ■ on-site ■ off-site

Dissolved-phase extent: ■ on-site ■ off-site ☐ unknown

Groundwater beneficial use category:
☐ Cat. I ☐ Cat. II ☐ Cat. III ■ Cat. IV ☐ Soils only affected, regional beneficial use can not be established.

Contaminants of Concern Exceed Target Concentrations of Affected media:

Soil (Worksheets 7.0, 11.1-5):	■ yes ☐ no
Groundwater (Worksheet 8 & 11.1-4):	☐ yes ■ no
Vapors (Worksheet 9.0):	☐ yes ■ no
Surface Water (Worksheet 10.0):	☐ yes ■ no

Site Priority: 1._____ 2._____ 3._____ 4._1_____

Recommended Actions:

☐ a) Affected Receptors Identified - Propose additional corrective action and/or monitoring program.

☐ b) Site does not exceed Plan A criteria - Submit site closure request form.

☐ c) Site does not exceed Plan A criteria - Propose verification groundwater monitoring program.

■ d) Site exceeds Plan A criteria - Propose corrective action to achieve Plan A criteria.

☐ e) Site exceeds Plan A criteria - Propose Plan B risk assessment and/or evaluation.

LPST ID: 108133

SITE DESCRIPTION

Location Description

Facility Name: Former Gary Air Force Base

Address: Hwy 21 East, Gary Job Corps Center

Cross-Street: E. Kane Avenue at 10th Street

City: San Marcos

County: Caldwell

Current Site Water Supply: City of San Marcos

Notes: Site lies between Building 9-361 and Buildings 10-350 and 10-351. Building 9-361 is described as a vocational education building, Building 10-350 is a storage-support building, and Building 10-351 is an administration building. Gary Job Corps is a vocational education facility. Building 10-221 is considered housing, and is located approximately 600 ft. southwest of the site (see Attachment 2).

Topography

Terrain: ■ Flat ☐ Steep ☐ Variable

Ground Surface Slope
Direction Southeast Grade (ft./ft.) 0.005 ft/ft

Other Comments:

Discuss any significant onsite or adjacent significant topographic feature.

A small surface storm drainage ditch is located about 700 ft. east of the site. This flows in a southerly direction and into Hemphill Creek.

Local Climate:

Average Annual Rainfall (in.): 32

Within 100 Year Floodplain: yes / ■ no

Other Comments:

Discuss recent (i.e., within the past year) extreme climatic changes. Discuss engineered modifications to floodplain status or designation.

LPST ID: 108133

LAND USE

PAST, CURRENT, AND FUTURE USE (check all that apply)

■ Past use of site:
- ■ Commercial/Industrial
- ☐ Residential
- ☐ Agricultural
- ☐ Recreational
- ☐ Vacant
- ■ UST/AST Facility

■ Past Predominant Land Use of the Area:
- ■ Commercial/Industrial
- ☐ Residential

Describe: Former Gary Air Force Base, Gary Job Corps-Department of Labor

■ Current use of site:
- ☐ Commercial/Industrial
- ☐ Residential
- ☐ Agricultural
- ☐ Recreational
- ■ Vacant
- ☐ UST/AST Facility

■ Current Predominant Land Use of the Area:
- ☐ Commercial/Industrial
- ■ Residential

■ Type of Residential Area:
- ☐ Minority/Low Income ☐ Non-minority/Low Income
- ■ Other

Describe: Gary Job Corps-Department of Labor, a vocational education facility

■ Future use of site:
- ☐ Commercial/Industrial
- ☐ Residential
- ☐ Agricultural
- ☐ Recreational
- ■ Vacant
- ☐ UST/AST Facility

■ Future Predominant Land Use of the Area:
- ☐ Commercial/Industrial
- ■ Residential

Describe: Gary Job Corps-Department of Labor, a vocational education facility

List all facilities (not limited to PST regulated) within 500 feet of the site that could be a source of contaminants:

Facility Name & Type: San Marcos Mun. Airport
Address: Highway 21 East
Facility No.: NA
LPST ID No. NA
Owner/Operator: City of San Marcos

Facility Name & Type: NA
Address: NA
Facility No.: NA
LPST ID No. NA
Owner/Operator: NA

Facility Name & Type: NA
Address: NA
Facility No.: NA
LPST ID No. NA
Owner/Operator: NA

Other Comments:

Additional facilities may be listed and noted on Attachment 2.

LPST ID: 108133

WATER WELL INVENTORY

SUMMARY OF WELLS WITHIN 0.5 MILE RADIUS OF THE SITE

			Downgradient Direction		
	Total No.	Active No.	Total No.	Active No.	No. Screened in Affected Zone
Public/Municipal:	0	0	0	0	0
Industrial:	0	0	0	0	0
Domestic:	0	0	0	0	0
Agricultural:	0	0	0	0	0

POTENTIAL RECEPTOR POINTS

	Closest Downgradient Water Well	Closest Downgradient Well Screened Within Affected Zone
Well No./Designation:	NA	NA
Distance from Site (ft.):	NA	NA
Total Well Depth (ft.):	NA	NA
Current Use of Water:	NA	NA
Screened Interval below Ground Surface (ft):	NA	NA
Year Constructed:	NA	NA

Comments: *(Include discussion of any ordinances which prevent or influence the future installation of water wells at the site or surrounding area.)*

LPST ID: 108133

RECEPTOR SURVEY

Underground Utility Survey

Nearest Underground Utility
Name: NA
Type: 4" Sanitary Sewer
Depth of Utility: 4 - 5'
Distance & Direction
From Affected Zone: Within

Nearest Downgradient Utility
Name: NA
Type: 4" Sanitary Sewer
Depth of Utility: 4 - 5'
Distance & Direction
From Affected Zone: Within

Other Comments:

Discuss other receptors and indicate on Attachment 2. If affected discuss abatement measures.

4" sanitary sewer line is located immediately south of the site and above the zone of contaminated soil.

An 8" water line is located along the eastern boundary of the site, at and above the perimeter of the zone of contaminated soil.

(See Attachments 1 and 6 for illustration)

Building Survey

Nearest Building
Name: Bldg 9-361
Type: Vocational Education
Distance & Direction
From Affected Zone: 80 ft. west

Nearest Downgradient Building
Name: Bldg 10-350
Type: Education Administration
Distance & Direction
From Affected Zone: 100 ft. southeast

Other Comments:

Discuss nearest and other receptors and indicate on Attachment 2. Buildings should include residences, schools, day care facility, nursing home, etc.

The buildings situated near the site are Building 9-361, Vocational Education; Building 10-350, Storage-Support; and Building 10-351, Administration. These buildings are part of Gary Jobs Corps, United States Department of Labor.

Surface Water Hydrology

Nearest Surface Water
Name: NA
Type: Drainage Ditch
Distance & Direction
From Affected Zone: 700 ft. east

Impacted Surface Water
Name: NA
Type: NA
Distance & Direction
From Affected Zone: NA

Nearest Downgradient Surface Water
Name: Hemphill Creek
Type: Creek
Distance & Direction
From Affected Zone: 1 Mile East

Other Comments:

If affected complete Worksheet 10.0. Describe potential for affected storm water or groundwater discharge to surface water feature.

The drainage ditch only contains water during rainfall events.

LPST ID: 108133

HABITAT SURVEY

Presence of Sensitive Habitat
Site located within or affects a sensitive or protected habitat? ☐ yes (explain below) ■ no

Name: NA
Location: NA

Discussion: *Provide the habitat type (wildlife sanctuary, wetlands, etc.), condition, regulatory authority, and other information relative to habitat characterization.*

SUMMARY AND RECOMMENDED ACTION

Observed or Potential Impacts	Recommended Action
■ None observed or anticipated	- No action required
☐ Potential for Significant Impact	- Additional Corrective Action Required (See Attachment 20)
☐ Significant Impact Observed	- Additional Corrective Action Required (See Attachment 20)

Comments: *Discuss any emergency abatement and continued corrective action.*

On November 12, 1997, a visit was made to the site by Thompson Professional Group, Inc., personnel to confirm the existence of NAPLs in the two groundwater monitoring wells. A NAPL layer approximately 0.5' was discovered in MW-1, and was removed by bailing. No NAPL was located in MW-2.

A follow-up site visit was made on December 1, 1997 to determine if NAPL had recharged into MW-1. Approximately 0.1' of NAPL was found in MW-1, and was removed by bailing. MW-2 was checked for NAPL, and a oil/water interface detector did not detect any NAPL, however, a barely visible sheen was detected visually on the surface of the water in the bailer. Subsequent bailings did not reveal additional NAPL in MW-2.

LPST ID: 108133

SITE ASSESSMENT HISTORY

SUMMARY OF PREVIOUS SITE ACTIVITIES

Typical site activities to be recorded include:
- Preliminary/Limited/Comprehensive Site Assessment
- Emergency Response
- Risk/Exposure Assessment
- Remedial/Corrective Actions

Types of sampling to be included: ● Soil ● Groundwater ● Surface Water ● Vapors

Date Completed	Description of Activity	Sampling and Testing	Result/Impact/Target Cleanup
April 20, 1994	4 UST's removed.	Soil: BTEX, TPH, total lead.	Native soil impacted, overexcavation ordered.
April 30, 1994	Structure housing associated pumps removed, and area below excavated	Soil: BTEX, TPH, total lead.	Native soils impacted.
June 9, 1994	Overexcavations completed.	Soil: BTEX, TPH, total lead.	Native soils near tankhold still impacted. LSA ordered.
July 1, 1994	Excavation lined with impermeable liner, backfilled and restored to original grade. Grass planted.	None.	None.
May 17, 1996	LSA performed.	Soil: BTEX, TPH, PAH Water: BTEX, TPH, PAH	Soils and groundwater impacted.
May 30, 1996	Groundwater measurements taken, additional samples collected.	Water: BTEX, PAH	Groundwater impacted.
July 17, 1996	Groundwater measurements taken, additional samples collected.	Water: TDS	Groundwater impacted.
Sept. 24, 1997	Additional LSA performed.	Soil: BTEX, TPH, Water: BTEX, TPH, PAH	Soils and groundwater impacted.
Nov. 12, 1997	Water level measurements taken.	None	NAPL observed in MW1, recovery initiated.
Dec. 1, 1997	Water level measurements taken.	None	NAPL observed in MW1 and MW2, recovery initiated.

LPST ID: 108133

UST/AST SYSTEM CHARACTERIZATION

Release Information

UST/AST System Status:
☐ Active ■ Permanently Removed From Service
☐ Temporarily Out of Service
☐ Temporarily/Indefinitely Out of Service (Due Date:_____)

Method of release discovery:
■ UST Removal ☐ Release Detection Equipment
☐ Divestiture Assessment ☐ Inventory Control
☐ System Tightness Testing ☐ Other_____

Substance released (check all that apply):
☐ Gasoline ☐ Diesel ☐ Waste Oil
☐ AV Gas ■ Jet Fuel ☐ Hydraulic Fluid
☐ Other: _____

Source of release(s): Date Discovered:
☐ Spills/overfills _____
☐ Piping _____
■ Dispenser April 30, 1994
■ Tank April 20, 1994
☐ Other _____

Other Comments:

Describe the measures taken to abate the release:

The tanks, pump pit and pump islands were removed from service, overexcavations removed some of the contaminated soils.

Removal Information

Date(s) of removal(s): April 20, and April 30, 1994
Type of removal:
■ Removal from the ground ☐ Closure in place
Water in tankhold during excavation? ☐ yes ☐ no
Depth of water in tankhold (BGS):
☐ <5 ft. ☐ 5-10 ft. ☐ 11-15 ft. ☐ None
NAPL: ☐ yes ■ no Thickness (ft.):_____
Water Evacuated from tankhold: ☐ yes ■ no
Volume (gal.): _____
Groundwater recharged into tankhold: ■ yes ☐ no
Depth (ft. BGS): 22 ft.
Status of excavation(s):
☐ Open with water ☐ Open/dry
☐ Backfilled with impervious cover
■ Backfilled with no impervious cover
Type of fill material:
■ Untreated backfill ☐ Treated backfill ☐ Other
☐ Clean fill - gravel ■ Clean fill - sandy/clay

Other Comments:

Provide the maximum contaminant concentrations milligrams per kilograms (mg/kg) of untreated backfill returned to the tankhold(s): Benzene ≤ 0.6 *TEX* <1.8 *TPH* 480 *OTHER* Total Lead 32. *If a new UST/AST system was installed describe & indicate on Attachment 1.*

The tank removal information presented in this report is based on the removal of Tanks 8-11, and the pump structures for Tanks 1-7 and Tanks 8-11. The report detailing the removal of Tanks 1-7, and the abandonment of the associated product piping was unavailable for the preparation of this document.

The overexcavations were lined with an impervious liner before backfilling occurred.

Maximum level of contamination detected in native soils upon completion of removal/repair (mg/kg):

Chemical of Concern	Sample Date	Sample Location/Depth	Laboratory Method Detection Limit	Maximum Concentration (mg/kg)
Benzene	6/9/94	Tank 08, bottom of hold	0.1	4.35
Toluene	6/9/94	Tank 08, bottom of hold	0.1	7.96
Ethylbenzene	6/9/94	Tank 08, bottom of hold	0.1	13.38
Total Xylenes	6/9/94	Tank 08, bottom of hold	0.1	57.35
TPH	6/9/94	Tank 08, bottom of hold	5	16705
Metals	NA	NA	NA	NA
VOC	NA	NA	NA	NA
Other Total Lead	4/20/94	Tank 08, northwest wall	0.1	38

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SOIL ASSESSMENT

SOIL DATA COLLECTION AND EVALUATION

Number of soil sampling points: Fifteen (15)

Method of determination: ☐ Direct Push ■ Borings ☐ Other: _____

Surface cover over affected soil zone (check all that apply):
☐ Concrete ☐ Asphalt ☐ Gravel ■ Dirt ■ Grass ☐ Other: _____

Percent of affected soil zone covered with impervious cover:
■ 0-25 % ☐ 25-50 % ☐ 50-75 % ☐ 75-100%

If there is no impervious surface cover, is there public access to the affected surface (0-2 ft.) soil? ■ yes ☐ no

Affected soil zone thickness (ft.): Ten (10)

*Affected soil zone surface area dimensions (ft.): *Approximately* 120 ft. by 220 ft.

Maximum depth of contamination exceeding appropriate Plan A risk-based levels: 5 ft. BGS

*Estimated volume of soil exceeding Plan A target concentration (yd^3): _____

*Minimum distance from affected soil zone to property boundary: ■ 0-10 ft. ☐ 10-50 ft. ☐ 50-100 ft.
☐ 100-300 ft. ☐ 300-500 ft. ☐ >500 ft. ☐ Extends beyond property boundary

Waste disposal: ■ Landfill ☐ On-site treatment ☐ Off-site treatment
☐ Other ☐ Pending ☐ None

Maximum level of contamination detected in native soils (mg/kg):

Chemical of Concern	Sample Date	Sample Depth (ft.)	Sample ID	Laboratory Method Detection Limit	Max Conc. (mg/kg)	Target Cleanup Goals †
Benzene	5/16/96	17	B5-5417	0.001	0.630	22
Toluene	5/16/96	17	B5-5417	0.001	1.700	3257
Ethylbenzene	5/16/96	20.5	B8-8720	0.001	44.000	3357
Total Xylenes	5/16/96	20.5	B8-8720	0.001	25.00	968
TPH	5/16/96	20.75	B6-6520	10	6300	NA
Total Lead	NA	NA	NA	NA	NA	NA
Naphthalene	5/16/96	20.5	B8-8720	0.150	6.200	782
Other: Benzo(B)Fluoran.	5/16/96	5	B8-8705	2.2	5.9	0.877
Other_____				NA		

* Beyond the minimal requirements for a Site Assessment as defined by 30 TAC 334.
† Refer to Worksheets 11.1-5 and *Risk-Based Corrective Action for Leaking Storage Tank Sites*, RG-36, Table A-1.

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* Geotechnical soil parameters:

Parameter	Result	Depth	Location/Sample ID	Method of Determination
Dry Bulk Density (g/m^3):	1.54E6	23-24 ft	B-6 (23.0-24.0')	ASTM D 5084-90
Effective Porosity (%):	42.6	23-24 ft	B-6 (23.0-24.0')	ASTM D 5084-90
Fraction Organic Carbon (g/g):	0.14	23-24 ft	B-6 (23.0-24.0')	Walkey-Blk
Intrinsic Permeability (cm^2):	9.98E-14	23-24 ft	B-6 (23.0-24.0')	ASTM D 5084-90
Water Content (cm^3/cm^3):	0.292*	23-24 ft	B-6 (23.0-24.0')	ASTM D 5084-90
Other	NA	NA	NA	NA

* Biodegradation Indicators:

Present spatial distribution of O_2, CO_2, CH_4, etc. levels on map. (Attachment 9)

* Moisture fraction.

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GROUNDWATER ASSESSMENT

GROUNDWATER DATA AND EVALUATION

Groundwater affected by release: ■ yes ☐ no (If no, complete only the Beneficial Groundwater Use Categories on this Worksheet.)

Site Hydrogeology	Upper Most Zone	Other
Depth to groundwater (ft.)	25 ft. (varies)	
Aquifer type (Perched, confined, unconfined)	Perched	
*Estimated Aquifer thickness (ft.)	1-6 ft. (varies)	
*Water level fluctuations (± ft.)	1 ft.	
Gradient (ft./ft.)/Direction	0.005/SSE (varies)	/
*Saturated hydraulic conductivity (ft./day)		
*Approximate well yield (gpd)		
Lithology	Sandy Gravel	
Geologic Formation	Leona Formation	
Major/minor aquifer name	NA - Perched	
Total dissolved solids (mg/L)	530	
Confining layer depth (ft. BGS)	NA	
Confining layer thickness (ft.)	NA	

Beneficial Groundwater Use Categories

Mark the potential beneficial use category for the impacted zone and indicate the selection criteria. Complete the appropriate worksheet (11.1-5) for the Category indicated.

☐ Category I	☐ Category II	☐ Category III	■ Category IV
☐ Impacted or threatened water supply well(s)I	☐ Affected groundwater zone TDS <3,000 ppm, and no beneficial useH is documented within 0.5 miles of the site.	☐ Affected groundwater zone TDS 3,000 - 10,000 ppm, and no beneficial useH within 0.5 miles of the site.	☐ Affected groundwater zone TDS >10,000 ppm, and no beneficial useH is documented within 0.5 miles of the site.
OR ☐ Affected groundwater zone TDS <3,000 ppm, and water well(s)I or water supply spring within 0.5 miles of the site. OR ☐ Soils only affected. Regional groundwater beneficial useH cannot be established.	OR ☐ TDS 3,000 - 10,000 ppm, and beneficial useH is documented within the 0.5 miles of the site.		OR ■ Well yield <150 gpd (i.e., affected zone is not considered to have a beneficial useH)

I If construction details of water well(s) are unknown or can not be proven, the interval is assumed to be connected.
H Applies to a drinking water source producing from the same or connected interval as the affected groundwater zone.

Groundwater Sampling Points

	On-Site (provide well ID)	*Beyond Property Boundary (provide well ID)
Number of Sampling points:	Boring 1/MW-1	Boring 15/MW-2
Number of permanent monitoring wells:	MW-1	MW-2
Static water levels above screened intervals: ☐ yes ■ no		

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DISSOLVED-PHASE PLUME

*Aerial extent of dissolved-phase plume (ft^2): 7000, estimated

*Distance from edge of plume to property boundary if on-site: ☐ <10 ft. ☐ 10-50 ft. ☐ 50-100 ft. ☐ 100-300 ft. ☐ >300 ft.

*Distance from property boundary to edge of plume if off-site: ☐ <10 ft. ☐ 10-50 ft. ■ 50-100 ft. ☐ 100-300 ft. ☐ >300 ft.

Maximum level of contamination detected in groundwater (mg/L):

Contaminant	Sample Date	Sample ID	Laboratory Method Detection Limit	Maximum Concentration (mg/L)	Target Cleanup Goals†
Benzene	5/16/96	G1-1234	0.001	1.500	NA
Toluene	5/30/96	MW1-7471	0.001	0.009	NA
Ethylbenzene	5/16/96	G1-1234	0.001	0.170	NA
Total Xylenes	5/16/96	G1-1234	0.001	<0.005	NA
MTBE	NA	NA	NA	NA	NA
TPH	5/16/96	G1-5234	0.5	7	NA
Naphthalene	9/25/97	MW2-25	0.09	3.67	NA
Other: Fluorene	9/25/97	MW2-25	0.0105	0.0394	NA

† Refer to Worksheet 11.1-3 and the *Risk-Based Correction Action for Leaking Storage Tank Sites*, RG-36, Table A1.

NAPL PLUME

NAPL Present? ■ yes ☐ no

	On-Site (provide well ID)	Thickness (ft.)	*Beyond Property Boundary (provide well ID)	Thickness (ft.)
Current maximum NAPL thickness (ft.):	MW-1	< 0.1	MW-2	Sheen
	NA	NA	NA	NA
	NA	NA	NA	NA
	NA	NA	NA	NA

NAPL recovery method: ■ hand bail ☐ passive skimmer ☐ sorbent socks ☐ automated system ☐ none

Volume recovered to date (gals.): 0.035

*Aerial extent of NAPL plume: (ft^2)_____ ☐ beyond property boundary

*Distance from edge of NAPL plume to property boundary if on-site: ☐ <10 ft. ☐ 10-50 ft. ☐ 50-100 ft. ☐ 100-300 ft. ☐ >300 ft.

*Distance from edge of NAPL plume from property boundary if off-site: ☐ <10 ft. ■ 10-50 ft. ☐ 50-75 ft. ☐ 75-100 ft. ☐ >100 ft.

* Biodegradation Indicators:

Present spatial distribution of dissolved Oxygen, dissolved CO_2, dissolved CH_4, Fe, SO_4, or other alternate electron acceptors on isoconcentration map. (Attachment 9)

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VAPOR ASSESSMENT

VAPOR DATA AND EVALUATION

Known vapor impact: ☐ yes ■ no

Location: ☐ ambient air ☐ utilities ☐ residences ☐ hospital ☐ school/day care ☐ commercial buildings ☐ other:

Lower Explosive Limit (LEL) concentrations: ☐ not measured ☐ measured ■ calculated[1]

NAPL present or soil concentration near saturation (for calculating soil vapor concentrations, refer to *Risk-Based Correction Action for Leaking Storage Tank Sites*, RG-36): ■ yes ☐ no Depth (ft. BGS): 25 ft.

Vapor monitoring data:

Sample No.	Location	Depth	% LEL	Total Organic Vapors (ppmv)	Benzene (ppmv)	Other
B5-5417	Boring 5	17 ft.	1.3	1437	0.6385	NA
B8-8720	Boring 8	20.5ft.	1.0	75		7.0836 EB
B5-5417	Boring 5	17 ft.	1.2	1737		0.8340 T
B8-8720	Boring 8	20.5 ft.	1.0	75		15.85 X

If vapor concentrations exceed 25% of the LEL or other potential for explosive vapor exist in surface or subsurface structure, describe affected area, methods of determination, and any abatement measure. Identify and discuss any occupational or indoor air exposures to released contaminants. Provide all calculations for the determination of the target concentrations:

EB = Ethyl benzene
T = Toluene
X = Xylene

Calculations on following page.

[1]LEL% should reflect whole mixture evaluation. If more than one compound is present, actual measurement of vapors will typically be warranted.

Site Specific Soil Vapor Calculations

Sample ID	Sample Depth	Contaminant	Bulk Soil Concentration	Soil Water Partition Coeffecient	Organic Carbon Partition Coefficient	Soil Organic Carbon Fraction	Dry Soil Bulk Density	Total Soil Porosity	Water Content	Air Fill Soil Porosity	Henry's Constant (Demensional Form)	Henry's Constant (Unitless)	Leachate Conc.	Target Soi Conc.	Calculated Soil Vapor Concentration
			C_s	K_d	K_{oc}	F_{oc}	B	Φ	Φ_w	Φ_a	H	H'	C_l	C_t	C_a
B5-5417	17'	Benzene	0.63	0.116	83	0.0014	1.54	0.419	0.1	0.319	0.00559	0.2324	0.5	0.1146	0.6385
B8-8720	20.5'	Ethyl benzene	44	1.54	1100	0.0014	1.54	0.419	0.1	0.319	0.00643	0.2673	70	116.2212	7.0836
B5-5417	17'	Toluene	1.7	0.42	300	0.0014	1.54	0.419	0.1	0.319	0.00637	0.2648	100	53.9787	0.8340
B8-8720	20.5'	Xylenes	25	0.336	240	0.0014	1.54	0.419	0.1	0.319	0.00704	0.2927	1000	461.5560	15.8514

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SURFACE WATER ASSESSMENT

SURFACE WATER DATA AND EVALUATION

Surface water(s) affected: ☐ yes ■ no Name:_____ Type:_____
Name:_____ Type:_____

NAPL present on surface water or run off: ☐ yes ■ no

NAPL recovery method: ☐ passive skimmer ☐ sorbent socks ☐ automated system ☐ booms ☐ other _____ ■ none

Volumes recovered to date (gals.): NA

Aerial extent of NAPL plume (ft.5): NA

Uses of affected surface water: ☐ drinking water ☐ contact recreation ☐ habitat for endangered species ☐ agriculture

Is a public or domestic surface water intake impacted? ☐ yes ■ no

If impacted lake or pond, indicate affected surface area (ft.5): NA

Average depth of surface water (ft.): NA

Maximum level of contamination detected in surface water (mg/P):

Contaminant	Sample Date	Sample Location & ID	Laboratory Method Detection Limit	Maximum Concentration (mg/L)	Target Cleanup Goals†
Benzene	NA	NA	NA	NA	NA
Toluene	NA	NA	NA	NA	NA
Ethylbenzene	NA	NA	NA	NA	NA
Total Xylenes	NA	NA	NA	NA	NA
MTBE	NA	NA	NA	NA	NA
TPH	NA	NA	NA	NA	NA
Naphthalene	NA	NA	NA	NA	NA
Other_____	NA	NA	NA	NA	NA
Other_____	NA	NA	NA	NA	NA

† Refer to 30 TAC, Chapter 307, the MCL or the *Risk-Based Correction Action for Leaking Storage Tank Sites*, RG-36.

Describe affected area, methods of determination and any abatement measures. Discuss the migration pathway between the source of contamination and the surface water body.

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PLAN A EVALUATION

CATEGORY I: Soil and Groundwater Target Cleanup Level Determination

- Complete this worksheet for Category I sites. Indicate the maximum detected concentration for the chemicals of concern.
- If groundwater is >15 feet BGS, calculate groundwater protective soil concentrations using the equilibrium partition equation on Worksheet 11.5 (when site specific geotechnical parameters have been analyzed).
- Check the box for each compound that exceeds the target concentrations. If any boxes are checked, further corrective action (i.e., monitoring, Plan B, CAP) will be required.
- If other chemicals of concern are present but not listed, refer to *Risk-Based Corrective Action for Leaking Storage Tank Sites (RG-36)*.

Chemical of Concern	GROUNDWATER (mg/L)		SOIL (mg/kg)				
			Depth to Affected Soil ≤15 ft.		Depth to Affected Soil >15 ft.		
	TARGET CONC.	MAX. LAB. ANALYZED CONC.	TARGET CONC.	MAX. LAB. ANALYZED CONC.	TARGET CONC.	MAX. LAB. ANALYZED CONC.	GW >15 ft. CALC. SOIL CONC. C_T
BENZENE	☐ 0.005		☐ 0.13		☐ 0.13		
ETHYLBENZENE	☐ 0.7		☐ 160		☐ 160		
TOLUENE	☐ 1		☐ 69		☐ 69		
XYLENE	☐ 10		☐ 568		☐ 568		
ACENAPHTHENE	☐ 2.19		☐ 314		☐ 314		
ANTHRACENE	☐ 11		☐ 13		☐ 13		
BENZO(A)ANTHRACENE	☐ 0.000117		☐ 0.877[H]		☐ 3.2		
BENZO(B)FLUORANTHENE	☐ 0.000117		☐ 0.877[H]		☐ 13		
BENZO(K)FLUORANTHENE	☐ 0.00117		☐ 8.77[H]		☐ 47		
BENZO(A)PYRENE	☐ 0.0002		☐ 0.0877[H]		☐ 220		
CHRYSENE	☐ 0.0117		☐ 7.2		☐ 7.2		
DIBENZO(A,H)ANTHRACENE	☐ 0.0000117		☐ 0.0877[H]		☐ 7.7		
FLUORANTHENE	☐ 1.46		☐ 156		☐ 156		
FLUORENE	☐ 1.46		☐ 247		☐ 247		
INDENO(1,2,3-CD)PYRENE	☐ 0.000117		☐ 0.877[H]		☐ 17		
NAPHTHALENE	☐ 1.46		☐ 389		☐ 389		
PYRENE	☐ 1.1		☐ 99		☐ 99		
OTHER	☐		☐		☐		
OTHER	☐		☐		☐		

H - Value represents health-based concentration

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PLAN A EVALUATION

CATEGORY II: Soil and Groundwater Target Cleanup Level Determination

- Complete this worksheet for Category II sites. Indicate the maximum detected concentration for the chemicals of concern.
- If groundwater is >15 feet BGS, calculate groundwater protective soil concentrations using the equilibrium partition equation on Worksheet 11.5 (when site specific geotechnical parameters have been analyzed).
- Check the box for each compound that exceeds the target concentrations. If any boxes are checked, further corrective action (i.e., monitoring, Plan B, CAP) will be required.
- If other chemicals of concern are present but not listed, refer to *Risk-Based Corrective Action for Leaking Storage Tank Sites (RG-36)*

Chemical of Concern	GROUNDWATER (mg/L)		SOIL (mg/kg)				
			Depth to Affected Soil <15 ft.		Depth to Affected Soil >15 ft.		
	TARGET CONC.	MAX. LAB. ANALYZED CONC.	TARGET CONC.	MAX. LAB. ANALYZED CONC.	TARGET CONC.	MAX. LAB. ANALYZED CONC.	GW >15 ft. CALC. SOIL CONC. C_T
BENZENE	☐ 0.0294		☐ 0.74		☐ 0.74		
ETHYLBENZENE	☐ 3.65		☐ 835		☐ 835		
TOLUENE	☐ 7.3		☐ 503		☐ 503		
XYLENE	☐ 73		☐ 968		☐ 968		
ACENAPHTHENE	☐ 2.19		☐ 314		☐ 314		
ANTHRACENE	☐ 11		☐ 13		☐ 13		
BENZO(A)ANTHRACENE	☐ 0.00117		☐ 0.877[H]		☐ 32		
BENZO(B)FLUORANTHENE	☐ 0.00117		☐ 0.877[H]		☐ 129		
BENZO(K)FLUORANTHENE	☐ 0. 0117		☐ 8.77[H]		☐ 47		
BENZO(A)PYRENE	☐ 0.000117		☐ 0.0877[H]		☐ 220		
CHRYSENE	☐ 0. 117		☐ 7.2		☐ 7.2		
DIBENZO(A,H)ANTHRACENE	☐ 0.000117		☐ 0.0877[H]		☐ 33		
FLUORANTHENE	☐ 1.46		☐ 156		☐ 156		
FLUORENE	☐ 1.46		☐ 247		☐ 247		
INDENO(1,2,3-CD)PYRENE	☐ 0.00117		☐ 0.877[H]		☐ 17		
NAPHTHALENE	☐ 1.46		☐ 389		☐ 389		
PYRENE	☐ 1.1		☐ 99		☐ 99		
OTHER	☐		☐		☐		
OTHER	☐		☐		☐		

H - Value represents health-based concentration

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PLAN A EVALUATION

CATEGORY III: Soil and Groundwater Target Cleanup Level Determination

- Complete this worksheet for Category III sites. Indicate the maximum detected concentration for the chemicals of concern.
- If groundwater is >15 feet BGS, calculate groundwater protective soil concentrations using the equilibrium partition equation on Worksheet 11.5 (when site specific geotechnical parameters have been analyzed).
- Check the box for each compound that exceeds the target concentrations. If any boxes are checked, further corrective action (i.e., monitoring, Plan B, CAP) will be required.
- If other chemicals of concern are present but not listed, refer to *Risk-Based Corrective Action for Leaking Storage Tank Sites (RG-36)*

Chemical of Concern	GROUNDWATER (mg/L)		SOIL (mg/kg)				
			Depth to Affected Soil ≤15 ft.		Depth to Affected Soil >15 ft.		
	TARGET CONC.	MAX. LAB. ANALYZED CONC.	TARGET CONC.	MAX. LAB. ANALYZED CONC.	TARGET CONC.	MAX. LAB. ANALYZED CONC.	GW >15 ft. CALC. SOIL CONC. C_T
BENZENE	☐ 0.14		☐ 3.5		☐ 3.5		
ETHYLBENZENE	☐ 5.21		☐ 1193		☐ 1193		
TOLUENE	☐ 10.4		☐ 716		☐ 716		
XYLENE	☐ 104		☐ 968		☐ 968		
ACENAPHTHENE	☐ 3.13		☐ 314		☐ 314		
ANTHRACENE	☐ 13		☐ 13		☐ 13		
BENZO(A)ANTHRACENE	☐ 0.00556		☐ 0.877[H]		☐ 153		
BENZO(B)FLUORANTHENE	☐ 0.00556		☐ 0.877[H]		☐ 154		
BENZO(K)FLUORANTHENE	☐ 0.0556		☐ 8.77[H]		☐ 47		
BENZO(A)PYRENE	☐ 0.000556		☐ 0.0877[H]		☐ 330		
CHRYSENE	☐ 0.556		☐ 7.2		☐ 7.2		
DIBENZO(A,H)ANTHRACENE	☐ 0.000556		☐ 0.0877[H]		☐ 33		
FLUORANTHENE	☐ 2.08		☐ 156		☐ 156		
FLUORENE	☐ 2.08		☐ 247		☐ 247		
INDENO(1,2,3-CD)PYRENE	☐ 0.00556		☐ 0.877[H]		☐ 17		
NAPHTHALENE	☐ 2.08		☐ 389		☐ 389		
PYRENE	☐ 1.56		☐ 99		☐ 99		
OTHER	☐		☐		☐		
OTHER	☐		☐		☐		

H - Value represents health-based concentration

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PLAN A EVALUATION

CATEGORY IV: Soil Target Cleanup Level Determination

- Complete this worksheet for Category IV sites. Check the appropriate column indicating the predominant land use and surface cover.
- Indicate the maximum detected soil concentration for the chemical of concern in the column checked. Check the box for each compound that exceeds the target concentration. If any boxes are checked, further corrective action will be required.
- Dermal exposure should be calculated if depth to groundwater is <15 feet, unless documentation can be provided that surface cover will be maintained and/or construction practices will not encroach upon groundwater[a]. For dermal exposure calculations refer to Chapter 10 of *Dermal Exposure Assessment, Principles and Applications (Interim Report)*, EPA/600/8-91/011B.NTIS PB92205665. Attach and provide all dermal exposure assessment calculations. Provide tables which include result and maximum detected concentrations.
- If other chemicals of concern are present but not listed, refer to *Risk-Based Corrective Action for Leaking Storage Tank Sites (RG-36)*.

Chemical of Concern	☐ RESIDENTIAL			■ RESIDENTIAL			☐ COML./INDUSTRIAL		
	☐ Surface to 2 Feet Without Impervious Cover (Soil mg/kg)			■ 2-15 Feet Without Impervious Cover ☐ Surface to 15 Feet with Impervious Cover (Soil mg/kg)			Surface to 15 feet Regardless of Surface Cover (Soil mg/kg)		
	Target Concentrations Based on Ingestion and Inhalation		Maximum Laboratory Analyzed Concentration	Soil Target Concentrations Based on Ingestion		Maximum Laboratory Analyzed Concentration	Target Concentrations Based on Ingestion/Inhalation		Maximum Laboratory Analyzed Concentration
BENZENE	☐	6.3	Not Sampled	☐	22	0.067	☐	10	
ETHYLBENZENE	☐	3357	Not Sampled	☐	3357[b]	0.580	☐	3357	
TOLUENE	☐	3257	Not Sampled	☐	3257[b]	0.660	☐	3257	
XYLENE	☐	968	Not Sampled	☐	968[b]	2.100	☐	968	
ACENAPHTHENE	☐	314	Not Sampled	☐	314[b]	< 5.000	☐	314	
ANTHRACENE	☐	13	Not Sampled	☐	13[b]	0.480	☐	13	
BENZO(A)ANTHRACENE	☐	0.877	Not Sampled	☐	0.877	0.780	☐	7.8	
BENZO(B)FLUORANTHENE	☐	0.877	Not Sampled	■	0.877	5.900	☐	7.8	
BENZO(K)FLUORANTHENE	☐	8.77	Not Sampled	☐	8.77	3.100	☐	47	
BENZO(A)PYRENE	☐	0.0877	Not Sampled	☐	0.0877	< 1.100	☐	0.784	
CHRYSENE	☐	7.2	Not Sampled	☐	87.7	0.590	☐	7.2	
DIBENZO(A,H)ANTHRACENE	☐	0.0877	Not Sampled	☐	0.0877	< 2.400	☐	0.784	
FLUORANTHENE	☐	156	Not Sampled	☐	156[b]	2.200	☐	156	
FLUORENE	☐	247	Not Sampled	☐	247[b]	< 5.600	☐	247	
INDENO(1,2,3-CD)PYRENE	☐	0.877	Not Sampled	☐	0.877	< 2.600	☐	7.84	
NAPHTHALENE	☐	782	Not Sampled	☐	782[b]	< 3.000	☐	782	
PYRENE	☐	99	Not Sampled	☐	99[b]	3.600	☐	99	
OTHER	☐			☐			☐		
OTHER	☐			☐			☐		

a Written statements, institutional controls must be provided that impermeable surfaces will be maintained.
b Maximum concentration based on pure product saturation limits.

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PLAN A EVALUATION

SOILS ONLY AFFECTED (Regional Groundwater Beneficial Use Can Not Be Established

! Complete this worksheet when groundwater beneficial use can not be established. Check the appropriate land use and indicate the maximum detected soil concentration for the chemicals of concern in the appropriate columns.

- For those chemicals of concern exceeding the default target concentrations, use site specific parameters (if collected) to calculate target soil concentrations using the equilibrium partition equation (on the following page).
- Check the box for each chemical of concern that exceeds the default target concentration and the calculated C_T value (Target Soil Concentration Protective of Groundwater determined by the equilibrium partition equation).
- If any boxes are checked, further corrective action will be required.
- If other chemicals of concern are present but not listed, refer to *Risk-Based Corrective Action for Leaking Storage Tank Sites (RG-36).*

Chemical of Concern	SOIL (mg/kg)								
	Affected Soil =15 ft.						Affected Soil >15 ft.		
	☐ RESIDENTIAL			☐ COMMERCIAL / INDUSTRIAL					
	DEFAULT TARGET CONC.	MAX. LAB. ANALYZED CONC.	CALC. SOIL TARGET CONC. C_T	DEFAULT TARGET CONC.	MAX. LAB. ANALYZED CONC.	CALC.SOIL TARGET CONC. C_T	DEFAULT TARGET CONC.	MAX. LAB. ANALYZED CONC.	CALC. SOIL TARGET CONC. C_T
BENZENE	☐ 0.13		☐	☐ 0.13		☐	☐ 0.13		☐
ETHYLBENZENE	☐ 160		☐	☐ 160		☐	☐ 160		☐
TOLUENE	☐ 69		☐	☐ 69		☐	☐ 69		☐
XYLENE	☐ 568		☐	☐ 568		☐	☐ 568		☐
ACENAPHTHENE	☐ 314		☐	☐ 314		☐	☐ 314		☐
ANTHRACENE	☐ 13		☐	☐ 13		☐	☐ 13		☐
BENZO(A)ANTHRACENE	☐ 0.877[H]		☐ 0.877[H]	☐ 3.2		☐	☐ 3.2		☐
BENZO(B)FLUORANTHENE	☐ 0.877[H]		☐ 0.877[H]	☐ 7.8[H]		☐ 7.8[H]	☐ 13		☐
BENZO(K)FLUORANTHENE	☐ 8.77[H]		☐ 8.77[H]	☐ 47		☐	☐ 47		☐
BENZO(A)PYRENE	☐ 0.0877[H]		☐ 0.0877[H]	☐ 0.784[H]		☐ 0.784[H]	☐ 220		☐
CHRYSENE	☐ 7.2		☐	☐ 7.2		☐	☐ 7.2		☐
DIBENZO(A,H)ANTHRACENE	☐ 0.0877[H]		☐ 0.0877[H]	☐ 0.784[H]		☐ 0.784[H]	☐ 7.7		☐
FLUORANTHENE	☐ 156		☐	☐ 156		☐	☐ 156		☐
FLUORENE	☐ 247		☐	☐ 247		☐	☐ 247		☐
INDENO(1,2,3-CD)PYRENE	☐ 0.877[H]		☐ 0.877[H]	☐ 7.84[H]		☐ 7.84[H]	☐ 17		☐
NAPHTHALENE	☐ 389		☐	☐ 389		☐	☐ 389		☐
PYRENE	☐ 99		☐	☐ 99		☐	☐ 99		☐
OTHER	☐		☐	☐		☐	☐		☐
OTHER	☐		☐	☐		☐	☐		☐

H - Value represents health-based concentration. The equilibrium partition equation may only be used when affected soils are >15 feet BGS for these chemicals of concern.

.T ID: 108133

PLAN A EVALUATION

EQUILIBRIUM PARTITION EQUATION

- Use this section to determine the target soil concentrations protective of groundwater (C_T). The C_T value may be calculated for each chemical of concern under the following conditions:
  - the option is provided on the appropriate column of the site specific category worksheet;
  - default target concentration was exceeded;
  - site specific soil parameters have been collected.
- Provide all calculations for each chemical of concern.

PARAMETERS	REFERENCE VALUES USED TO CALCULATE DEFAULT TARGET CONCENTRATION	SITE SPECIFIC VALUES
C_w = Category I groundwater target concentration (chemical specific) (mg/L)	*Reference worksheet 11.1 for chemical specific category I target concentration.*	
ρ_s = Dry Soil bulk density (g-soil/cm^3-soil)	1.8	1.54
θ_w = Water content (cm^3-H_2O/cm^3-soil)	0.1	Not Measured
θa = Air content (cm^3-air/cm^3-soil)	0.22	0.319
f_{oc} = Faction of organic carbon (g-C/g-soil)	0.002	0.0014
K_{oc} = Carbon-Water sorption coefficient (chemical specific) (g-H_2O/g-soil)	*Reference RG-36, page 55, Table B-1 for chemical specific values.*	See next page
K_d = Soil-Water sorption coefficient = K_{oc} x f_{oc}	Chemical Specific	See next page
H' = Unitless form of Henry's law constant H x 41.57 (at 25°C)	*Reference RG-36 page 55*	See next page
C_l = Leachate Concentration Dilution Factor = 100	= Dilution Factor x C_W	See next page

Use this equation to determine the target soil concentration which is protective of groundwater for each chemical of concern. Use site specific geotechnical parameters to calculate C_T. (Use referenced default values for any parameters not analyzed.)

C_T = Target soil concentration protective of groundwater determined by the equilibrium partition equation

$$C_T = \frac{C_l \times \rho_s K_d + \theta_w + \theta_a H'}{\rho_s}$$

Calculations on following page.

Site Specific Target Soil Calculations

Contaminant	Category 1 Groundwater Target Concentration	Soil-Water Sorption Coefficient	Carbon-Water sorption Coefficient	Fraction of Organic Carbon	Dry Soil Bulk Density	Total Soil Porosity	Water Content	Air Content	Henry's Constant (Demisional)	Henry's Contant (Unitless)	Leachate Concentration	Target Soil Concentration
	C_w	K_d	K_{oc}	F_{oc}	B	θ	θ_w	θ_a	H	H'	C_l	C_t
Benzene	0.005	0.1162	83	0.0014	1.54	0.419	0.1	0.319	0.0056	0.2324	0.5	0.115
Ethyl benzene	0.7	1.54	1100	0.0014	1.54	0.419	0.1	0.319	0.0064	0.2673	70	116.221
Toluene	1	0.42	300	0.0014	1.54	0.419	0.1	0.319	0.0064	0.2648	100	53.979
Xylenes	10	0.336	240	0.0014	1.54	0.419	0.1	0.319	0.007	0.2927	198	91.388
Acenaphthene	2.19	6.44	4600	0.0014	1.54	0.419	0.1	0.319	9E-05	0.0038	3.42	22.250
Anthracene	11	19.6	14000	0.0014	1.54	0.419	0.1	0.319	0.001	0.0424	0.045	0.885
Benzo a anthracene	0.000117	1932	1380000	0.0014	1.54	0.419	0.1	0.319	1E-06	0.0000	0.0057	11.013
Benzo b fluoranthene	0.000117	770	550000	0.0014	1.54	0.419	0.1	0.319	1E-05	0.0005	0.014	10.781
Benzo k fluoranthene	0.00117	770	550000	0.0014	1.54	0.419	0.1	0.319	4E-05	0.0016	0.0043	3.311
Benzo a pyrene	0.0002	7700	5500000	0.0014	1.54	0.419	0.1	0.319	6E-07	0.0000	0.003	23.100
Chrysene	0.0117	280	200000	0.0014	1.54	0.419	0.1	0.319	1E-06	0.0000	0.0018	0.504
Dibenzo(A,H)anthracene	0.0000117	4620	3300000	0.0014	1.54	0.419	0.1	0.319	7E-08	0.0000	0.0005	2.310
Fluoranthene	1.46	53.2	38000	0.0014	1.54	0.419	0.1	0.319	6E-06	0.0003	0.206	10.973
Fluorene	1.46	10.22	7300	0.0014	1.54	0.419	0.1	0.319	6E-05	0.0027	1.69	17.382
Indeno(1,2,3-CD)pyrene	0.000117	2240	1600000	0.0014	1.54	0.419	0.1	0.319	7E-08	0.0000	0.00053	1.187
Naphthalene	1.46	1.82	1300	0.0014	1.54	0.419	0.1	0.319	0.0013	0.0538	30	56.882
Pyrene	1.1	53.2	38000	0.0014	1.54	0.419	0.1	0.319	5E-06	0.0002	0.13	6.924

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SITE PRIORITIZATION

PRIORITY 1 SITES

NAPL present? ■ yes ☐ no Evaluate all information on site soils, vapors, groundwater, surface water, and other impacts and check all boxes which match site conditions. The lowest value is the site priority. If priority cannot be determined, the assessment is inadequate.

	PRIORITY	ACTIONS
☐ 1.1	Explosive levels, or concentrations of vapors that could cause acute health effects are present in a residence or other building. (Ensure the local fire authority or State Fire Marshal (512/918-7100) and the local TNRCC Region Office have been notified.)	**Emergency Actions:** Notify appropriate authorities, property owners, and potentially affected parties. Mitigate vapor impact. **Additional Actions:** Conduct receptor survey. Conduct assessment of contaminant plumes. Determine target cleanup levels. Conduct remediation as necessary.
☐ 1.2	An active public water supply well, public water supply line, or public surface water intake is affected or immediately threatened by the release. (Ensure the public authority and the local TNRCC Region Office have been notified.)	**Emergency Actions:** Notify appropriate authorities, well users, and property owners. Prevent further migration. Mitigate impact. Discontinue use of water supply. **Additional Actions:** Provide alternative water sourceH. Conduct receptor survey. Conduct assessment of contaminant plumes in relation to water supply impact. Determine target cleanup levels. Conduct remediation as necessary.
☐ 1.3	A sole-source domestic water supply well or line, or sole-source domestic surface water intake is affected or immediately threatened by the release. (Ensure the well user or surface water user and the local TNRCC Region Office have been notified.)	**Emergency Actions:** Notify appropriate authorities, well users, and property owners. Prevent further migration. Mitigate impact. Discontinue use of water supply. **Additional Actions:** Provide alternative water sourceH. Conduct receptor survey. Conduct assessment of contaminant plumes in relation to water supply impact. Determine target cleanup levels. Conduct remediation as necessary.
☐ 1.4	Explosive vapors are present in a subsurface utility system, but no building or residence is affected. (Ensure the utility authority and the local TNRCC Region Office have been notified.)	**Emergency Actions:** Notify appropriate authorities, property owners, and affected parties. Mitigate vapor impact. **Additional Actions:** Conduct receptor survey. Conduct assessment of contaminant plumes. Determine target cleanup levels. Conduct remediation as necessary.
☐ 1.5	NAPL is present at the ground surface, on surface water bodies, surface water runoff, or in utilities other than water supply lines. (Ensure the utility authority is notified if utilities are affected. Ensure NAPL is removed as required pursuant to 30 TAC 334.79.)	**Emergency Actions:** Notify appropriate authorities, property owners, and affected parties. Secure area. **Additional Actions:** Conduct NAPL removal activities. Prevent migration of NAPL. Conduct assessment in relation to impact. Conduct receptor survey. Determine target cleanup levels. Conduct remediation as necessary.
☐ 1.6	The Edwards aquifer, recharge zone or transition zone is affected.	**Emergency Actions:** Recover NAPL if present. **Additional Actions:** Initiate assessment activities. Conduct assessment in relation to impact. Conduct receptor survey. Determine target cleanup levels. Conduct remediation as necessary. If NAPL is present, conduct removal activities.
☐ 1.7	Concentrations of vapors/particulates that could cause acute health affects, or safety concerns are present in outdoor air.	**Emergency Actions:** Notify appropriate authorities, property owners, and affected parties. Mitigate immediate impacts. **Additional Actions:** Conduct sufficient assessment to determine exposure pathways, receptors and their locations, and target cleanup goals. If NAPL is present, conduct removal activities.

* Reimbursement is contingent upon 30 TAC 334.308 (c)(3).

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PRIORITY 2 SITES

	PRIORITY	ACTIONS
☐ 2.1	Soils or water contaminated by the release are exposed and unsecured from public access and dwellings, playgrounds, parks, day care centers, schools, or similar use facilities are located within 500 feet of those soils.	Remove, cover, or otherwise secure exposed soils or water. Fill open excavations. Conduct actions necessary to contain contamination or prevent impact or exposure.
☐ 2.2	A former vapor impact is associated with this site, or NAPL is present in close proximity to subsurface utilities or other natural or man-made conduit and there is potential for the accumulation of explosive vapors or vapors that could cause acute effects in a building or other structure.	Remediate/remove vapors, NAPL, or contaminated soils. Determine migration pathways and remove/prevent migration pathways. Conduct assessment of contaminant plumes in relation to the potential vapor pathway. Determine target cleanup levels. Conduct actions necessary to contain contamination or prevent impact or exposure.
☐ 2.3	A domestic water supply well or line, or a domestic surface water intake is affected or immediately threatened by the release, but the user has access to another public or private water supply. (Ensure the user and the local TNRCC Region Office have been notified.)	Notify proper authorities, users, and property owners. Prevent migration to water intake. Provide alternative water supply if necessary. Conduct assessment to identify contaminant plumes and exposure pathways in relation to water intake. Determine appropriate target cleanup goals based on site conditions. Conduct actions necessary to contain contamination or prevent impact or exposure.
☐ 2.4	A non-public or non-domestic water supply well is affected or immediately threatened. (Do not consider monitor wells.) (Ensure the user and the local TNRCC Region Office have been notified.)	Notify proper authorities, well users, and property owners. Prevent migration to water well. Provide alternative water supply if necessary. Plug water well if necessary. Conduct assessment to identify contaminant plumes and exposure pathways in relation to water well. Determine appropriate target cleanup goals based on site conditions. Conduct actions necessary to contain contamination or prevent impact or exposure.
☐ 2.5[1]	Groundwater is affected and a public or domestic water supply well is located within 0.25 miles of the UST/AST system or source area. (Check if a well is present, but the well use is unknown). **(See footnote 1 before responding.)**	Determine completion data and usage of well(s) if not already known. Conduct receptor survey to locate additional wells and other potential receptors (if not already done). Evaluate well impact potential. Determine appropriate cleanup goals based on site conditions. Conduct actions necessary to contain contamination or prevent impact or exposure.
☐ 2.6	Groundwater or storm water runoff is affected and discharges within 500 feet of the known extent of contamination to a surface water body used for human drinking water, contact recreation, habitat to a protected or listed endangered plant and animal species.	Conduct assessment which addresses the contaminant plumes in relation to the surface water. Determine target cleanup levels. Conduct actions necessary to contain contamination or prevent impact or exposure. Notify property owners if impact is documented.
☐ 2.7	A public or domestic water supply well that produces from a groundwater zone which is not affected or threatened is located within the known extent of contamination. (Check if a well is present, but the well use is unknown.)	Notify well users and property owners. Determine completion data and usage of water well(s). Conduct receptor survey to locate additional sensitive receptors. Investigate well impact or cross-contamination potential. Plug well(s) if necessary. Determine target cleanup levels. Conduct actions necessary to contain contamination or prevent impact or exposure. Monitor water well for groundwater quality.

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PRIORITY 3 SITES

	PRIORITY	ACTIONS
☐ 3.1[1]	Groundwater is affected and a public or domestic water supply well is located between 0.25 and 0.5 miles from the UST/AST system or source area. (Check if a well is present in this interval, but the well use is unknown.) **(See footnote 1 before responding.)**	Determine completion data and usage of well(s) if not already known. Conduct receptor survey to locate additional wells and other potential receptors (if not already done). Evaluate well impact potential. Evaluate need for remediation.
☐ 3.2	Groundwater is affected and the affected groundwater zone may discharge between 500 feet and 0.25 miles of the UST/AST or source area to a surface water body used for human drinking water, contact recreation, or habitat to a protected or listed endangered plant and animal species.	Conduct assessment which evaluates potential to impact the surface water. Evaluate need for remediation.
☐ 3.3[1]	Groundwater is affected and a non-public or non-domestic water supply well is located within 0.25 miles of the UST/AST system or source area. **(See footnote 1 before responding.)**	Determine completion data and usage of well(s) if not already known. Conduct receptor survey to locate additional wells and other potential receptors (if not already done). Monitor water well for groundwater quality. Evaluate need for remediation.
☐ 3.4	A non-community or non-domestic water supply well that produces from a groundwater zone which is not affected or threatened is located within the known extent of contamination. (If a well is present, but the use of the well is unknown, check 2.7 instead.)	Notify well users and property owners. Determine completion data and usage of well(s) if not already known. Conduct receptor survey to locate additional wells and other potential receptors (if not already done). Investigate well impact or cross-contamination potential. Monitor water well for groundwater quality. Evaluate need for remediation.
☐ 3.5[2]	A designated major or minor groundwater aquifer is affected or immediately threatened. **(See footnote 2 before responding.)**	Conduct assessment of soil and groundwater contaminant plumes in relation to major or minor aquifer. Conduct receptor survey and water well inventory. Evaluate need for remediation.

PRIORITY 4 SITES

	PRIORITY	ACTIONS
■ 4.1	Groundwater is affected.	Conduct assessment of soil and groundwater contaminant plumes. Conduct receptor survey and water well inventory. Evaluate site conditions to determine need for additional corrective actions.
☐ 4.2	The vertical extent of contamination has been defined and the assessment results document that groundwater is not affected.	Conduct assessment of soil contaminant plume. Conduct receptor survey and water well inventory. Evaluate site conditions to determine need for additional corrective actions.

1. Consider only wells producing from the same interval as the affected groundwater zone at the release site, wells which may provide a cross-contamination pathway, or wells where completion details are unknown.

2. Refer to Major and Minor Aquifers of Texas Maps prepared by Texas Water Development Board, September 1990. Do not consider the low permeability Beaumont clays of the Beaumont Formation for the Gulf Coast aquifer. Do not consider a perched groundwater zone overlaying the principal producing portion of the aquifer unless the two arehydrologically connected.

Abbreviations	Definition
%	percent
AST	Aboveground Storage Tank
AV	aviation
BGS	below ground surface
C	celius
CAP	corrective action plan
CAT.	category
CH_4	methane
cm	cubic centimeter
cm^2/cm^2	square centimeter per square centimeter
CO_2	carbon dioxide
coml.	commercial
conc.	concentration
cont.	continue
EPA	Environmental Protection Agency
Fe	iron
ft.	feet
$ft.^2$	square feet
gal.	gallons
g/g	gram per gram
g/m^3	gram per cubic meter
gpd	gallons per day
ID	identification
in.	inches
Lab.	laboratory
LPST	Leaking Petroleum Storage Tank
LSA	Limited Site Assessment
Max.	maximum
MCL	maximum contaminant level
mg/kg	milligram per kilogram
mg/P	milligram per liter
NAPL	non-aqueous phase liquids
No.	number
O_2	oxygen
ppm	parts per million
PST	Petroleum Storage Tank
RP	Responsible Party
RPR	Responsible Party Remediation
TAC	Texas Administrative Code
TEX	toluene, ethylbenzene, and total xylenes
TNRCC	Texas Natural Resource Conservation Commission
TPH	total petroleum hydrocarbons
UST	Underground Storage Tank

THIS REPORT CONTAINS THE ORIGINALS FROM WHICH REPRODUCTIONS HAVE BEEN MADE TO PROVIDE THE OTHER COPIES

Prepared 18 Jul 96

SWDETE-GL REPORT NO. 16558

RBA @ LIST site Former Gary AFB
drilled and sampled by Thompson Prof. Group

RESULTS OF CHEMICAL ANALYSES OF SOIL & WATER SAMPLES

GARY AFB

CORPS OF ENGINEERS

U. S. ARMY

SOUTHWESTERN DIVISION LABORATORY

DALLAS, TEXAS

SOUTHWESTERN DIVISION LABORATORY, CORPS OF ENGINEERS
4815 Cass Street
Dallas, Texas 75235

SUBMITTAL OF SWDETE-GL REPORT 16558

PROJECT: GARY AFB FEATURE:	Contract No.
TEST REQUEST NO.: W45XMA61274823 Dated: 06 MAY 96 Received: 07 MAY 96	From:

MATERIAL: Two soil samples and seven water samples.

Date Received: 17 and 31 MAY 1996

Remarks:

Report sent to: FORT WORTH ATTN: CESWF-ED-E	Copy furnished:

Date:	Name and title:	Signature
7-2-96	Brian J. Condike Quality Assurance Officer SWD Laboratory	BJ Condike
Date:	Name and title:	Signature
7-2-96	STEPHEN L. BROOKS Director SWD Laboratory	Steph Brooks

Invoice Date	Invoice Number	Report Number
01-JUL-96	901	16558-0

Southwestern Division Laboratory

INVOICE

BILL TO:

Former Gary AFB

Project:
Start:
End:
Acctnum: W45XMA61274823

Sample Id: S60436-1, S60436-2, S60436-3, S60436-4, S60436-5, S60436-6, S60468-1, S60468-2, S60468-3
Client Id: B1-1040, B5-5421, G1-2234, G1-6234, G1-2324, G1-6324, MW-1-7468, MW-1-7469, MW-1-7470

Qty	Matrix	Analysis	Description	Unit Price	Total Price
3	Water	BTEX-8020-00	BTEX In-house	$ 100.00	$ 300.00
1	Water	CONDY-9050-02	Conductivity by Sub0	$ 12.50	$ 12.50
1	Water	PAH-8310-01	Polynuclear Aromatic	$ 158.13	$ 158.13
1	Water	PAH-8310-02	Polynuclear Aromatic	$ 156.25	$ 156.25
1	Water	PH-9040-02	pH by Sub02	$ 6.25	$ 6.25
1	Water	TRPH-418.1-02	TRPH by Sub02	$ 31.25	$ 31.25
1	Water	TURBY-180.1-02	* Turbidity by Sub02	$ 25.00	$ 25.00
2	Soil	BTEX-8020-02	BTEX by Sub02	$ 50.00	$ 100.00
2	Soil	PAH-8310-02	Polynuclear Aromatic	$ 156.25	$ 312.50
2	Soil	TRPH-418.1-02	TRPH by Sub02	$ 31.25	$ 62.50
1	Labor	DATA-REV-00	Data Review & Report	$ 100.00	$ 100.00

9 Samples; 16 Analyses; Total Amount Due: $ 1264.38

Total Remaining on DA2544: $ -764.38

U.S. ARMY CORPS OF ENGINEERS
Southwestern Division Laboratory
Environmental Services Section
4815 Cass Street
Dallas, Texas 75235
214/905-9130

CASE NARRATIVE

Two soil samples and seven water samples arrived at Southwestern Division Laboratory on 17 and 31 May 1996 from Former Gary AFB. The samples arrived in fair condition with incomplete chains of custody. No custody seals were on the coolers. No Corps of Engineers' point of contact was listed on the chains of custody. For the 17 of May shipment; the volatile vials for sample G1-2234 on the labels indicated the sample was a soil but listed on the chain of custody and visually it was a water. One of the vials contained bubbles that were greater than six mm. Sample G1-6234 did not have a pH less than two for the TRPH analysis. Per the client; analyze sample G1-6234 for TRPH anyway, and do not analyze for D.O.. For the 31 of May shipment; the sample labels received some water damage. SWD recommends taping the labels to the bottles and jars with clear tape to avoid water damage. The BTEX vial for sample MW-1-7468 contained bubbles that were greater than eight mm. The samples were distributed for analysis as shown in the following table:

LABORATORIES	SAMPLE TYPES
SWD	Field for sample S60436-3 and S60468-1 to S60468-2: BTEX.
Inchcape Testing Services	Field for sample S60468-3: PAH.
Environmental Chemical Corporation	Field for samples S60436-1 to S60436-6: BTEX, TRPH, PAH, pH, conductivity, and turbidity.

The above laboratories are Corps of Engineers' validated laboratories.

The computerized data from Inchcape Testing Services is in Inchcape Testing Services' standard deliverable format. The computerized data from Environmental Chemical Corporation is in Environmental Chemical Corporation's standard deliverable format.

The data package from Southwestern Division Laboratory was received complete with all required internal quality control information. The majority of all of the analyses were performed using specified methods and within the proper holding times. The BTEX was analyzed using method 8021A instead of the requested 8020 method. The results are comparable. All of the matrix spike, surrogate, laboratory control recoveries, and RPDs were within control limits. All method blanks were free of contamination.

The data package from Inchcape Testing Services was received complete with all required internal quality control information. All of the analyses were performed using specified methods and within the proper holding times. All of the matrix spike, surrogate, laboratory control recoveries, and RPDs were within control limits. All of the method blanks were free of contamination.

The data package from Environmental Chemical Corporation was received complete with all required internal quality control information. All of the analyses were performed using specified methods and within the proper holding times. The majority of all of the matrix spike, surrogate, laboratory control recoveries, and RPDs were within control limits with the following exceptions:

- For BTEX: samples S60436-1 , S60436-2, the sample duplicate, MS, and MSD; the surrogate was outside of quality control limits due to matrix interference.

- For PAH: due to insufficient sample volume a MS and MSD was not analyzed. A LCS and LCSD was prepared.

- For TRPH: due to insufficient sample volume a MS and MSD was not analyzed. A LCS and LCSD was prepared.

All of the method blanks were free of contamination.

The data package from Southwestern Division Laboratory was received complete with all required internal quality control information. All of the analyses were performed using specified methods and within the proper holding times. All of the matrix spike, surrogate, laboratory control recoveries, and RPDs were within control limits. All method blanks were free of contamination.

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- For TRPH: due to insufficient sample volume a MS and MSD was not analyzed. A LCS and LCSD was prepared.

All of the method blanks were free of contamination.

ENVIRONMENTAL CHEMICAL CORPORATION

SAMPLE NUMBER

S60436-1

Customer: U.S. ARMY CORPS OF ENGINEERS - SWDL

Source: Former Perrin AFB: GARY AFB

Login Number : S60436

Location: B1-1040

Analysis: PAH 8310

Matrix:(soil/water) SOIL

Sample Weight: 9.99 g

Extract Volume: 1.0 mL

Percent Solid: 72 %

Dilution Factor: 1

Lab Notebook No: 510, PAGE 33

Lab Sample I.D.: 22676-001

Date Sampled: 05/16/96

Date Received: 05/18/96

Date Extracted: 05/20/96

Date Analyzed: 05/24/96

Preparation Batch: PAHS0520

Instrument Batch: PAH0524

SAMPLE RESULTS

	CAS NO.	COMPOUND	DETECTION LIMITS (µg/kg)	RESULTS	FLAG
1.	91-20-3	Naphthalene	89.5	311	
2.	208-96-8	Acenaphthylene	120	U	
3.	83-32-9	Acenaphthene	43.7	U	
4.	86-73-7	Fluorene	32.5	U	
5.	85-01-8	Phenanthrene	27.4	196	
6.	120-12-7	Anthracene	18.2	U	
7.	206-44-0	Fluoranthrene	32.4	125	
8.	129-00-0	Pyrene	21.5	361	
9.	56-55-3	Benzo(a)Anthracene	28.1	U	
10.	218-01-9	Chrysene	17.4	U	
11.	205-99-2	Benzo(b)Fluoranthene	26.7	U	
12.	207-08-9	Benzo(k)Fluoranthene	20.0	U	
13.	50-32-8	Benzo(a)Pyrene	17.5	U	
14.	53-70-3	Dibenzo(a,h)Anthracene	22.0	U	
15.	191-24-2	Benzo(g,h,i)Perylene	30.3	U	
16.	193-39-5	Indeno(1,2,3)Pyrene	32.3	U	

	SURROGATE STANDARD	RECOVERY (%)	ACCEPTABLE	SPIKE (µg/kg)
17.	DECAFLUOROBIPHENYL	101	70-130	400

J: Below Detection Limit

ENVIRONMENTAL CHEMICAL CORPORATION

SAMPLE NUMBER

S60436-1

Customer: U.S. ARMY CORPS OF ENGINEERS - SWDL

Source: Former Perrin AFB: GARY AFB

Login Number : S60436

Location: B1-1040

Analysis: **BETX EPA 8020**

Matrix:(soil/water) SOIL

Sample Weight: 5.7 g

Extract Volume: 5.0 mL

Percent Solid: 72 %

Dilution Factor: 1

Lab Notebook No: 508,PG32

Lab Sample I.D.: 22676-001

Date Sampled: 05/16/96

Date Received: 05/18/96

Date Extracted: 05/23/96

Date Analyzed: 05/23/96

Preparation Batch: BTXS0523

Instrument Batch: BTX0523

SAMPLE RESULTS

	CAS NO.	COMPOUND	DETECTION LIMITS (µg/kg)	RESULTS	FLAG
1.	71-43-2	Benzene	3.7	29.3	
2.	100-41-4	Ethyl Benzene	3.7	73.7	
3.	108-88-3	Toluene	3.7	U	
4.	1330-20-7	Xylene (total)	3.7	U	

	SURROGATE STANDARD	RECOVERY (%)	ACCEPTABLE	SPIKE (µg/kg)
5.	4-Bromofluorobenzene	197 #	74-121	26.3

U: Below Detection Limit

#: Matrix Interference

ENVIRONMENTAL CHEMICAL CORPORATION

Customer:	U.S. ARMY CORPS OF ENGINEERS - SWDL	Login Number :	S60436
Source:	Former Perrin AFB: GARY AFB	Project No.:	22676
Analysis:	TRPH	Date Received:	05/18/96
Method:	EPA 9071/418.1	Date Analyzed:	05/24/96
Lab Notebook:	511 pg.52, 53, 54	**Prep. Batch:**	TRPHS0523A
Detection Limit:	15.0 mg/kg	**Instr. Batch:**	TRPH0524

LAB I.D.	CUSTOMER SAMPLE NO.	MATRIX	LOCATION	VALUE mg/kg
22676-001	S60436-1	SOIL	B1-1040	33.0

BDL: Below Detection Limit

ENVIRONMENTAL CHEMICAL CORPORATION

SAMPLE NUMBER

S60436-2

Customer: U.S. ARMY CORPS OF ENGINEERS - SWDL
Source: Former Perrin AFB: GARY AFB
Location: B5-5421
Analysis: PAH 8310

Login Number : S60436

Matrix:(soil/water) SOIL
Sample Weight: 10.0 g
Extract Volume: 1.0 mL

Percent Solid: 86 %
Dilution Factor: 1
Lab Notebook No: 510, PAGE 33

Lab Sample I.D.: 22676-002
Date Sampled: 05/16/96
Date Received: 05/18/96
Date Extracted: 05/20/96
Date Analyzed: 05/24/96
Preparation Batch: PAHS0520
Instrument Batch: PAH0524

SAMPLE RESULTS

	CAS NO.	COMPOUND	DETECTION LIMITS (µg/kg)	RESULTS	FLAG
1.	91-20-3	Naphthalene	74.9	1640	
2.	208-96-8	Acenaphthylene	100	573	
3.	83-32-9	Acenaphthene	36.5	3350	
4.	86-73-7	Fluorene	27.2	48.6	
5.	85-01-8	Phenanthrene	22.9	U	
6.	120-12-7	Anthracene	15.2	U	
7.	206-44-0	Fluoranthrene	27.1	U	
8.	129-00-0	Pyrene	18.0	U	
9.	56-55-3	Benzo(a)Anthracene	23.5	U	
10.	218-01-9	Chrysene	14.5	U	
11.	205-99-2	Benzo(b)Fluoranthene	22.3	U	
12.	207-08-9	Benzo(k)Fluoranthene	16.7	U	
13.	50-32-8	Benzo(a)Pyrene	14.7	U	
14.	53-70-3	Dibenzo(a,h)Anthracene	18.4	U	
15.	191-24-2	Benzo(g,h,i)Perylene	25.3	U	
16.	193-39-5	Indeno(1,2,3)Pyrene	27.0	U	

	SURROGATE STANDARD	RECOVERY (%)	ACCEPTABLE	SPIKE (µg/kg)
17.	DECAFLUOROBIPHENYL	84	70-130	400

J: Below Detection Limit

ENVIRONMENTAL CHEMICAL CORPORATION

SAMPLE NUMBER

S60436-2

Customer: U.S. ARMY CORPS OF ENGINEERS - SWDL
Source: Former Perrin AFB: GARY AFB
Location: B5-5421
Analysis: **BETX EPA 8020**

Login Number : S60436

Matrix:(soil/water) SOIL
Sample Weight: 4.1 g
Extract Volume: 10.0 mL

Percent Solid: 86 %
Dilution Factor: 50
Lab Notebook No: 508,PG32

Lab Sample I.D.: 22676-002
Date Sampled: 05/16/96
Date Received: 05/18/96
Date Extracted: 05/23/96
Date Analyzed: 05/23/96
Preparation Batch: BTXS0523
Instrument Batch: BTX0523

SAMPLE RESULTS

	CAS NO.	COMPOUND	DETECTION LIMITS (µg/kg)	RESULTS	FLAG
1.	71-43-2	Benzene	425	U	
2.	100-41-4	Ethyl Benzene	425	1010	
3.	108-88-3	Toluene	425	U	
4.	1330-20-7	Xylene (total)	425	8310	

	SURROGATE STANDARD	RECOVERY (%)	ACCEPTABLE	SPIKE (µg/kg)
5.	4-Bromofluorobenzene	125#	74-121	3660

U: Below Detection Limit

#: Matrix Interference

ENVIRONMENTAL CHEMICAL CORPORATION

Customer:	U.S. ARMY CORPS OF ENGINEERS - SWDL	Login Number :	S60436
Source:	Former Perrin AFB: GARY AFB	Project No.:	22676
Analysis:	**TRPH**	Date Received:	05/18/96
Method:	EPA 9071/418.1	Date Analyzed:	05/24/96
Lab Notebook:	511 pg.52, 53, 54	**Prep. Batch:**	TRPHS0523A
Detection Limit:	15.0 mg/kg	**Instr. Batch:**	TRPH0524

LAB I.D.	CUSTOMER SAMPLE NO.	MATRIX	LOCATION	VALUE mg/kg
22676-002	S60436-2	SOIL	B5-5421	492

BDL: Below Detection Limit

U.S. ARMY CORPS OF ENGINEERS
Southwestern Division Laboratory
4815 Cass Street
Dallas, Texas 75235
(214)905-9130

District: Fort Worth
Project: Former Gary AFB
Location: LPST#108133
Field ID: G1-2234
SWD Number: S60436-3
Batch Number: B1W96
Analyst: LTN

Sampling Date: 05/14/96
Received Date: 05/17/96
Analysis Date: 05/20/96
Reported Date: 05/21/96
Matrix: Water
Method Number: 8021A

Analyte	Laboratory Reporting Limit (LRL)	Results	Units	Dilution Factor
Benzene	200	1,260	µg/L	100
Toluene	20.0	26.7	µg/L	10
Ethylbenzene	20.0	157	µg/L	10
m/p-Xylenes	40.0	48.9	µg/L	10
o-Xylene	20.0	27.3	µg/L	10

Surrogate	Spike Amount	Recovery	QC Limit
4-Bromochlorobenzene	100 µg/L	107 µg/L	75 - 125 µg/L

ENVIRONMENTAL CHEMICAL CORPORATION

Customer:	U.S. ARMY CORPS OF ENGINEERS - SWDL	Login Number :	S60436
Source:	Former Perrin AFB: GARY AFB	Project No.:	22676
Analysis:	**TRPH**	Date Received:	05/18/96
Method:	EPA 418.1	Date Analyzed:	05/24/96
Lab Notebook:	511 pg.55, 56	**Prep. Batch:**	TRPHW0523
Detection Limit:	0.50 mg/L	**Instr. Batch:**	TRPH0524

LAB I.D.	CUSTOMER SAMPLE NO.	MATRIX	LOCATION	VALUE mg/L
22676-003	S60436-4	WATER	G1-6234	19.6

BDL: Below Detection Limit

ENVIRONMENTAL CHEMICAL CORPORATION

SAMPLE NUMBER

S60436-5

Customer: U.S. ARMY CORPS OF ENGINEERS - SWDL

Source: Former Perrin AFB; GARY AFB

Login Number : S60436

Location: G1-2324

Analysis: **PAH 8310**

Matrix:(soil/water) WATER

Sample Volume: 1000 mL

Extract Volume: 1.0 mL

Lab Sample I.D.: 22676-004

Date Sampled: 05/16/96

Date Received: 05/18/96

Date Extracted: 05/21/96

Date Analyzed: 05/24/96

pH: N/A

Dilution Factor: 1

Lab Notebook No: 510, PAGE 33

Preparation Batch: PAHW0521

Instrument Batch: PAH0524

SAMPLE RESULTS

	CAS NO.	COMPOUND	DETECTION LIMITS (µg/L)	RESULTS	FLAG
1.	91-20-3	Naphthalene	0.28	315**	
2.	208-96-8	Acenaphthylene	0.26	U	
3.	83-32-9	Acenaphthene	0.22	U	
4.	86-73-7	Fluorene	0.29	U	
5.	85-01-8	Phenanthrene	0.28	U	
6.	120-12-7	Anthracene	0.22	U	
7.	206-44-0	Fluoranthrene	0.19	U	
8.	129-00-0	Pyrene	0.22	U	
9.	56-55-3	Benzo(a)Anthracene	0.28	U	
10.	218-01-9	Chrysene	0.22	U	
11.	205-99-2	Benzo(b)Fluoranthene	0.25	U	
12.	207-08-9	Benzo(k)Fluoranthene	0.21	U	
13.	50-32-8	Benzo(a)Pyrene	0.24	U	
14.	53-70-3	Dibenzo(a,h)Anthracene	0.13	U	
15.	191-24-2	Benzo(g,h,i)Perylene	0.18	U	
16.	193-39-5	Indeno(1,2,3)Pyrene	0.21	U	

	SURROGATE STANDARD	RECOVERY (%)	ACCEPTABLE	SPIKE (µg/L)
17.	DECAFLUOROBIPHENYL	80	70-130	4.0

U: Below Detection Limit

Sample dilution of : **-1:50.00

ENVIRONMENTAL CHEMICAL CORPORATION

Customer:	U.S. ARMY CORPS OF ENGINEERS - SWDL	Login Number :	S60436
Source:	Former Perrin AFB: GARY AFB	Project No.:	22676
Analysis:	**pH**	Date Received:	05/18/96
Method:	EPA 9040	Date Analyzed:	05/22/96
Lab Notebook:	513, Pg. 91	**Prep. Batch:**	PHW0522
		Instr. Batch:	PH0522

LAB I.D.	CUSTOMER SAMPLE NO.	MATRIX	LOCATION	VALUE
22676-005	S60436-6	WATER	G1-6324	9.486

ENVIRONMENTAL CHEMICAL CORPORATION

Customer:	U.S. ARMY CORPS OF ENGINEERS - SWDL	Login Number :	S60436
Source:	Former Perrin AFB: GARY AFB	Project No.:	22676
Analysis:	Conductivity	Date Received:	05/18/96
Method:	EPA 9050	Date Analyzed:	05/20/96
Lab Notebook:	512, pg. 35	**Prep. Batch:**	CO520
		Instr. Batch:	CO520

LAB I.D.	CUSTOMER SAMPLE NO.	MATRIX	LOCATION	VALUE umhos
22676-005	S60436-6	WATER	G1-6324	762

BDL: Below Detection Limit

ENVIRONMENTAL CHEMICAL CORPORATION

Customer:	U.S. ARMY CORPS OF ENGINEERS - SWDL	Login Number :	S60436
Source:	Former Perrin AFB: GARY AFB	Project No.:	22676
Analysis:	**Turbidity**	Date Received:	05/18/96
Method:	EPA 180.1	Date Analyzed:	05/20/96
Lab Notebook:	512, pg. 34	**Prep. Batch:**	TB520
		Instr. Batch:	TB520

LAB I.D.	CUSTOMER SAMPLE NO.	MATRIX	LOCATION	VALUE NTU
22676-005	S60436-6	WATER	G1-6324	20500

BDL: Below Detection Limit

U.S. ARMY CORPS OF ENGINEERS
Southwestern Division Laboratory
4815 Cass Street
Dallas, Texas 75235
(214)905-9130

District: Fort Worth
Project: Former Perrin AFB
Location: Gary AFB
Field ID: MW-1-7468
SWD Number: S60468-1
Batch Number: B3W96
Analyst: LTN

Sampling Date: 05/30/96
Received Date: 05/31/96
Analysis Date: 06/11/96
Reported Date: 06/17/96
Matrix: Water
Method Number: 8021A

Analyte	Laboratory Reporting Limit (LRL)	Results	Units	Dilution Factor
Benzene	200	1330	µg/L	100
Toluene	2.0	7.1	µg/L	1
Ethylbenzene	20	133	µg/L	10
m/p-Xylenes	4.0	10.9	µg/L	1
o-Xylene	2.0	< 2.0	µg/L	1

Surrogate	Spike Amount	Recovery	QC Limit
4-Bromochlorobenzene	20.0 µg/L	19.1 µg/L	15 - 25 µg/L

U.S. ARMY CORPS OF ENGINEERS
Southwestern Division Laboratory
4815 Cass Street
Dallas, Texas 75235
(214)905-9130

District: Fort Worth
Project: Former Perrin AFB
Location: Gary AFB
Field ID: MW-1-7469
SWD Number: S60468-2
Batch Number: B3W96
Analyst: LTN

Sampling Date: 05/30/96
Received Date: 05/31/96
Analysis Date: 06/11/96
Reported Date: 06/17/96
Matrix: Water
Method Number: 8021A

Analyte	Laboratory Reporting Limit (LRL)	Results	Units	Dilution Factor
Benzene	200	1320	µg/L	100
Toluene	2.0	7.0	µg/L	1
Ethylbenzene	20	143	µg/L	10
m/p-Xylenes	4.0	9.9	µg/L	1
o-Xylene	2.0	< 2.0	µg/L	1

Surrogate	Spike Amount	Recovery	QC Limit
4-Bromochlorobenzene	20.0 µg/L	19.5 µg/L	15 - 25 µg/L

Inchcape Testing Services
Environmental Laboratories

DATE RECEIVED : 31-MAY-1996

REPORT NUMBER : D96-5855-1
REPORT DATE : 10-JUN-1996

SAMPLE SUBMITTED BY : US Army Corps of Engineers
ADDRESS : 4815 Cass St.
: Dallas, TX 75235-8011
ATTENTION : Ms. Mai Tran

SAMPLE MATRIX : Liquid
ID MARKS : MW-1-7470 S60468-3
: Gary AFB
PROJECT : Former Perrin (S60468-3)
DATE SAMPLED : 30-MAY-1996
PREPARATION METHOD : EPA 3520B
PREPARED BY : HCS
PREPARED ON : 3-JUN-1996
ANALYSIS METHOD : EPA 8310 /1
ANALYZED BY : JXA
ANALYZED ON : 7-JUN-1996
DILUTION FACTOR : 2
METHOD FACTOR : 10
QC BATCH NO : AB766-34

POLYNUCLEAR AROMATIC HYDROCARBONS		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Acenaphthene	3.60 µg/L	< 3.60 µg/L
Acenaphthylene	2.00 µg/L	< 2.00 µg/L
Anthracene	1.32 µg/L	< 1.32 µg/L
Benzo(a)anthracene	0.260 µg/L	< 0.260 µg/L
Benzo(b)fluoranthene	0.360 µg/L	< 0.360 µg/L
Benzo(k)fluoranthene	0.340 µg/L	< 0.340 µg/L
Benzo(g,h,i)perylene	1.52 µg/L	< 1.52 µg/L
Benzo(a)pyrene	0.460 µg/L	< 0.460 µg/L
Chrysene	0.300 µg/L	< 0.300 µg/L
Dibenzo(a,h)anthracene	0.600 µg/L	< 0.600 µg/L
Fluoranthene	0.420 µg/L	8.00 µg/L
Fluorene	0.420 µg/L	< 0.420 µg/L
Indeno(1,2,3-cd)pyrene	0.860 µg/L	< 0.860 µg/L
Naphthalene	2.00 µg/L	335 µg/L

U.S. ARMY CORPS OF ENGINEERS
Southwestern Division Laboratory
4815 Cass Street
Dallas, Texas 75235
(214)905-9130

District: Tulsa
Project: Former Shawnee NAS
Analysis Date: 05/20/96
Reported Date: 05/21/96
SWD Number: Method Blank
Batch Number: B1W96
Method Number: 8021A
Matrix: Water
Analyst: LTN

Analyte	Laboratory Reporting Limit (LRL)	Results	Units	Dilution Factor
Benzene	2.0	< 2.0	µg/L	1
Toluene	2.0	< 2.0	µg/L	1
Ethylbenzene	2.0	< 2.0	µg/L	1
m/p-Xylenes	4.0	< 4.0	µg/L	1
o-Xylene	2.0	< 2.0	µg/L	1

Surrogate	Spike Amount	Recovery	QC Limit
4-Bromochlorobenzene	100 µg/L	91.9 µg/L	75 - 125 µg/L

REPORT NUMBER : D96-5855-1
ANALYSIS METHOD : EPA 8310 /1

POLYNUCLEAR AROMATIC HYDROCARBONS		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Phenanthrene	1.28 µg/L	11.6 µg/L
Pyrene	0.540 µg/L	< 0.540 µg/L

QUALITY CONTROL DATA		
SURROGATE COMPOUND	SPIKE LEVEL	SPIKE RECOVERED
1-Fluoronapthalene (SS)	100 µg/L	118 %

Applicable results are reported on Dry Weight basis.

U.S. ARMY CORPS OF ENGINEERS
Southwestern Division Laboratory
4815 Cass Street
Dallas, Texas 75235
(214)905-9130

District: Tulsa
Project: Former Shawnee NAS
Analysis Date: 05/20/96
Reported Date: 05/21/96
SWD Number: Laboratory Control Samples
Batch Number: B1W96
Method Number: 8021A
Matrix: Water
Analyst: LTN

Analyte	Laboratory Reporting Limit (LRL)	LCS/LCSD Results		Units
Benzene	2.0	18.4	17.0	µg/L
Toluene	2.0	18.6	17.0	µg/L
Ethylbenzene	2.0	18.4	17.0	µg/L
m/p-Xylenes	4.0	37.4	34.8	µg/L
o-Xylene	2.0	18.3	17.3	µg/L

Surrogate Recovery

Sample	Spike Amount	4-Bromochlorobenzene Recovery (µg/L)	QC Limit
LCS	100 µg/L	91.8	75 - 125 µg/L
LCSD	100 µg/L	94.8	75 - 125 µg/L

U.S. ARMY CORPS OF ENGINEERS
Southwestern Division Laboratory
4815 Cass Street
Dallas, Texas 75235
(214)905-9130

District: Tulsa
Project: Former Shawnee NAS
Analysis Date: 05/20/96
Reported Date: 05/21/96
SWD Number: S60436-1-Matrix Spike
Batch Number: B1W96
Method Number: 8021A
Matrix: Water
Analyst: LTN

Analyte	Laboratory Reporting Limit (LRL)	Results	Units	Dilution Factor
Benzene	2.0	17.8	µg/L	1
Toluene	2.0	18.6	µg/L	1
Ethylbenzene	2.0	17.8	µg/L	1
m/p-Xylenes	4.0	38.3	µg/L	1
o-Xylene	2.0	19.1	µg/L	1

Surrogate	Spike Amount	Recovery	QC Limit
4-Bromochlorobenzene	100 µg/L	106 µg/L	75 - 125 µg/L

U.S. ARMY CORPS OF ENGINEERS
Southwestern Division Laboratory
4815 Cass Street
Dallas, Texas 75235
214/905-9130

WATER QUALITY CONTROL DATA

Project: Former Shawnee NAS

	Benzene	Toluene	Ethylbenzene	m,p-Xylenes	o-Xylene
Analysis Method	8021A	8021A	8021A	8021A	8021A
Prep Method	5030A	5030A	5030A	5030A	5030A
Analysis Date	05/20/96	05/20/96	05/20/96	05/20/96	05/20/96
Batch Number	B1W96	B1W96	B1W96	B1W96	B1W96
Blank µg/L	< 2.0	< 2.0	< 2.0	< 4.0	< 2.0
Sample Conc. µg/L	< 2.0	< 2.0	< 2.0	< 4.0	< 2.0
Spike Sample No.	S60442-4	S60442-4	S60442-4	S60442-4	S60442-4
Spike Conc. µg/L	20.0	20.0	20.0	40.0	20.0
Actual MS Conc. µg/L	17.8	18.6	17.8	38.3	19.1
MS % Rec.	89%	93%	89%	96%	96%
Laboratory Control Sample Result µg/L	18.4	18.6	18.4	37.4	18.3
	17.0	17.0	17.0	34.8	17.3
Laboratory Control Sample (% Recovery)	92.0	93.0	92.0	88.5	93.5
	85.0	85.0	85.0	87.0	86.5
LCS/LCSD Duplicate RPD[1]	11	13	11	7	6

[1] **NA:** % RPD cannot be calculated.

Insufficient sample to analyze for MSD.

$$\text{Matrix spike \% Rec.} = \frac{[(\text{Actual MS or MSD Conc.}) - \text{Sample Conc.}]}{\text{Spike Conc.}} \times 100$$

U.S. ARMY CORPS OF ENGINEERS
Southwestern Division Laboratory
4815 Cass Street
Dallas, Texas 75235
(214)905-9130

District: Fort Worth
Project: Former Perrin AFB: Gary AFB
Analysis Date: 06/11/96
Reported Date: 06/17/96
SWD Number: Method Blank
Batch Number: B3W96
Method Number: 8021A
Matrix: Water
Analyst: LTN

Analyte	Laboratory Reporting Limit (LRL)	Results	Units	Dilution Factor
Benzene	2.0	< 2.0	µg/L	1
Toluene	2.0	< 2.0	µg/L	1
Ethylbenzene	2.0	< 2.0	µg/L	1
m/p-Xylenes	4.0	< 4.0	µg/L	1
o-Xylene	2.0	< 2.0	µg/L	1

Surrogate	Spike Amount	Recovery	QC Limit
4-Bromochlorobenzene	20.0 µg/L	18.4 µg/L	15 - 25 µg/L

U.S. ARMY CORPS OF ENGINEERS
Southwestern Division Laboratory
4815 Cass Street
Dallas, Texas 75235
(214)905-9130

District: Fort Worth
Project: Former Perrin AFB: Gary AFB
Analysis Date: 06/11/96
Reported Date: 06/17/96
SWD Number: Laboratory Control Samples
Batch Number: B3W96
Method Number: 8021A
Matrix: Water
Analyst: LTN

Analyte	Laboratory Reporting Limit (LRL)	Results		Units
		LCS	LCSD	
Benzene	2.0	19.7	20.3	µg/L
Toluene	2.0	19.6	20.3	µg/L
Ethylbenzene	2.0	19.5	20.4	µg/L
m/p-Xylenes	4.0	39.5	41.1	µg/L
o-Xylene	2.0	19.6	20.4	µg/L

Surrogate	Spike Amount	Recovery (µg/L)		QC Limit
4-Bromochlorobenzene	20.0 µg/L	18.8	19.3	15 - 25 µg/L

U.S. ARMY CORPS OF ENGINEERS
Southwestern Division Laboratory
4815 Cass Street
Dallas, Texas 75235
(214)905-9130

District: Fort Worth
Project: Former Perrin AFB: Gary AFB
Analysis Date: 06/11/96
Reported Date: 06/17/96
SWD Number: S60467-1-Matrix Spike
Batch Number: B3W96
Method Number: 8021A
Matrix: Water
Analyst: LTN

Analyte	Laboratory Reporting Limit (LRL)	Results	Units	Dilution Factor
Benzene	2.0	26.8	µg/L	1
Toluene	2.0	20.3	µg/L	1
Ethylbenzene	2.0	20.0	µg/L	1
m/p-Xylenes	4.0	39.8	µg/L	1
o-Xylene	2.0	19.9	µg/L	1

Surrogate	Spike Amount	Recovery	QC Limit
4-Bromochlorobenzene	20.0 µg/L	18.9 µg/L	15 - 25 µg/L

U.S. ARMY CORPS OF ENGINEERS
Southwestern Division Laboratory
4815 Cass Street
Dallas, Texas 75235
214/905-9130

WATER QUALITY CONTROL DATA

Project: Former Perrin AFB: Gary AFB

	Benzene	Toluene	Ethylbenzene	m,p-Xylenes	o-Xylene
Analysis Method	8021A	8021A	8021A	8021A	8021A
Analysis Date	06/11/96	06/11/96	06/11/96	06/11/96	06/11/96
Batch Number	B3W96	B3W96	B3W96	B3W96	B3W96
Blank µg/L	< 2.0	< 2.0	< 2.0	< 4.0	< 2.0
Sample Conc. µg/L	5.6	< 2.0	< 2.0	< 4.0	< 2.0
Spike Sample No.	S60467-1	S60467-1	S60467-1	S60467-1	S60467-1
Spike Conc. µg/L	20.0	20.0	20.0	40.0	20.0
Actual MS Conc. µg/L	26.8	20.3	20.0	39.8	19.9
MS % Rec.	106%	102%	100%	99%	99%
LCS Spike Amount µg/L	20.0	20.0	20.0	40.0	20.0
Laboratory Control Sample Results µg/L	19.7	19.6	19.5	39.5	19.6
	20.3	20.3	20.4	41.1	20.4
Laboratory Control Sample (% Recovery)	99%	98%	98%	99%	98%
	102%	102%	102%	103%	102%
LCS/LCSD Duplicate RPD[1]	3.0	3.5	4.5	4.0	4.0

[1] **NA:** % RPD cannot be calculated.

Insufficient sample to analyze for MSD

$$\text{Matrix spike \% Rec.} = \frac{[(\text{Actual MS or MSD Conc.}) - \text{Sample Conc.}]}{\text{Spike Conc.}} \times 100$$

ENVIRONMENTAL
CHEMICAL
CORPORATION

June 6, 1996

U.S. ARMY CORPS OF ENGINEERS
ATTN: Ms. Mai Tran
SWD LAB
4815 Cass Street
Dallas, Texas 75235

Dear Ms. Tran:

Please find enclosed the results of analysis for Login Number S60436 received on May 18, 1996.

If you have any further questions, please feel free to contact me at (513) 752-2950.

Sincerely,

Mona Risk, Ph.D.
Director

MR:dd

Enclosures

3235
Omni Drive
Cincinnati, Ohio
45245

TEL:(513) 752-2950
FAX:(513) 752-2261

ENVIRONMENTAL CHEMICAL CORPORATION CHECK LIST

Login # :	S60436	Project No.:	22676
Lab Check:	fe (Initials)	Narrative:	✓
Telephone/Fax #:	-	SWD Check:	
Code Sheet:	✓	Diskette:	✓

MISCELLANEOUS ANALYSES

ANALYSES:	BETX (8020)	PAH (8310) (s)	PAH (8310) (w)	TRPH (s)	TRPH (w)	CONDUCTIVITY
Samples	✓	✓	✓	✓	✓	✓
Method Blank	✓	✓	✓	✓	✓	✓
Duplicate	✓	✓	-	✓	-	✓
MS/MSD	✓	✓	-	✓	-	-
LCS	✓	✓	LCS/LCSD	✓	LCS/LCSD	✓

ANALYSES:	TURBIDITY	pH		
Samples	✓	✓		
Method Blank	✓	-		
Duplicate	✓	✓		
MS/MSD	-	-		
LCS	✓	✓		

CUSTODY DOCUMENTS:

Customer Chain-of-Custody	✓
Cooler Receipt Form	✓
Sample Log-In Sheet	✓
Problem & Corrective Action	✓
Holding Time Report	✓

File name: f:\data\forms\ftwortmi.wpd

ENVIRONMENTAL CHEMICAL CORPORATION

CASE NARRATIVE

Customer: U.S. ARMY CORPS OF ENGINEERS - SWDL
Source: Former Perrin AFB; GARY AFB
Login Number : S60436
Lab Sample I.D.: 22676

PAH (8310), TRPH

For the water samples, not enough was received to do a duplicate, matrix spike, matrix spike duplicate. A blank, LCS/LCSD were done for QC package.
No problem encountered when running the soil samples.

BETX

Samples S60436-001 and -002 contain other non-target compounds that interfere with surrogate recoveries.

CONDUCTIVITY, TURBIDITY, pH

No problem.

QA/QC: _____

ENVIRONMENTAL CHEMICAL CORPORATION
CODE EXPLANATION

"Project" Is the ECC Project No.

Metals Analysis

Under Column C:

"U" Element not detected, below detection limit.

Under Column M:

"P" ICP Analysis
"F" Furnace AA Analysis
"CV" Manual Cold Vapor AA Analysis
"NR" Not Required

Organic Analysis

"J" Indicates trace amount.
"U" Analyte not detected, below detection limit.

ENVIRONMENTAL CHEMICAL CORPORATION

QUALITY CONTROL

Customer:	U.S. ARMY CORPS OF ENGINEERS - SWDL	Login Number :	S60436
Source:	N/A	Project No.:	22676
Analysis:	**pH**	Date Received:	N/A
Method:	EPA 9040	Date Analyzed:	05/22/96
Lab Notebook:	513, Pg. 91	**Prep. Batch:**	PHW0522
		Instr. Batch:	PH0522

LAB I.D.	CUSTOMER SAMPLE NO.	MATRIX	LOCATION	VALUE
22676-005DUP	S60436-6	WATER	G1-6324	9.458

			TRUE VALUE	RECOVERED	% RECOVERY
LCSW	N/A	WATER	3.0	3.2	107

ENVIRONMENTAL CHEMICAL CORPORATION

QUALITY CONTROL

Customer:	U.S. ARMY CORPS OF ENGINEERS - SWDL		
Source:	N/A	Project No.:	22676
Analysis:	TRPH	Date Received:	N/A
Method:	EPA 418.1	Date Analyzed:	05/24/96
Lab Notebook:	511 pg.55, 56	**Prep. Batch:**	TRPHW0523
Detection Limit:	0.50 mg/L	**Instr. Batch:**	TRPH0524

LAB I.D.	CUSTOMER SAMPLE NO.	MATRIX	LOCATION	VALUE mg/L
Blank	N/A	WATER	N/A	BDL

			SPIKE mg/L	RECOVERED mg/L	% RECOVERY	QC LIMITS
LCSW Dup	N/A	WATER	5.0	4.7	94	80-120
LCSW	N/A	WATER	5.0	4.9	98	80-120

BDL: Below Detection Limit

ENVIRONMENTAL CHEMICAL CORPORATION

QUALITY CONTROL

Customer:	U.S. ARMY CORPS OF ENGINEERS - SWDL	Login Number :	S60436
Source:	N/A	Project No.:	22676
Analysis:	**TRPH**	Date Received:	N/A
Method:	EPA 9071/418.1	Date Analyzed:	05/24/96
Lab Notebook:	511 pg.52, 53, 54	**Prep. Batch:**	TRPHS0523A
Detection Limit:	15.0 mg/kg	**Instr. Batch:**	TRPH0524

LAB I.D.	CUSTOMER SAMPLE NO.	MATRIX	LOCATION	VALUE mg/kg
22676-002DUP	S60436-2	SOIL	B5-5421	493
Blank	N/A	SOIL	N/A	BDL

			SPIKE mg/kg	RECOVERED mg/kg	% RECOVERY	QC LIMITS
LCSS	N/A	SOIL	250	235	94	80-120
22676-002MS	S60436-2	SOIL	250	309	124	75-125
22676-002MSD	S60436-2	SOIL	250	258	103	75-125

BDL: Below Detection Limit

ENVIRONMENTAL CHEMICAL CORPORATION

QUALITY CONTROL

SAMPLE NUMBER

N/A

Customer: U.S. ARMY CORPS OF ENGINEERS - SWDL

Source: Former Perrin AFB: GARY AFB Login Number : S60436

Location: N/A

Analysis: **BETX EPA 8020**

Matrix:(soil/water)	Soil	Lab Sample I.D.:	BLANK
Sample Weight:	5.0 g	Date Sampled:	N/A
Extract Volume:	5.0 mL	Date Received:	N/A
		Date Extracted:	05/23/96
Column:(packed/cap)	Cap	Date Analyzed:	05/23/96
Percent Solid:	100 %	**Preparation Batch:**	BTXS0523
Dilution Factor:	1	**Instrument Batch:**	BTXS0523
Lab Notebook No:	508,PG32		

BLANK

CAS NO.	COMPOUND	DETECTION LIMITS (µg/kg)	RESULTS	FLAG

ALL COMPOUNDS ARE BELOW DETECTION LIMIT.

SURROGATE STANDARD	RECOVERY (%)	ACCEPTABLE	SPIKE (µg/kg)
4-Bromofluorobenzene	102	74-121	30.0

ENVIRONMENTAL CHEMICAL CORPORATION

QUALITY CONTROL

SAMPLE NUMBER

S60436-1

Customer: U.S. ARMY CORPS OF ENGINEERS - SWDL

Source: Former Perrin AFB: GARY AFB

Login Number : S60436

Location: B1-1040

Analysis: **BETX EPA 8020**

Matrix:(soil/water) SOIL

Sample Weight: 5.0 g

Extract Volume: 5.0 mL

Percent Solid: 72 %

Dilution Factor: 1

Lab Notebook No: 508,PG32

Lab Sample I.D.: 22676-001 Duplicate

Date Sampled: 05/16/96

Date Received: 05/18/96

Date Extracted: 05/23/96

Date Analyzed: 05/23/96

Preparation Batch: BTXS0523

Instrument Batch: BTX0523

DUPLICATE

COMPOUND	DETECTION LIMIT (µg/kg)	SAMPLE RESULT (µg/kg)	DUPLICATE RESULT (µg/kg)	RPD
Benzene	4.2	29.3	14.6	66
Ethyl Benzene	4.2	73.7	55.6	27

ALL OTHER COMPOUNDS ARE BELOW DETECTION LIMIT.

SURROGATE STANDARD	SAMPLE RECOVERY (%)	DUPLICATE RECOVERY (%)	ACCEPTABLE	SPIKE (µg/kg)
4-Bromofluorobenzene	197 #	185 #	74-121	30.0

U: Below Detection Limit

#: Matrix Interference

ENVIRONMENTAL CHEMICAL CORPORATION

QUALITY CONTROL

SAMPLE NUMBER

S60436-1

Customer: U.S. ARMY CORPS OF ENGINEERS - SWDL

Source: Former Perrin AFB: GARY AFB Login Number : S60436

Location: B1-1040

Analysis: BETX EPA 8020

Matrix: (soil/water) SOIL Lab Sample I.D.: 22676-001

Preparation Batch: BTXS0523 **Instrument Batch:** BTX0523

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

COMPOUND	SPIKE ADDED (µg/kg)	SAMPLE CONC. (µg/kg)	MS CONC. (µg/kg)	% REC #	QC LIMITS % REC.
Benzene	25.7	29.3	48.3	74	39-150
Toluene	25.7	0.0	26.8	104	46-148
Ethyl Benzene	25.7	73.7	109	138	32-160
Xylene (total)	77.2	0.0	87.0	113	50-150

COMPOUND	SPIKE ADDED (µg/kg)	MSD CONC. (µg/kg)	MSD % REC	% RPD #	QC LIMITS RPD	QC LIMITS REC.
Benzene	38.6	63.5	89	18	30	39-150
Toluene	38.6	41.4	107	3	30	46-148
Ethyl Benzene	38.6	125	133	4	30	32-160
Xylene (total)	116	132	114	1	30	50-150

SURROGATE STANDARD	SAMPLE RECOVERY (%)	DUPLICATE RECOVERY (%)	ACCEPTABLE	SPIKE (µg/kg)
4-Bromofluorobenzene	201#	185#	74-121	27.8

#: Matrix Interference

 # Column to be used to flag recovery and RPD values with an asterisk

*** Values outside of QC limits**

RPD: 0 out of 4 outside limits

Spike Recovery: 0 out of 8 outside limits

COMMENTS:

ENVIRONMENTAL CHEMICAL CORPORATION

QUALITY CONTROL

SAMPLE NUMBER

N/A

Customer: U.S. ARMY CORPS OF ENGINEERS - SWDL

Source : Former Perrin AFB: GARY AFB Login Number : S60436

Location: N/A

Analysis: BETX EPA 8020

Matrix: (soil/water) SOIL Lab Sample I.D.: 22676-LCSS

Preparation Batch: BTXS0523 **Instrument Batch:** BTXS0523

LABORATORY CONTROL SAMPLE

COMPOUND		TRUE VALUE (µg/kg)	FOUND (µg/kg)	% REC #	QC LIMITS % REC.
Benzene		20.0	19.6	98	39-150
Toluene		20.0	20.3	101	46-148
Ethyl Benzene		20.0	20.8	104	32-160
Xylene (total)		60.0	62.1	103	50-150

SURROGATE STANDARD	RECOVERY (%)	ACCEPTABLE	SPIKE (µg/kg)
4-Bromofluorobenzene	100	74-121	30.0

 # Column to be used to flag recovery values with an asterisk

*** Values outside of QC limits**

Spike Recovery: 0 out of 4 outside limits

COMMENTS:

ENVIRONMENTAL CHEMICAL CORPORATION

QUALITY CONTROL

SAMPLE NUMBER

N/A

Customer: **U.S. ARMY CORPS OF ENGINEERS - SWDL**

Source: Former Perrin AFB: GARY AFB Login Number : S60436

Location: N/A

Analysis: **PAH 8310**

Matrix:(soil/water) Water

Sample Volume: 1000 mL

Extract Volume: 1.0 mL

pH: N/A

Dilution Factor: 1

Lab Notebook No: 510, PAGE 33

Lab Sample I.D.: BLANK

Date Sampled: N/A

Date Received: N/A

Date Extracted: 05/21/96

Date Analyzed: 05/23/96

Preparation Batch: PAHW0521

Instrument Batch: PAH0523

BLANK

CAS NO.	COMPOUND	DETECTION LIMITS (µg/L)	RESULTS	FLAG

ALL COMPOUNDS ARE BELOW DETECTION LIMIT.

SURROGATE STANDARD	RECOVERY (%)	ACCEPTABLE	SPIKE (µg/L)
DECAFLUOROBIPHENYL	95	70-130	4.0

ENVIRONMENTAL CHEMICAL CORPORATION

QUALITY CONTROL

SAMPLE NUMBER

N/A

Customer: U.S. ARMY CORPS OF ENGINEERS - SWDL

Source: Former Perrin AFB: GARY AFB Login Number : S60436

Location: N/A

Analysis: PAH 8310

Matrix: (soil/water) Water Lab Sample I.D.: 22676-LCSW

Preparation Batch: PAHW0521 **Instrument Batch:** PAH0524

LAB CONTROL SAMPLE / LAB CONTROL SAMPLE DUPLICATE

COMPOUND		TRUE VALUE (µg/L)	FOUND (µg/L)	% REC #	QC LIMITS % REC.
NAPHTHALENE		4.0	3.9	96	70-130
ACENAPHTHYLENE		4.0	3.7	94	70-130
ACENAPHATHENE		4.0	3.9	97	70-130
FLUORENE		4.0	4.0	99	70-130
PHENANTHRENE		4.0	4.1	101	70-130
ANTHRACENE		4.0	4.2	105	70-130
FLUORANTHENE		4.0	4.1	103	70-130
PYRENE		4.0	4.3	107	70-130
BENZO (A) ANTHRACEN		4.0	4.1	103	70-130
CHRYSENE		4.0	4.1	103	70-130
BENZO (B) FLUORANATHENE		4.0	4.1	103	70-130
BENZO (K) FLUORANTHENE		4.0	4.1	103	70-130
BENZO (A) PYRENE		4.0	4.1	102	70-130

COMPOUND	TRUE VALUE (µg/L)	FOUND (µg/L)	% REC	% RPD #	QC LIMITS RPD	QC LIMITS REC.
NAPHTHALENE	4.0	3.8	94	2	20	70-130
ACENAPAHTHYLENE	4.0	3.8	95	1	20	70-130
ACENAPHATHENE	4.0	3.7	94	3	20	70-130
FLUORENE	4.0	3.8	96	3	20	70-130
PHENANTHRENE	4.0	4.0	99	2	20	70-130
ANTHRACENE	4.0	4.1	103	2	20	70-130
FLUORANTHENE	4.0	4.0	100	3	20	70-130
PYRENE	4.0	4.1	102	5	20	70-130
BENZO (A) ANTHRACENE	4.0	4.1	102	1	20	70-130
CHRYSENE	4.0	4.1	101	2	20	70-130
BENZO (B) FLUORANTHENE	4.0	4.1	101	2	20	70-130
BENZO (K) FLUORANATHENE	4.0	4.1	102	1	20	70-130
BENZO (A) PYRENE	4.0	4.0	100	2	20	70-130

 # Column to be used to flag recovery and RPD values with an asterisk

*** Values outside of QC limits**

RPD: 0 out of 13 outside limits

Spike Recovery: 0 out of 26 outside limits

COMMENTS: A Blank Spike was performed because of insufficient sample amount

ENVIRONMENTAL CHEMICAL CORPORATION

QUALITY CONTROL

SAMPLE NUMBER

N/A

Customer: **U.S. ARMY CORPS OF ENGINEERS - SWDL**

Source: Former Perrin AFB: GARY AFB WORK ORDER: S60436

Location: N/A

Analysis: **PAH 8310**

Matrix: (soil/water) Water Lab Sample I.D.: 22676-LCSW

Preparation Batch: PAHW0521 **Instrument Batch:** PAH0524

SURROGATE STANDARD	SAMPLE RECOVERY (%)	DUPLICATE RECOVERY (%)	ACCEPTABLE	SPIKE (µg/L)
DECAFLUOROBIPHENYL	93	91	70-130	4.0

ENVIRONMENTAL CHEMICAL CORPORATION

QUALITY CONTROL

SAMPLE NUMBER

N/A

Customer: **U.S. ARMY CORPS OF ENGINEERS - SWDL**

Source: Former Perrin AFB: GARY AFB Login Number : S60436

Location: N/A

Analysis: **PAH 8310**

Matrix:(soil/water) Soil

Sample Weight: 10.01 g

Extract Volume: 1.0 mL

Percent Solid: 100 %

Dilution Factor: 1

Lab Notebook No: 510, PAGE 33

Lab Sample I.D.: BLANK

Date Sampled: N/A

Date Received: N/A

Date Extracted: 05/20/96

Date Analyzed: 05/24/96

Preparation Batch: PAHS0520

Instrument Batch: PAH0524

BLANK

CAS NO.	COMPOUND	DETECTION LIMITS (µg/kg)	RESULTS	FLAG

ALL COMPOUNDS ARE BELOW DETECTION LIMIT.

SURROGATE STANDARD	RECOVERY (%)	ACCEPTABLE	SPIKE (µg/kg)
DECAFLUOROBIPHENYL	103	70-130	400

ENVIRONMENTAL CHEMICAL CORPORATION

QUALITY CONTROL

SAMPLE NUMBER

S60436-1

Customer: **U.S. ARMY CORPS OF ENGINEERS - SWDL**

Source: Former Perrin AFB: GARY AFB

Login Number : S60436

Location: B1-1040

Analysis: PAH 8310

Matrix:(soil/water) SOIL

Sample Weight: 10.01 g

Extract Volume: 1.0 mL

Percent Solid: 72 %

Dilution Factor: 1

Lab Notebook No: 510, PAGE 33

Lab Sample I.D.: 22676-001 Duplicate

Date Sampled: 05/16/96

Date Received: 05/18/96

Date Extracted: 05/20/96

Date Analyzed: 05/24/96

Preparation Batch: PAHS0520

Instrument Batch: PAH0524

DUPLICATE

COMPOUND	DETECTION LIMIT (µg/kg)	SAMPLE RESULT (µg/kg)	DUPLICATE RESULT (µg/kg)	RPD
Naphthalene	89.4	311	320	2
Phenanthrene	27.3	196	187	4
Fluoranthrene	32.3	125	126	0
Pyrene	21.5	361	385	6

ALL OTHER COMPOUNDS ARE BELOW DETECTION LIMIT.

SURROGATE STANDARD	SAMPLE RECOVERY (%)	DUPLICATE RECOVERY (%)	ACCEPTABLE	SPIKE (µg/kg)
DECAFLUOROBIPHENYL	101	99	70-130	400

U: Below Detection Limit

ENVIRONMENTAL CHEMICAL CORPORATION

QUALITY CONTROL

SAMPLE NUMBER

S60436-1

Customer: **U.S. ARMY CORPS OF ENGINEERS - SWDL**

Source: Former Perrin AFB: GARY AFB Login Number : S60436

Location: B1-1040

Analysis: **PAH 8310**

Matrix: (soil/water) SOIL Lab Sample I.D.: 22676-001

Preparation Batch: PAHS0520 **Instrument Batch:** PAH0524

MATRIX SPIKE/MATRIX SPIKE DUPLICATE

COMPOUND	SPIKE ADDED (µg/kg)	SAMPLE CONC. (µg/kg)	MS CONC. (µg/kg)	% REC #	QC LIMITS % REC.
NAPHTHALENE	556	311	812	90	70-130
ACENAPHTHYLENE	556	0.0	503	91	70-130
ACENAPHATHENE	556	0.0	460	83	70-130
FLUORENE	556	0.0	552	99	70-130
PHENANTHRENE	556	196	670	85	70-130
ANTHRACENE	556	0.0	583	105	70-130
FLUORANTHRENE	556	125	584	83	70-130
PYRENE	556	361	938	104	70-130
BENZO (A) ANTRACENE	556	0.0	560	101	70-130
CHRYSENE	556	0.0	481	87	70-130
BENZO (B) FLUORANTHENE	556	0.0	475	85	70-130
BENZO (K) FLUORANTHENE	556	0.0	462	83	70-130
BENZO (A) PYRENE	556	0.0	440	79	70-130

COMPOUND	SPIKE ADDED (µg/kg)	MSD CONC. (µg/kg)	MSD % REC	% RPD #	QC LIMITS RPD	QC LIMITS REC.
NAPHTHALENE	555	801	88	2	20	70-130
ACENAPHTHYLENE	555	522	94	3	20	70-130
ACENAPHATHENE	555	502	90	8	20	70-130
FLUORENE	555	541	98	1	20	70-130
PHENANTHRENE	555	669	85	0	20	70-130
ANTHRACENE	555	585	105	0	20	70-130
FLUORANTHRENE	555	570	80	4	20	70-130
PYRENE	555	924	102	2	20	70-130
BENZO (A) ANTHRACENE	555	557	100	1	20	70-130
CHRYSENE	555	513	92	6	20	70-130
BENZO (B) FLUORANTHENE	555	505	91	7	20	70-130
BENZO (K) FLUORANTHENE	555	495	89	7	20	70-130
BENZO (A) PYRENE	555	481	87	10	20	70-130

 # Column to be used to flag recovery and RPD values with an asterisk

*** Values outside of QC limits**

RPD: 0 out of 13 outside limits

Spike Recovery: 0 out of 26 outside limits

COMMENTS:

ENVIRONMENTAL CHEMICAL CORPORATION

QUALITY CONTROL

SAMPLE NUMBER

S60436-1

Customer: **U.S. ARMY CORPS OF ENGINEERS - SWDL**

Source: Former Perrin AFB: GARY AFB WORK ORDER: S60436

Location: B1-1040

Analysis: PAH 8310

Matrix: (soil/water) SOIL Lab Sample I.D.: 22676-001

Preparation Batch: PAHS0520 **Instrument Batch:** PAH0524

SURROGATE STANDARD	SAMPLE RECOVERY (%)	DUPLICATE RECOVERY (%)	ACCEPTABLE	SPIKE (µg/kg)
DECAFLUOROBIPHENYL	96	94	70-130	400

ENVIRONMENTAL CHEMICAL CORPORATION

QUALITY CONTROL

SAMPLE NUMBER

N/A

Customer: **U.S. ARMY CORPS OF ENGINEERS - SWDL**

Source : Former Perrin AFB: GARY AFB Login Number : S60436

Location: N/A

Analysis: **PAH 8310**

Matrix: (soil/water) SOIL Lab Sample I.D.: 22676-LCSS

Preparation Batch: PAHS0520 **Instrument Batch:** PAH0524

LABORATORY CONTROL SAMPLE

COMPOUND		TRUE VALUE (µg/kg)	FOUND (µg/kg)	% REC #	QC LIMITS % REC.
NAPHTHALENE		400	352	88	70-130
ACENAPHTHYLENE		400	354	88	70-130
ACENAPHATHENE		400	400	100	70-130
FLUORENE		400	359	90	70-130
PHENANTHRENE		400	375	94	70-130
ANTHRACENE		400	369	92	70-130
FLUORANATHENE		400	387	97	70-130
PYRENE		400	384	96	70-130
BENZO(A)ANTHRACENE		400	356	89	70-130
CHRYSENE		400	347	87	70-130
BENZO(B)FLUORANTHENE		400	346	87	70-130
BENZO(K)FLUORANTHENE		400	344	86	70-130
BENZO(A)PYRENE		400	326	82	70-130

SURROGATE STANDARD	RECOVERY (%)	ACCEPTABLE	SPIKE (µg/kg)
DECAFLUOROBIPHENYL	99	70-130	400

 # Column to be used to flag recovery values with an asterisk

*** Values outside of QC limits**

Spike Recovery: 0 out of 13 outside limits

COMMENTS:

ENVIRONMENTAL CHEMICAL CORPORATION

QUALITY CONTROL

Customer:	U.S. ARMY CORPS OF ENGINEERS - SWDL	Login Number :	S60436
Source:	N/A	Project No.:	22676
Analysis:	Conductivity	Date Received:	N/A
Method:	EPA 9050	Date Analyzed:	05/20/96
Lab Notebook:	512, pg. 35	**Prep. Batch:**	CO520
		Instr. Batch:	CO520

LAB I.D.	CUSTOMER SAMPLE NO.	MATRIX	LOCATION	VALUE umhos
22676-005DUP	S60436-6	WATER	G1-6324	766
Blank	N/A	WATER	N/A	2.0

			SPIKE	RECOVERED	% RECOVERY
LCS	N/A	WATER	862	850	99

BDL: Below Detection Limit

ENVIRONMENTAL CHEMICAL CORPORATION

QUALITY CONTROL

Customer:	U.S. ARMY CORPS OF ENGINEERS - SWDL	Login Number :	S60436
Source:	N/A	Project No.:	22676
Analysis:	**Turbidity**	Date Received:	N/A
Method:	EPA 180.1	Date Analyzed:	05/20/96
Lab Notebook:	512, pg. 34	**Prep. Batch:**	TB520
		Instr. Batch:	TB520

LAB I.D.	CUSTOMER SAMPLE NO.	MATRIX	LOCATION	VALUE NTU
22676-005DUP	S60436-6	WATER	G1-6324	20600
Blank	N/A	WATER	N/A	0.041

			SPIKE	RECOVERED	% RECOVERY
LCSW	N/A	WATER	10.0	10.5	105

BDL: Below Detection Limit

ENVIRONMENTAL CHEMICAL CORPORATION

SAMPLE LOG-IN SHEET

Received by:(print name) HOLLY WILLIS	Page of
Received by:(signature) Holly Willis	Log-In Date 5-18-96

Remarks:		Customer Sample #	Site	ECC#	pH	Remarks: Condition of Sample Shipment, etc.
Custody Seal(s)	~~Present~~/Absent ~~Intact~~/Broken	560436 -1	Former Perrin AFB	22676 -001		
Custody Seal Nos.:	NA	-2		-002		
		-4		-003		
Chain-of-Custody Records	~~Present~~/Absent	-5		-004		
Airbill	~~Airbill~~/Sticker ~~Present~~/Absent	-6		-005		
Airbill No.:	8652191951					
Sample Condition:	~~Intact~~/Broken/ Leaking					
Does information on Custody records, traffic reports, and sample tags agree?	~~Yes~~/No					
Date Received at Lab:	5-18-96					
Time Received:	10:00a.m.					

Received By:	Holly Willis
Date:	5-18-96

ENVIRONMENTAL CHEMICAL CORPORATION

PROBLEMS & CORRECTIVE ACTION SHEET

Customer Name: USACE-SWD-FW
Location: Former Perrin AFB
Date Rec'd: 5-18-96

PROBLEMS

None

CORRECTIVE ACTION

Received By: [illegible]
Date: 5-18-96
Time: 10:00 a.m.

Environmental Chemical Corporation

Additional Cooler Receipt Forms

Customer Name: ~~ECC~~ USACE-SWD

Site/Location: Former Perrin AFB

MPS 964 8499 655 — cooler # TC-54 - lower sid - 5/17/96 - Smith

Temp 4°C

Received By: Hollyn Willis

Date & Time: 5-18-96

Attachment

Project #: 22676
ECC - HOLDING TIME

Date Printed: 06/05/96

Customer : U.S. ARMY CORPS OF ENGINEERS -
Source : Former Perrin AFB: GARY AFB
Login Number : S60436

Lab I.D. #	Sample #	Analysis	Sampling Date	Date Received	Prep. Batch	Prep/Extr Date	Holding Time
22676-001	S60436-1	BETX	05/16/96	05/18/96	BTXS0523	05/23/96	14
22676-001	S60436-1	Method 8310	05/16/96	05/18/96	PAHS0520	05/20/96	14
22676-001	S60436-1	TRPH	05/16/96	05/18/96	TRPHS0523A	05/23/96	28
22676-002	S60436-2	BETX	05/16/96	05/18/96	BTXS0523	05/23/96	14
22676-002	S60436-2	Method 8310	05/16/96	05/18/96	PAHS0520	05/20/96	14
22676-002	S60436-2	TRPH	05/16/96	05/18/96	TRPHS0523A	05/23/96	28
22676-003	S60436-4	TRPH	05/16/96	05/18/96	TRPHW0523	05/24/96	28
22676-004	S60436-5	Method 8310	05/16/96	05/18/96	PAHW0521	05/21/96	7
22676-005	S60436-6	Conductivity	05/16/96	05/18/96	CO520	05/20/96	N/A
22676-005	S60436-6	Turbidity	05/16/96	05/18/96	TB520	05/20/96	N/A
22676-005	S60436-6	pH	05/16/96	05/18/96	PHW0522	05/22/96	7

* - Sample Received After Holding Time Had Elapsed
\# - Sample Received Within One Day of Holding Time

ENVIRONMENTAL CHEMICAL CORPORATION
COOLER RECEIPT FORM

Cooler #: _____
Date Rec'd: 5-18-96

Project: USACOE-SWD-Former Purrimo#

A. PRELIMINARY EXAMINATION PHASE: Date Cooler was opened: 5-18-96
by:(Print) Holly Willis (Sign) Holly Willis

1. Were custody seals on outside of cooler? ..... ~~YES~~ NO
   If yes, how many and where? 1 - lid
   Date 5-17-96 Signature Smith
2. Were custody seals unbroken and intact at the date and time of arrival? ~~YES~~ NO

2a. Were tamper-evident seals used? ..... YES NO

3. Were chain of custody papers sealed in a plastic bag and taped to top of lid? YES NO

4. Was project identifiable from custody papers? ..... ~~YES~~ NO

5. Were custody paper filled out properly (ink, signed, ect)? ..... ~~YES~~ NO

6. Did you sign custody papers in the appropriate place? ..... ~~YES~~ NO

7. Did cooler come with a shipping slip? ..... ~~YES~~ NO
   If yes, attach & enter airbill#: Federal Express/UPS 8605219951

8. Have designated person initial here to acknowledge receipt of cooler: HW Date 5-18-96

B. LOG-IN PHASE: Date samples were logged in: 5-18-96
by:(Print) Holly Willis (Sign) Holly Willis

9. Describe Packaging: ~~Ice Packs~~ Peanuts Ice ~~Packing Material~~

10. Was enough ice used? ..... Temp. 4°C ~~YES~~ NO

11. Were all bottles sealed in separate plastic bags and in good condition? ..... ~~YES~~ NO

12. Were bottle labels and correct containers used? ..... ~~YES~~ NO

13. Did labels agree with custody papers? ..... ~~YES~~ NO

14. Were correct preservatives used when required? ..... ~~YES~~ NO

15. Was correct amount of sample sent for analysis? ..... ~~YES~~ NO

Inchcape Testing Services
Environmental Laboratories

1089 E. Collins Blvd.
Richardson, TX 75081
Tel. 214-238-5591
Fax. 214-238-5592

DATE RECEIVED: 31-MAY-1996 REPORT NUMBER: D96-5855
REPORT DATE: 10-JUN-1996

SAMPLE SUBMITTED BY : US Army Corps of Engineers
ADDRESS : 4815 Cass Street
Dallas, TX 75235-8011
ATTENTION : Ms. Mai Tran
PROJECT : Former Perrin (S60468-3)
DATE SAMPLED : 30-MAY-1996

CASE NARRATIVE COMMENTS:

The applicable results were reported on a dry weight basis, having been corrected for total solids.

No problems were encountered during the sample analysis of this job.

Please refer to the enclosed Case Narrative Summary for a comparison of sample identifications and analytical requests.

If you have any questions, please call Mr. John Todd at (214) 238-5591.

Amy Pence
Data Review

Inchcape Testing Services
Environmental Laboratories

JOB ID : D96-5855
CUSTOMER : US Army Corps of Engineers
PROJECT : Former Perrin (S60468-3)

SAMPLE ID : D96-5855-1 DATE SAMPLED : 30-MAY-1996
ID MARKS : MW-1-7470 S60468-3 Gary AFB

ANALYSIS	PRP	PRP DATE	ANL	ANL DATE	QC BATCH NUMBER
8310_PAH_L /1	HCS	3-JUN-1996	JXA	7-JUN-1996	AB766-34

SAMPLE ID : D96-5855-2 DATE SAMPLED : 31-MAY-1996
ID MARKS : Method Blank

ANALYSIS	PRP	PRP DATE	ANL	ANL DATE	QC BATCH NUMBER
8310_PAH_L /1	HCS	3-JUN-1996	JXA	4-JUN-1996	AB766-34

ANALYSIS	DESCRIPTION
8310_PAH_L	Polynuclear Aromatic Hydrocarbons,8310,Liquid

Inchcape Testing Services
Environmental Laboratories

1089 E. Collins Blvd.
Richardson, TX 75081
Tel. 214-238-5591
Fax. 214-238-5592

ANALYTICAL REPORT

DATE RECEIVED : 31-MAY-1996

REPORT NUMBER : D96-5855
REPORT DATE : 10-JUN-1996

SAMPLE SUBMITTED BY : US Army Corps of Engineers
ADDRESS : 4815 Cass St.
: Dallas, TX 75235-8011
ATTENTION : Ms. Mai Tran
PROJECT : Former Perrin (S60468-3)

Included in this data package are the analytical results for the sample group which you have submitted to Inchcape Testing Services for analysis. These results are representative of the samples as received by the laboratory.

The information contained herein has undergone extensive review and is deemed accurate and complete. Sample analysis and quality control were performed in accordance with all applicable protocols. Any deviations from these protocols or observations of interest are detailed in an accompanying Case Narrative. Please refrain from reproducing this report except in its entirety.

If you have any questions regarding this report and its associated materials please call your Project Manager at (214) 238-5591.

We appreciate the opportunity to serve you and look forward to providing continued service in the future.

Martin Jeffus
General Manager

Inchcape Testing Services
Environmental Laboratories

DATE RECEIVED : 31-MAY-1996

REPORT NUMBER : D96-5855-2
REPORT DATE : 10-JUN-1996

SAMPLE SUBMITTED BY : US Army Corps of Engineers
ADDRESS : 4815 Cass St.
: Dallas, TX 75235-8011
ATTENTION : Ms. Mai Tran

SAMPLE MATRIX : Liquid
ID MARKS : Method Blank
PROJECT : Former Perrin (S60468-3)
DATE SAMPLED : 31-MAY-1996
PREPARATION METHOD : EPA 3520B
PREPARED BY : HCS
PREPARED ON : 3-JUN-1996
ANALYSIS METHOD : EPA 8310 /1
ANALYZED BY : JXA
ANALYZED ON : 4-JUN-1996
DILUTION FACTOR : 1
METHOD FACTOR : 10
QC BATCH NO : AB766-34

POLYNUCLEAR AROMATIC HYDROCARBONS		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Acenaphthene	1.80 µg/L	< 1.80 µg/L
Acenaphthylene	1.00 µg/L	< 1.00 µg/L
Anthracene	0.660 µg/L	< 0.660 µg/L
Benzo(a)anthracene	0.130 µg/L	< 0.130 µg/L
Benzo(b)fluoranthene	0.180 µg/L	< 0.180 µg/L
Benzo(k)fluoranthene	0.170 µg/L	< 0.170 µg/L
Benzo(g,h,i)perylene	0.760 µg/L	< 0.760 µg/L
Benzo(a)pyrene	0.230 µg/L	< 0.230 µg/L
Chrysene	0.150 µg/L	< 0.150 µg/L
Dibenzo(a,h)anthracene	0.300 µg/L	< 0.300 µg/L
Fluoranthene	0.210 µg/L	< 0.210 µg/L
Fluorene	0.210 µg/L	< 0.210 µg/L
Indeno(1,2,3-cd)pyrene	0.430 µg/L	< 0.430 µg/L
Naphthalene	1.00 µg/L	< 1.00 µg/L

REPORT NUMBER : D96-5855-2
ANALYSIS METHOD : EPA 8310 /1

POLYNUCLEAR AROMATIC HYDROCARBONS		
TEST REQUESTED	DETECTION LIMIT	RESULTS
Phenanthrene	0.640 µg/L	< 0.640 µg/L
Pyrene	0.270 µg/L	< 0.270 µg/L

QUALITY CONTROL DATA		
SURROGATE COMPOUND	SPIKE LEVEL	SPIKE RECOVERED
1-Fluoronapthalene (SS)	100 µg/L	90.5 %

Applicable results are reported on Dry Weight basis.

Inchcape Testing Services
Environmental Laboratories

REPORT DATE : 10-JUN-1996 REPORT NUMBER : D96-5855

SAMPLE SUBMITTED BY : US Army Corps of Engineers
ATTENTION : Ms. Mai Tran
PROJECT : Former Perrin (S60468-3)

LABORATORY QUALITY CONTROL REPORT

ANALYTE	Naphthalene	Acenaphthylene	Acenaphthene	Fluorene	Phenanthrene
BATCH NO.	AB766-34	AB766-34	AB766-34	AB766-34	AB766-34
LCS LOT NO.	AB604-25B	AB604-25B	AB604-25B	AB604-25B	AB604-25B
PREP METHOD	EPA 3520B	EPA 3520B	EPA 3520B	EPA 3520B	EPA 3520B
PREPARED BY	HCS	HCS	HCS	HCS	HCS
ANALYSIS METHOD	EPA 8310	EPA 8310	EPA 8310	EPA 8310	EPA 8310
ANALYZED BY	JXA	JXA	JXA	JXA	JXA
UNITS	µg/L	µg/L	µg/L	µg/L	µg/L
METHOD BLANK	< 1.80	< 1.00	< 1.80	< 0.210	< 0.640
SPIKE LEVEL	10.0	10.0	10.0	10.0	10.0
MS RESULT	NA	NA	NA	NA	NA
MS RECOVERY %	NA	NA	NA	NA	NA
MSD RESULT	NA	NA	NA	NA	NA
MSD RECOVERY %	NA	NA	NA	NA	NA
MS/MSD RPD %	NA	NA	NA	NA	NA
BS RESULT	10.5	9.49	11.0	8.90	8.70
BS RECOVERY %	105	94.9	110	89.0	87.0
BSD RESULT	10.6	9.33	10.6	8.50	8.30
BSD RECOVERY %	106	93.3	106	85.0	83.0
BS/BSD RPD %	0.95	1.70	3.70	4.60	4.71
DUPLICATE RPD %	NA	NA	NA	NA	NA
LCS LEVEL	100	100	100	100	100
LCS RESULT	SEE_BS	SEE_BS	SEE_BS	SEE_BS	SEE_BS
LCS RECOVERY %	SEE_BS	SEE_BS	SEE_BS	SEE_BS	SEE_BS
SPIKE SAMPLE ID	---	---	---	---	---
DUP SAMPLE ID	---	---	---	---	---

NA Not applicable
SEE_BS LCS and LCS Duplicate reported as BS and BSD.

Inchcape Testing Services
Environmental Laboratories

REPORT DATE : 10-JUN-1996 REPORT NUMBER : D96-5855

SAMPLE SUBMITTED BY : US Army Corps of Engineers
ATTENTION : Ms. Mai Tran
PROJECT : Former Perrin (S60468-3)

LABORATORY QUALITY CONTROL REPORT

ANALYTE	Anthracene	Chrysene	Benzo(k)fluoranthene
BATCH NO.	AB766-34	AB766-34	AB766-34
LCS LOT NO.	AB604-25B	AB604-25B	AB604-25B
PREP METHOD	EPA 3520B	EPA 3520B	EPA 3520B
PREPARED BY	HCS	HCS	HCS
ANALYSIS METHOD	EPA 8310	EPA 8310	EPA 8310
ANALYZED BY	JXA	JXA	JXA
UNITS	µg/L	µg/L	µg/L
METHOD BLANK	< 0.660	< 0.150	< 0.170
SPIKE LEVEL	10.0	10.0	10.0
MS RESULT	NA	NA	NA
MS RECOVERY %	NA	NA	NA
MSD RESULT	NA	NA	NA
MSD RECOVERY %	NA	NA	NA
MS/MSD RPD %	NA	NA	NA
BS RESULT	8.50	8.90	7.70
BS RECOVERY %	85.0	89.0	77.0
BSD RESULT	8.20	8.70	8.10
BSD RECOVERY %	82.0	87.0	81.0
BS/BSD RPD %	3.59	2.27	5.06
DUPLICATE RPD %	NA	NA	NA
LCS LEVEL	100	100	100
LCS RESULT	SEE_BS	SEE_BS	SEE_BS
LCS RECOVERY %	SEE_BS	SEE_BS	SEE_BS
SPIKE SAMPLE ID	---	---	---
DUP SAMPLE ID	---	---	---

NA Not applicable
SEE_BS LCS and LCS Duplicate reported as BS and BSD.

ORIGINAL

COOLER RECEIPT FORM

Date Received: 5-31-96 Project: Former Perrin

Date Logged-in: 5-31-96 Received by: B. Wilson

No. of coolers received: 3 Cooler Numbers: TC-65, LC-11, PTX-024

1	Shipping slip. If yes, carrier and bill number:	Yes	No
2	Custody seals on cooler. If yes, how many and where: (2) Front + Back	Yes	No
3	Custody seals intact.	Yes	No
4	Chain of Custody in plastic.	Yes	No
5	Chain of Custody filled out properly.	Yes	No
6	Client signed Chain of Custody.	Yes	No
7	Samples shipped on ice. If no, temperature of cooler:	Yes	No
8	All bottles sealed.	Yes	No
9	All bottles received intact.	Yes	No
10	Labels in good condition and complete.	Yes	No
11	Sample labels agree with Chain of Custody.	Yes	No
12	Correct containers used.	Yes	No
13	Correct preservative used.	Yes	No
14	Sufficient sample provided.	Yes	No
15	Bubbles absent from VOA.	Yes	No
16	Comments (use corrective action form if necessary):		

INCHCAPE TESTING SERVICES
Dallas

SAMPLE PRESERVATION INFORMATION SHEET

Preserved By	KRH	JOB NUMBER	5855
Date	5-31-96		
Time		Client Name	COE

Sample No.	Container Type	Apparent Volume (mLs)	Initial pH* (20± 2°C)	Final pH	Preservative Added	Filtration	Comments
5855-1	1 Ag	1L	6.4	6.4	8		NP

KRH

pH Duplicate (maximum difference = 0.2): Sample No. 5855-1	6.4	**PRESERVATIVE / FILTRATION KEY** 1 = Pre-preserved 2 = H_2SO_4 to pH<2 3 = HNO_3 to pH<2 4 = HCl to pH<2 5 = NaOH to pH>12 6 = $Na_2S_2O_3$ (0.008%) 7 = 2 mL ZnOAc/NaOH to pH>12 8 = No Preservative Required
pH LCS (pH = 7.0 ± 0.2): Lot Number: M090	7.0	F = Chain-of-Custody indicates sample was filtered in the field L = Sample filtered (0.45 pm) in the laboratory before preservation

* The initial pH is determined in accordance with EPA methods 150.1 / SW-846 9040 using a sample aliquot which has been adjusted to 20 ± 2°C

1089 East Collins Blvd. • Richardson TX 75081 • (214) 238-5591 • Fax (214) 238-5592

RANDY NIEBUHR
(817) 334-3221 x 2642

Page 1 of 1

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

Former Gary Air Force Base LPST # 108133 5-19-96	Soil Boring /Ground Water Monitoring Well No. QA	Caldwell County, Texas

Field Sample No./ Identification	Date and Time	Filtered Yes	Filtered No	Sample Container (SIZE/MAT'L)	Sample Type (Liquid, Sludge, Etc.)	Preservative	ANALYSIS REQUESTED BTEX	TPH	PAH	LABORATORY REMARKS
B1-1040	11:20 A		✓	2" x 2" Glass	Soil	None	EPA 8020	EPA 418.1 EPA 3540 soxlet extraction	EPA 8310	S60436-1
B5-5921	5-16-96 09:15A		✓	"	"	"	"	"	"	2
G1-2234	11:05A		✓	2-40ml Glass	GW	HCL	BTEX	EPA 8020	—	3
G1-6234	11:10 A		✓	1L Glass	GW	"	TPH	EPA 418.1 EPA 3540 Soxlet extraction		4
G1-2324	11:15A		✓	1L Amber	GW	None	PAH	EPA 8310		5
G1-6324	11:20A		✓	1L Amber	GW	"	pH, conductivity, DO, turbidity			6

Samplers: (Signature)	Relinquished by: (Signature)	Date: 5/16/96 Time: 6:40P	Received by: (Signature)	Date: Time:	Intact
[signature]	[signature]		[signature]		
	Relinquished by: (Signature)	Date: Time:	Received by: (Signature)	Date: Time:	Intact
Affiliation: Thompson Professional Group, Inc. 6110 Clarkson Lane Houston, TX 77055 (713) 956-4100	Relinquished by: (Signature)	Date: Time:	Received by: (Signature)	Date: Time:	Intact

SAMPLER REMARKS: MIPR #W45X MA ~~61062608~~ 61274823

Seal #

Received for laboratory: (SIGNATURE) [signature]

Date: 17 MAY 96 Time: 1110

Laboratory No.

Data Results to:

per Randy Niebuhr 28/... SC

MAY-17-96 SAT 08:34 LQ #929 S... FAX NO. 5123920324 ...02

THOMPSON
PROFESSIONAL
GROUP, INC.

6110 Clarkson Lane
Houston, Texas 77055
(713) 956-4100
(713) 956-4121 Fax

Engineering
Architecture
Environmental Sciences
Surveying & Mapping

To: Mr. Randy Smith

With: USACE Laboratory

Fax No: (214) 905-9135

From: L. J. Wieting, Jr.

No. of Pages: 2 with this sheet

Message:

Mr. Smith,

This is the Chain-of-Custody for the Former Camp FB, San Marcos, TX. This will be all the samples for this project.

Contact me at 1-800-467-3700, Enter PIN#596-0007, then your telephone No. and # sign. I will call you back.

Thank you.

L. J. Wieting, Jr.

CESWD-ETE-GL
Cooler Receipt Form

5-1-95

CEFMS # _____ LIMS # 560436

Date Received 17MAY96 MIPR # _____

Date Checked In 17MAY96 Project GARY AFB

By (sign) [signature] District _____

Carrier/Bill # FX 962 615 9675

1. Custody Seals?/Location NONE Yes (No)
2. Samples were non-radioactive? ..... (Yes) No
3. Chain of custody in plastic? ..... (Yes) No
4. Temperature at receipt ~~ICE SN~~ (OK = 4 +/- 2°C) (OK) NOK
5. Ice & Packing ICE/BUB-BAGS
6. Chain of Custody filled out properly? ..... Yes (No)
7. All containers in separate bags? ..... (Yes) No
8. Sample containers intact? ..... (Yes) No
9. Label(s) complete & in good condition? ..... (Yes) No
10. Label(s) agree with chain of custody? ..... Yes (No)
11. Correct containers used? ..... (Yes) No
12. Sufficient sample? ..... (Yes) No
13. VOA vials bubble-free (H_2O) or no head space (soil)? Yes (No)
14. Preservation OK? TM pH____; TRPH pH 1.0; TOC pH____; TOX pH____; CN pH____; N/P pH____; Other pH____ Yes (No)

Comments #6 - NO COE/POC. #10 - VOA VIALS (G1-2234) INDICATE SY IS SOIL. CDC = WATER. VISUAL = WATER. #13 - ONE VIAL BUB > 6mm. #14 - #G1-6234 NOT pH < 2 //SH

1100HRS/RANDY ~~NIEBUHR SH~~ NIEBUHR ADV'D SWD TO GO ~~AHEAD SH~~ AHEAD W/ TRPH (G1-6434). SWD ADV'D FTW SY HAS LOT (3/4" ≈) SEDIMENT IN BTL. COULD BE LIME & NEUT.'D ACID ADDED BY CTR. //SH

1520HRS - 17MAY96 / PER RANDY N., DO NOT RUN D.O. //SH

SWD KEPT WATER/BTEX

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

Former Gary Air Force Base LPST # 108133	Soil Boring /Ground Water Monitoring Well No. 1	Caldwell County, Texas

Field Sample No./ Identification	Date and Time	Filtered Yes	Filtered No	Sample Container (SIZE/MAT'L)	Sample Type (Liquid, Sludge, Etc.)	Preservative	ANALYSIS REQUESTED	LABORATORY REMARKS
MW-1-7468	5/30-1305		✓	40 ml	GW	HCL	BTEX (EPA 8020)	360468-1
MW-1-7469	5/30-1308		✓	40 ml	GW	HCL	BTEX (EPA 8020)	2
MW-1-7470	5/30-1310		✓	1L Amber	GW	none	PAH (EPA 8310)	3

Samplers: (Signature)	Relinquished by: (Signature)	Date: 5-30-96 Time: 1501	Received by: (Signature)	Date: 5-30-96 Time: 1501	Intact
Affiliation	Relinquished by: (Signature)	Date: Time:	Received by: (Signature)	Date: Time:	Intact
	Relinquished by: (Signature)	Date: Time:	Received by: (Signature)	Date: Time:	Intact

SAMPLER REMARKS: MIPR-# W45XMA61062608

Received for laboratory: (SIGNATURE) Randy Smith — Date: 31 MAY 96 Time: 1330 — Laboratory No.

Seal #

Data Results to:

per Randy Nieber 6/28/96 SL

CESWD-ETE-GL
Cooler Receipt Form

5-1-95

CEFMS # _____ LIMS # 560468

Date Received 31MAY96 MIPR # _____

Date Checked In 31MAY96 Project GARY AFB

By (sign) Randy Smith District FT WORTH

Carrier/Bill # FX 938 490 389 4

1. Custody Seals?/Location Ø Yes (No)
2. Samples were non-radioactive? ..... (Yes) No
3. Chain of custody in plastic? ..... (Yes) No
4. Temperature at receipt _____ (OK = 4 +/- 2°C) (OK) NOK
5. Ice & Packing ICE BUB-WRAP
6. Chain of Custody filled out properly? ..... Yes (No)
7. All containers in separate bags? ..... (Yes) No
8. Sample containers intact? ..... (Yes) No
9. Label(s) complete & in good condition? ..... Yes (No)
10. Label(s) agree with chain of custody? ..... (Yes) No
11. Correct containers used? ..... (Yes) No
12. Sufficient sample? ..... (Yes) No
13. VOA vials bubble-free (H_2O) or no head space (soil)? Yes (No)
14. Preservation OK? TM pH____; TRPH pH____; TOC pH____; TOX pH____; CN pH____; N/P pH____; Other pH____ (Yes) No

Comments #6 - NO COE/POC - PHONE #9 - NO TAPE - WATER DAMAGE
#13 - 54 #MW-1-7468 W/BUB OF 8mm

SWD KEPT BTEX

Aj

Southwestern Division Laboratory

CHAIN OF CUSTODY REPORT BY DEPARTMENT (1n01d)
4815 Cass Street
Dallas, Texas 75235
(214) 905-9130

May 17 1996, 01:53 pm
Login Number: S60436
Department: ECC 96D0002
Account: Former Perrin AFB: GARY AFB

Account number: W45XMA61062608

Sample #/ Matrix	Field ID/ Test Parameter	Collect date/ Method #	Due Date/ # of Bottles
S60436-1	B1-1040	16-MAY-96	07-JUN-96
Soil	BTEX by Sub02	SW-846 8020	
Soil	Polynuclear Aromatics by Sub02	EPA 8310	
Soil	TRPH by Sub02	EPA 9071/418.1	
S60436-2	B5-5421	16-MAY-96	07-JUN-96
Soil	BTEX by Sub02	SW-846 8020	
Soil	Polynuclear Aromatics by Sub02	EPA 8310	
Soil	TRPH by Sub02	EPA 9071/418.1	
S60436-4	G1-6234	16-MAY-96	07-JUN-96
Water	TRPH by Sub02	EPA 418.1	
S60436-5	G1-2324	16-MAY-96	07-JUN-96
Water	Polynuclear Aromatics by Sub02	EPA 8310	
S60436-6	G1-6324	16-MAY-96	07-JUN-96
Water	Conductivity by Sub02	EPA 9050	
Water	pH by Sub02	EPA 9040	
Water	* Turbidity by Sub02	EPA 180.1	

Cost Summary of Products by Products

Matrix	Product Description	Method	QTY	Cost	Factor	Total
Soil	BTEX by Sub02	SW-846 8020	2 EA @ $	40.00 *	1.00 = $	80.00
Water	Conductivity by Sub0	EPA 9050	1 EA @ $	10.00 *	1.00 = $	10.00
Water	Polynuclear Aromatic	EPA 8310	1 EA @ $	125.00 *	1.00 = $	125.00
Soil	Polynuclear Aromatic	EPA 8310	2 EA @ $	125.00 *	1.00 = $	250.00
Water	pH by Sub02	EPA 9040	1 EA @ $	5.00 *	1.00 = $	5.00
Water	TRPH by Sub02	EPA 418.1	1 EA @ $	25.00 *	1.00 = $	25.00
Soil	TRPH by Sub02	EPA 9071/418.	2 EA @ $	25.00 *	1.00 = $	50.00
Water	* Turbidity by Sub02	EPA 180.1	1 EA @ $	20.00 *	1.00 = $	20.00
		Total				$ 565.00

**** ALL NON-CONTRACT ANALYSIS REQUIRE YOUR INTERNAL QC PACKAGE ****

Release Signature: _____ Receipt Signature: _____

Date/Time: _____ Date/Time: _____

Southwestern Division Laboratory
CHAIN OF CUSTODY REPORT (ln01)
4815 Cass Street
Dallas, Texas 75235
(214) 905-9130

May 17 1996, 01:53 pm
Login Number: S60436
Account: Former Perrin AFB: GARY AFB

Laboratory Sample Number		Client ID Sample Number	Collect Date	Receive Date	Due Date
S60436-1		B1-1040	16-MAY-96	17-MAY-96	07-JUN-96
Soil	BTEX by Sub02		SW-846 8020		
Soil	Polynuclear Aromatics by Sub02		EPA 8310		
Soil	TRPH by Sub02		EPA 9071/418.1		
S60436-2		B5-5421	16-MAY-96	17-MAY-96	07-JUN-96
Soil	BTEX by Sub02		SW-846 8020		
Soil	Polynuclear Aromatics by Sub02		EPA 8310		
Soil	TRPH by Sub02		EPA 9071/418.1		
S60436-3		G1-2234	16-MAY-96	17-MAY-96	07-JUN-96
Water	BTEX In-house		SW-846 8020		
S60436-4		G1-6234	16-MAY-96	17-MAY-96	07-JUN-96
Water	TRPH by Sub02		EPA 418.1		
S60436-5		G1-2324	16-MAY-96	17-MAY-96	07-JUN-96
Water	Polynuclear Aromatics by Sub02		EPA 8310		
S60436-6		G1-6324	16-MAY-96	17-MAY-96	07-JUN-96
Water	Conductivity by Sub02		EPA 9050		
Water	pH by Sub02		EPA 9040		
Water	* Turbidity by Sub02		EPA 180.1		

**** ALL NON-CONTRACT ANALYSIS REQUIRE YOUR INTERNAL QC PACKAGE ****

Release Signature: _____ Receipt Signature: _____

Date/Time: _____ Date/Time: _____

Southwestern Division Laboratory

CHAIN OF CUSTODY REPORT BY DEPARTMENT (1n01d)
4815 Cass Street
Dallas, Texas 75235
(214) 905-9130

May 17 1996, 01:53 pm
Login Number: S60436
Department: ECC 96D0002
Account: Former Perrin AFB: GARY AFB

Account number: W45XMA61062608

Sample #/ Matrix	Field ID/ Test Parameter	Collect date/ Method #	Due Date/ # of Bottles
S60436-1	B1-1040	16-MAY-96	07-JUN-96
Soil	BTEX by Sub02	SW-846 8020	
Soil	Polynuclear Aromatics by Sub02	EPA 8310	
Soil	TRPH by Sub02	EPA 9071/418.1	
S60436-2	B5-5421	16-MAY-96	07-JUN-96
Soil	BTEX by Sub02	SW-846 8020	
Soil	Polynuclear Aromatics by Sub02	EPA 8310	
Soil	TRPH by Sub02	EPA 9071/418.1	
S60436-4	G1-6234	16-MAY-96	07-JUN-96
Water	TRPH by Sub02	EPA 418.1	
S60436-5	G1-2324	16-MAY-96	07-JUN-96
Water	Polynuclear Aromatics by Sub02	EPA 8310	
S60436-6	G1-6324	16-MAY-96	07-JUN-96
Water	Conductivity by Sub02	EPA 9050	
Water	pH by Sub02	EPA 9040	
Water	* Turbidity by Sub02	EPA 180.1	

Cost Summary of Products by Products

Matrix	Product Description	Method	QTY	Cost	Factor	Total
Soil	BTEX by Sub02	SW-846 8020	2 EA @ $	40.00 *	1.00 =	$ 80.00
Water	Conductivity by Sub0	EPA 9050	1 EA @ $	10.00 *	1.00 =	$ 10.00
Water	Polynuclear Aromatic	EPA 8310	1 EA @ $	125.00 *	1.00 =	$ 125.00
Soil	Polynuclear Aromatic	EPA 8310	2 EA @ $	125.00 *	1.00 =	$ 250.00
Water	pH by Sub02	EPA 9040	1 EA @ $	5.00 *	1.00 =	$ 5.00
Water	TRPH by Sub02	EPA 418.1	1 EA @ $	25.00 *	1.00 =	$ 25.00
Soil	TRPH by Sub02	EPA 9071/418.	2 EA @ $	25.00 *	1.00 =	$ 50.00
Water	* Turbidity by Sub02	EPA 180.1	1 EA @ $	20.00 *	1.00 =	$ 20.00
		Total				$ 565.00

**** ALL NON-CONTRACT ANALYSIS REQUIRE YOUR INTERNAL QC PACKAGE ****

Release Signature: [signature] Receipt Signature: [signature]

Date/Time: 17MAY96/1500 Date/Time: 5-18-96 10:00a.m.

Southwestern Division Laboratory
CHAIN OF CUSTODY REPORT (ln01)
4815 Cass Street
Dallas, Texas 75235
(214) 905-9130

May 31 1996, 01:48 pm
Login Number: S60468
Account: Former Perrin AFB: GARY AFB

Laboratory Sample Number		Client ID Sample Number	Collect Date	Receive Date	Due Date
S60468-1		MW-1-7468	30-MAY-96	31-MAY-96	21-JUN-96
Water	BTEX In-house		SW-846 8020		
S60468-2		MW-1-7469	30-MAY-96	31-MAY-96	21-JUN-96
Water	BTEX In-house		SW-846 8020		
S60468-3		MW-1-7470	30-MAY-96	31-MAY-96	21-JUN-96
Water	Polynuclear Aromatics by Sub01		EPA 8310		

**** ALL NON-CONTRACT ANALYSIS REQUIRE YOUR INTERNAL QC PACKAGE ****

Release Signature: _____ Receipt Signature: _____

Date/Time: _____ Date/Time: _____

Southwestern Division Laboratory

CHAIN OF CUSTODY REPORT BY DEPARTMENT (1n01d)
4815 Cass Street
Dallas, Texas 75235
(214) 905-9130

May 31 1996, 01:45 pm
Login Number: S60468
Department: ITS 96D0005
Account: Former Perrin AFB: GARY AFB

Account number: W45XMA61062608

Sample #/ Matrix	Field ID/ Test Parameter	Collect date/ Method #	Due Date/ # of Bottles
S60468-3	MW-1-7470	30-MAY-96	21-JUN-96
Water	Polynuclear Aromatics by Sub01	EPA 8310	

Cost Summary of Products by Products

Matrix	Product Description	Method	QTY	Cost	Factor	Total
Water	Polynuclear Aromatic	EPA 8310	1 EA @ $	126.50 *	1.00 =	$ 126.50
		Total				$ 126.50

**** ALL NON-CONTRACT ANALYSIS REQUIRE YOUR INTERNAL QC PACKAGE ****

Release Signature: _____ Receipt Signature: _____

Date/Time: _____ Date/Time: _____

Southwestern Division Laboratory
CHAIN OF CUSTODY REPORT BY DEPARTMENT (1n01d)
4815 Cass Street
Dallas, Texas 75235
(214) 905-9130

May 31 1996, 01:45 pm
Login Number: S60468
Department: ITS 96D0005
Account: Former Perrin AFB: GARY AFB

Account number: W45XMA61062608

Sample #/ Matrix	Field ID/ Test Parameter	Collect date/ Method #	Due Date/ # of Bottles
S60468-3	MW-1-7470	30-MAY-96 5855-1	21-JUN-96
Water	Polynuclear Aromatics by Sub01	EPA 8310	

MB - 2

Cost Summary of Products by Products

Matrix	Product Description	Method	QTY	Cost	Factor	Total
Water	Polynuclear Aromatic	EPA 8310	1 EA @ $	126.50 *	1.00 =	$ 126.50
		Total				$ 126.50

COOLER TEMPERATURE WHEN RECEIVED
_____ °C

SCREENED FOR RADIOACTIVITY

ORIGINAL

**** ALL NON-CONTRACT ANALYSIS REQUIRE YOUR INTERNAL QC PACKAGE ****

Release Signature: Randy Smith
Date/Time: 31MAY96 1500

Receipt Signature: B. Wilson
Date/Time: 5-31-96 1345

Southwestern Division Laboratory
CHAIN OF CUSTODY REPORT BY DEPARTMENT (ln01d)
4815 Cass Street
Dallas, Texas 75235
(214) 905-9130

May 31 1996, 01:45 pm
Login Number: S60468
Department: ITS 96D0005
Account: Former Perrin AFB: GARY AFB

Account number: W45XMA61062608 ØØ91 D96-5855

Sample #/ Matrix	Field ID/ Test Parameter	Collect date/ Method #	Due Date/ # of Bottles
S60468-3 Water	MW-1-7470 Polynuclear Aromatics by Sub01	30-MAY-96 EPA 8310	21-JUN-96

Cost Summary of Products by Products

Matrix	Product Description	Method	QTY	Cost	Factor	Total
Water	Polynuclear Aromatic	EPA 8310	1 EA @ $	126.50 *	1.00 =	$ 126.50
		Total				$ 126.50

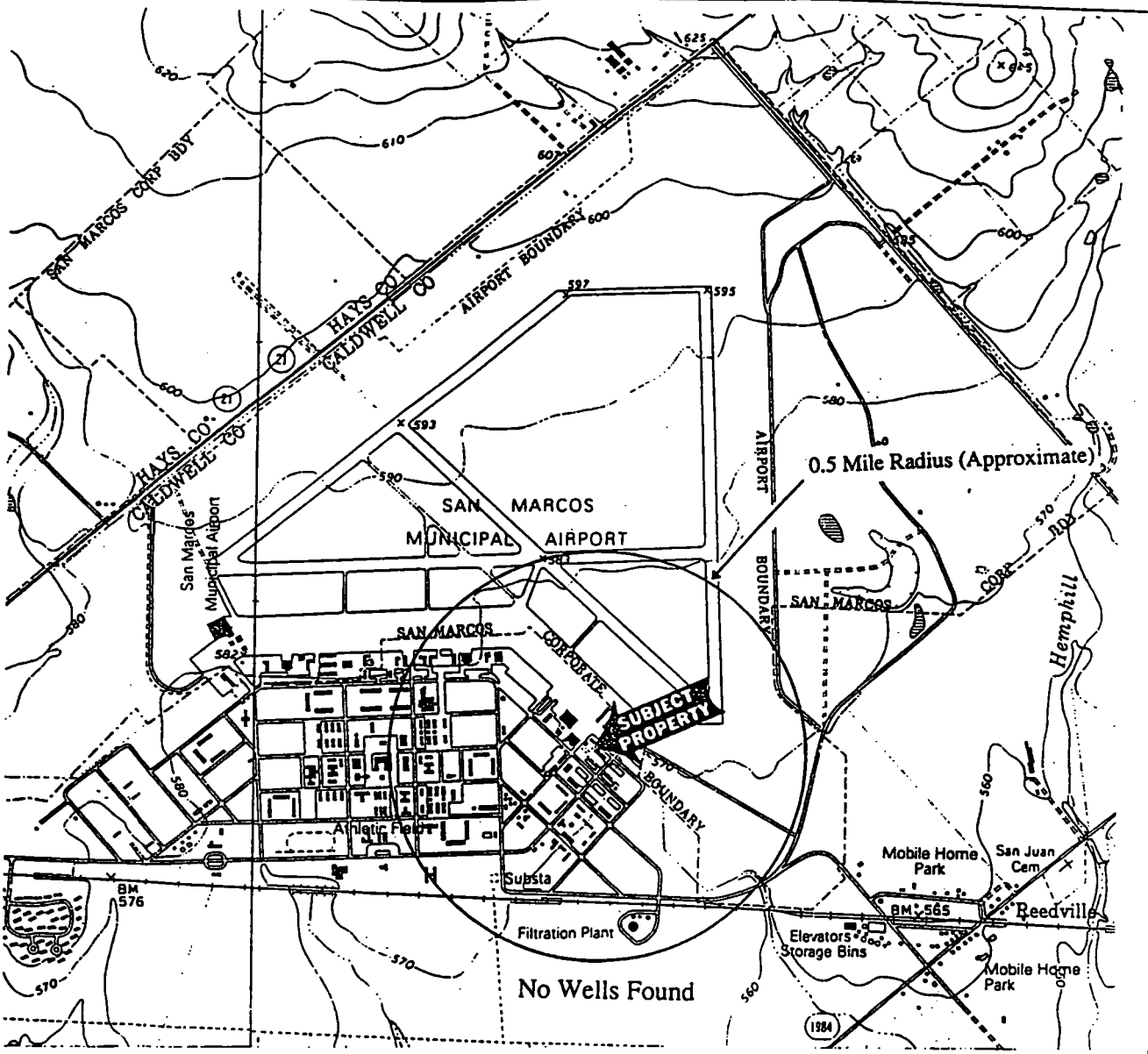
**** ALL NON-CONTRACT ANALYSIS REQUIRE YOUR INTERNAL QC PACKAGE ****

Release Signature: _____ Receipt Signature: _____

Date/Time: _____ Date/Time: _____

Attachment 3

Attachment 3
USGS Map with Water Well Locations



SCALE 1:24000

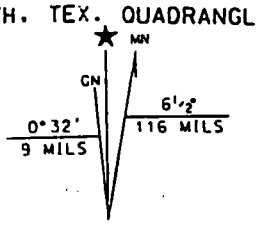
1 ½ 0 1 MILE

1000 0 1000 2000 3000 4000 5000 6000 7000 FEET

1 .5 0 1 KILOMETER

CONTOUR INTERVAL 10 FEET
NATIONAL GEODETIC VERTICAL DATUM OF 1929

SAN MARCOS NORTH, TEX. QUADRANGLE - 1994



UTM GRID AND 1994 MAGNETIC NORTH

SYM	D.O. NO.	ACTION	DATE	DESCRIPTION OF REVISION

THOMPSON PROFESSIONAL GROUP, INC.

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS

DESIGNED BY:
DRAWN BY:
CHECKED BY:

Former Gary AFB
San Marcos, Caldwell County, Texas
Attachment 3
USGS Map/Well Locations

SUBMITTED BY:
ENGINEER: DATE:

SOL. NO. DATE:
CONTR. NO.
DRAWING NUMBER SHEET NO. OF
REFERENCE NO.

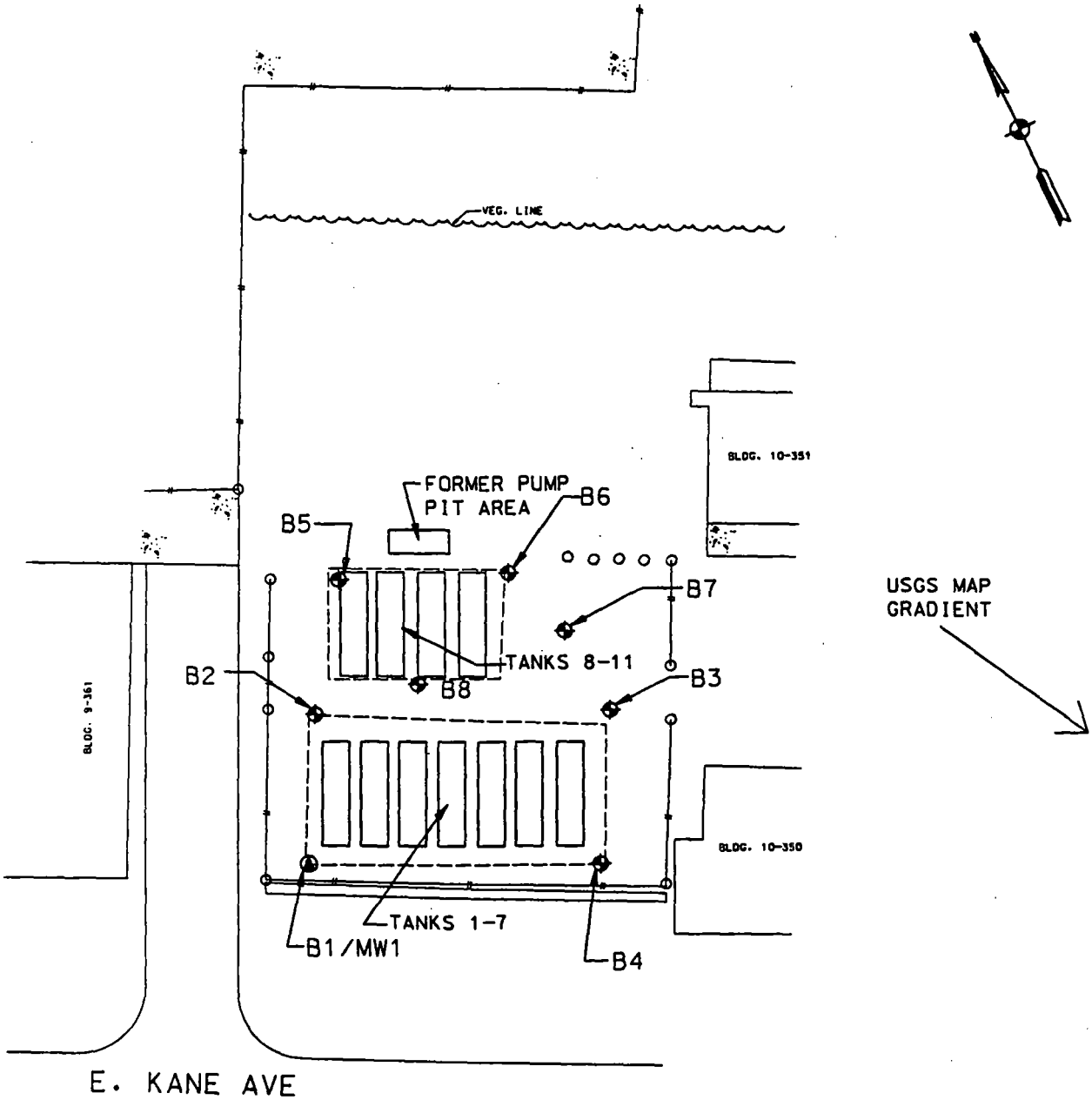
Attachment 4

Attachment 4
Well Completion Details

No Wells Found

Attachment 5

Attachment 5
Site Plan



SCALE: 1" = 60'

NAME	LAT.	LONG.	ELEV.
BM1/MW1	29°53'23"N	097°51'38"W	573.06
BORE #2	29°53'23"N	097°51'38"W	571.39
BORE #3	29°53'23"N	097°51'36"W	571.02
BORE #4	29°53'22"N	097°51'37"W	571.48
BORE #5	29°53'23"N	097°51'37"W	571.55
BORE #6	29°53'23"N	097°51'37"W	571.72
BORE #7	29°53'23"N	097°51'36"W	571.14
BORE #8	29°53'23"N	097°51'37"W	571.55

SYM	D.O. NO.	ACTION	DATE	DESCRIPTION OF REVISION

THOMPSON PROFESSIONAL GROUP, INC.

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS

DESIGNED BY: JRM
DRAWN BY: MJC
CHECKED BY: JRM

Former Gary AFB
San Marcos, Caldwell County, Texas
Attachment 5
Site Plan

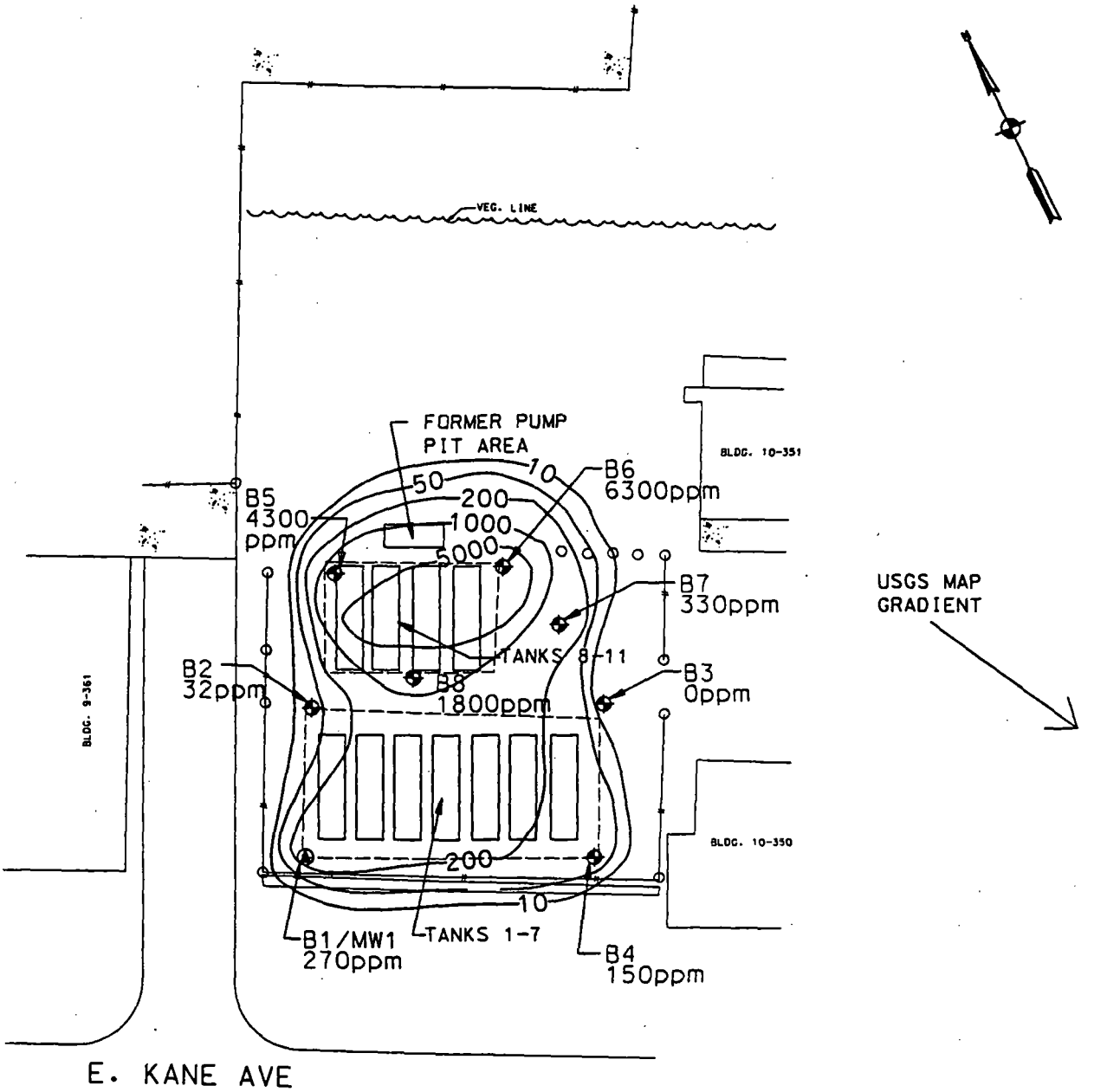
SUBMITTED BY: (ENGINEER) DATE

SOL. NO. DATE:
CONTR. NO.
DRAWING NUMBER SHEET NO OF
SEQUENCE NO.

User: RICHARDN
Plotted On: 15 JAN 97 @ 09:37:31
FILENAME: d:\projects\867-09\01\dgn\garyatt5.dgn

Attachment 6

Attachment 6
Soil Contaminant Concentration Maps



SCALE: 1" = 60'

SYM	D.O. NO.	ACTION	DATE	DESCRIPTION OF REVISION

THOMPSON PROFESSIONAL GROUP, INC.

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS

DESIGNED BY: JRM
DRAWN BY: MJC
CHECKED BY: JRM

Former Gary AFB
San Marcos, Caldwell County, Texas
Attachment 6
TPH Contamination Concentration Map

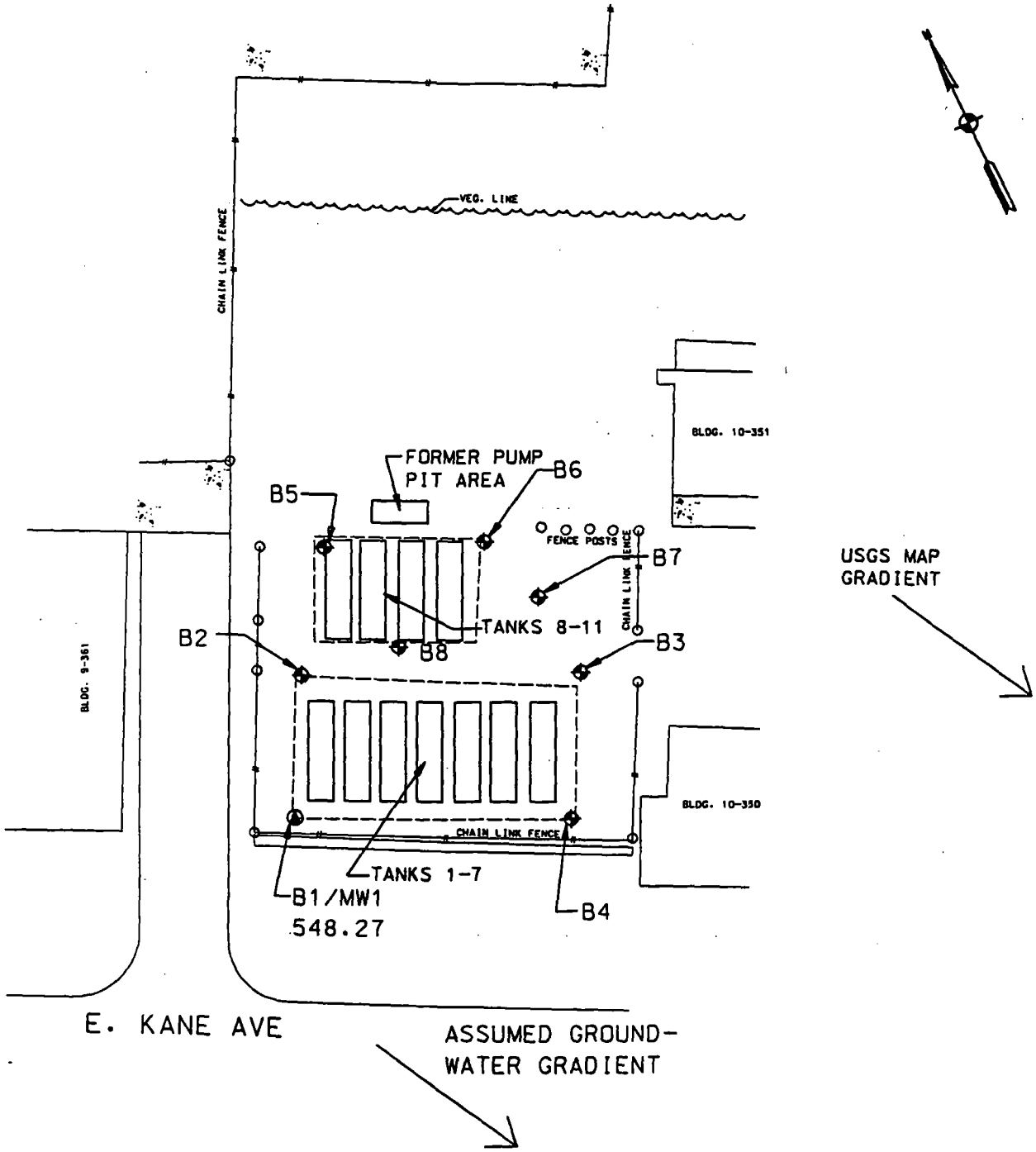
SUBMITTED BY: (ENGINEER) DATE

SOL. NO. | DATE:
CONTR. NO. | SEQUENCE NO.
DRAWING NUMBER | SHEET NO OF

User: RICHARDN
Plotted On: 15 JAN 97 @ 09:37:05
FILENAME: d:\projects\867-09\01\dgn\garyatt6.dgn

Attachment 7

Attachment 7
Groundwater Gradient Maps



SCALE: 1" = 60'

ELEVATION OF WATER LEVEL IN FEET ABOVE MEAN SEA LEVEL. INSUFFICIENT DATA FOR GROUNDWATER GRADIENT LEVELS.

SYM	D.O. NO.	ACTION	DATE	DESCRIPTION OF REVISION

THOMPSON PROFESSIONAL GROUP, INC.

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS

DESIGNED BY: JRM
DRAWN BY: MJC
CHECKED BY: JRM

Former Gary AFB
San Marcos, Caldwell County, Texas
Attachment 7
Groundwater Gradient Map

SUBMITTED BY: (ENGINEER) DATE

SOL. NO. | DATE:
CONTR. NO.
DRAWING NUMBER | SHEET NO OF | SEQUENCE NO.

User: RICHARDN
Plotted On: 15 JAN 97 @ 09:36:23
FILENAME: d:\projects\867-09\01\dgn\garyatt7.dgn

NO submittal

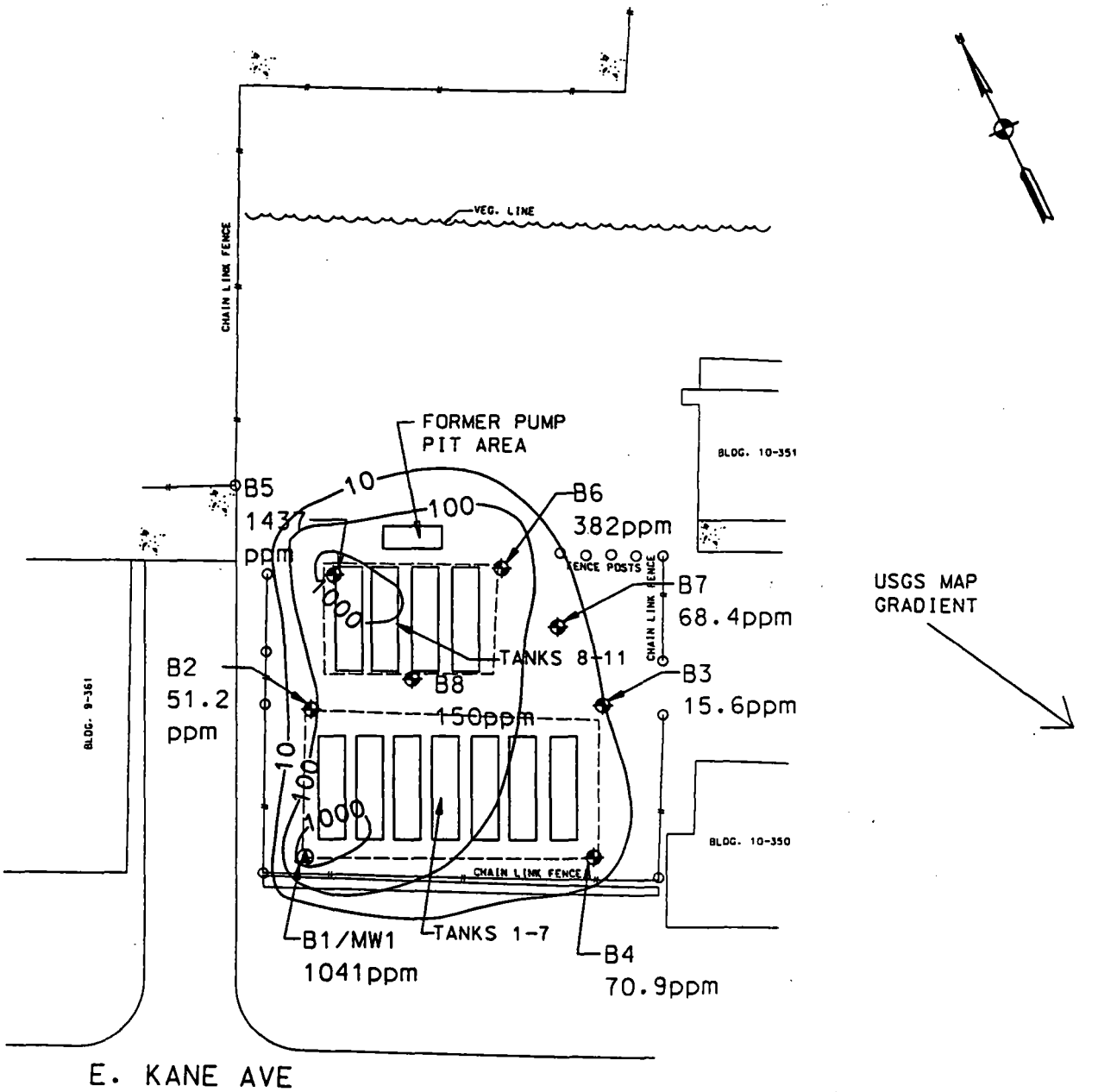
Attachment 8

Attachment 10

NO submittal

Attachment 11

Attachment 11
Soil Vapor Contaminant Concentration Map



SCALE: 1" = 60'

CALCULATED VAPOR CONTAMINATE CONCENTRATIONS IN PARTS PER MILLION. VAPORS

SYM	B.D. NO	ACTION	DATE	DESCRIPTION OF REVISION

THOMPSON PROFESSIONAL GROUP, INC.

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS

DESIGNED BY: JRM
DRAWN BY: MJC
CHECKED BY: JRM

Former Gary AFB
San Marcos, Caldwell County, Texas
Attachment 11
Vapor Contaminant Concentration Map

SUBMITTED BY: (ENGINEER) DATE

SOL. NO. | DATE:
CONTR. NO. | SEQUENCE NO.
DRAWING NUMBER | SHEET NO OF

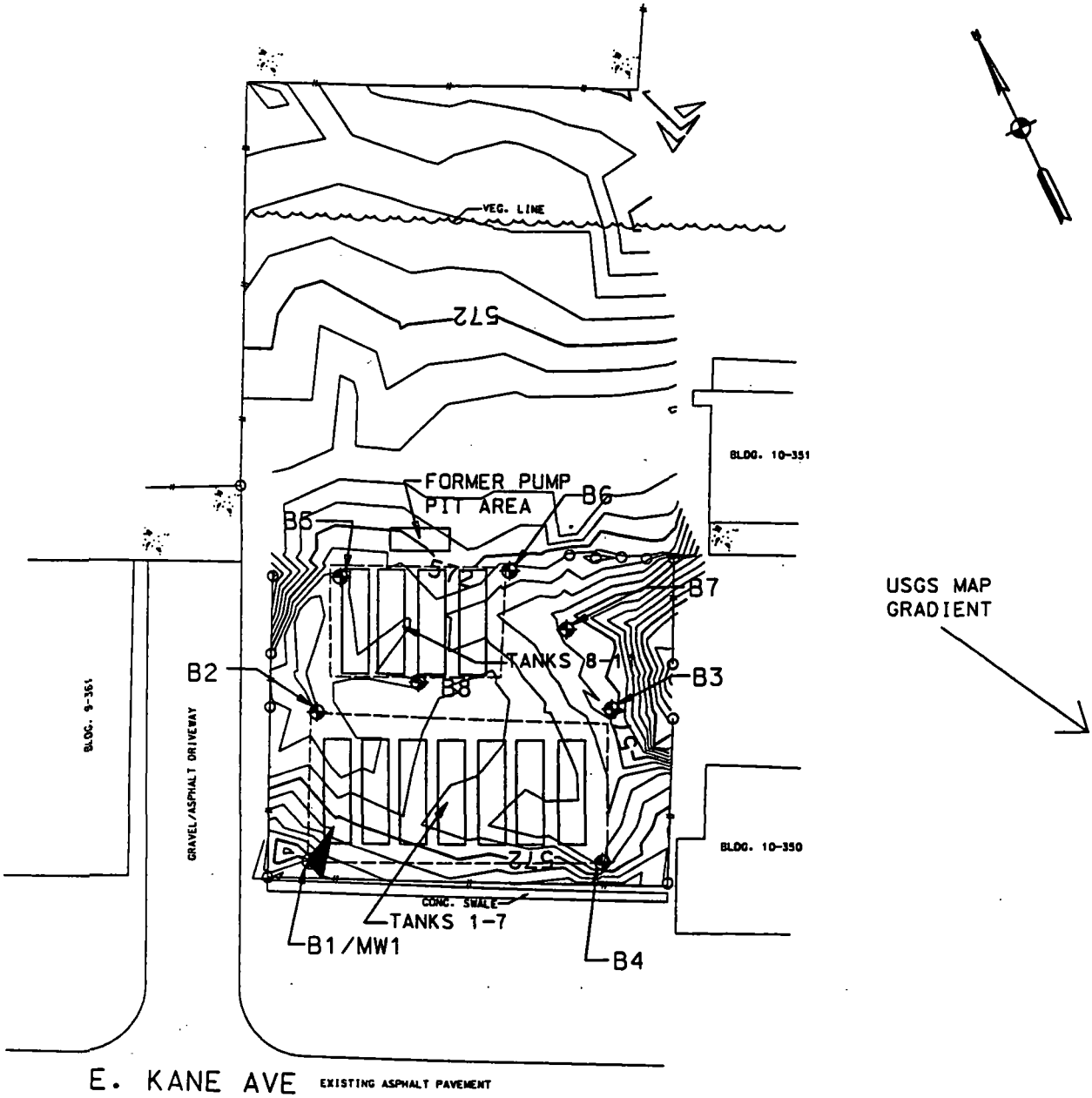
User: RIC
Plotted On: N 97 @ 09:34:38
FILENAME: d:\projects\867-09\01\dgn\garyatt11.dgn

Attachment 12

No submittal

Attachment 13

Attachment 13
Surface Water Flow Maps



SCALE: 1" = 60'

CONTOURS REPRESENT A 0.1 FOOT CHANGE IN ELEVATION

SYMBOL NO.	ACTION	DATE	DESCRIPTION OF REVISION	

THOMPSON PROFESSIONAL GROUP, INC.

U.S. ARMY ENGINEER DISTRICT
CORPS OF ENGINEERS

DESIGNED BY: JRM
DRAWN BY: MJC
CHECKED BY: JRM

Former Gary AFB
San Marcos, Caldwell County, Texas
Attachment 13
Surface Water Flow Map

SUBMITTED BY: (ENGINEER) DATE

SOL. NO. | DATE:
CONTR. NO.
DRAWING NUMBER | SHEET NO OF
SEQUENCE NO.

User: RIC
Plotted On: 4 97 @ 09:33:32
FILENAME: a:\projects\867-09\01\dgn\garyatt3.dgn

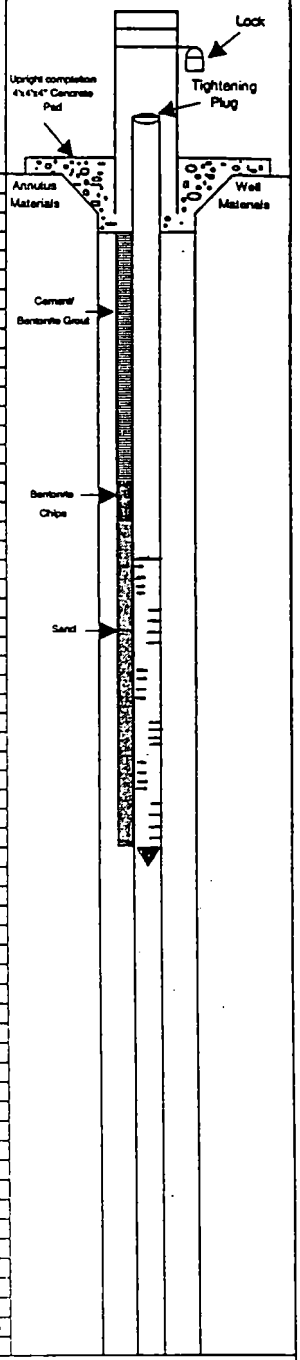
Attachment 14

Attachment 14
Soil Boring Logs

LOG OF BORING/MONITORING WELL NO. 1

DEPTH	STRATIGRAPHY	SAMPLES	DESCRIPTION OF STRATUM	SCREENING DATA: ODOR	VISIBLE	DIRECT READING INTRUMENT (ppm by PID)	TYPE OF ANALYSIS	SUBMITTED for ANALYSIS	DEPTH (FT.)
			0-0.5' Black to brown clay, firm gravelly, consolidated						
			0.5-1.5' Tan to white $CaCO_3$ (caliche)						
			1.5-2.5' Unconsolidated, brown to gray gravelly clay						
			2.5-4' Reddish brown to black silty clay, gravel, black, high plasticity			5.7			
5			4-5' Black-brown black silty clay, high plasticity, small pebbles to larger pebbles at 5'						5
			5-6' Gravelly reddish brown silty clay, unconsolidated						
			6-10' Reddish brown silty clay, medium plasticity decreasing with depth, increasing porosity			4.8			
10			10-15' Reddish brown sandy clay, gravel increasing at 15', porosity good						10
				org.		5.9			
15			15-20' Brown gravelly clay, $CaCO_3$ nodules predominate	org		439			15
20			20-21' $CaCO_3$ (Caliche)						20
			21-21.5' Gray sandy clay						
			21.5-25' Brown to tan sand, porous, unconsolidated, moist	org		1041	Chem	[illegible]	
25			25-30' Sandy gravel, SiO_2, wet, saturated, ground water, capillary fringe at approximately 26.5', large gravel at 29' (2" diam.), tan	org		836	Chem	[illegible]	25
30			30-33' Tan to gray sandy clay, moist, increasing plasticity, decreasing porosity, black mottling, high plasticity, firm horizontal fracturing						30
			33-35' Tan clay, high plasticity, moist.						
35						195	Chem	[illegible]	35
40									40
45									45
50									50
55									55
60									60

Monitor Well Completion Data



Client: USACE Project No: 867-09.01 Date Drilled: 5/14/96 Driller: Terry Barrett

Groundwater Elevation: Date: 5/15/96 Time: 2:10 pm Elevation: 545.36 Date: 5/16/96 Time: 9:50 Elevation: 545.33

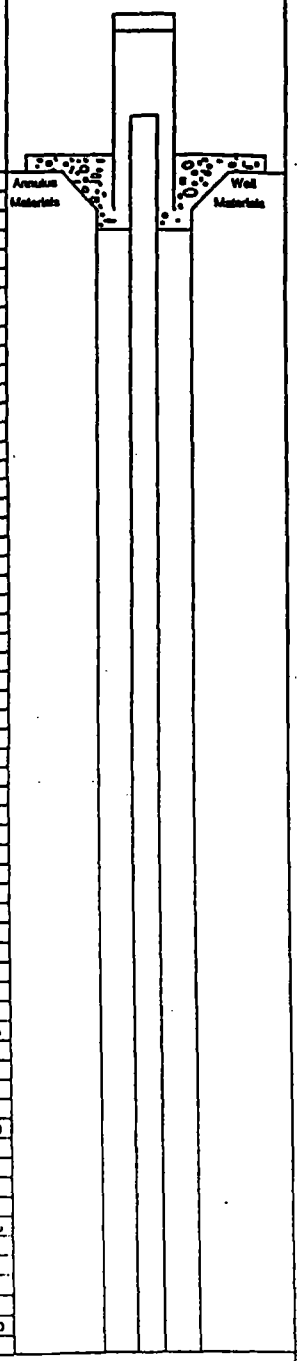
Ground Elevation: 573.06 Top of Casing Elevation: 575.96 Drilling Method: 3" Hollow Stem Auger

Total Depth: 35' Comments: Former Gary AFB, San Marcos. Start 10:15 am, Stop 11:17

LOG OF BORING NO. 2

DEPTH	STRATIGRAPHY	SAMPLES	DESCRIPTION OF STRATUM	SCREENING DATA: ODOR (*)	VISIBLE (*)	DIRECT READING INTRUMENT (ppm, by PID)	TYPE OF ANALYSIS	SUBMITTED for ANALYSIS	DEPTH (FT.)
			Tan to brown caliche fill 0-2' gravelly, unconsolidated						
			2-3' Dark brown silty clay, gravel to pebbles			2.7			
			3-4' Black clay, small $CaCO_3$ nodules, reddish brown, high plasticity						
5			4-5' Black to brown clay with CaCO3 nodules increasing, decreasing plasticity, increasing porosity			3.5			5
			5-10' Reddish brown silty clay medium plasticity, CaCo3 nodules decreasing with depth to 0, increasing plasticity with depth			3.6			
10			10'-12' Same as above						10
			12-15' Tan to gray silty clay with SiO2 pebbles and $CaCO_3$ nodules increasing with depth to gravelly silty clay			3.7			
15			15-18' Reddish brown silty clay, SiO2 pebbles, moist, increasing consolidation with depth	org.		47			15
							Chem		
			18-20' Light gray to white clay, $CaCo_3$ nodules, high plasticity, firmly consolidated	org.		75			
20			20-21' Gray gravelly clay, SiO2 gravel, decreasing size with depth	org.		53	Chem		20
			21-22.5' Tan clay, high plasticity	org.		103			
			22.5-24.5' Tan shaley clay, unconsolidated, with fractures, high plasticity, Fe				Geo-Tech		
25			24.5-25' Tan silty clay, consolidated, high plasticity, Fe nodules scattered			5.0			25
			25-30' Gray clay, shale fracturing broken throughout, high plasticity			4.4			
30							Chem		30
35									35
40									40
45									45
50									50
55									55
60									60

Monitor Well Completion Data



Client: USACE Project No: 867-09.01 Date Drilled: 5/15/96 Driller: Terry Barritt

Groundwater Elevation: NA Date: NA Time: NA Elevation: NA Date: NA Time: NA Elevation: NA

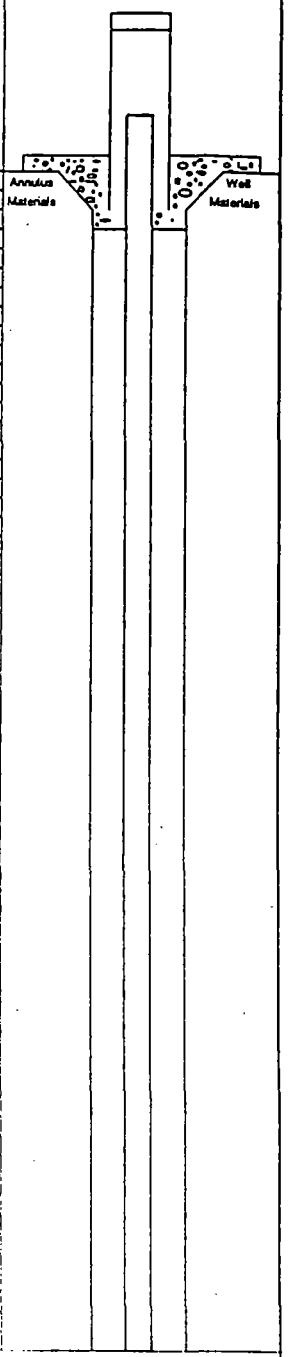
Ground Elevation: 571.39 Top of Casing Elevation: NA Drilling Method: 3" Hollow Stem Auger

Total Depth: 30' Comments: No water-dryhole. Start 8:35 am. Stop 9:50

LOG OF BORING NO. 3

DEPTH	STRATIGRAPHY	SAMPLES	DESCRIPTION OF STRATUM	SCREENING DATA: ODOR (*)	VISIBLE (*)	DIRECT READING INTRUMENT (ppm, by PID)	TYPE OF ANALYSIS	SUBMITTED for ANALYSIS	DEPTH (FT.)
			0-2.5' Gravelly clay loam, tan to light gray, unconsolidated, "rocky" caliche			3.9			
			2.5-5' Black to reddish brown gravelly clay loam, more consolidation $CaCo_3$ nodules predominant			5			
5			5-5.5' same as above						5
			5.5-10' Reddish brown silty clay CaCo3 nodules with decreasing depth to zero, medium plasticity			4.5			
10			10-12' Same with increasing CaCo3 nodules						10
			12-14' Gray to white clay high plasticity, $CaCo_3$ nodules			5.6			
15									15
			15-20' Tan to white gravelly clay loam, unconsolidated	Slight		5.9	Chem	[redacted]	
20			20-21' Silty gravel, SiO_2, unconsolidated, gravel to pebble size, approximately 2 1/2" - 0.5"						20
			21-22' Transition zone gravel clay, gray, high plasticity			15.6	Chem	[redacted]	
25			22-25' Tan to reddish brown shaley clay, high plasticity, $CaCo_3$ nodules, Fe staining, nothing predominant						25
			25-30' Tan to gray shaley clay, decreasing plasticity, shale fracturing, Fe staining			4.2			
30							Chem	[redacted]	30
35									35
40									40
45									45
50									50
55									55
60									60

Monitor Well Completion Data



Client: USACE Project No: 867-09.01 Date Drilled: 5/15/96 Driller: Terry Barnett

Groundwater Elevation: Date: NA Time: NA Elevation: NA Date: NA Time: NA Elevation: NA

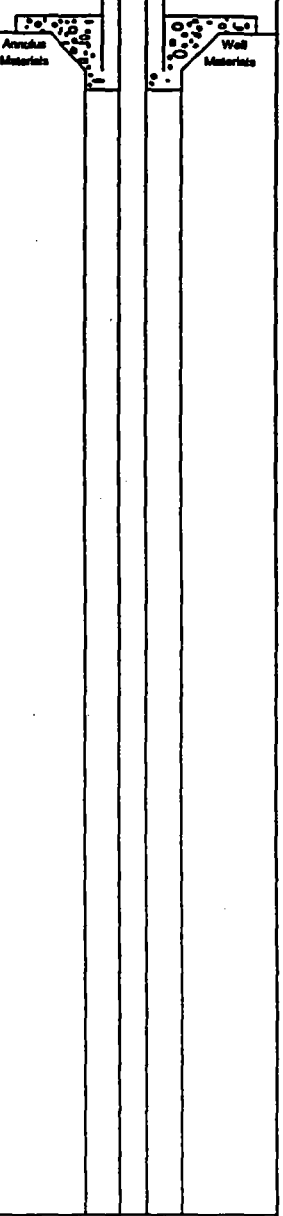
Ground Elevation: 571.02 Top of Casing Elevation: NA Drilling Method: 3" Hollow Stem Auger

Total Depth: 30' Comments: No water-dryhole. Start 10:15am. Stop 11:30pm.

LOG OF BORING NO. 4

DEPTH	STRATIGRAPHY	SAMPLES	DESCRIPTION OF STRATUM	SCREENING DATA: ODOR (*)	VISIBLE (*)	DIRECT READING INTRUMENT (ppm, by PID)	TYPE OF ANALYSIS	SUBMITTED for ANALYSIS	DEPTH (FT.)
			0'-2.5' Light brown silty clay, medium plasticity, organic material, SiO_2 pebbles			39			
			2.5-3' Brown gravelly clay						
			3-5' Light brown silty clay, SiO_2 pebbles						
5			5-10' Same, $CaCO_3$ nodules			24.7			5
10			10-11' Same, increasing $CaCO_3$ nodules			27			10
			11-13.5' Light brown silty clay, decreasing $CaCO_3$ to 0.			99			
			13.5-15' Light tan clay loam unconsolidated, low to medium plasticity						
15			15-15.5' Same			42			15
			15.5-17.5' Light gray to white loam gravel, SiO_2 pebbles - gravel size				Chem	■	
			17.5-18.5' Same						
			18.5-19' Tan silty sand	org.		99	Chem	■	
			19.5-20' Tan sandy clay, SiO_2 pebbles						
20			20-22' Tan clay with gravel to pebble size rocks, increasing sand content at			30			20
			22-22.5' gray, clay, clay high plasticity, firm						
			22.5-25' Tan to gray clay shale, gray shale fractured						
25			25-30' Same, Fe staining increasing with depth			25.5			25
30							Chem	■	30
35									35
40									40
45									45
50									50
55									55
60									60

Monitor Well Completion Data



Client: USACE Project No: 867-09.01 Date Drilled: 5/15/96 Driller: : Terry Barrett

Groundwater Elevation: Date:NA Time: NA Elevation: NA Date: NA Time: NA Elevation: NA

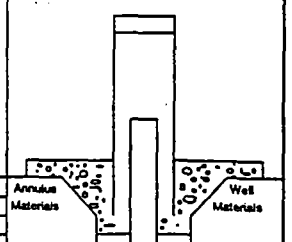
Ground Elevation: 571.48 Top of Casing Elevation: NA Drilling Method: 3" Hollow Stem Auger

Total Depth: 30' Comments: No water-dryhole. Start 2:00 pm. Stop 3:30 pm.

LOG OF BORING NO. 5

DEPTH	STRATIGRAPHY	SAMPLES	DESCRIPTION OF STRATUM	SCREENING DATA: ODOR (')	VISIBLE (')	DIRECT READING INTRUMENT	TYPE OF ANALYSIS	SUBMITTED for ANALYSIS	DEPTH (FT.)
			0'-0.5' Sandy loam, organic material						
			0.5-0.75' Silty clay with $CaCO_3$ nodules						
			0.75-5' Brown silty clay, medium plasticity, organic material			33.8			
5			5-5.5' Gravelly brown silty clay transition zone						5
			5.5-10' Dark brown gravelly clay, high plasticity, gravel (2"), pebble size rocks						
10			10-13' Same (Note: black plastic (thin poly) encountered at 10')	org.		57			10
			13-14' Black clay with gravel to pebble size rocks, high plasticity	org.		300			
			(Note: White thicker mil poly at 13')	org.		686	Chem	[redacted]	
15			14-15' Tan clay, $CaCo_3$ nodules, odor	str. org.		295			15
			15-16.5' Same, decreasing $CaCo_3$, moist sloughing						
			16.5-20' Light gray silty clay	org.		1437	Chem	[redacted]	
20			20-20.5' Light gray clay sand			348	Chem	[redacted]	20
			20.5-21" Transition zone gravelly sand						
			21-25' Gray to reddish brown shaley clay, high plasticity, stiff fracturing - horizontal and vertical			124			
25			25-30' Same						25
						49.1			
30							Chem	[redacted]	30
35									35
40									40
45									45
50									50
55									55
60									60

Monitor Well Completion Data



Client: USACE Project No: 867-09.01 Date Drilled: 5/16/96 Driller: Terry Burrell

Groundwater Elevation: Date: NA Time: NA Elevation: NA Date: NA Elevation: NA

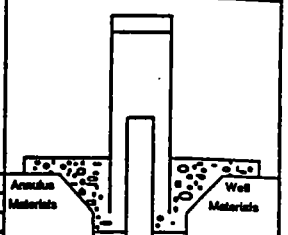
Ground Elevation: 571.55 Top of Casing Elevation: NA Drilling Method: : 3" Hollow Stem Auger

Total Depth: 30' Comments: No water-dryhole. Start 8:45am. Stop 9.30am

LOG OF BORING NO. 6

DEPTH	STRATIGRAPHY	SAMPLES	DESCRIPTION OF STRATUM	SCREENING DATA: ODOR (*)	VISIBLE (*)	DIRECT READING (ppm by PID)	INTRUMENT	TYPE OF ANALYSIS	SUBMITTED for ANALYSIS	DEPTH (FT.)
			0-1' Gravelly sandy loam			55.7				
			1-2.25' Black clay, hard, high plasticity, gravel to pepple size rocks							
			Transition zone at 2.25-2.5', Red brown clay with black clay							
			2.5-3.5' Same organic material							
5			3.5-5' Red brown silty clay with $CaCO_3$ nodules			77				5
			5-6.5' Same with increasing black clay content							
			6.5-7.5' Red brown gravely clay, $CaCO_3$ nodules predominant							
			7.5-10' Red brown silty clay decreasing plasticity increasing silt content			87.7				
10			10-11' Red brown silty clay, decreasing CaCO3 medium plasticity							10
			11-12' Tan clay silt, Low through medium plasticity, unconsolidated							
			12-15' Tan silty gravel, unconsolidated			62				
15			15-17.5' Gravelly sand, tan, SiO_2 gravel to pebble size rocks (2")							15
				faint		108				
			17.5-18' Tan sandy clay, moist	org.		178	Chem			
			18-20' Gray-green-white sandy clay pebbles, high plasticity clay, stiff							
20			20-22' Gravelly sand, moist low plasticity							20
				org		382	Chem			
			22-23' Tan-gray clay, no gravel, high plasticity							
			23-25' Tan-gray shaley clay, highly fractured, high plasticity			47.3				
25			25-30' Same, Fe staining predominant in 26-28.5' decreasing with depth			42.8	Geo-tech			25
30							Chem			30
35										35
40										40
45										45
50										50
55										55
60										60

Monitor Well Completion Data



Client: USACE Project No: 867-09.01 Date Drilled: 5/16/96 Driller : Terry Barritt

Groundwater Elevation: Date: NA Time: NA Elevation: NA Date: NA Time: NA Elevation: NA

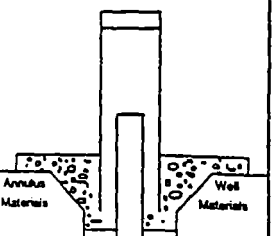
Ground Elevation: 571.72 Top of Casing Elevation: NA Drilling Method: 3" Hollow Stem Auger

Total Depth: 30' Comments: No Water - Dry Hole. Start 10:15 am, Stop 10:55 am

LOG OF BORING NO. 7

DEPTH	STRATIGRAPHY	SAMPLES	DESCRIPTION OF STRATUM	SCREENING DATA: ODOR (*)	VISIBLE (*)	DIRECT READING (ppm, by PID)	INTRUMENT	TYPE OF ANALYSIS	SUBMITTED for ANALYSIS	DEPTH (FT.)
			0-3' Tan-black gravelly clay, broken up			6.2				
			3-4.5' Black clay with reddish brown motting, high plasticity, $CaCO_3$							
			4.5-5' Red brown to white clay gravel, $CaCO_3$ nodules dominant							
5			5-8' Red brown silty clay with CaCO3 nodules prominent decreasing with depth, high through medium plasticity			7.0				5
			8-10' Tan silty clay, medium plasticity							
10			10-10.25' Red clay, high plasticity							10
			10.25-13' Tan silty clay, medium plasticity			7.3				
			13-15' White to tan clay gravel, SiO_2 gravel to pebble size rocks							
15			15-16' Same							15
			16-17' Gray-white silty clay, medium plasticity							
			17-17.5' Same	org		31		Chem	[redacted]	
			17.5-18.5' Gravelly clay, 1/2"pebble							
			18.5-20' Gray silty clay, Fe mottling, SiO_2 pebbles							
20			20-21' Light gray gravelly clay	org		68.4				20
			21-21.5' Transition zone, light gray to brown gravelly clay, moist							
			21.5-22' Light brown clay gravel, moist	org		249		Chem	[redacted]	
			22-23' Transition gravelly clay, gray to light brown							
			23-25' Light brown, tan/gray shale streamers, clay high plasticity							
25			25-30' Light gray with red brown mottling clay shale, high plasticity			23.6				25
30								Chem	[redacted]	30
35										35
40										40
45										45
50										50
55										55
60										60

Monitor Well Completion Data



Client: USACE Project No: 867-09.01 Date Drilled: 5/16/96 Driller: Terry Burrit

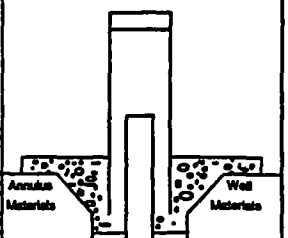
Groundwater Elevation: Date: NA Time: NA Elevation: NA Date: NA Time: NA Elevation: NA

Ground Elevation: 571.14 Top of Casing Elevation: NA Drilling Method: 3" Hollow Stem Auger

Total Depth: 30' Comments: No Water, Dry Hole, Start 1:50 pm, Stop 2:47 pm.

LOG OF BORING NO. 8

DEPTH	STRATIGRAPHY	SAMPLES	DESCRIPTION OF STRATUM	SCREENING DATA: ODOR (*)	VISIBLE (*)	DIRECT READING INTRUMENT (ppm, by PID)	TYPE OF ANALYSIS	SUBMITTED for ANALYSIS	Monitor Well Completion Data: DEPTH (FT.)
			0-0.5' Sandy loam, tan, organic material, SiO2 pebbles						
			0.5-1' Gray gravelly clay, high plasticity, stiff						
			1-2' Tan-gray clay gravel, pebble size rocks 1.5"			6.2	Chem	■	
			2-2.5' Gravelly limestone. Note: Wood chip at 2.5'						
5			2.5-3' Wood						5
			3-3.5' Gravel 1 1/2" -pebble size, loose, no cohension						
			3.5-4.25' Black clay, high plasticity, stiff						
			4.25'-5 Black gravelly clay, stiff						
			5-6' Tan-light brown silty clay, abundant $CaCO_3$ nodules decreasing with depth						
10			6-10' Redish brown silty clay with occasional $CaCO_3$ nodules, medium plasticity			7.0			10
			10-13' Light brown silty clay, medium plasticity, decreasing with depth			7.3			
			13-14' Light brown sandy clay, low through medium plasticity, moist						
			14-15' Light gray, light brown sand with $CaCO_3$ nodules predominant						
15			15-19.75' Light brown sandy gravel, SiO_2 gravel 1"-pebble size rocks	org		7			15
							Chem	■	
			19.75-20' Light gray-white $CaCO_3$ modules with clay (light brown) high plasticity	org		94			
20			20-21.5' Light brown-gray sandy gravel SiO_2 2"-pebble size rocks						20
			21.5-23' Light gray-reddish brown gravelly clay, high plasticity, clay gravel 2 1/2"-pebble size rocks	org		200	Chem	■	
			23-25' Light gray-reddish brown Fe mottling clay, high plasticity, stiff, shale content with depth, some fracturing			68.4			
25			25-30' Light gray to reddish brown Fe staining, shale clay, highly fractured, high plasticity			23.6			25
30							Chem	■	30
35									35
40									40
45									45
50									50
55									55
60									60



Client: USACE Project No: 867-09.01 Date Drilled: 5/16/96 Driller: Terry Barritt

Groundwater Elevation: Date: NA Time: NA Elevation: NA Date: NA Time: NA Elevation: NA

Ground Elevation: 571.55 Top of Casing Elevation: NA Drilling Method: 3"Hollow Stem Auger

Total Depth: 30' Comments: No water-dryhole. Start 4 pm. Stop 4:55 pm.

Send original copy by certified mail to: TNRCC, P.O. Box 13087, Austin, TX 78711-3087

Please use black ink.

ATTENTION OWNER: *Confidentiality Privilege Notice on Reverse Side*

State of Texas WELL REPORT

Texas Water Well Drillers Advisory Council
P.O. Box 13087
Austin, TX 78711-3087
512-239-0530

1) OWNER LLSACE (Name) ADDRESS 819 Taylor st (Street or RFD) Ft Worth (City) Tx (State) 76102 (Zip)

2) ADDRESS OF WELL: County Hays (Street, RFD or other) San Marcos (City) Tx (State) (Zip) GRID # ____

3) TYPE OF WORK (Check): [X] New Well [ ] Deepening [ ] Reconditioning [ ] Plugging

4) PROPOSED USE (Check): [X] Monitor [ ] Environmental Soil Boring [ ] Domestic [ ] Industrial [ ] Irrigation [ ] Injection [ ] Public Supply [ ] De-watering [ ] Testwell
If Public Supply well, were plans submitted to the TNRCC? [ ] Yes [ ] No

5)

6) WELL LOG: B-1
Date Drilling:
Started 5/14 1996
Completed 5/14 1996

DIAMETER OF HOLE		
Dia. (in.)	From (ft.)	To (ft.)
7.5	Surface	35

7) DRILLING METHOD (Check): [ ] Driven [ ] Air Rotary [ ] Mud Rotary [ ] Bored [ ] Air Hammer [ ] Cable Tool [ ] Jetted [X] Other HSA

From (ft.)	To (ft.)	Description and color of formation material
0	2.5	Dark Brown Silty Clay
2.5	6.0	Black to brown Clay
6.0	18	Reddish Tan to brown Sity Clay
18	20	Tanish brown Silty Clay
20	23	Tan Silty heavelly Clay
23	28	Tan to Reddish brown Sholey Clay
28	35	brown Shale Clay
	TD = 35	

(Use reverse side if necessary)

8) Borehole Completion (Check): [ ] Open Hole [ ] Straight Wall [ ] Underreamed [X] Gravel Packed [ ] Other ____
If Gravel Packed give interval ... from 15 ft. to 34' ft.

CASING, BLANK PIPE, AND WELL SCREEN DATA:

Dia. (in.)	New or Used	Steel, Plastic, etc. Perf., Slotted, etc. Screen Mfg., if commercial	Setting (ft.) From	Setting (ft.) To	Gage Casting Screen
2	N	PVC Sch 40 Screen	17.5	33.5	.010
2	N	PVC Sch 40 Blank (Tri-Lock PVC)	0	17.5	

9) CEMENTING DATA [Rule 338.44(1)]
Cemented from 0 ft. to 12 ft. No. of sacks used 2
____ ft. to ____ ft. No. of sacks used ____
Method used Tremie
Cemented by Maxim Tech
Distance to septic system field lines or other concentrated contamination ____ ft.
Method of verification of above distance ____

10) SURFACE COMPLETION
[X] Specified Surface Slab Installed [Rule 338.44(2)(A)]
[ ] Specified Steel Sleeve Installed [Rule 338.44(3)(A)]
[ ] Pitless Adapter Used [Rule 338.44(3)(b)]
[ ] Approved Alternative Procedure Used [Rule 338.71]

11) WATER LEVEL:
Static level 20' ft. below land surface Date 5/15/96
Artesian flow ____ gpm. Date ____

12) PACKERS: N/A Type Depth

13) TYPE PUMP: N/A
[ ] Turbine [ ] Jet [ ] Submersible [ ] Cylinder
[ ] Other ____
Depth to pump bowls, cylinder, jet, etc., ____ ft.

14) WELL TESTS: N/A
Type test: [ ] Pump [ ] Bailer [ ] Jetted [ ] Estimated
Yield: ____ gpm with ____ ft. drawdown after ____ hrs.

15) WATER QUALITY:
Did you knowingly penetrate any strata which contained undesirable constituents?
[ ] Yes [X] No If yes, submit "REPORT OF UNDESIRABLE WATER"
Type of water? ____ Depth of strata ____
Was a chemical analysis made? [ ] Yes [ ] No

I hereby certify that this well was drilled by me (or under my supervision) and that each and all of the statements herein are true to the best of my knowledge and belief. I understand that failure to complete items 1 thru 15 will result in the log(s) being returned for completion and resubmittal.

COMPANY NAME Maxim Technologies (Type or print) WELL DRILLER'S LICENSE NO. 3058-M

ADDRESS 2575 Lone Star Dr (Street or RFD) Dallas (City) Tx (State) 75212 (Zip)

(Signed) ____ (Licensed Well Driller) (Signed) ____ (Registered Driller Trainee)

SM

Please attach electric log, chemical analysis, and other pertinent information, if available.

TNRCC-0199 (Rev. 11-01-94)

TNRCC COPY

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ATTENTION OWNER: *Confidentiality Privilege Notice on Reverse Side*

State of Texas WELL REPORT

Texas Water Well Drillers Advisory Council
P.O. Box 13087
Austin, TX 78711-3087
512-239-0530

1) OWNER USACE (Name) ADDRESS 819 Taylor st. (Street or RFD) Fort Worth (City) TX (State) 76102 (Zip)

2) ADDRESS OF WELL: County Hays (Street, RFD or other) San Marcos (City) TX (State) (Zip) GRID # ____

3) TYPE OF WORK (Check): ☐ New Well ☐ Deepening ☐ Reconditioning ☒ Plugging

4) PROPOSED USE (Check): ☐ Monitor ☒ Environmental Soil Boring ☐ Domestic ☐ Industrial ☐ Irrigation ☐ Injection ☐ Public Supply ☐ De-watering ☐ Testwell
If Public Supply well, were plans submitted to the TNRCC? ☐ Yes ☐ No

5) N↑

6) WELL LOG: B-2
Date Drilling: Started 4/16 19 96 Completed 4/16 19 96

DIAMETER OF HOLE		
Dia. (in.)	From (ft.)	To (ft.)
7.5	Surface	30

7) DRILLING METHOD (Check): ☐ Driven ☐ Air Rotary ☐ Mud Rotary ☐ Bored ☐ Air Hammer ☐ Cable Tool ☐ Jetted ☒ Other HSA

From (ft.)	To (ft.)	Description and color of formation material
0	5	Brownish black Silty Clay
5	12	Redish brown Silty Clay
12	15	Tan to Creamy Silty Clay
15	18	Redish brown Silty Clay
18	20	Light Creamy Clay
20	22.5	Creamy + Tan Clay
22.5	25	Tan Sholey Clay
25	30	Creamy Sholey Clay

TD = 30.0

(Use reverse side if necessary)

8) Borehole Completion (Check): ☐ Open Hole ☐ Straight Wall ☐ Underreamed ☐ Gravel Packed ☐ Other N/A
If Gravel Packed give interval ___ from ____ ft. to ____ ft.

CASING, BLANK PIPE, AND WELL SCREEN DATA:

Dia. (in.)	New or Used	Steel, Plastic, etc. Perf., Slotted, etc. Screen Mfg., if commercial	Setting (ft.) From	Setting (ft.) To	Gage Casting Screen
		N/A			

9) CEMENTING DATA [Rule 338.44(1)]
Cemented from 0 ft. to 30 ft. No. of sacks used 5
____ ft. to ____ ft. No. of sacks used ____
Method used Mud Pump
Cemented by Maxim
Distance to septic system field lines or other concentrated contamination ____ ft.
Method of verification of above distance ____

10) SURFACE COMPLETION
☐ Specified Surface Slab Installed [Rule 338.44(2)(A)]
☐ Specified Steel Sleeve Installed [Rule 338.44(3)(A)]
☐ Pitless Adapter Used [Rule 338.44(3)(b)]
☐ Approved Alternative Procedure Used [Rule 338.71]

11) WATER LEVEL:
Static level Dry ft. below land surface Date 4/16/96
Artesian flow ____ gpm. Date ____

12) PACKERS: N/A Type Depth

13) TYPE PUMP: N/A
☐ Turbine ☐ Jet ☐ Submersible ☐ Cylinder
☐ Other ____
Depth to pump bowls, cylinder, jet, etc., ____ ft.

14) WELL TESTS: N/A
Type test: ☐ Pump ☐ Bailer ☐ Jetted ☐ Estimated
Yield: ____ gpm with ____ ft. drawdown after ____ hrs.

15) WATER QUALITY:
Did you knowingly penetrate any strata which contained undesirable constituents?
☐ Yes ☒ No If yes, submit "REPORT OF UNDESIRABLE WATER"
Type of water? ____ Depth of strata ____
Was a chemical analysis made? ☐ Yes ☐ No

I hereby certify that this well was drilled by me (or under my supervision) and that each and all of the statements herein are true to the best of my knowledge and belief. I understand that failure to complete items 1 thru 15 will result in the log(s) being returned for completion and resubmittal.

COMPANY NAME Maxim Technologies (Type or print) WELL DRILLER'S LICENSE NO. 3058-M

ADDRESS 2575 Lone Star Dr (Street or RFD) Dallas (City) TX (State) 75212 (Zip)

(Signed) ____ (Licensed Well Driller) (Signed) ____ (Registered Driller Trainee)

Please attach electric log, chemical analysis, and other pertinent information, if available.

TNRCC-0199 (Rev. 11-01-94)

DRILLER'S COPY

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State of Texas WELL REPORT

Texas Water Well Drillers Advisory Council
P.O. Box 13087
Austin, TX 78711-3087
512-239-0530

1) OWNER USACE (Name) ADDRESS 819 Taylor st (Street or RFD) Fort Worth (City) Tx (State) 76102 (Zip)

2) ADDRESS OF WELL: County Hays (Street, RFD or other) San Marcos (City) Tx (State) (Zip) GRID #

3) TYPE OF WORK (Check): ☐ New Well ☐ Deepening ☐ Reconditioning ☒ Plugging

4) PROPOSED USE (Check): ☐ Monitor ☒ Environmental Soil Boring ☐ Domestic ☐ Industrial ☐ Irrigation ☐ Injection ☐ Public Supply ☐ De-watering ☐ Testwell
If Public Supply well, were plans submitted to the TNRCC? ☐ Yes ☐ No

5) N

6) WELL LOG: B-3
Date Drilling: Started 4/3 19 96 Completed 4/3 19 96

DIAMETER OF HOLE		
Dia. (in.)	From (ft.)	To (ft.)
7.5	Surface	30.0

7) DRILLING METHOD (Check): ☐ Driven ☐ Air Rotary ☐ Mud Rotary ☐ Bored ☐ Air Hammer ☐ Cable Tool ☐ Jetted ☒ Other HSA

From (ft.)	To (ft.)	Description and color of formation material
0	2.5	Tan ish Loamy Clay
2.5	5.0	Black to Redish brown Clay
5	12	Redish brown Silty Clay
12	20	Loamy Clay
20	22	Tan Silty Gravely Clay
22	25	Tan to Redish brown Clay
25	30	Tan to Loamy Shaley Clay

TD = 30.0

(Use reverse side if necessary)

8) Borehole Completion (Check): ☐ Open Hole ☐ Straight Wall
N/A ☐ Underreamed ☐ Gravel Packed ☐ Other
If Gravel Packed give interval ... from ft. to ft.

CASING, BLANK PIPE, AND WELL SCREEN DATA:

Dia. (in.)	New or Used	Steel, Plastic, etc. Perf., Slotted, etc. Screen Mfg., if commercial	Setting (ft.) From	Setting (ft.) To	Gage Casting Screen
		N/A			

9) CEMENTING DATA [Rule 338.44(1)]
Cemented from 0 ft. to 30 ft. No. of sacks used 5
ft. to ft. No. of sacks used
Method used Mud Pump
Cemented by Maxim
Distance to septic system field lines or other concentrated contamination ft.
Method of verification of above distance

10) SURFACE COMPLETION
☐ Specified Surface Slab Installed [Rule 338.44(2)(A)]
☐ Specified Steel Sleeve Installed [Rule 338.44(3)(A)]
☐ Pitless Adapter Used [Rule 338.44(3)(b)]
☐ Approved Alternative Procedure Used [Rule 338.71]

11) WATER LEVEL:
Static level Dry ft. below land surface Date 5/3/96
Artesian flow gpm. Date

12) PACKERS: N/A Type Depth

13) TYPE PUMP: N/A
☐ Turbine ☐ Jet ☐ Submersible ☐ Cylinder
☐ Other
Depth to pump bowls, cylinder, jet, etc., ft.

14) WELL TESTS: N/A
Type test: ☐ Pump ☐ Bailer ☐ Jetted ☐ Estimated
Yield: gpm with ft. drawdown after hrs.

15) WATER QUALITY:
Did you knowingly penetrate any strata which contained undesirable constituents?
☐ Yes ☒ No If yes, submit "REPORT OF UNDESIRABLE WATER"
Type of water? Depth of strata
Was a chemical analysis made? ☐ Yes ☐ No

I hereby certify that this well was drilled by me (or under my supervision) and that each and all of the statements herein are true to the best of my knowledge and belief. I understand that failure to complete items 1 thru 15 will result in the log(s) being returned for completion and resubmittal.

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ADDRESS 2575 Lone Star Dr (Street or RFD) Dallas (City) Tx (State) 75212 (Zip)

(Signed) (Licensed Well Driller) (Signed) (Registered Driller Trainee)

Please attach electric log, chemical analysis, and other pertinent information, if available.

TNRCC-0199 (Rev. 11-01-94)

DRILLER'S COPY

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State of Texas WELL REPORT

Texas Water Well Drillers Advisory Council
P.O. Box 13087
Austin, TX 78711-3087
512-239-0530

1) OWNER USACE (Name) ADDRESS 819 Taylor st (Street or RFD) Fort Worth (City) Tx (State) 76102 (Zip)

2) ADDRESS OF WELL: County Hays (Street, RFD or other) San Marcos (City) Tx (State) (Zip) GRID #

3) TYPE OF WORK (Check): ☐ New Well ☐ Deepening ☐ Reconditioning ☒ Plugging

4) PROPOSED USE (Check): ☐ Monitor ☒ Environmental Soil Boring ☐ Domestic ☐ Industrial ☐ Irrigation ☐ Injection ☐ Public Supply ☐ De-watering ☐ Testwell
If Public Supply well, were plans submitted to the TNRCC? ☐ Yes ☐ No

5) N

6) WELL LOG: B-4
Date Drilling:
Started 5/1 19 96
Completed 5/1 19 96

DIAMETER OF HOLE		
Dia. (in.)	From (ft.)	To (ft.)
7.5	Surface	30'

7) DRILLING METHOD (Check): ☐ Driven ☐ Air Rotary ☐ Mud Rotary ☐ Bored ☐ Air Hammer ☐ Cable Tool ☐ Jetted ☒ Other HSA

From (ft.)	To (ft.)	Description and color of formation material
0.0	3.0	Lt brown Silty Clay
3.0	11.0	Brown Silty Clay
11.0	13.5	Lt brown Silty clay
13.5	16.0	Lt TAN Clay
16.0	18	Lt Gray loam/gravel
18	20	TAN Silty SAND
20	22	TAN Clay w/ gravel
22	25	Gray Clay
25	30	TAN to Gray Clay
TD = 30.0		

(Use reverse side if necessary)

8) Borehole Completion (Check): ☐ Open Hole ☐ Straight Wall
N/A ☐ Underreamed ☐ Gravel Packed ☐ Other
If Gravel Packed give interval ... from ft. to ft.

CASING, BLANK PIPE, AND WELL SCREEN DATA:

Dia. (in.)	New or Used	Steel, Plastic, etc. Perf., Slotted, etc. Screen Mfg., if commercial	Setting (ft.) From	Setting (ft.) To	Gage Casting Screen
		N/A			

9) CEMENTING DATA [Rule 338.44(1)]
Cemented from 0 ft. to 30 ft. No. of sacks used 5
ft. to ft. No. of sacks used
Method used Mud Pump
Cemented by Maxim
Distance to septic system field lines or other concentrated contamination ft.
Method of verification of above distance

10) SURFACE COMPLETION
☐ Specified Surface Slab Installed [Rule 338.44(2)(A)]
☐ Specified Steel Sleeve Installed [Rule 338.44(3)(A)]
☐ Pitless Adapter Used [Rule 338.44(3)(b)]
☐ Approved Alternative Procedure Used [Rule 338.71]

11) WATER LEVEL:
Static level Dry ft. below land surface Date 5/1/96
Artesian flow gpm. Date

12) PACKERS: N/A Type Depth

13) TYPE PUMP: N/A
☐ Turbine ☐ Jet ☐ Submersible ☐ Cylinder
☐ Other
Depth to pump bowls, cylinder, jet, etc., ft.

14) WELL TESTS: N/A
Type test: ☐ Pump ☐ Bailer ☐ Jetted ☐ Estimated
Yield: gpm with ft. drawdown after hrs.

15) WATER QUALITY:
Did you knowingly penetrate any strata which contained undesirable constituents?
☐ Yes ☒ No If yes, submit "REPORT OF UNDESIRABLE WATER"
Type of water? Depth of strata
Was a chemical analysis made? ☐ Yes ☐ No

I hereby certify that this well was drilled by me (or under my supervision) and that each and all of the statements herein are true to the best of my knowledge and belief. I understand that failure to complete items 1 thru 15 will result in the log(s) being returned for completion and resubmittal.

COMPANY NAME Maxim Technologies (Type or print) WELL DRILLER'S LICENSE NO. 3058-M

ADDRESS 2575 Lone Star Dr (Street or RFD) Dallas (City) Tx (State) 75212 (Zip)

(Signed) (Licensed Well Driller) (Signed) (Registered Driller Trainee)

Please attach electric log, chemical analysis, and other pertinent information, if available.

TNRCC-0199 (Rev. 11-01-94) DRILLER'S COPY

Send original copy by certified mail to: TNRCC, P.O. Box 13087, Austin, TX 78711-3087 *Please use black ink.*

ATTENTION OWNER: *Confidentiality Privilege Notice on Reverse Side*

State of Texas WELL REPORT

Texas Water Well Drillers Advisory Council
P.O. Box 13087
Austin, TX 78711-3087
512-239-0530

1) OWNER USACE (Name) ADDRESS 819 Taylor st (Street or RFD) Fort Worth (City) Tx (State) 76102 (Zip)

2) ADDRESS OF WELL: County Hays (Street, RFD or other) San Marcos (City) Tx (State) (Zip) GRID #

3) TYPE OF WORK (Check): ☐ New Well ☐ Deepening ☐ Reconditioning ☒ Plugging

4) PROPOSED USE (Check): ☐ Monitor ☒ Environmental Soil Boring ☐ Domestic ☐ Industrial ☐ Irrigation ☐ Injection ☐ Public Supply ☐ De-watering ☐ Testwell
If Public Supply well, were plans submitted to the TNRCC? ☐ Yes ☐ No

5)

6) WELL LOG: B-5
Date Drilling:
Started 5/10 1996
Completed 5/10 1996

DIAMETER OF HOLE

Dia. (in.)	From (ft.)	To (ft.)
7.5	Surface	30

7) DRILLING METHOD (Check): ☐ Driven ☐ Air Rotary ☐ Mud Rotary ☐ Bored ☐ Air Hammer ☐ Cable Tool ☐ Jetted ☒ Other HSA

N

From (ft.)	To (ft.)	Description and color of formation material
0	1	Sandy Loam (fill)
1	5.5	Brown Silty Clay (fill)
5.5	13.0	Dark Brown Gravely Clay (fill)
13	14	Black Clay
14	16.5	Tan Clay
16.5	20	Light Gray Clay w/ Gravely Clay
20	30.0	Redish brown Shaley Clay

TD = 30

(Use reverse side if necessary)

8) Borehole Completion (Check): ☐ Open Hole ☐ Straight Wall N/A ☐ Underreamed ☐ Gravel Packed ☐ Other
If Gravel Packed give interval ... from ft. to ft.

CASING, BLANK PIPE, AND WELL SCREEN DATA:

Dia. (in.)	New or Used	Steel, Plastic, etc. Perf., Slotted, etc. Screen Mfg., if commercial	Setting (ft.) From	Setting (ft.) To	Gage Casting Screen
		N/A			

9) CEMENTING DATA [Rule 338.44(1)]
Cemented from 0 ft. to 30 ft. No. of sacks used 5
ft. to ft. No. of sacks used
Method used Mud Pump
Cemented by Maxim Technologies
Distance to septic system field lines or other concentrated contamination ft.
Method of verification of above distance

13) TYPE PUMP: N/A
☐ Turbine ☐ Jet ☐ Submersible ☐ Cylinder
☐ Other
Depth to pump bowls, cylinder, jet, etc., ft.

10) SURFACE COMPLETION
☐ Specified Surface Slab Installed [Rule 338.44(2)(A)]
☐ Specified Steel Sleeve Installed [Rule 338.44(3)(A)]
☐ Pitless Adapter Used [Rule 338.44(3)(b)]
☐ Approved Alternative Procedure Used [Rule 338.71]

14) WELL TESTS: N/A
Type test: ☐ Pump ☐ Bailer ☐ Jetted ☐ Estimated
Yield: gpm with ft. drawdown after hrs.

11) WATER LEVEL:
Static level Dry ft. below land surface Date 5/10/96
Artesian flow gpm. Date

15) WATER QUALITY:
Did you knowingly penetrate any strata which contained undesirable constituents?
☐ Yes ☒ No If yes, submit "REPORT OF UNDESIRABLE WATER"
Type of water? Depth of strata
Was a chemical analysis made? ☐ Yes ☐ No

12) PACKERS: N/A Type Depth

I hereby certify that this well was drilled by me (or under my supervision) and that each and all of the statements herein are true to the best of my knowledge and belief. I understand that failure to complete items 1 thru 15 will result in the log(s) being returned for completion and resubmittal.

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ADDRESS 2575 Lone Star Dr (Street or RFD) Dallas (City) Tx (State) 75212 (Zip)

(Signed) [signature] (Licensed Well Driller) (Signed) (Registered Driller Trainee)

Please attach electric log, chemical analysis, and other pertinent information, if available.

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State of Texas WELL REPORT

Texas Water Well Drillers Advisory Council
P.O. Box 13087
Austin, TX 78711-3087
512-239-0530

1) OWNER USACE (Name) ADDRESS 819 Taylor St (Street or RFD) Fort Worth (City) Tx (State) 76102 (Zip)

2) ADDRESS OF WELL: County Hays (Street, RFD or other) San Marcos (City) Tx (State) (Zip) GRID #

3) TYPE OF WORK (Check): ☐ New Well ☐ Deepening ☐ Reconditioning ☒ Plugging

4) PROPOSED USE (Check): ☐ Monitor ☒ Environmental Soil Boring ☐ Domestic ☐ Industrial ☐ Irrigation ☐ Injection ☐ Public Supply ☐ De-watering ☐ Testwell
If Public Supply well, were plans submitted to the TNRCC? ☐ Yes ☐ No

5)

6) WELL LOG: B-6
Date Drilling:
Started 5/10 1996
Completed 5/10 1996

DIAMETER OF HOLE		
Dia. (in.)	From (ft.)	To (ft.)
7.5	Surface	30

7) DRILLING METHOD (Check): ☐ Driven ☐ Air Rotary ☐ Mud Rotary ☐ Bored ☐ Air Hammer ☐ Cable Tool ☐ Jetted ☒ Other HSA

N

From (ft.)	To (ft.)	Description and color of formation material
0	3.5	Black Clay
3.5	11	Reddish brown Silty Clay
11	15	Tan Clay
15	17.5	Tan Gravelly Sand
17.5	19	Tan Sandy Clay
19	20	Gray, red, yellow Silty Clay
20	23	Tan + Gray Clay
23	30	Tan + Gray Shaley Clay
		TD = 30

(Use reverse side if necessary)

8) Borehole Completion (Check): ☐ Open Hole ☐ Straight Wall ☐ Underreamed ☐ Gravel Packed ☐ Other
N/A
If Gravel Packed give interval ___ from ___ ft. to ___ ft.

CASING, BLANK PIPE, AND WELL SCREEN DATA:

Dia. (in.)	New or Used	Steel, Plastic, etc. Perf., Slotted, etc. Screen Mfg., if commercial	Setting (ft.) From	Setting (ft.) To	Gage Casting Screen
		N/A			

9) CEMENTING DATA [Rule 338.44(1)]
Cemented from 0 ft. to 30 ft. No. of sacks used 5
___ ft. to ___ ft. No. of sacks used ___
Method used Mud Pump
Cemented by Maxim
Distance to septic system field lines or other concentrated contamination ___ ft.
Method of verification of above distance ___

10) SURFACE COMPLETION
☐ Specified Surface Slab Installed [Rule 338.44(2)(A)]
☐ Specified Steel Sleeve Installed [Rule 338.44(3)(A)]
☐ Pitless Adapter Used [Rule 338.44(3)(b)]
☐ Approved Alternative Procedure Used [Rule 338.71]

11) WATER LEVEL:
Static level Dry ft. below land surface Date 5/10/96
Artesian flow ___ gpm. Date ___

12) PACKERS: N/A Type Depth

13) TYPE PUMP: N/A
☐ Turbine ☐ Jet ☐ Submersible ☐ Cylinder
☐ Other ___
Depth to pump bowls, cylinder, jet, etc., ___ ft.

14) WELL TESTS: N/A
Type test: ☐ Pump ☐ Bailer ☐ Jetted ☐ Estimated
Yield: ___ gpm with ___ ft. drawdown after ___ hrs.

15) WATER QUALITY:
Did you knowingly penetrate any strata which contained undesirable constituents?
☐ Yes ☒ No If yes, submit "REPORT OF UNDESIRABLE WATER"
Type of water? ___ Depth of strata ___
Was a chemical analysis made? ☐ Yes ☐ No

I hereby certify that this well was drilled by me (or under my supervision) and that each and all of the statements herein are true to the best of my knowledge and belief. I understand that failure to complete items 1 thru 15 will result in the log(s) being returned for completion and resubmittal.

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ADDRESS 2575 Lone Star Dr (Street or RFD) Dallas (City) Tx (State) 75212 (Zip)

(Signed) ___ (Licensed Well Driller) (Signed) ___ (Registered Driller Trainee)

Please attach electric log, chemical analysis, and other pertinent information, if available.

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P.O. Box 13087
Austin, TX 78711-3087
512-239-0530

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2) ADDRESS OF WELL: County Hays (Street, RFD or other) San Marcos (City) Tx (State) (Zip) GRID # ____

3) TYPE OF WORK (Check): ☐ New Well ☐ Deepening ☐ Reconditioning ☒ Plugging

4) PROPOSED USE (Check): ☐ Monitor ☒ Environmental Soil Boring ☐ Domestic ☐ Industrial ☐ Irrigation ☐ Injection ☐ Public Supply ☐ De-watering ☐ Testwell
If Public Supply well, were plans submitted to the TNRCC? ☐ Yes ☐ No

5) N

6) WELL LOG: B-7
Date Drilling: Started 5/16 19 96 Completed 5/16 19 96

DIAMETER OF HOLE		
Dia. (in.)	From (ft.)	To (ft.)
7.5	Surface	30

7) DRILLING METHOD (Check): ☐ Driven ☐ Air Rotary ☐ Mud Rotary ☐ Bored ☐ Air Hammer ☐ Cable Tool ☐ Jetted ☒ Other HSA

From (ft.)	To (ft.)	Description and color of formation material
0	4.5	Black Tan Gravelly Clay
4.5	8	Redish brown Silty Clay
8	10	Tan Silty Clay
10	13	Red Clay
13	18.5	Tan Clay Gravelly Clay
18.5	23	Gray Silty Clay
23	25	Lt brown to Tan Gray Shale
25	30	Lt Gray + Red Clay Shale

TD = 30.0

(Use reverse side if necessary)

8) Borehole Completion (Check): ☐ Open Hole ☐ Straight Wall ☐ Underreamed ☐ Gravel Packed ☐ Other ____
N/A
If Gravel Packed give interval ... from ____ ft. to ____ ft.

CASING, BLANK PIPE, AND WELL SCREEN DATA:

Dia. (in.)	New or Used	Steel, Plastic, etc. Perf., Slotted, etc. Screen Mfg., if commercial	Setting (ft.) From	Setting (ft.) To	Gage Casting Screen
		N/A			

9) CEMENTING DATA [Rule 338.44(1)]
Cemented from 0 ft. to 30 ft. No. of sacks used 5
____ ft. to ____ ft. No. of sacks used ____
Method used Mud Pump
Cemented by Maxim Tech
Distance to septic system field lines or other concentrated contamination ____ ft.
Method of verification of above distance ____

10) SURFACE COMPLETION
☐ Specified Surface Slab Installed [Rule 338.44(2)(A)]
☐ Specified Steel Sleeve Installed [Rule 338.44(3)(A)]
☐ Pitless Adapter Used [Rule 338.44(3)(b)]
☐ Approved Alternative Procedure Used [Rule 338.71]

11) WATER LEVEL:
Static level Dry ft. below land surface Date 5/16/96
Artesian flow ____ gpm. Date ____

12) PACKERS: N/A Type Depth

13) TYPE PUMP: N/A
☐ Turbine ☐ Jet ☐ Submersible ☐ Cylinder
☐ Other ____
Depth to pump bowls, cylinder, jet, etc., ____ ft.

14) WELL TESTS: N/A
Type test: ☐ Pump ☐ Bailer ☐ Jetted ☐ Estimated
Yield: ____ gpm with ____ ft. drawdown after ____ hrs.

15) WATER QUALITY:
Did you knowingly penetrate any strata which contained undesirable constituents?
☐ Yes ☒ No If yes, submit "REPORT OF UNDESIRABLE WATER"
Type of water? ____ Depth of strata ____
Was a chemical analysis made? ☐ Yes ☐ No

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(Signed) ____ (Licensed Well Driller) (Signed) ____ (Registered Driller Trainee)

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State of Texas WELL REPORT

Texas Water Well Drillers Advisory Council
P.O. Box 13087
Austin, TX 78711-3087
512-239-0530

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3) TYPE OF WORK (Check): ☐ New Well ☐ Deepening ☐ Reconditioning ☒ Plugging

4) PROPOSED USE (Check): ☐ Monitor ☒ Environmental Soil Boring ☐ Domestic ☐ Industrial ☐ Irrigation ☐ Injection ☐ Public Supply ☐ De-watering ☐ Testwell
If Public Supply well, were plans submitted to the TNRCC? ☐ Yes ☐ No

5)

6) WELL LOG: B-8
Date Drilling:
Started 5/10 1996
Completed 5/10 1996

DIAMETER OF HOLE

Dia. (in.)	From (ft.)	To (ft.)
7.5	Surface	30

7) DRILLING METHOD (Check): ☐ Driven ☐ Air Rotary ☐ Mud Rotary ☐ Bored ☐ Air Hammer ☐ Cable Tool ☐ Jetted ☒ Other HSA

N

From (ft.)	To (ft.)	Description and color of formation material
0	-	Tanish Gray Clay w/ Gravel
	3.5	w/ LS. + Wood (Fill)
3.5	5.0	Black Clay
5.0	10	Tan to Redish brown Silty Clay
10	15	Lt brown silty Clay
15	21	Lt Gray to brown Sand
21	25	Gray Redish brown gravely Clay
25	30	" " " Shaley Clay

TD = 30

(Use reverse side if necessary)

8) Borehole Completion (Check): ☐ Open Hole ☐ Straight Wall ☐ Underreamed ☐ Gravel Packed ☐ Other N/A
If Gravel Packed give interval ... from ____ ft. to ____ ft.

CASING, BLANK PIPE, AND WELL SCREEN DATA:

Dia. (in.)	New or Used	Steel, Plastic, etc. Perf., Slotted, etc. Screen Mfg., if commercial	Setting (ft.) From	Setting (ft.) To	Gage Casting Screen
		N/A			

9) CEMENTING DATA [Rule 338.44(1)]
Cemented from 0 ft. to 30 ft. No. of sacks used 5
____ ft. to ____ ft. No. of sacks used ____
Method used Mud Pump
Cemented by Maxim
Distance to septic system field lines or other concentrated contamination ____ ft.
Method of verification of above distance ____

13) TYPE PUMP: N/A
☐ Turbine ☐ Jet ☐ Submersible ☐ Cylinder
☐ Other ____
Depth to pump bowls, cylinder, jet, etc., ____ ft.

10) SURFACE COMPLETION
☐ Specified Surface Slab Installed [Rule 338.44(2)(A)]
☐ Specified Steel Sleeve Installed [Rule 338.44(3)(A)]
☐ Pitless Adapter Used [Rule 338.44(3)(b)]
☐ Approved Alternative Procedure Used [Rule 338.71]

14) WELL TESTS: N/A
Type test: ☐ Pump ☐ Bailer ☐ Jetted ☐ Estimated
Yield: ____ gpm with ____ ft. drawdown after ____ hrs.

11) WATER LEVEL:
Static level Dry ft. below land surface Date 5/10/96
Artesian flow ____ gpm. Date ____

15) WATER QUALITY:
Did you knowingly penetrate any strata which contained undesirable constituents?
☐ Yes ☒ No If yes, submit "REPORT OF UNDESIRABLE WATER"
Type of water? ____ Depth of strata ____
Was a chemical analysis made? ☐ Yes ☐ No

12) PACKERS: N/A Type Depth

I hereby certify that this well was drilled by me (or under my supervision) and that each and all of the statements herein are true to the best of my knowledge and belief. I understand that failure to complete items 1 thru 15 will result in the log(s) being returned for completion and resubmittal.

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(Signed) [signature] (Licensed Well Driller) (Signed) ____ (Registered Driller Trainee)

Please attach electric log, chemical analysis, and other pertinent information, if available.

TNRCC-0199 (Rev. 11-01-94)

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Attachment 15

Attachment 15
Sample Summary Tables

Soil Sample Tables - Risk-Based Site Assessment*

*Compiled from data gathered by Thompson Professional Group, Inc., from samples collected May 16, 1996, through July 17, 1996.

Soil Sample Descriptions
LPST 108133

Boring Location	Depth (ft. BGS)	Field ID#	Lab ID#	Date Sampled	Time Sampled	Parameters Analyzed	PID Reading
Boring 1	22	B1-1022	9605D61-01	5/14/96	10:58 AM	BTEX, TPH, PAHs	1041ppm
Boring 1	26.5	B1-1026	9605D61-03	5/14/96	11:04 AM	BTEX, TPH, PAHs	836 ppm
Boring 1	35	B1-1035	9605D61-02	5/14/96	11:20 AM	BTEX, TPH, PAHs	195 ppm
Boring 2	17	B2-2117	9605D61-05	5/15/96	11:43 AM	BTEX, TPH, PAHs	34.7 ppm
Boring 2	21.5	B2-2121	9605D61-06	5/15/96	9:15 AM	BTEX, TPH, PAHs	51.2 ppm
Boring 2	30	B2-2130	9605D61-04	5/15/96	11:25 AM	BTEX, TPH, PAHs	4.4 ppm
Boring 3	17	B3-3217	9605D61-08	5/15/96	3:34 PM	BTEX, TPH, PAHs	5.9 ppm
Boring 3	22	B3-3222	9605D61-09	5/15/96	3:35 PM	BTEX, TPH, PAHs	15.6 ppm
Boring 3	30	B3-3230	9605D61-07	5/15/96	11:25 AM	BTEX, TPH, PAHs	4.2 ppm
Boring 4	16	B4-4316	9605D61-11	5/15/96	4:25 PM	BTEX, TPH, PAHs	42.0 ppm
Boring 4	18.5	B4-43.8	9605D61-12	5/15/96	2:50 PM	BTEX, TPH, PAHs	70.9 ppm
Boring 4	30	B4-4330	9605D61-10	5/15/96	3:10 PM	BTEX, TPH, PAHs	25.5 ppm
Boring 5	14	B5-5414	9605D61-15	5/16/96	8:55 AM	BTEX, TPH, PAHs	686 ppm
Boring 5	17	B5-5417	9605D61-14	5/16/96	11:44 AM	BTEX, TPH, PAHs	1437 ppm
Boring 5	20.5	B5-5420	9605D61-16	5/16/96	9:15 AM	BTEX, TPH, PAHs	124 ppm
Boring 5	30	B5-5430	9605D61-13	5/16/96	10:55 AM	BTEX, TPH, PAHs	49.1 ppm
Boring 6	17	B6-6517	9605D61-18	5/16/96	1:37 PM	BTEX, TPH, PAHs	178 ppm
Boring 6	20	B6-6520	9605D61-19	5/16/96	10:55 AM	BTEX, TPH, PAHs	382 ppm
Boring 6	30 ft.	B6-6530	9605D61-17	5/16/96	10:45 AM	BTEX, TPH, PAHs	42.8 ppm
Boring 7	17	B7-7617	9605952-03	5/16/96	5:08 PM	BTEX, TPH, PAHs	31.0 ppm
Boring 7	22	B7-7622	9605952-01	5/16/96	2:33 PM	BTEX, TPH, PAHs	68.7 ppm
Boring 7	30	B7-7630	9605952-02	5/16/96	2:47 PM	BTEX, TPH, PAHs	23.6 ppm
Boring 8	5	B8-8705	9605952-07	5/17/96	8:45 AM	BTEX, TPH, PAHs	150 ppm
Boring 8	17	B8-8717	9605952-05	5/16/96	5:50 PM	BTEX, TPH, PAHs	75 ppm
Boring 8	20.5	B8-8720	9605952-06	5/16/96	4:30 PM	BTEX, TPH, PAHs	52 ppm
Boring 8	30	B7-8730	9605952-04	5/16/96	4:47 PM	BTEX, TPH, PAHs	9 ppm

Ground Water Sample Descriptions
LPST 108133

Monitoring Well	Field ID#	Lab ID#	Date Sampled	Time Sampled	Other Notes	Parameters Analyzed
MW 1	G1-1234	9605D61-20	5/16/96	11:05 AM	Inital Well Sample	BTEX
MW 1	G1-3234	9605D61-21	5/16/96	3:15 PM	Rinsate Blank	BTEX
MW 1	G1-4234	9605D61-22	5/16/96	11:25 AM	Rinsate Blank	BTEX
MW 1	G1-5234	9605D61-23	5/16/96	11:10 AM	Inital Well Sample	TPH
MW 1	G1-7234	9605D61-24	5/16/96	3:20 PM	Rinsate Blank	TPH
MW 1	G1-8234	9605D61-25	5/16/96	11:25 AM	Rinsate Blank	TPH
MW 1	MW-1-7471	9605F42-01	5/30/96	1:13 PM	Well Sample	BTEX
MW 1	MW-1-7472	9605F42-02	5/30/96	1:15 PM	Duplicate of 7471	BTEX
MW 1	MW-1-7473	9605F42-03	5/30/96	1:18 PM	Well Sample	PAHs
MW 1	MW1-7480	9607861-01	7/17/96	2:30 PM	Blank	TDS
MW 1	MW1-7481	9607861-02	7/17/96	3:00 PM	Well Sample	TDS

SOIL & GROUNDWATER SAMPLING ANALYTICAL RESULTS

Former Gary Air Force Base LPST # 108133				Soil Boring/Ground Water Monitoring Well No. 1							Caldwell County, Texas
Compound	Soil Samples			Groundwater Samples							
	B1-1022	B1-1035	B1-1026	G1-1234	G1-3234	G1-4234	G1-5234	G1-7234	G1-8234	MW-1-7471	MW-1-7472
BTEX	[µg/kg]	[µg/kg]	[µg/kg]	[µg/L]	[µg/L]	[µg/L]				[µg/L]	[µg/L]
Benzene	< 1	39	300	1500	<1	<1				1000	1100
Toluene	< 1	<5	<50	8	<1	<1				9	7
Ethylbenzene	2	180	1700	170	<1	<1				110	110
Total Xylene	6	77	1750	<5	<1	1				<5	<5
Total BTEX	8	296	3750	1678	<1	1				1119	1217
TPH	[mg/kg]	[mg/kg]	[mg/kg]				[mg/L]	[mg/L]	[mg/L]		
	17	34	270				7	<0.5	<0.5		
PAH	[µg/kg]	[µg/kg]	[µg/kg]								
Naphthalene	<60	32	900							170	
Acenaphthylene	<30	< 1.5	<150							<10	
Acenaphthene	<100	< 5	<500							<20	
Fluorene	<112	< 5.6	<560							<40	
Phenanthrene	<104	< 5.2	<520							<40	
Anthracene	<90	< 4.5	<450							<20	
Fluoranthene	<76	< 3.8	<380							<20	
Pyrene	<70	< 3.5	<350							<20	
Chrysene	<54	< 2.7	<270							<16	
Benzo a anthracene	<54	< 2.7	<270							<16	
Benzo b fluoranthene	<44	< 2.2	<220							<12	
Benzo k fluoranthene	<48	< 2.4	<240							<14	
Benzo a pyrene	<22	< 1.1	<110							<6	
Dibenzo a,h anthracene	<48	< 2.4	<240							<14	
Benzo g,h,i perylene	<70	< 3.5	<350							<20	
Indeno 1,2,3-cd pyrene	<52	< 2.6	<260							<16	

SOIL & GROUNDWATER SAMPLING ANALYTICAL RESULTS

Former Gary Air Force Base LPST # 108133	Soil Boring/Ground Water Monitoring Well No. 2	Caldwell County, Texas

Compound	Soil Samples			Groundwater Samples
	B2-2130	B2-2117	B2-2121	
BTEX	[µg/kg]	[µg/kg]	[µg/kg]	
Benzene	< 1	2	< 1	
Toluene	< 1	2	< 1	
Ethylbenzene	< 1	4	< 1	
Total Xylene	< 1	3	< 1	
Total BTEX	< 1	11	< 1	
TPH	[mg/kg]	[mg/kg]	[mg/kg]	
	13	32	<10	
PAH	[µg/kg]	[µg/kg]	[µg/kg]	
Naphthalene	< 3	< 3	< 3	
Acenaphthylene	< 1.5	< 1.5	< 1.5	
Acenaphthene	< 5	< 5	< 5	
Fluorene	< 5.6	< 5.6	< 5.6	
Phenanthrene	< 5.2	< 5.2	< 5.2	
Anthracene	< 4.5	< 4.5	< 4.5	
Fluoranthene	< 3.8	< 3.8	< 3.8	
Pyrene	< 3.5	< 3.5	< 3.5	
Chrysene	< 2.7	< 2.7	< 2.7	
Benzo a anthracene	< 2.7	< 2.7	< 2.7	
Benzo b fluoranthene	< 2.2	< 2.2	< 2.2	
Benzo k fluoranthene	< 2.4	< 2.4	< 2.4	
Benzo a pyrene	< 1.1	< 1.1	< 1.1	
Dibenzo a,h anthracene	< 2.4	< 2.4	< 2.4	
Benzo g,h,i perylene	< 3.5	< 3.5	< 3.5	
Indeno 1,2,3-cd pyrene	< 2.6	< 2.6	< 2.6	

SOIL & GROUNDWATER SAMPLING ANALYTICAL RESULTS

Former Gary Air Force Base LPST # 108133				Soil Boring/Ground Water Monitoring Well No. 3	Caldwell County, Texas
Compound	Soil Samples			Groundwater Samples	
	B3-3230	B3-3217	B3-3222		
BTEX	[µg/kg]	[µg/kg]	[µg/kg]		
Benzene	< 1	< 1	< 1		
Toluene	< 1	< 1	< 1		
Ethylbenzene	< 1	< 1	2		
Total Xylene	< 1	< 1	ND		
Total BTEX	< 1	< 1	2		
TPH	[mg/kg]	[mg/kg]	[mg/kg]		
	<10	<10	<10		
PAH	[µg/kg]	[µg/kg]	[µg/kg]		
Naphthalene	< 3	< 15	< 15		
Acenaphthylene	< 1.5	< 7.5	< 7.5		
Acenaphthene	< 5	< 25	< 25		
Fluorene	< 5.6	< 28.0	< 28.0		
Phenanthrene	< 5.2	< 26.0	< 26.0		
Anthracene	< 4.5	< 22.5	< 22.5		
Fluoranthene	< 3.8	< 19.0	< 19.0		
Pyrene	< 3.5	< 17.5	< 17.5		
Chrysene	< 2.7	< 13.5	< 13.5		
Benzo a anthracene	< 2.7	< 13.5	< 13.5		
Benzo b fluoranthene	< 2.2	< 11.0	< 11.0		
Benzo k fluoranthene	< 2.4	< 12.0	< 12.0		
Benzo a pyrene	< 1.1	< 5.5	< 5.5		
Dibenzo a,h anthracene	< 2.4	< 12.0	< 12.0		
Benzo g,h,i perylene	< 3.5	< 17.5	< 17.5		
Indeno 1,2,3-cd pyrene	< 2.6	< 13.0	< 13.0		

SOIL & GROUNDWATER SAMPLING ANALYTICAL RESULTS

Former Gary Air Force Base LPST # 108133				Soil Boring/Ground Water Monitoring Well No. 4	Caldwell County, Texas
Compound	Soil Samples			Groundwater Samples	
	B4-4330	B4-4316	B4-4318		
BTEX	[µg/kg]	[µg/kg]	[µg/kg]		
Benzene	< 1	< 1	<5		
Toluene	< 1	< 1	<5		
Ethylbenzene	< 1	< 1	110		
Total Xylene	2	< 1	135		
Total BTEX	2	< 1	245		
TPH	[mg/kg]	[mg/kg]	[mg/kg]		
	<10	12	150		
PAH	[µg/kg]	[µg/kg]	[µg/kg]		
Naphthalene	< 15	< 3	<60		
Acenaphthylene	< 7.5	< 1.5	<30		
Acenaphthene	< 25	< 5	<100		
Fluorene	< 28.0	< 5.6	<112		
Phenanthrene	< 26.0	< 5.2	<104		
Anthracene	< 22.5	< 4.5	<90		
Fluoranthene	< 19.0	< 3.8	<76		
Pyrene	< 17.5	< 3.5	<70		
Chrysene	< 13.5	< 2.7	120		
Benzo a anthracene	< 13.5	< 2.7	<54		
Benzo b fluoranthene	< 11.0	< 2.2	<44		
Benzo k fluoranthene	< 12.0	< 2.4	<48		
Benzo a pyrene	< 5.5	< 1.1	<22		
Dibenzo a,h anthracene	< 12.0	< 2.4	<48		
Benzo g,h,i perylene	< 17.5	< 3.5	<70		
Indeno 1,2,3-cd pyrene	< 13.0	< 2.6	<52		

SOIL & GROUNDWATER SAMPLING ANALYTICAL RESULTS

Former Gary Air Force Base LPST # 108133					Soil Boring/Ground Water Monitoring Well No. 5	Caldwell County, Texas
Compound	Soil Samples				Groundwater Samples	
	B5-5430	B5-5417	B5-5414	B5-5420		
BTEX	[µg/kg]	[µg/kg]	[µg/kg]	[µg/kg]		
Benzene	18	630	67	10		
Toluene	19	1700	660	<10		
Ethylbenzene	5	11000	580	160		
Total Xylene	25	20200	2100	1880		
Total BTEX	67	33530	3407	2050		
TPH	[mg/kg]	[mg/kg]	[mg/kg]	[mg/kg]		
	<10	4300	62	610		
PAH	[µg/kg]	[µg/kg]	[µg/kg]	[µg/kg]		
Naphthalene	< 15	2000	<300	1700		
Acenaphthylene	< 7.5	<30	<150	<30		
Acenaphthene	< 25	<100	<500	<100		
Fluorene	< 28.0	<112	<560	<112		
Phenanthrene	< 26.0	<104	1900	<104		
Anthracene	< 22.5	<90	480	<90		
Fluoranthene	< 19.0	<76	2200	<76		
Pyrene	< 17.5	<70	1300	<70		
Chrysene	< 13.5	74	590	<54		
Benzo a anthracene	< 13.5	<54	780	<54		
Benzo b fluoranthene	< 11.0	<44	500	<44		
Benzo k fluoranthene	< 12.0	<48	<240	<48		
Benzo a pyrene	< 5.5	<22	<110	<22		
Dibenzo a,h anthracene	< 12.0	<48	<240	<48		
Benzo g,h,i perylene	< 17.5	<70	<350	<70		
Indeno 1,2,3-cd pyrene	< 13.0	<52	<260	<52		

SOIL & GROUNDWATER SAMPLING ANALYTICAL RESULTS

Former Gary Air Force Base LPST # 108133				Soil Boring/Ground Water Monitoring Well No. 6	Caldwell County, Texas
Compound	Soil Samples			Groundwater Samples	
	B6-6530	B6-6517	B6-6520		
BTEX	[µg/kg]	[µg/kg]	[µg/kg]		
Benzene	15	<10	60		
Toluene	<5	<10	<50		
Ethylbenzene	<5	14	2500		
Total Xylene	<5	41	2630		
Total BTEX	15	55	5190		
TPH	[mg/kg]	[mg/kg]	[mg/kg]		
	15	190	6300		
PAH	[µg/kg]	[µg/kg]	[µg/kg]		
Naphthalene	4	<150	2100		
Acenaphthylene	< 1.5	<75	<375		
Acenaphthene	< 5	<250	<1250		
Fluorene	< 5.6	<280	<1400		
Phenanthrene	< 5.2	<260	<1300		
Anthracene	< 4.5	<225	<1125		
Fluoranthene	< 3.8	<190	<950		
Pyrene	< 3.5	<175	<875		
Chrysene	< 2.7	<135	<675		
Benzo a anthracene	< 2.7	<135	<675		
Benzo b fluoranthene	< 2.2	<110	<550		
Benzo k fluoranthene	< 2.4	<120	<600		
Benzo a pyrene	< 1.1	<55	<275		
Dibenzo a,h anthracene	< 2.4	<120	<600		
Benzo g,h,i perylene	< 3.5	<175	<875		
Indeno 1,2,3-cd pyrene	< 2.6	<130	<650		

SOIL & GROUNDWATER SAMPLING ANALYTICAL RESULTS

Former Gary Air Force Base LPST # 108133				Soil Boring/Ground Water Monitoring Well No. 7	Caldwell County, Texas
Compound	Soil Samples			Groundwater Samples	
	B7-7622	B7-7630	B7-7617		
BTEX	[µg/kg]	[µg/kg]	[µg/kg]		
Benzene	<10	< 1	< 1		
Toluene	24	< 1	< 1		
Ethylbenzene	190	< 1	3		
Total Xylene	230	< 1	8		
Total BTEX	444	< 1	11		
TPH	[mg/kg]	[mg/kg]	[mg/kg]		
	330	<10	<10		
PAH	[µg/kg]	[µg/kg]	[µg/kg]		
Naphthalene	< 3	< 3	< 3		
Acenaphthylene	< 1.5	< 1.5	< 1.5		
Acenaphthene	< 5	< 5	< 5		
Fluorene	< 5.6	< 5.6	< 5.6		
Phenanthrene	< 5.2	< 5.2	< 5.2		
Anthracene	< 4.5	< 4.5	< 4.5		
Fluoranthene	< 3.8	< 3.8	< 3.8		
Pyrene	< 3.5	< 3.5	< 3.5		
Chrysene	< 2.7	< 2.7	< 2.7		
Benzo a anthracene	< 2.7	< 2.7	< 2.7		
Benzo b fluoranthene	< 2.2	< 2.2	< 2.2		
Benzo k fluoranthene	< 2.4	< 2.4	< 2.4		
Benzo a pyrene	< 1.1	< 1.1	< 1.1		
Dibenzo a,h anthracene	< 2.4	< 2.4	< 2.4		
Benzo g,h,i perylene	10	< 3.5	< 3.5		
Indeno 1,2,3-cd pyrene	< 2.6	< 2.6	< 2.6		

SOIL & GROUNDWATER SAMPLING ANALYTICAL RESULTS

Former Gary Air Force Base LPST # 108133					Soil Boring/Ground Water Monitoring Well No. 8	Caldwell County, Texas
Compound	Soil Samples				Groundwater Samples	
	B8-8730	B8-8717	B8-8720	B8-8705		
BTEX	[µg/kg]	[µg/kg]	[µg/kg]	[µg/kg]		
Benzene	< 1	<10	<200	<5		
Toluene	32	<10	790	<5		
Ethylbenzene	2	<10	44000	<5		
Total Xylene	3	<10	25000	<5		
Total BTEX	37	<10	69790	<5		
TPH	[mg/kg]	[mg/kg]	[mg/kg]	[mg/kg]		
	<10	130	1800	46		
PAH	[µg/kg]	[µg/kg]	[µg/kg]	[µg/kg]		
Naphthalene	< 15	<30	6200	<3000		
Acenaphthylene	< 7.5	<15	<750	<1500		
Acenaphthene	< 25	<50	<2500	<5000		
Fluorene	< 28.0	<56	<2800	<5600		
Phenanthrene	< 26.0	<52	<2600	<5200		
Anthracene	< 22.5	<45	<2250	<4500		
Fluoranthene	27	<38	<1900	<3800		
Pyrene	24	<35	<1750	3600		
Chrysene	< 13.5	<27	<1350	<2700		
Benzo a anthracene	< 13.5	<27	<1350	<2700		
Benzo b fluoranthene	< 11.0	<22	<1100	5900		
Benzo k fluoranthene	< 12.0	<24	<1200	3100		
Benzo a pyrene	< 5.5	<11	<550	<1100		
Dibenzo a,h anthracene	< 12.0	<24	<1200	<2400		
Benzo g,h,i perylene	< 17.5	<35	<1750	3500		
Indeno 1,2,3-cd pyrene	< 13.0	<26	<1300	<2600		

Sample Tables - Tank Removal*

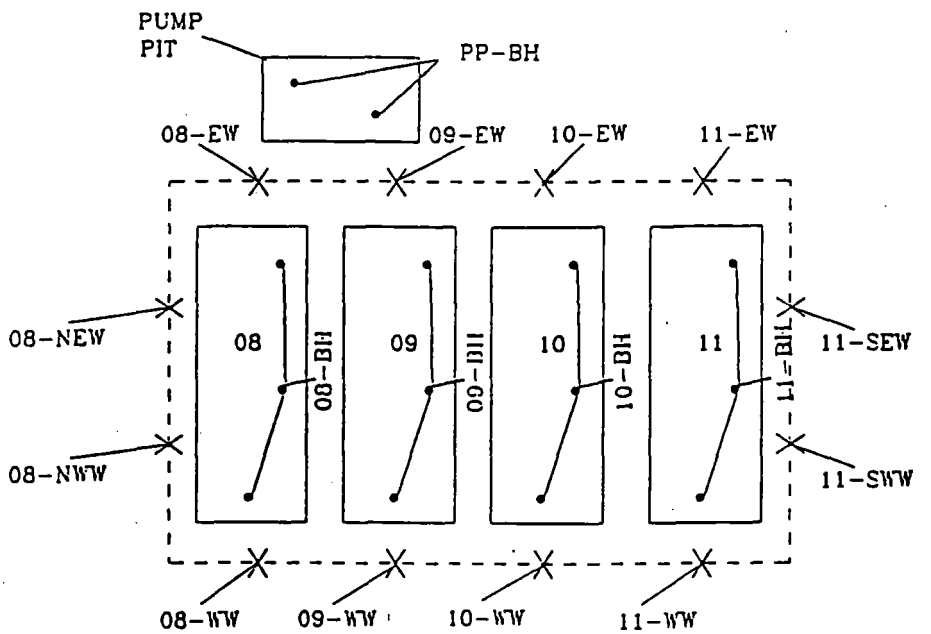
*From report titled Petroleum Storage Tank Site Assessment and Remedial Activities, *Former Gary Air Force Base, Site No. 10-350 (Tanks 8-11), San Marcos (Caldwell County), Texas.* Prepared by Perry Williams Inc. for the U.S. Army Corps of engineers, dated March 17, 1995

SAMPLE LOCATIONS

SPA	SPG
SPB	SPH
SPC	SPI
SPD	SPJ
SPE	SPK
SPF	SPL

NOTE:
600 cyds SAMPLED ON
50 cyds BASIS 12 SAMPLES

STOCKPILE : 72'x20'x8'



X = IN-PLACE SAMPLE LOCATIONS

• = BOTTOM HOLE COMPOSITE LOCATIONS

TANKHOLD : 50'x30'x11'

PROJECT NAME: GARY AFB
SITE 10-350
D.O.# 0008

N

FIGURE 5

PERRY WILLIAMS, INC.
P. O. BOX 30206
AMARILLO, TEXAS 79120

0 15'

SCALE 1" = 15'

SAMPLE TESTING RESULTS

Contract No: DACA63-92-D-0047 Site No: Gary AFB #10350 Tanks 8-11 San Marcos, TX Zone: 4

Order No: 0008 Sampler: Mike Soto

Date Sampled	Lab ID#	Field Description	Matrix	TRPH	BTEX	Lead
4/20/94	35518	GAFB-10-350-08-BH	Soil	<10 ppm	62.5 ppm	5.9 ppm
4/20/94	35523	GAFB-10-350-08-NWW	Soil	70 ppm	<2.4 ppm	38 ppm
4/20/94	35524	GAFB-10-350-08-NEW	Soil	29 ppm	<2.4 ppm	28 ppm
4/20/94	35527	GAFB-10-350-08-EW	Soil	74 ppm	<2.4 ppm	56 ppm
4/20/94	35531	GAFB-10-350-08-WW	Soil	<10 ppm	<2.4 ppm	9.7 ppm
4/20/94	35520	GAFB-10-350-09-BH	Soil	86 ppm	<2.4 ppm	15 ppm
4/20/94	35528	GAFB-10-350-09-EW	Soil	<10 ppm	<2.4 ppm	6.5 ppm
4/20/94	35532	GAFB-10-350-09-WW	Soil	<10 ppm	<2.4 ppm	5.7 ppm
4/20/94	35521	GAFB-10-350-10-BH	Soil	3800 ppm	<2.4 ppm	8.9 ppm
4/20/94	35529	GAFB-10-350-10-EW	Soil	<10 ppm	<2.4 ppm	14 ppm
4/20/94	35533	GAFB-10-350-10-WW	Soil	780 ppm	<2.4 ppm	6.4 ppm
4/20/94	35522	GAFB-10-350-11-BH	Soil	6500 ppm	2.0 ppm	10 ppm
4/20/94	35525	GAFB-10-350-11-SWW	Soil	16 ppm	<2.4 ppm	6.9 ppm
4/20/94	35526	GAFB-10-350-11-SEW	Soil	101 ppm	<2.4 ppm	8.5 ppm
4/20/94	35530	GAFB-10-350-11-EW	Soil	<10 ppm	<2.4 ppm	6.4 ppm

TABLE 1

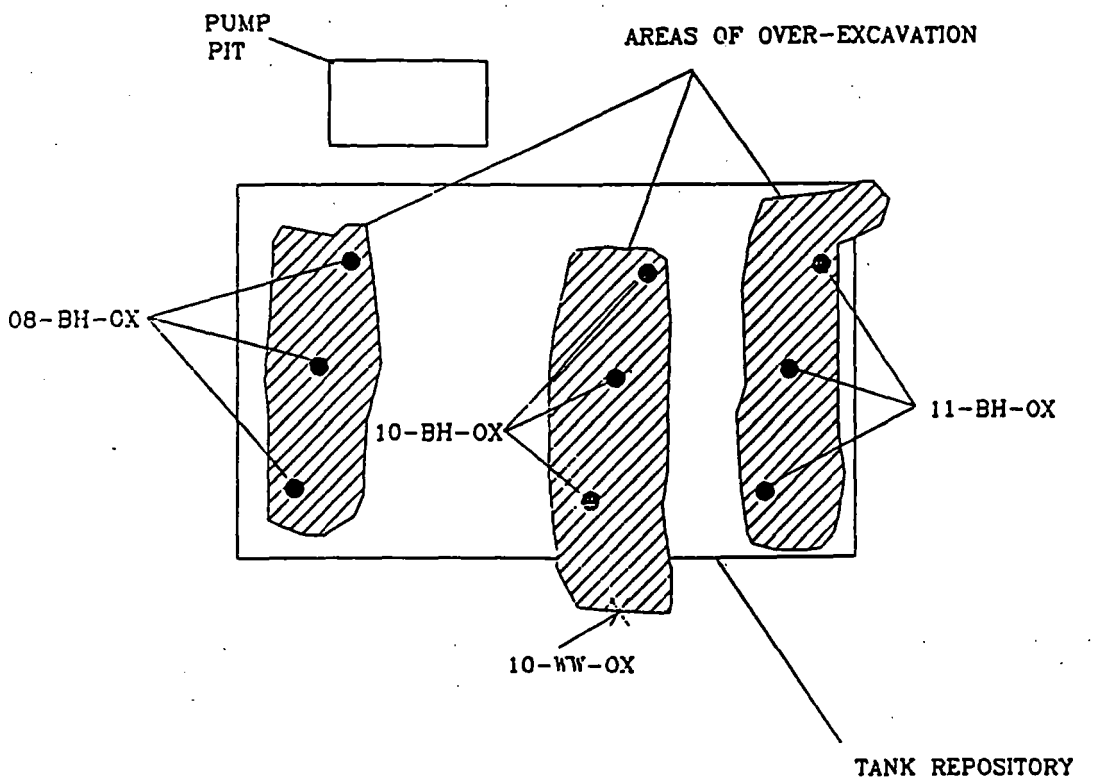
SAMPLE TESTING RESULTS

Contract No: DACA63-92-D-0047 Site No: Gary AFB #10350 Tanks 8-11 San Marcos, TX Zone: 4

Order No: 0008 Sampler: Mike Soto

Date Sampled	Lab ID#	Field Description	Matrix	TRPH	BTEX	Lead
4/20/94	35534	GAFB-10-350-11-WW	Soil	<10 ppm	<2.4 ppm	6.1 ppm
4/20/94	35519	GAFB-10-350-08-BH/QC	Soil	<10 ppm	33.5 ppm	5.5 ppm

OVER-EXCAVATION SAMPLE LOCATIONS



● = BOTTOM HOLE COMPOSITE SAMPLE LOCATIONS

X = IN-PLACE SAMPLE LOCATIONS

PROJECT NAME: GARY AFB
SITE 10-350 (TANKS 8-11)
D.O.# 0008

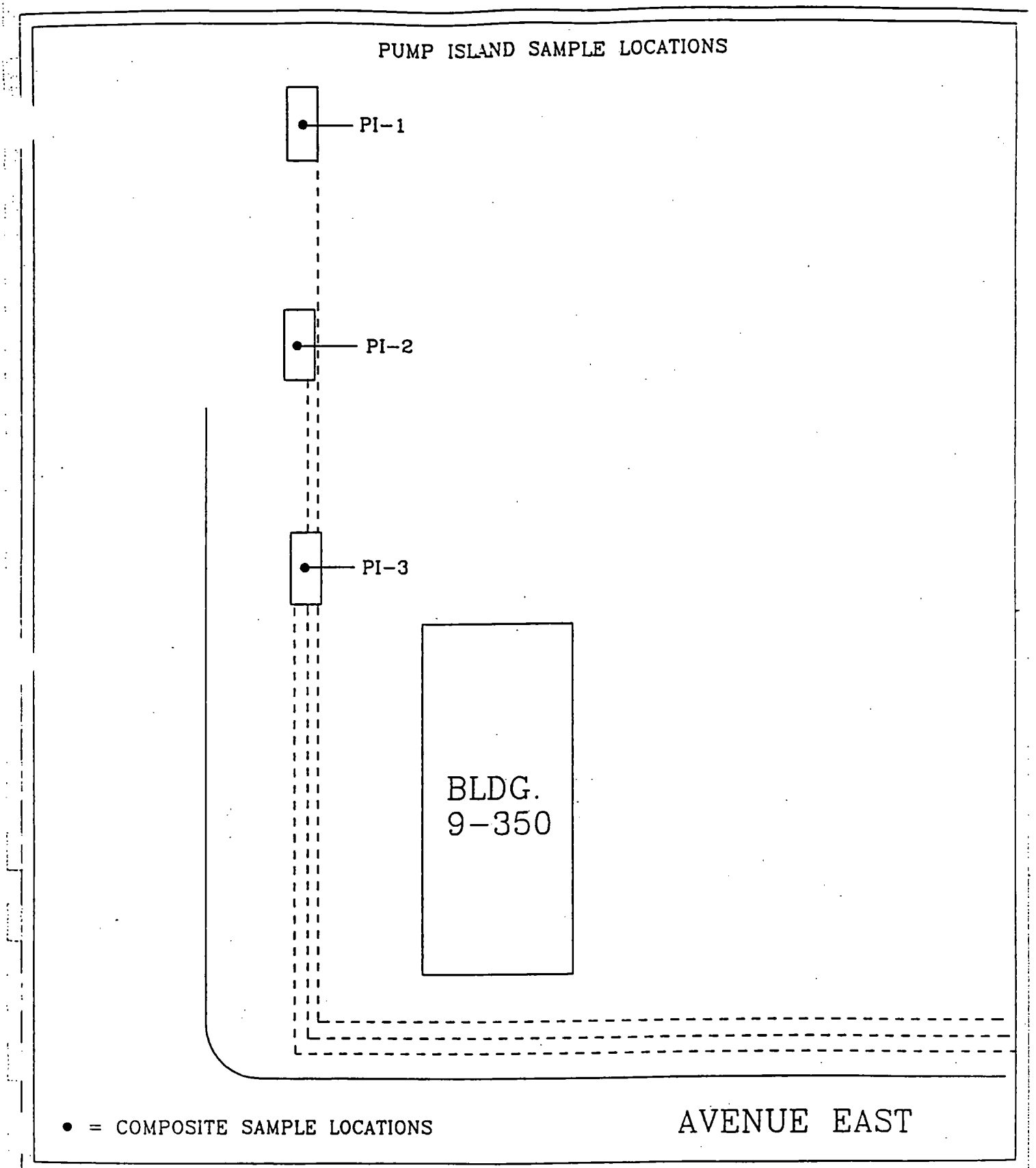
N

FIGURE 6

PERRY WILLIAMS, INC.
P. O. BOX 30206
AMARILLO, TEXAS 79120

0 15'

SCALE 1" = 15'



PROJECT NAME:
GARY AFB
10-350 (TANKS 8-11)
D.O. 0008

FIGURE 7

WC ENVIRONMENTAL GROUP
P.O. BOX 30206,
AMARILLO, TX 79120

NOT TO SCALE

SAMPLE TESTING RESULTS

Contract No: DACA63-92-D-0047 Site No: Gary AFB #10350 Tanks 8-11 San Marcos, TX Zone: 4

Order No: 0008 Sampler: Mike Soto

Date Sampled	Lab ID#	Field Description	Matrix	TRPH	BTEX	Lead
4/30/94	404045-4	GAFB-10-350-PI-1	Soil	105 ppm	<0.6 ppm	148.8 ppm
4/30/94	404045-5	GAFB-10-350-PI-2	Soil	<5 ppm	<0.6 ppm	106.1 ppm
4/30/94	404045-6	GAFB-10-350-PI-3	Soil	20 ppm	<0.6 ppm	173.4 ppm
4/30/94	404045-1	TRIP BLANK	Water	N/A	<0.030 ppm	N/A
4/30/94	404045-2	GAFB-10-350-PI-1/RB	Water	<0.200 ppm	<0.030 ppm	<0.1 ppm
4/30/94	404045-3	GAFB-10-350-PI-1/QC	Soil	14 ppm	<0.6 ppm	173.1 ppm

SAMPLE TESTING RESULTS

Contract No: DACA63-92-D-0047 Site No: Gary AFB #10350 Tanks 8-11 San Marcos, TX Zone: 4

Order No: 0008 Sampler: Mike Soto

Date Sampled	Lab ID#	Field Description	Matrix	TCLP Lead (MG/L)
4/30/94	405045-4	GAFB-10-350-PI-1	Soil	<0.1
4/30/94	405045-5	GAFB-10-350-PI-2	Soil	<0.1
4/30/94	405045-6	GAFB-10-350-PI-3	Soil	<0.1

Sample Tables - Excavated Soil Stockpiles*

*From report titled Petroleum Storage Tank Site Assessment and Remedial Activities, *Former Gary Air Force Base, Site No. 10-350 (Tanks 8-11), San Marcos (Caldwell County), Texas.* Prepared by Perry Williams Inc. for the U.S. Army Corps of engineers, dated March 17, 1995

SAMPLE TESTING RESULTS

Contract No: DACA63-92-D-0047 Site No: Gary AFB #10350 Tanks 8-11 San Marcos, TX Zone: 4

Order No: 0008 Sampler: Mike Soto

Date Sampled	Lab ID#	Field Description	Matrix	TRPH	BTEX	Lead
4/20/94	35505	GAFB-10-350-SPA	Soil	<10 ppm	<2.4 ppm	11 ppm
4/20/94	35507	GAFB-10-350-SPB	Soil	130 ppm	<2.4 ppm	27 ppm
4/20/94	35508	GAFB-10-350-SPC	Soil	130 ppm	<2.4 ppm	31 ppm
4/20/94	35509	GAFB-10-350-SPD	Soil	<10 ppm	<2.4 ppm	31 ppm
4/20/94	35510	GAFB-10-350-SPE	Soil	96 ppm	<2.4 ppm	29 ppm
4/20/94	35511	GAFB-10-350-SPF	Soil	360 ppm	<2.4 ppm	18 ppm
4/20/94	35512	GAFB-10-350-SPG	Soil	79 ppm	<2.4 ppm	26 ppm
4/20/94	35513	GAFB-10-350-SPH	Soil	140 ppm	<2.4 ppm	32 ppm
4/20/94	35514	GAFB-10-350-SPI	Soil	29 ppm	<2.4 ppm	17 ppm
4/20/94	35515	GAFB-10-350-SPJ	Soil	480 ppm	<2.4 ppm	19 ppm
4/20/94	35516	GAFB-10-350-SPK	Soil	210 ppm	<2.4 ppm	20 ppm
4/20/94	35517	GAFB-10-350-SPL	Soil	38 ppm	<2.4 ppm	27 ppm

SAMPLE TESTING RESULTS

Contract No: DACA63-92-D-0047 Site No: Gary AFB #10350 Tanks 8-11 San Marcos, TX Zone: 4

Order No: 0008 Sampler: Mike Soto

Date Sampled	Lab ID#	Field Description	Matrix	TRPH	BTEX	Lead
6/9/94	2609	GAFB-10-350-SPA-OX	Soil	6560 ppm	<3.31 ppm	14.6 ppm
6/9/94	2610	GAFB-10-350-SPB-OX	Soil	870 ppm	<0.6 ppm	19.2 ppm
6/9/94	2611	GAFB-10-350-SPC-OX	Soil	2260 ppm	<1.76 ppm	12.9 ppm
6/9/94	2612	GAFB-10-350-SPD-OX	Soil	4230 ppm	<0.95 ppm	9.4 ppm
6/9/94	2613	GAFB-10-350-SPE-OX	Soil	<5 ppm	<0.6 ppm	7.6 ppm
6/9/94	2614	GAFB-10-350-SPF-OX	Soil	<5 ppm	12.18 ppm	5.7 ppm

SAMPLE TESTING RESULTS

Contract No: DACA63-92-D-0047 Site No: Gary AFB #10350 Tanks 8-11 San Marcos, TX Zone: 4

Order No: 0008 Sampler: Mike Soto

Date Sampled	Lab ID#	Field Description	Matrix	TRPH	BTEX	Lead
6/23/94	4001	GAFB-10-350-SPE-OX-RS	Soil	2945 ppm	<0.68 ppm	18.2 ppm
6/23/94	4002	GAFB-10-350-SPF-OX-RS	Soil	2140 ppm	<0.6 ppm	17.8 ppm

SAMPLE TESTING RESULTS

Contract No: DACA63-92-D-0047 Site No: Gary AFB #10350 Tanks 8-11 San Marcos, TX Zone: 4

Order No: 0008 Sampler: Mike Soto

Date Sampled	Lab ID#	Field Description	Matrix	TRPH	BTEX	Lead
7/26/94	8408	GAFB-10-350-SPA-OX-RM	Soil	<5 ppm	<0.6 ppm	18.0 ppm
7/26/94	8407	GAFB-10-350-SPC-OX-RM	Soil	900 ppm	<0.6 ppm	17.2 ppm
7/26/94	8406	GAFB-10-350-SPD-OX-RM	Soil	2165 ppm	<0.6 ppm	22.3 ppm
7/26/94	8405	GAFB-10-350-SPE-OX-RM	Soil	55 ppm	<0.6 ppm	17.0 ppm
7/26/94	8404	GAFB-10-350-SPF-OX-RM	Soil	285 ppm	<0.6 ppm	13.9 ppm
7/26/94	8401	TRIP BLANK	Water	N/A	<0.030 ppm	N/A
7/26/94	8402	GAFB-10-350-SPF-OX-RM/RB	Water	<0.200 ppm	<0.030 ppm	<0.1 ppm
7/26/94	8403	GAFB-10-350-SPF-OX-RM/QC	Soil	260 ppm	<0.6 ppm	13.8 ppm

SAMPLE TESTING RESULTS

Contract No: DACA63-92-D-0047 Site No: Gary AFB #10350 Tanks 8-11 San Marcos, TX Zone: 4

Order No: 0008 Sampler: Walter Carlock

Date Sampled	Lab ID#	Field Description	Matrix	TRPH	BTEX	Lead
8/31/94	12401	GAFB-10-350-SPD-OX-RM-2	Soil	45 ppm	N/A	N/A

SAMPLE TESTING RESULTS

Contract No: DACA63-92-D-0047 Site No: Gary AFB #10350 Tanks 8-11 San Marcos, TX Zone: 4

Order No: 0008 Sampler: Mike Soto

Date Sampled	Lab ID#	Field Description	Matrix	TRPH	BTEX	Lead
6/24/94	4003	GAFB-10-350-PP-BH	Soil	900 ppm	<0.6 ppm	5.1 ppm
6/24/94	4004	GAFB-10-350-PP-SPA	Soil	785 ppm	<2.69 ppm	55.2 ppm
6/24/94	4005	GAFB-10-350-PP-SPB	Soil	565 ppm	<0.66 ppm	22.1 ppm

SAMPLE TESTING RESULTS

Contract No: DACA63-92-D-0047 Site No: Gary AFB #10350 Tanks 8-11 San Marcos, TX Zone: 4

Order No: 0008 Sampler: Mike Soto

Date Sampled	Lab ID#	Field Description	Matrix	TCLP Lead (mg/L)
6/24/94	4004	GAFB-10-350-PP-SPA	Soil	<0.1

Sample Tables - Tank Contents*

*From report titled Petroleum Storage Tank Site Assessment and Remedial Activities, *Former Gary Air Force Base, Site No. 10-350 (Tanks 8-11), San Marcos (Caldwell County), Texas.* Prepared by Perry Williams Inc. for the U.S. Army Corps of engineers, dated March 17, 1995

SAMPLE TESTING RESULTS

Contract No: DACA63-92-D-0047 Site No: Gary AFB #10350 Tanks 8-11 San Marcos, TX Zone: 4

Order No: 0008 Sampler: Walter Carlock

Date Sampled	Lab ID#	Field Description	Matrix	TRPH	BTEX	Lead
2/23/94	34224	GAFB-10-350-08-TC	Water	53. ppm	N/A	N/A
2/23/94	34226	GAFB-10-350-09-TC	Water	590. ppm	N/A	N/A
2/23/94	34227	GAFB-10-350-10-TC	Water	140. ppm	N/A	N/A
2/23/94	34225	GAFB-10-350-11-TC	Water	10. ppm	N/A	N/A

SAMPLE TESTING RESULTS

Contract No: DACA63-92-D-0047 Site No: Gary AFB #10350 Tanks 8-11 San Marcos, TX Zone: 4

Order No: 0008 Sampler: Walter Carlock

8 RCRA METALS

Date Sampled	Lab ID#	Field Description	Matrix	Parameter	Value	Units	Analytical Method
2/23/94	34224	GAFB-10-350-08-TC	Water	Total Arsenic	<.042	MG/L	3005/6010
				Total Barium	.25	MG/L	3005/6010
				Total Cadmium	<.002	MG/L	3005/6010
				Total Chromium	<.003	MG/L	3005/6010
				Total Lead	<.021	MG/L	3005/6010
				Total Mercury	<.001	MG/L	3005/7470
				Total Selenium	<.061	MG/L	3005/6010
				Total Silver	<.003	MG/L	3005/6010

SAMPLE TESTING RESULTS

Contract No: DACA63-92-D-0047 Site No: Gary AFB #10350 Tanks 8-11 San Marcos, TX Zone: 4

Order No: 0008 Sampler: Walter Carlock

8 RCRA METALS

Date Sampled	Lab ID#	Field Description	Matrix	Parameter	Value	Units	Analytical Method
2/23/94	34226	GAFB-10-350-09-TC	Water	Total Arsenic	<.042	MG/L	3005/6010
				Total Barium	.25	MG/L	3005/6010
				Total Cadmium	.006	MG/L	3005/6010
				Total Chromium	.008	MG/L	3005/6010
				Total Lead	1.8	MG/L	3005/6010
				Total Mercury	<.001	MG/L	3005/7470
				Total Selenium	<.061	MG/L	3005/6010
				Total Silver	<.003	MG/L	3005/6010

SAMPLE TESTING RESULTS

Contract No: DACA63-92-D-0047 Site No: Gary AFB #10350 Tanks 8-11 San Marcos, TX Zone: 4

Order No: 0008 Sampler: Walter Carlock

8 RCRA METALS

Date Sampled	Lab ID#	Field Description	Matrix	Parameter	Value	Units	Analytical Method
2/23/94	34227	GAFB-10-350-10-TC	Water	Total Arsenic	<.042	MG/L	3005/6010
				Total Barium	.53	MG/L	3005/6010
				Total Cadmium	.015	MG/L	3005/6010
				Total Chromium	<.003	MG/L	3005/6010
				Total Lead	.50	MG/L	3005/6010
				Total Mercury	<.001	MG/L	3005/7470
				Total Selenium	<.061	MG/L	3005/6010
				Total Silver	<.003	MG/L	3005/6010

SAMPLE TESTING RESULTS

Contract No: DACA63-92-D-0047 Site No: Gary AFB #10350 Tanks 8-11 San Marcos, TX Zone: 4

Order No: 0008 Sampler: Walter Carlock

8 RCRA METALS

Date Sampled	Lab ID#	Field Description	Matrix	Parameter	Value	Units	Analytical Method
2/23/94	34225	GAFB-10-350-11-TC	Water	Total Arsenic	<.042	MG/L	3005/6010
				Total Barium	.17	MG/L	3005/6010
				Total Cadmium	.006	MG/L	3005/6010
				Total Chromium	<.003	MG/L	3005/6010
				Total Lead	1.6	MG/L	3005/6010
				Total Mercury	<.001	MG/L	3005/7470
				Total Selenium	<.061	MG/L	3005/6010
				Total Silver	<.003	MG/L	3005/6010

SAMPLE TESTING RESULTS

Contract No: DACA63-92-D-0047 Site No: Gary AFB #10350 Tanks 8-11 San Marcos, TX Zone: 4

Order No: 0008 Sampler: Walter Carlock

PCB (Polychlorinated Biphenyls)

Date Sampled	Lab ID#	Field Description	Matrix	Analyte	MDL	Units	Results	Test Method
2/23/94	34224	GAFB-10-350-08-TC	Water	Aroclor 1016	5.0	UG/L	ND	8080
				Aroclor 1221	5.0	UG/L	ND	8080
				Aroclor 1232	5.0	UG/L	ND	8080
				Aroclor 1242	5.0	UG/L	ND	8080
				Aroclor 1248	5.0	UG/L	ND	8080
				Aroclor 1254	5.0	UG/L	ND	8080
				Aroclor 1260	5.0	UG/L	ND	8080

ND - Not Detected

SAMPLE TES_ _NG RESULTS

Contract No: DACA63-92-D-0047 Site No: Gary AFB #10350 Tanks 8-11 San Marcos, TX Zone: 4

Order No: 0008 Sampler: Walter Carlock

PCB (Polychlorinated Biphenyls)

Date Sampled	Lab ID#	Field Description	Matrix	Analyte	MDL	Units	Results	Test Method
2/23/94	34226	GAFB-10-350-09-TC	Water	Aroclor 1016	5.0	UG/L	ND	8080
				Aroclor 1221	5.0	UG/L	ND	8080
				Aroclor 1232	5.0	UG/L	ND	8080
				Aroclor 1242	5.0	UG/L	ND	8080
				Aroclor 1248	5.0	UG/L	ND	8080
				Aroclor 1254	5.0	UG/L	ND	8080
				Aroclor 1260	5.0	UG/L	ND	8080

ND - Not Detected

SAMPLE TES . .G RESULTS

Contract No: DACA63-92-D-0047 Site No: Gary AFB #10350 Tanks 8-11 San Marcos, TX Zone: 4

Order No: 0008 Sampler: Walter Carlock

PCB (Polychlorinated Biphenyls)

Date Sampled	Lab ID#	Field Description	Matrix	Analyte	MDL	Units	Results	Test Method
2/23/94	34227	GAFB-10-350-10-TC	Water	Aroclor 1016	5.0	UG/L	ND	8080
				Aroclor 1221	5.0	UG/L	ND	8080
				Aroclor 1232	5.0	UG/L	ND	8080
				Aroclor 1242	5.0	UG/L	ND	8080
				Aroclor 1248	5.0	UG/L	ND	8080
				Aroclor 1254	5.0	UG/L	ND	8080
				Aroclor 1260	5.0	UG/L	ND	8080

ND - Not Detected

SAMPLE TESTING RESULTS

Contract No: DACA63-92-D-0047 Site No: Gary AFB #10350 Tanks 8-11 San Marcos, TX Zone: 4

Order No: 0008 Sampler: Walter Carlock

PCB (Polychlorinated Biphenyls)

Date Sampled	Lab ID#	Field Description	Matrix	Analyte	MDL	Units	Results	Test Method
2/23/94	34225	GAFB-10-350-11-TC	Water	Aroclor 1016	5.0	UG/L	ND	8080
				Aroclor 1221	5.0	UG/L	ND	8080
				Aroclor 1232	5.0	UG/L	ND	8080
				Aroclor 1242	5.0	UG/L	ND	8080
				Aroclor 1248	5.0	UG/L	ND	8080
				Aroclor 1254	5.0	UG/L	ND	8080
				Aroclor 1260	5.0	UG/L	ND	8080

ND - Not Detected

SAMPLE TESTING RESULTS

Contract No.: DACA63-92-D-0047 Delivery Order: 0008 Zone: 4

Site: Gary AFB #10350 Tanks 8-11 San Marcos, TX

Field Description: GAFB-10-350-08-TC Sampler: Walter Carlock

Lab ID# 34224 Matrix: Water Date Sampled: 2/23/94

FULL VOLATILE

Parameter	Results	Quant. Limit	Units	Method
Acetone	<0.010	0.010	mg/l	8260
Acrolein	<0.005	0.005	mg/l	8260
Acrylonitrile	<0.004	0.004	mg/l	8260
Allyl chloride	<0.003	0.003	mg/l	8260
Benzene	<0.003	0.003	mg/l	8260
Bromodichloromethane	<0.003	0.003	mg/l	8260
Bromoform	<0.002	0.002	mg/l	8260
Bromomethane	<0.006	0.006	mg/l	8260
2-Butanone (MEK)	<0.010	0.010	mg/l	8260
Carbon tetrachloride	<0.003	0.003	mg/l	8260
Chlorobenzene	<0.004	0.004	mg/l	8260
Chloroethane	<0.002	0.002	mg/l	8260
2-Chloroethyl vinyl ether	<0.010	0.010	mg/l	8260
Chloroform	<0.003	0.003	mg/l	8260
Chloromethane	<0.005	0.005	mg/l	8260
Dibromochloromethane	<0.003	0.003	mg/l	8260
1,2-Dibromo-3-chloropropane	<0.006	0.006	mg/l	8260
1,2-Dibromoethane	<0.003	0.003	mg/l	8260
Dibromomethane	<0.002	0.002	mg/l	8260
1,2-Dichlorobenzene	<0.005	0.005	mg/l	8260
1,3-Dichlorobenzene	<0.005	0.005	mg/l	8260
1,4-Dichlorobenzene	<0.006	0.006	mg/l	8260
trans-1,4-Dichloro-2-butene	<0.004	0.004	mg/l	8260
Dichlorodifluoromethane	<0.003	0.003	mg/l	8260
1,1-0.005Dichloroethane	<0.003	0.003	mg/l	8260
1,2-Dichloroethane	<0.003	0.003	mg/l	8260
1,1-Dichloroethene	<0.005	0.005	mg/l	8260
cis-1,2-Dichloroethene	<0.004	0.004	mg/l	8260
trans-1,2-Dichloroethene	<0.004	0.004	mg/l	8260
1,2-Dichloropropane	<0.002	0.002	mg/l	8260
cis-1,3-Dichloropropene	<0.002	0.002	mg/l	8260
trans-1,3-Dichlopropene	<0.003	0.003	mg/l	8260

FULL VOLATILE Lab ID# 34224 (continued page 2 of 2)

Parameter	Results	Quant. Limit	Units	Method
Diethyl ether	<0.005	0.005	mg/l	8260
Ethylbenzene	<0.005	0.005	mg/l	8260
Ethylmethacrylate	<0.005	0.005	mg/l	8260
2-Hexanone	<0.006	0.006	mg/l	8260
Iodomethane	<0.005	0.005	mg/l	8260
Methacrylonitrile	<0.005	0.005	mg/l	8260
Methylene chloride	<0.004	0.004	mg/l	8260
Methylmethacrylate	<0.004	0.004	mg/l	8260
4-Methyl-2-pentanone (MIBK)	<0.010	0.010	mg/l	8260
Propionitrile	<0.010	0.010	mg/l	8260
Styrene	<0.004	0.004	mg/l	8260
1,1,1,2-Tetrachloroethane	<0.005	0.005	mg/l	8260
1,1,2,2-Tetrachloroethane	<0.003	0.003	mg/l	8260
Tetrachloroethene	<0.005	0.005	mg/l	8260
Toluene	<0.003	0.003	mg/l	8260
1,1,1-Trichloroethane	<0.005	0.005	mg/l	8260
1,1,2-Trichloroethane	<0.003	0.003	mg/l	8260
Trichloroethene	<0.002	0.002	mg/l	8260
Trichlorofluoromethane	<0.005	0.005	mg/l	8260
1,2,3-Trichloropropane	<0.003	0.003	mg/l	8260
m,p-Xylene	0.010	0.005	mg/l	8260
o-Xylene	0.008	0.004	mg/l	8260
Vinyl Chloride	<0.002	0.002	mg/l	8260

SAMPLE TESTING RESULTS

Contract No.: DACA63-92-D-0047 Delivery Order: 0008 Zone: 4

Site: Gary AFB #10350 Tanks 8-11 San Marcos, TX

Field Description: GAFB-10-350-10-TC Sampler: Walter Carlock

Lab ID# 34227 Matrix: Water Date Sampled: 2/23/94

FULL VOLATILE

Parameter	Results	Quant. Limit	Units	Method
Acetone	<0.010	0.010	mg/l	8260
Acrolein	<0.005	0.005	mg/l	8260
Acrylonitrile	<0.004	0.004	mg/l	8260
Allyl chloride	<0.003	0.003	mg/l	8260
Benzene	<0.003	0.003	mg/l	8260
Bromodichloromethane	<0.003	0.003	mg/l	8260
Bromoform	<0.002	0.002	mg/l	8260
Bromomethane	<0.006	0.006	mg/l	8260
2-Butanone (MEK)	<0.010	0.010	mg/l	8260
Carbon tetrachloride	<0.003	0.003	mg/l	8260
Chlorobenzene	<0.004	0.004	mg/l	8260
Chloroethane	<0.002	0.002	mg/l	8260
2-Chloroethyl vinyl ether	<0.010	0.010	mg/l	8260
Chloroform	<0.003	0.003	mg/l	8260
Chloromethane	<0.005	0.005	mg/l	8260
Dibromochloromethane	<0.003	0.003	mg/l	8260
1,2-Dibromo-3-chloropropane	<0.006	0.006	mg/l	8260
1,2-Dibromoethane	<0.003	0.003	mg/l	8260
Dibromomethane	<0.002	0.002	mg/l	8260
1,2-Dichlorobenzene	<0.005	0.005	mg/l	8260
1,3-Dichlorobenzene	<0.005	0.005	mg/l	8260
1,4-Dichlorobenzene	<0.006	0.006	mg/l	8260
trans-1,4-Dichloro-2-butene	<0.004	0.004	mg/l	8260
Dichlorodifluoromethane	<0.003	0.003	mg/l	8260
1,1-0.005Dichloroethane	<0.003	0.003	mg/l	8260
1,2-Dichloroethane	<0.003	0.003	mg/l	8260
1,1-Dichloroethene	<0.005	0.005	mg/l	8260
cis-1,2-Dichloroethene	<0.004	0.004	mg/l	8260
trans-1,2-Dichloroethene	<0.004	0.004	mg/l	8260
1,2-Dichloropropane	<0.002	0.002	mg/l	8260
cis-1,3-Dichloropropene	<0.002	0.002	mg/l	8260
trans-1,3-Dichlopropene	<0.003	0.003	mg/l	8260

FULL VOLATILE Lab ID# 34227 (continued page 2 of 2)

Parameter	Results	Quant. Limit	Units	Method
Diethyl ether	<0.005	0.005	mg/l	8260
Ethylbenzene	0.010	0.005	mg/l	8260
Ethylmethacrylate	<0.005	0.005	mg/l	8260
2-Hexanone	<0.006	0.006	mg/l	8260
Iodomethane	<0.005	0.005	mg/l	8260
Methacrylonitrile	<0.005	0.005	mg/l	8260
Methylene chloride	<0.004	0.004	mg/l	8260
Methylmethacrylate	<0.004	0.004	mg/l	8260
4-Methyl-2-pentanone (MIBK)	<0.010	0.010	mg/l	8260
Propionitrile	<0.010	0.010	mg/l	8260
Styrene	<0.004	0.004	mg/l	8260
1,1,1,2-Tetrachloroethane	<0.005	0.005	mg/l	8260
1,1,2,2-Tetrachloroethane	<0.003	0.003	mg/l	8260
Tetrachloroethene	<0.005	0.005	mg/l	8260
Toluene	0.011	0.003	mg/l	8260
1,1,1-Trichloroethane	<0.005	0.005	mg/l	8260
1,1,2-Trichloroethane	<0.003	0.003	mg/l	8260
Trichloroethene	<0.002	0.002	mg/l	8260
Trichlorofluoromethane	<0.005	0.005	mg/l	8260
1,2,3-Trichloropropane	<0.003	0.003	mg/l	8260
m,p-Xylene	0.039	0.005	mg/l	8260
o-Xylene	0.026	0.004	mg/l	8260
Vinyl Chloride	<0.002	0.002	mg/l	8260

SAMPLE TESTING RESULTS

Contract No.: DACA63-92-D-0047 Delivery Order: 0008 Zone: 4

Site: Gary AFB #10350 Tanks 8-11 San Marcos, TX

Field Description: GAFB-10-350-11-TC Sampler: Walter Carlock

Lab ID# 34225 Matrix: Water Date Sampled: 2/23/94

FULL VOLATILE

Parameter	Results	Quant. Limit	Units	Method
Acetone	<0.010	0.010	mg/l	8260
Acrolein	<0.005	0.005	mg/l	8260
Acrylonitrile	<0.004	0.004	mg/l	8260
Allyl chloride	<0.003	0.003	mg/l	8260
Benzene	<0.003	0.003	mg/l	8260
Bromodichloromethane	<0.003	0.003	mg/l	8260
Bromoform	<0.002	0.002	mg/l	8260
Bromomethane	<0.006	0.006	mg/l	8260
2-Butanone (MEK)	<0.010	0.010	mg/l	8260
Carbon tetrachloride	<0.003	0.003	mg/l	8260
Chlorobenzene	<0.004	0.004	mg/l	8260
Chloroethane	<0.002	0.002	mg/l	8260
2-Chloroethyl vinyl ether	<0.010	0.010	mg/l	8260
Chloroform	<0.003	0.003	mg/l	8260
Chloromethane	<0.005	0.005	mg/l	8260
Dibromochloromethane	<0.003	0.003	mg/l	8260
1,2-Dibromo-3-chloropropane	<0.006	0.006	mg/l	8260
1,2-Dibromoethane	<0.003	0.003	mg/l	8260
Dibromomethane	<0.002	0.002	mg/l	8260
1,2-Dichlorobenzene	<0.005	0.005	mg/l	8260
1,3-Dichlorobenzene	<0.005	0.005	mg/l	8260
1,4-Dichlorobenzene	<0.006	0.006	mg/l	8260
trans-1,4-Dichloro-2-butene	<0.004	0.004	mg/l	8260
Dichlorodifluoromethane	<0.003	0.003	mg/l	8260
1,1-0.005Dichloroethane	<0.003	0.003	mg/l	8260
1,2-Dichloroethane	<0.003	0.003	mg/l	8260
1,1-Dichloroethene	<0.005	0.005	mg/l	8260
cis-1,2-Dichloroethene	<0.004	0.004	mg/l	8260
trans-1,2-Dichloroethene	<0.004	0.004	mg/l	8260
1,2-Dichloropropane	<0.002	0.002	mg/l	8260
cis-1,3-Dichloropropene	<0.002	0.002	mg/l	8260
trans-1,3-Dichlopropene	<0.003	0.003	mg/l	8260

FULL VOLATILE Lab ID# 34225 (continued page 2 of 2)

Parameter	Results	Quant. Limit	Units	Method
Diethyl ether	<0.005	0.005	mg/l	8260
Ethylbenzene	<0.005	0.005	mg/l	8260
Ethylmethacrylate	<0.005	0.005	mg/l	8260
2-Hexanone	<0.006	0.006	mg/l	8260
Iodomethane	<0.005	0.005	mg/l	8260
Methacrylonitrile	<0.005	0.005	mg/l	8260
Methylene chloride	<0.004	0.004	mg/l	8260
Methylmethacrylate	<0.004	0.004	mg/l	8260
4-Methyl-2-pentanone (MIBK)	<0.010	0.010	mg/l	8260
Propionitrile	<0.010	0.010	mg/l	8260
Styrene	<0.004	0.004	mg/l	8260
1,1,1,2-Tetrachloroethane	<0.005	0.005	mg/l	8260
1,1,2,2-Tetrachloroethane	<0.003	0.003	mg/l	8260
Tetrachloroethene	<0.005	0.005	mg/l	8260
Toluene	<0.003	0.003	mg/l	8260
1,1,1-Trichloroethane	<0.005	0.005	mg/l	8260
1,1,2-Trichloroethane	<0.003	0.003	mg/l	8260
Trichloroethene	<0.002	0.002	mg/l	8260
Trichlorofluoromethane	<0.005	0.005	mg/l	8260
1,2,3-Trichloropropane	<0.003	0.003	mg/l	8260
m,p-Xylene	<0.005	0.005	mg/l	8260
o-Xylene	<0.004	0.004	mg/l	8260
Vinyl Chloride	<0.002	0.002	mg/l	8260

SAMPLE TESTING RESULTS

Contract No.:DACA63-92-D-0047 Delivery Order: 0008 Zone: 4

Site:Gary AFB #10350 Tanks 8-11 San Marcos ,TX

Field Description: GAFB-10-350-09-TC Sampler: Walter Carlock

Lab ID# 34226 Matrix: Water Date Sampled: 2/23/94

FULL VOLATILE

Parameter	Results	Quant. Limit	Units	Method
Acetone	<0.050	0.050	mg/l	8260
Acrolein	<0.025	0.025	mg/l	8260
Acrylonitrile	<0.020	0.020	mg/l	8260
Allyl chloride	<0.015	0.015	mg/l	8260
Benzene	2.8	0.015	mg/l	8260
Bromodichloromethane	<0.015	0.015	mg/l	8260
Bromoform	<0.010	0.010	mg/l	8260
Bromomethane	<0.030	0.030	mg/l	8260
2-Butanone (MEK)	<0.050	0.050	mg/l	8260
Carbon tetrachloride	<0.015	0.015	mg/l	8260
Chlorobenzene	<0.020	0.020	mg/l	8260
Chloroethane	<0.010	0.010	mg/l	8260
2-Chloroethyl vinyl ether	<0.050	0.050	mg/l	8260
Chloroform	<0.015	0.015	mg/l	8260
Chloromethane	<0.025	0.025	mg/l	8260
Dibromochloromethane	<0.015	0.015	mg/l	8260
1,2-Dibromo-3-chloropropane	<0.030	0.030	mg/l	8260
1,2-Dibromoethane	<0.015	0.015	mg/l	8260
Dibromomethane	<0.010	0.010	mg/l	8260
1,2-Dichlorobenzene	<0.025	0.025	mg/l	8260
1,3-Dichlorobenzene	<0.025	0.025	mg/l	8260
1,4-Dichlorobenzene	<0.030	0.030	mg/l	8260
trans-1,4-Dichloro-2-butene	<0.020	0.020	mg/l	8260
Dichlorodifluoromethane	<0.015	0.015	mg/l	8260
1,1-Dichloroethane	<0.015	0.015	mg/l	8260
1,2-Dichloroethane	0.91	0.015	mg/l	8260
1,1-Dichloroethene	<0.025	0.025	mg/l	8260
cis-1,2-Dichloroethene	<0.020	0.020	mg/l	8260
trans-1,2-Dichloroethene	<0.020	0.020	mg/l	8260
1,2-Dichloropropane	<0.010	0.010	mg/l	8260
cis-1,3-Dichloropropene	<0.010	0.010	mg/l	8260
trans-1,3-Dichlopropene	<0.015	0.015	mg/l	8260

FULL VOLATILE Lab ID# 34226 (continued page 2 of 2)

Parameter	Results	Quant. Limit	Units	Method
Diethyl ether	<0.025	0.025	mg/l	8260
Ethylbenzene	1.7	0.025	mg/l	8260
Ethylmethacrylate	<0.025	0.025	mg/l	8260
2-Hexanone	<0.030	0.030	mg/l	8260
Iodomethane	<0.025	0.025	mg/l	8260
Methacrylonitrile	<0.025	0.025	mg/l	8260
Methylene chloride	<0.020	0.020	mg/l	8260
Methylmethacrylate	<0.020	0.020	mg/l	8260
4-Methyl-2-pentanone (MIBK)	<0.050	0.050	mg/l	8260
Propionitrile	<0.050	0.050	mg/l	8260
Styrene	<0.020	0.020	mg/l	8260
1,1,1,2-Tetrachloroethane	<0.025	0.025	mg/l	8260
1,1,2,2-Tetrachloroethane	<0.015	0.015	mg/l	8260
Tetrachloroethene	<0.025	0.025	mg/l	8260
Toluene	9.9	0.015	mg/l	8260
1,1,1-Trichloroethane	<0.025	0.025	mg/l	8260
1,1,2-Trichloroethane	<0.015	0.015	mg/l	8260
Trichloroethene	<0.010	0.010	mg/l	8260
Trichlorofluoromethane	<0.025	0.025	mg/l	8260
1,2,3-Trichloropropane	<0.015	0.015	mg/l	8260
m,p-Xylene	11	0.025	mg/l	8260
o-Xylene	6.3	0.020	mg/l	8260
Vinyl Chloride	<0.010	0.010	mg/l	8260

SAMPLE TESTING RESULTS

Contract No.: DACA63-92-D-0047 Delivery Order: 0008 Zone: 4

Site: Gary AFB #10350 Tanks 8-11 San Marcos, TX

Field Description: GAFB-10-350-08-TC Sampler: Walter Carlock

Lab ID# 34224 Matrix: Water Date Sampled: 2/23/94

SEMI-VOLATILE

Parameter	MDL	Units	Results	Method
Acenaphthene	10	UG/L	ND	8270
Acenaphthylene	10	UG/L	ND	8270
Acetophenone	10	UG/L	ND	8270
Aniline	10	UG/L	ND	8270
Anthracene	10	UG/L	ND	8270
4-Aminobiphenyl	10	UG/L	ND	8270
Benzidine	50	UG/L	ND	8270
Benzo(a)anthracene	10	UG/L	ND	8270
Benzo(b)fluorathene	10	UG/L	ND	8270
Benzo(k)fluoranthene	10	UG/L	ND	8270
Benzo(g,h,i)perylane	10	UG/L	ND	8270
Benzo(a)pyrene	10	UG/L	ND	8270
Benzoic Acid	50	UG/L	ND	8270
Benzyl alcohol	20	UG/L	ND	8270
Bis(2-chloroethoxy)methane	10	UG/L	ND	8270
Bis(2-chloroethyl)ether	10	UG/L	ND	8270
Bis(2-chloroIsopropyl)ether	10	UG/L	ND	8270
Bis(2-ethylhexyl)phthalate	10	UG/L	ND	8270
4-Bromophenylphenyl ether	10	UG/L	ND	8270
Butylbenzyl phthalate	10	UG/L	ND	8270
4-Chloroaniline	20	UG/L	ND	8270
1-Chloronaphthalene	10	UG/L	ND	8270
2-Chloronaphthalene	10	UG/L	ND	8270
4-Chloro-3-methylphenol	20	UG/L	ND	8270
2-Chloropenol	10	UG/L	ND	8270
4-Chlorophenylphenyl ether	10	UG/L	ND	8270
Chrysene	10	UG/L	ND	8270
Dibenz(a,h)anthracene	10	UG/L	ND	8270
Dibenzofuran	10	UG/L	ND	8270
1,3-Dichlorobenzene	10	UG/L	ND	8270
1,4-Dichlorobenzene	10	UG/L	ND	8270

SEMI-VOLATILE Lab ID# 34224 (continued page 2 or 3)

Parameter	MDL	Units	Results	Method
1,2-Dichlorobenzene	10	UG/L	ND	8270
3,3-Dichlorobenzidine	20	UG/L	ND	8270
2,4-Dichlorophenol	10	UG/L	ND	8270
2-6-Dichlorophenol	10	UG/L	ND	8270
Diethylphthalate	10	UG/L	ND	8270
a,a-Dimethylphenethylamine	10	UG/L	ND	8270
2,4-Dimethylphenol	10	UG/L	ND	8270
Dimethylphthalate	10	UG/L	ND	8270
Di-n-butylphthalate	10	UG/L	ND	8270
4,6-Dinitro-2-methylphenol	50	UG/L	ND	8270
2,4-Dinitrophenol	50	UG/L	ND	8270
2,4-Dinitrotoluene	10	UG/L	ND	8270
2,6-Dinitrotoluene	10	UG/L	ND	8270
Di-n-octylphthalate	10	UG/L	ND	8270
1,2-Diphenylhydrazine	50	UG/L	ND	8270
Fluoranthene	10	UG/L	ND	8270
Fluorene	10	UG/L	ND	8270
Hexachlorobenzene	10	UG/L	ND	8270
Hexachlorobutadlene	10	UG/L	ND	8270
Hexachlorocyclopentadlene	10	UG/L	ND	8270
Hexachloroethane	10	UG/L	ND	8270
Indeno(1,2,3-cd)pyrene	10	UG/L	ND	8270
Isophorone	10	UG/L	ND	8270
3-Methylcholanthrene	10	UG/L	ND	8270
2-Methylnaphthalene	10	UG/L	32	8270
2-Methylphenol	10	UG/L	ND	8270
4-Methylphenol*	10	UG/L	ND	8270
Naphthalene	10	UG/L	ND	8270
1-Naphthylamine	10	UG/L	ND	8270
2-Naphthylamine	10	UG/L	ND	8270
2-Nitroaniline	10	UG/L	ND	8270
3-Nitroaniline	10	UG/L	ND	8270
4-Nitroaniline	10	UG/L	ND	8270
Nitrobenzene	10	UG/L	ND	8270
2-Nitrophenol	10	UG/L	ND	8270
4-Nitrophenol	50	UG/L	ND	8270
N-Nitroso-di-n-butylamine	10	UG/L	ND	8270
N-Nitrosodimethylamine	10	UG/L	ND	8270
N-Nitrosodi-n-phenylamine**	10	UG/L	ND	8270
N-Nitroso-di-n-propylamine	10	UG/L	ND	8270

SEMI-VOLATILE Lab ID# 34224 (Continued page 3 of 3)

Parameter	MDL	Units	Results	Method
Pentachlorobenzene	10	UG/L	ND	8270
Pentachloronitrobenzene	10	UG/L	ND	8270
Pentachlorophenol	50	UG/L	ND	8270
Phenacetin	10	UG/L	ND	8270
Phenanthrene	10	UG/L	ND	8270
Phenol	10	UG/L	ND	8270
Pyrene	10	UG/L	ND	8270
Pyridine	10	UG/L	ND	8270
1,2,4,5-Tetrachlorobenzene	10	UG/L	ND	8270
2,3,4,6-Tetrachlorophenol	10	UG/L	ND	8270
1,2,4-Trichlorobenzene	10	UG/L	ND	8270
2,4,5-Trichlorophenol	10	UG/L	ND	8270
2,4,6-Trichlorophenol	10	UG/L	ND	8270

ND - not detected
* - Co-elutes with 3-Methylphenol
** - Inseparable from Diphenylamine

SAMPLE TESTING RESULTS

Contract No.: DACA63-92-D-0047 Delivery Order: 0008 Zone: 4

Site: Gary AFB #10350 Tanks 8-11 San Marcos, TX

Field Description: GAFB-10-350-11-TC Sampler: Walter Carlock

Lab ID# 34225 Matrix: Water Date Sampled: 2/23/94

SEMI-VOLATILE

Parameter	MDL	Units	Results	Method
Acenaphthene	10	UG/L	ND	8270
Acenaphthylene	10	UG/L	ND	8270
Acetophenone	10	UG/L	ND	8270
Aniline	10	UG/L	ND	8270
Anthracene	10	UG/L	ND	8270
4-Aminobiphenyl	10	UG/L	ND	8270
Benzidine	50	UG/L	ND	8270
Benzo(a)anthracene	10	UG/L	ND	8270
Benzo(b)fluorathene	10	UG/L	ND	8270
Benzo(k)fluoranthene	10	UG/L	ND	8270
Benzo(g,h,i)perylane	10	UG/L	ND	8270
Benzo(a)pyrene	10	UG/L	ND	8270
Benzoic Acid	50	UG/L	ND	8270
Benzyl alcohol	20	UG/L	ND	8270
Bis(2-chloroethoxy)methane	10	UG/L	ND	8270
Bis(2-chloroethyl)ether	10	UG/L	ND	8270
Bis(2-chlorolsopropyl)ether	10	UG/L	ND	8270
Bis(2-ethylhexyl)phthalate	10	UG/L	ND	8270
4-Bromophenylphenyl ether	10	UG/L	ND	8270
Butylbenzyl phthalate	10	UG/L	ND	8270
4-Chloroaniline	20	UG/L	ND	8270
1-Chloronaphthalene	10	UG/L	ND	8270
2-Chloronaphthalene	10	UG/L	ND	8270
4-Chloro-3-methylphenol	20	UG/L	ND	8270
2-Chloropenol	10	UG/L	ND	8270
4-Chlorophenylphenyl ether	10	UG/L	ND	8270
Chrysene	10	UG/L	ND	8270
Dibenz(a,h)anthracene	10	UG/L	ND	8270
Dibenzofuran	10	UG/L	ND	8270
1,3-Dichlorobenzene	10	UG/L	ND	8270
1,4-Dichlorobenzene	10	UG/L	ND	8270

SEMI-VOLATILE Lab ID# 34225 (continued page 2 or 3)

Parameter	MDL	Units	Results	Method
1,2-Dichlorobenzene	10	UG/L	ND	8270
3,3-Dichlorobenzidine	20	UG/L	ND	8270
2,4-Dichlorophenol	10	UG/L	ND	8270
2-6-Dichlorophenol	10	UG/L	ND	8270
Diethylphthalate	10	UG/L	ND	8270
a,a-Dimethylphenethylamine	10	UG/L	ND	8270
2,4-Dimethylphenol	10	UG/L	ND	8270
Dimethylphthalate	10	UG/L	ND	8270
Di-n-butylphthalate	10	UG/L	ND	8270
4,6-Dinitro-2-methylphenol	50	UG/L	ND	8270
2,4-Dinitrophenol	50	UG/L	ND	8270
2,4-Dinitrotoluene	10	UG/L	ND	8270
2,6-Dinitrotoluene	10	UG/L	ND	8270
Di-n-octylphthalate	10	UG/L	ND	8270
1,2-Diphenylhydrazine	50	UG/L	ND	8270
Fluoranthene	10	UG/L	ND	8270
Fluorene	10	UG/L	ND	8270
Hexachlorobenzene	10	UG/L	ND	8270
Hexachlorobutadlene	10	UG/L	ND	8270
Hexachlorocyclopentadlene	10	UG/L	ND	8270
Hexachloroethane	10	UG/L	ND	8270
Indeno(1,2,3-cd)pyrene	10	UG/L	ND	8270
Isophorone	10	UG/L	ND	8270
3-Methylcholanthrene	10	UG/L	ND	8270
2-Methylnaphthalene	10	UG/L	ND	8270
2-Methylphenol	10	UG/L	ND	8270
4-Methylphenol*	10	UG/L	ND	8270
Naphthalene	10	UG/L	ND	8270
1-Naphthylamine	10	UG/L	ND	8270
2-Naphthylamine	10	UG/L	ND	8270
2-Nitroaniline	10	UG/L	ND	8270
3-Nitroaniline	10	UG/L	ND	8270
4-Nitroaniline	10	UG/L	ND	8270
Nitrobenzene	10	UG/L	ND	8270
2-Nitrophenol	10	UG/L	ND	8270
4-Nitrophenol	50	UG/L	ND	8270
N-Nitroso-di-n-butylamine	10	UG/L	ND	8270
N-Nitrosodimethylamine	10	UG/L	ND	8270
N-Nitrosodi-n-phenylamine**	10	UG/L	ND	8270
N-Nitroso-di-n-propylamine	10	UG/L	ND	8270

SEMI-VOLATILE Lab ID# 34225 (Continued page 3 of 3)

Parameter	MDL	Units	Results	Method
Pentachlorobenzene	10	UG/L	ND	8270
Pentachloronitrobenzene	10	UG/L	ND	8270
Pentachlorophenol	50	UG/L	ND	8270
Phenacetin	10	UG/L	ND	8270
Phenanthrene	10	UG/L	ND	8270
Phenol	10	UG/L	ND	8270
Pyrene	10	UG/L	ND	8270
Pyridine	10	UG/L	ND	8270
1,2,4,5-Tetrachlorobenzene	10	UG/L	ND	8270
2,3,4,6-Tetrachlorophenol	10	UG/L	ND	8270
1,2,4-Trichlorobenzene	10	UG/L	ND	8270
2,4,5-Trichlorophenol	10	UG/L	ND	8270
2,4,6-Trichlorophenol	10	UG/L	ND	8270

ND - not detected
* - Co-elutes with 3-Methylphenol
** - Inseparable from Diphenylamine

SAMPLE TESTING RESULTS

Contract No.: DACA63-92-D-0047 Delivery Order: 0008 Zone: 4

Site: Gary AFB #10350 Tanks 8-11 San Marcos, TX

Field Description: GAFB-10-350-09-TC Sampler: Walter Carlock

Lab ID# 34226 Matrix: Water Date Sampled: 2/23/94

SEMI-VOLATILE

Parameter	MDL	Units	Results	Method
Acenaphthene	100	UG/L	ND	8270
Acenaphthylene	100	UG/L	ND	8270
Acetophenone	100	UG/L	ND	8270
Aniline	100	UG/L	ND	8270
Anthracene	100	UG/L	ND	8270
4-Aminobiphenyl	100	UG/L	ND	8270
Benzidine	500	UG/L	ND	8270
Benzo(a)anthracene	100	UG/L	ND	8270
Benzo(b)fluorathene	100	UG/L	ND	8270
Benzo(k)fluoranthene	100	UG/L	ND	8270
Benzo(g,h,i)perylane	100	UG/L	ND	8270
Benzo(a)pyrene	100	UG/L	ND	8270
Benzoic Acid	500	UG/L	ND	8270
Benzyl alcohol	200	UG/L	ND	8270
Bis(2-chloroethoxy)methane	100	UG/L	ND	8270
Bis(2-chloroethyl)ether	100	UG/L	ND	8270
Bis(2-chlorolsopropyl)ether	100	UG/L	ND	8270
Bis(2-ethylhexyl)phthalate	100	UG/L	770	8270
4-Bromophenylphenyl ether	100	UG/L	ND	8270
Butylbenzyl phthalate	100	UG/L	ND	8270
4-Chloroaniline	200	UG/L	ND	8270
1-Chloronaphthalene	100	UG/L	ND	8270
2-Chloronaphthalene	100	UG/L	ND	8270
4-Chloro-3-methylphenol	200	UG/L	ND	8270
2-Chloropenol	100	UG/L	ND	8270
4-Chlorophenylphenyl ether	100	UG/L	ND	8270
Chrysene	100	UG/L	ND	8270
Dibenz(a,h)anthracene	100	UG/L	ND	8270
Dibenzofuran	100	UG/L	ND	8270
1,3-Dichlorobenzene	100	UG/L	ND	8270
1,4-Dichlorobenzene	100	UG/L	ND	8270

SEMI-VOLATILE Lab ID# 34226 (continued page 2 or 3)

Parameter	MDL	Units	Results	Method
1,2-Dichlorobenzene	100	UG/L	ND	8270
3,3-Dichlorobenzidine	200	UG/L	ND	8270
2,4-Dichlorophenol	100	UG/L	ND	8270
2-6-Dichlorophenol	100	UG/L	ND	8270
Diethylphthalate	100	UG/L	ND	8270
a,a-Dimethylphenethylamine	100	UG/L	ND	8270
2,4-Dimethylphenol	100	UG/L	470	8270
Dimethylphthalate	100	UG/L	ND	8270
Di-n-butylphthalate	100	UG/L	ND	8270
4,6-Dinitro-2-methylphenol	500	UG/L	ND	8270
2,4-Dinitrophenol	500	UG/L	ND	8270
2,4-Dinitrotoluene	100	UG/L	ND	8270
2,6-Dinitrotoluene	100	UG/L	ND	8270
Di-n-octylphthalate	100	UG/L	ND	8270
1,2-Diphenylhydrazine	500	UG/L	ND	8270
Fluoranthene	100	UG/L	ND	8270
Fluorene	100	UG/L	ND	8270
Hexachlorobenzene	100	UG/L	ND	8270
Hexachlorobutadlene	100	UG/L	ND	8270
Hexachlorocyclopentadlene	100	UG/L	ND	8270
Hexachloroethane	100	UG/L	ND	8270
Indeno(1,2,3-cd)pyrene	100	UG/L	ND	8270
Isophorone	100	UG/L	ND	8270
3-Methylcholanthrene	100	UG/L	ND	8270
2-Methylnaphthalene	100	UG/L	1700	8270
2-Methylphenol	100	UG/L	150	8270
4-Methylphenol*	100	UG/L	110	8270
Naphthalene	100	UG/L	1400	8270
1-Naphthylamine	100	UG/L	ND	8270
2-Naphthylamine	100	UG/L	ND	8270
2-Nitroaniline	100	UG/L	ND	8270
3-Nitroaniline	100	UG/L	ND	8270
4-Nitroaniline	100	UG/L	ND	8270
Nitrobenzene	100	UG/L	ND	8270
2-Nitrophenol	100	UG/L	ND	8270
4-Nitrophenol	500	UG/L	ND	8270
N-Nitroso-di-n-butylamine	100	UG/L	ND	8270
N-Nitrosodimethylamine	100	UG/L	ND	8270
N-Nitrosodi-n-phenylamine**	100	UG/L	ND	8270
N-Nitroso-di-n-propylamine	100	UG/L	ND	8270

SEMI-VOLATILE Lab ID# 34226 (Continued page 3 of 3)

Parameter	MDL	Units	Results	Method
Pentachlorobenzene	100	UG/L	ND	8270
Pentachloronitrobenzene	100	UG/L	ND	8270
Pentachlorophenol	500	UG/L	ND	8270
Phenacetin	100	UG/L	ND	8270
Phenanthrene	100	UG/L	ND	8270
Phenol	100	UG/L	ND	8270
Pyrene	100	UG/L	ND	8270
Pyridine	100	UG/L	ND	8270
1,2,4,5-Tetrachlorobenzene	100	UG/L	ND	8270
2,3,4,6-Tetrachlorophenol	100	UG/L	ND	8270
1,2,4-Trichlorobenzene	100	UG/L	ND	8270
2,4,5-Trichlorophenol	100	UG/L	ND	8270
2,4,6-Trichlorophenol	100	UG/L	ND	8270

ND - not detected
* - Co-elutes with 3-Methylphenol
** - Inseparable from Diphenylamine

SAMPLE TESTING RESULTS

Contract No.: DACA63-92-D-0047 Delivery Order: 0008 Zone: 4

Site: Gary AFB #10350 Tanks 8-11 San Marcos, TX

Field Description: GAFB-10-350-10-TC Sampler: Walter Carlock

Lab ID# 34227 Matrix: Water Date Sampled: 2/23/94

SEMI-VOLATILE

Parameter	MDL	Units	Results	Method
Acenaphthene	100	UG/L	ND	8270
Acenaphthylene	100	UG/L	ND	8270
Acetophenone	100	UG/L	ND	8270
Aniline	100	UG/L	ND	8270
Anthracene	100	UG/L	ND	8270
4-Aminobiphenyl	100	UG/L	ND	8270
Benzidine	500	UG/L	ND	8270
Benzo(a)anthracene	100	UG/L	ND	8270
Benzo(b)fluorathene	100	UG/L	ND	8270
Benzo(k)fluoranthene	100	UG/L	ND	8270
Benzo(g,h,i)perylane	100	UG/L	ND	8270
Benzo(a)pyrene	100	UG/L	ND	8270
Benzoic Acid	500	UG/L	ND	8270
Benzyl alcohol	200	UG/L	ND	8270
Bis(2-chloroethoxy)methane	100	UG/L	ND	8270
Bis(2-chloroethyl)ether	100	UG/L	ND	8270
Bis(2-chlorolsopropyl)ether	100	UG/L	ND	8270
Bis(2-ethylhexyl)phthalate	100	UG/L	1000	8270
4-Bromophenylphenyl ether	100	UG/L	ND	8270
Butylbenzyl phthalate	100	UG/L	ND	8270
4-Chloroaniline	200	UG/L	ND	8270
1-Chloronaphthalene	100	UG/L	ND	8270
2-Chloronaphthalene	100	UG/L	ND	8270
4-Chloro-3-methylphenol	200	UG/L	ND	8270
2-Chloropenol	100	UG/L	ND	8270
4-Chlorophenylphenyl ether	100	UG/L	ND	8270
Chrysene	100	UG/L	ND	8270
Dibenz(a,h)anthracene	100	UG/L	ND	8270
Dibenzofuran	100	UG/L	ND	8270
1,3-Dichlorobenzene	100	UG/L	ND	8270
1,4-Dichlorobenzene	100	UG/L	ND	8270

SEMI-VOLATILE Lab ID# 34227 (continued page 2 or 3)

Parameter	MDL	Units	Results	Method
1,2-Dichlorobenzene	100	UG/L	ND	8270
3,3-Dichlorobenzidine	200	UG/L	ND	8270
2,4-Dichlorophenol	100	UG/L	ND	8270
2-6-Dichlorophenol	100	UG/L	ND	8270
Diethylphthalate	100	UG/L	ND	8270
a,a-Dimethylphenethylamine	100	UG/L	ND	8270
2,4-Dimethylphenol	100	UG/L	ND	8270
Dimethylphthalate	100	UG/L	ND	8270
Di-n-butylphthalate	100	UG/L	ND	8270
4,6-Dinitro-2-methylphenol	500	UG/L	ND	8270
2,4-Dinitrophenol	500	UG/L	ND	8270
2,4-Dinitrotoluene	100	UG/L	ND	8270
2,6-Dinitrotoluene	100	UG/L	ND	8270
Di-n-octylphthalate	100	UG/L	ND	8270
1,2-Diphenylhydrazine	500	UG/L	ND	8270
Fluoranthene	100	UG/L	ND	8270
Fluorene	100	UG/L	ND	8270
Hexachlorobenzene	100	UG/L	ND	8270
Hexachlorobutadlene	100	UG/L	ND	8270
Hexachlorocyclopentadlene	100	UG/L	ND	8270
Hexachloroethane	100	UG/L	ND	8270
Indeno(1,2,3-cd)pyrene	100	UG/L	ND	8270
Isophorone	100	UG/L	ND	8270
3-Methylcholanthrene	100	UG/L	ND	8270
2-Methylnaphthalene	100	UG/L	ND	8270
2-Methylphenol	100	UG/L	ND	8270
4-Methylphenol*	100	UG/L	ND	8270
Naphthalene	100	UG/L	ND	8270
1-Naphthylamine	100	UG/L	ND	8270
2-Naphthylamine	100	UG/L	ND	8270
2-Nitroaniline	100	UG/L	ND	8270
3-Nitroaniline	100	UG/L	ND	8270
4-Nitroaniline	100	UG/L	ND	8270
Nitrobenzene	100	UG/L	ND	8270
2-Nitrophenol	100	UG/L	ND	8270
4-Nitrophenol	500	UG/L	ND	8270
N-Nitroso-di-n-butylamine	100	UG/L	ND	8270
N-Nitrosodimethylamine	100	UG/L	ND	8270
N-Nitrosodi-n-phenylamine**	100	UG/L	ND	8270
N-Nitroso-di-n-propylamine	100	UG/L	ND	8270

SEMI-VOLATILE Lab ID# 34227 (Continued page 3 of 3)

Parameter	MDL	Units	Results	Method
Pentachlorobenzene	100	UG/L	ND	8270
Pentachloronitrobenzene	100	UG/L	ND	8270
Pentachlorophenol	500	UG/L	ND	8270
Phenacetin	100	UG/L	ND	8270
Phenanthrene	100	UG/L	ND	8270
Phenol	100	UG/L	ND	8270
Pyrene	100	UG/L	ND	8270
Pyridine	100	UG/L	ND	8270
1,2,4,5-Tetrachlorobenzene	100	UG/L	ND	8270
2,3,4,6-Tetrachlorophenol	100	UG/L	ND	8270
1,2,4-Trichlorobenzene	100	UG/L	ND	8270
2,4,5-Trichlorophenol	100	UG/L	ND	8270
2,4,6-Trichlorophenol	100	UG/L	ND	8270

ND - not detected
* - Co-elutes with 3-Methylphenol
** - Inseparable from Diphenylamine

Attachment 16

Attachment 16
Groundwater Gauging Data

Groundwater Guaging Data for LPST 108133

Well	Date	Time	Total Depth	Depth to Water	Product Thickness	Corrected Depth to Water	Casing Elevation	Corrected Water Elevation
B1/MW1	5/15/96	14:10	36.5	27.7	0	27.7	573.06	545.36
B1/MW1	5/16/96	10:00	36.5	27.73	0	27.73	573.06	545.33
B1/MW1	5/16/96	13:59	36.5	27.74	0	27.74	573.06	545.32
B1/MW1	5/30/96	10:18	36.5	27.85	0	27.85	573.06	545.21

Attachment 17

Attachment 17
Analytical Report Data

Analytical Report Data - Risk-Based Site Assessment*

*Compiled from data gathered by Thompson Professional Group, Inc., from samples collected May 16, 1996, through July 17, 1996.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

JUN 1 3

Southern Petroleum Laboratories, Inc.

Certificate of Analysis Number: 96-05-952

Approved for Release by:

Brent Barron, Client Services Supervisor

Date: 6/10/96

Greg Grandits
Laboratory Director

Idelis Williams
Quality Assurance Officer

The attached analytical data package may not be reproduced except in full without the express written approval of this laboratory.

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Appendix I - Summary of Results
Appendix II - Laboratory Results

INTRODUCTION

SPL is pleased to present the following report to Thompson Engineering for the Corps of Engineer project LPST # 108133 for former Perrin Air Force Base received on May 17, 1996. The scope of work included seven (7) SOIL samples for BTEX, Total Petroleum Hydrocarbons (TPH) by Soxhlet and LCPAHS. All samples were received at a temperature of 5 degrees C.

GENERAL

The methods employed for this project are listed in the laboratory method section.

LABORATORY METHODS

The methods that were employed in this project were BTEX by SW846 method 5030/8020, TPH by Soxhlet/IR by method 3540/418.1 and Polynuclear Aromatics Hydrocarbons (LCPAHS) by SW846 method 3550/8310.

DISCUSSION AND RECOMMENDATIONS

The results for the samples chosen for the matrix spike (MS), matrix spike dupliate (MSD) recoveries as well as the relative percent difference (RPD) between the matrix spike and the matrix spike duplicate for this project were acceptable except for the MS, MSD for the following compounds: Napthalene, Acenaphthylene, Acenaphthene and Fluorene as well as the RPD for Phenanthrene, Fluoranthene, Pyrene, Chrysene, Benzo (A) Anthracene and Benzo (B) Fluoranthene. The laboratory control sample (LCS) was well within the quality control (QC) limit criteria.

All of the detection limits and results have been based on the weight of the samples.

APPENDIX I

SUMMARY TABLE OF RESULTS for BTEX

SAMPLE ID	DATE SAMPLED	SPL ID	MATRIX	COMPOUND	RESULTS
B-7-7622	05/16/96	9605952-01	SOIL	Benzene Toluene Ethylbenze Total Xylene Total Btex	< 10 µg/Kg 24 µg/Kg 190 µg/Kg 230 µg/Kg 444 µg/Kg
B7-7630	05/16/96	9605952-02	SOIL	Benzene Toluene Ethylbenzene Total Xylene Total Btex	< 1 µg/Kg < 1 µg/Kg < 1 µg/Kg < 1 µg/Kg < 1 µg/Kg
B7-7617	05/16/96	9605952-03	SOIL	Benzene Toluene Ethylbenzene Total Xylene Total Btex	< 1 µg/Kg < 1 µg/Kg 3 µg/Kg 8 µg/Kg 11 µg/Kg
B8-8730	05/16/96	9605952-04	SOIL	Benzene Toluene Ethylbenzene Total Xylene Total Btex	< 1 µg/Kg 32 µg/Kg 2 µg/Kg 3 µg/Kg 37 µg/Kg
B8-8717	05/16/96	9605952-05	SOIL	Benzene Toluene Ethylbenzene Total Xylene Total Btex	< 10 µg/Kg < 10 µg/Kg < 10 µg/Kg < 10 µg/Kg < 10 µg/Kg
B8-8720	05/16/96	9605952-06	SOIL	Benzene Toluene Ethylbenzene Total Xylene Total Btex	< 200 µg/Kg 790 µg/Kg 44000 µg/Kg 25000 µg/Kg 69790 µg/Kg
B8-8705	05/17/96	9605952-07	SOIL	Benzene Toluene Ethylbenzene Total Xylene Total Btex	< 5 µg/Kg < 5 µg/Kg < 5 µg/Kg < 5 µg/Kg < 5 µg/Kg

SUMMARY TABLE OF RESULTS for POLYNUCLEAR AROMATICHYDROCARBONS

SAMPLE ID	DATE SAMPLED	SPL ID	MATRIX	COMPOUND	RESULTS
B7-7622	05/16/96	9605952-01	SOIL	Naphthalene	< 3 µg/Kg
				Acenaphthylene	< 1.5 µg/Kg
				Acenaphthene	< 5 µg/Kg
				Fluorene	< 5.6 µg/Kg
				Phenanthrene	< 5.2 µg/Kg
				Anthracene	< 4.5 µg/Kg
				Fluoranthene	< 3.8 µg/Kg
				Pyrene	< 3.5 µg/Kg
				Chrysene	< 2.7 µg/Kg
				Benzo a anthracene	< 2.7 µg/Kg
				Benzo b fluoranthene	< 2.2 µg/Kg
				Benzo k fluoranthene	< 2.4 µg/Kg
				Benzo a pyrene	< 1.1 µg/Kg
				Dibenzo a,h, anthracene	< 2.4 µg/Kg
				Benzo g,h,i perylene	10 µg/Kg
				Indeno 1,2,3-cd pyrene	< 2.6 µg/Kg
B7-7630	05/16/96	9605952-02	SOIL	Naphthalene	< 3 µg/Kg
				Acenaphthylene	< 1.5 µg/Kg
				Acenaphthene	< 5 µg/Kg
				Fluorene	< 5.6 µg/Kg
				Phenanthrene	< 5.2 µg/Kg
				Anthracene	< 4.5 µg/Kg
				Fluoranthene	< 3.8 µg/Kg
				Pyrene	< 3.5 µg/Kg
				Chrysene	< 2.7 µg/Kg
				Benzo a anthracene	< 2.7 µg/Kg
				Benzo b fluoranthene	< 2.2 µg/Kg
				Benzo k fluoranthene	< 2.4 µg/Kg
				Benzo a pyrene	< 1.1 µg/Kg
				Dibenzo a,h, anthracene	< 2.4 µg/Kg
				Benzo g,h,i perylene	< 3.5 µg/Kg
				Indeno 1,2,3-cd pyrene	< 2.6 µg/Kg

B7-7617	05/16/96	9605952-03	SOIL	Naphthalene	< 3 µg/Kg
				Acenaphthylene	< 1.5 µg/Kg
				Acenaphthene	< 5 µg/Kg
				Fluorene	< 5.6 µg/Kg
				Phenanthrene	< 5.2 µg/Kg
				Anthracene	< 4.5 µg/Kg
				Fluoranthene	< 3.8 µg/Kg
				Pyrene	< 3.5 µg/Kg
				Chrysene	< 2.7 µg/Kg
				Benzo a anthracene	< 2.7 µg/Kg
				Benzo b fluoranthene	< 2.2 µg/Kg
				Benzo k fluoranthene	< 2.4 µg/Kg
				Benzo a pyrene	< 1.1 µg/Kg
				Dibenzo a,h, anthracene	< 2.4 µg/Kg
				Benzo g,h,i perylene	< 3.5 µg/Kg
				Indeno 1,2,3-cd pyrene	< 2.6 µg/Kg
B8-8730	05/16/96	9605952-04	SOIL	Naphthalene	< 15 µg/Kg
				Acenaphthylene	< 7.5 µg/Kg
				Acenaphthene	< 25 µg/Kg
				Fluorene	< 28.0 µg/Kg
				Phenanthrene	< 26.0 µg/Kg
				Anthracene	< 22.5 µg/Kg
				Fluoranthene	27 µg/Kg
				Pyrene	24 µg/Kg
				Chrysene	< 13.5 µg/Kg
				Benzo a anthracene	< 13.5 µg/Kg
				Benzo b fluoranthene	< 11.0 µg/Kg
				Benzo k fluoranthene	< 12.0 µg/Kg
				Benzo a pyrene	< 5.5 µg/Kg
				Dibenzo a,h, anthracene	< 12.0 µg/Kg
				Benzo g,h,i perylene	< 17.5 µg/Kg
				Indeno 1,2,3-cd pyrene	< 13.0 µg/Kg

B8-8717	05/16/96	9605952-05	SOIL	Naphthalene	< 30 µg/Kg
				Acenaphthylene	< 15.0 µg/Kg
				Acenaphthene	< 50 µg/Kg
				Fluorene	< 56.0 µg/Kg
				Phenanthrene	< 52.0 µg/Kg
				Anthracene	< 45.0 µg/Kg
				Fluoranthene	< 38.0 µg/Kg
				Pyrene	< 35.0 µg/Kg
				Chrysene	< 27.0 µg/Kg
				Benzo a anthracene	< 27.0 µg/Kg
				Benzo b fluoranthene	< 22.0 µg/Kg
				Benzo k fluoranthene	< 24.0 µg/Kg
				Benzo a pyrene	< 11.0 µg/Kg
				Dibenzo a,h, anthracene	< 24.0 µg/Kg
				Benzo g,h,i perylene	< 35.0 µg/Kg
				Indeno 1,2,3-cd pyrene	< 26.0 µg/Kg
B8-8720	05/16/96	9605952-06	SOIL	Naphthalene	6200 µg/Kg
				Acenaphthylene	< 750.0 µg/Kg
				Acenaphthene	< 2500 µg/Kg
				Fluorene	< 2800.0 µg/Kg
				Phenanthrene	< 2600.0 µg/Kg
				Anthracene	< 2250.0 µg/Kg
				Fluoranthene	< 1900.0 µg/Kg
				Pyrene	< 1750.0 µg/Kg
				Chrysene	< 1350.0 µg/Kg
				Benzo a anthracene	< 1350.0 µg/Kg
				Benzo b fluoranthene	< 1100.0 µg/Kg
				Benzo k fluoranthene	< 1200.0 µg/Kg
				Benzo a pyrene	< 550.0 µg/Kg
				Dibenzo a,h, anthracene	< 1200.0 µg/Kg
				Benzo g,h,i perylene	< 1750.0 µg/Kg
				Indeno 1,2,3-cd pyrene	< 1300.0 µg/Kg

B8-8705	05/17/96	9605952-07	SOIL	Naphthalene	< 3000 µg/Kg
				Acenaphthylene	< 1500.0 µg/Kg
				Acenaphthene	< 5000 µg/Kg
				Fluorene	< 5600.0 µg/Kg
				Phenanthrene	< 5200.0 µg/Kg
				Anthracene	< 4500.0 µg/Kg
				Fluoranthene	< 3800.0 µg/Kg
				Pyrene	3600 µg/Kg
				Chrysene	< 2700.0 µg/Kg
				Benzo a anthracene	< 2700.0 µg/Kg
				Benzo b fluoranthene	5900 µg/Kg
				Benzo k fluoranthene	3100 µg/Kg
				Benzo a pyrene	< 1100.0 µg/Kg
				Dibenzo a,h, anthracene	< 2400.0 µg/Kg
				Benzo g,h,i perylene	3500 µg/Kg
				Indeno 1,2,3-cd pyrene	< 2600.0 µg/Kg

SUMMARY TABLE OF RESULTS for TPH BY SOXHLET

SAMPLE ID	DATE SAMPLED	SPL ID	MATRIX	COMPOUND	RESULTS
B7-7622	05/16/96	9605952-01	SOIL	TPH by Soxhlet	330 mg/Kg
B7-7630	05/16/96	9605952-02	SOIL	TPH by Soxhlet	< 10 mg/Kg
B7-7617	05/16/96	9605952-03	SOIL	TPH by Soxhlet	< 10 mg/Kg
B7-8730	05/16/96	9605952-04	SOIL	TPH by Soxhlet	< 10 mg/Kg
B7-8717	05/16/96	9605952-05	SOIL	TPH by Soxhlet	130 mg/Kg
B7-8720	05/16/96	9605952-06	SOIL	TPH by Soxhlet	1800 mg/Kg
B8-8705	05/17/96	9605952-07	SOIL	TPH by Soxhlet	46 mg/Kg

SUMMARY TABLE OF RESULTS for SOLIDS

SAMPLE ID	DATE SAMPLED	SPL ID	MATRIX	COMPOUND	RESULTS
B7-7622	05/16/96	9605952-01	SOIL	Solids	87 % Wt
B7-7630	05/16/96	9605952-02	SOIL	Solids	78 % Wt
B7-7617	05/16/96	9605952-03	SOIL	Solids	81 % Wt
B8-8730	05/16/96	9605952-04	SOIL	Solids	80 % Wt
B8-8717	05/16/96	9605952-05	SOIL	Solids	95 % Wt
B8-8720	05/16/96	9605952-06	SOIL	Solids	89 % Wt
B8-8705	05/17/96	9605952-07	SOIL	Solids	94 % Wt

APPENDIX II

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9605952-01

Thompson Professional Grp,Inc
6110 Clarkson Lane
Houston, TX 77055
ATTN: John Laser

DATE: 06/07/96

PROJECT: Soil Bor/Grnd Water Mon B7,B8
SITE: Former Gary Air Force Base
SAMPLED BY: H.Platt Thompson Engineering
SAMPLE ID: B7-7622

PROJECT NO: LPST #108133
MATRIX: SOIL
DATE SAMPLED: 05/16/96 14:33:00
DATE RECEIVED: 05/17/96

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
BENZENE	< 10	10 P	µg/Kg
TOLUENE	24	10 P	µg/Kg
ETHYLBENZENE	190	10 P	µg/Kg
TOTAL XYLENE	230	10 P	µg/Kg
TOTAL BTEX	444		µg/Kg
Surrogate	**% Recovery**		
1,4-Difluorobenzene	88		
4-Bromofluorobenzene	130		
METHOD 5030/8020 ***			
Analyzed by: DY			
Date: 05/30/96			
TPH by Soxhlet/IR	330	10	mg/Kg
METHOD 3540/418.1			
Analyzed by: DR			
Date: 05/28/96 09:00:00			
Sonication extraction	05/29/96		
METHOD 3550 ***			
Analyzed by: MF			
Date: 05/29/96 14:00:00			
Solids	87	1	% Weight
CLP Inorganics SOW			
Analyzed by: ST			
Date: 05/20/96			

(P) - Practical Quantitation Limit

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9605952-01

Thompson Professional Grp, Inc
6110 Clarkson Lane
Houston, TX 77055
ATTN: John Laser

06/07/96

PROJECT: Soil Bor/Grnd Water Mon B7,B8
SITE: Former Gary Air Force Base
SAMPLED BY: H.Platt Thompson Engineering
SAMPLE ID: B7-7622

PROJECT NO: LPST #108133
MATRIX: SOIL
DATE SAMPLED: 05/16/96 14:33:00
DATE RECEIVED: 05/17/96

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Naphthalene	< 3	3	µg/Kg
Acenaphthylene	< 1.5	1.5	µg/Kg
Acenaphthene	< 5	5	µg/Kg
Fluorene	< 5.6	5.6	µg/Kg
Phenanthrene	< 5.2	5.2	µg/Kg
Anthracene	< 4.5	4.5	µg/Kg
Fluoranthene	< 3.8	3.8	µg/Kg
Pyrene	< 3.5	3.5	µg/Kg
Chrysene	< 2.7	2.7	µg/Kg
Benzo (a) anthracene	< 2.7	2.7	µg/Kg
Benzo (b) fluoranthene	< 2.2	2.2	µg/Kg
Benzo (k) fluoranthene	< 2.4	2.4	µg/Kg
Benzo (a) pyrene	< 1.1	1.1	µg/Kg
Dibenzo (a,h) anthracene	< 2.4	2.4	µg/Kg
Benzo (g,h,i) perylene	10	3.5	µg/Kg
Indeno (1,2,3-cd) pyrene	< 2.6	2.6	µg/Kg

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
Biphenyl	µg/Kg	55	50	150
Coronene	µg/Kg	117	50	150

ANALYZED BY: JZL
DATE/TIME: 05/31/96 04:10:35
EXTRACTED BY: MF
DATE/TIME: 05/29/96 14:00:00
METHOD: 8310 Polynuclear Aromatic Hydrocarbons
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
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PHONE (713) 660-0901

Certificate of Analysis No. H9-9605952-02

Thompson Professional Grp,Inc
6110 Clarkson Lane
Houston, TX 77055
ATTN: John Laser

DATE: 06/07/96

PROJECT: Soil Bor/Grnd Water Mon B7,B8
SITE: Former Gary Air Force Base
SAMPLED BY: H.Platt Thompson Engineering
SAMPLE ID: B7-7630

PROJECT NO: LPST #108133
MATRIX: SOIL
DATE SAMPLED: 05/16/96 14:47:00
DATE RECEIVED: 05/17/96

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
BENZENE	< 1	1 P	µg/Kg
TOLUENE	< 1	1 P	µg/Kg
ETHYLBENZENE	< 1	1 P	µg/Kg
TOTAL XYLENE	< 1	1 P	µg/Kg
TOTAL BTEX	< 1		µg/Kg
Surrogate	**% Recovery**		
1,4-Difluorobenzene	89		
4-Bromofluorobenzene	94		
METHOD 5030/8020 ***			
Analyzed by: DY			
Date: 05/30/96			
TPH by Soxhlet/IR	< 10	10	mg/Kg
METHOD 3540/418.1			
Analyzed by: DR			
Date: 05/28/96 09:00:00			
Sonication extraction	05/29/96		
METHOD 3550 ***			
Analyzed by: MF			
Date: 05/29/96 14:00:00			
Solids	78	1	% Weight
CLP Inorganics SOW			
Analyzed by: ST			
Date: 05/20/96			

(P) - Practical Quantitation Limit ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
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HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9605952-02

Thompson Professional Grp,Inc
6110 Clarkson Lane
Houston, TX 77055
ATTN: John Laser

06/07/96

PROJECT: Soil Bor/Grnd Water Mon B7,B8
SITE: Former Gary Air Force Base
SAMPLED BY: H.Platt Thompson Engineering
SAMPLE ID: B7-7630

PROJECT NO: LPST #108133
MATRIX: SOIL
DATE SAMPLED: 05/16/96 14:47:00
DATE RECEIVED: 05/17/96

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Naphthalene	< 3	3	µg/Kg
Acenaphthylene	< 1.5	1.5	µg/Kg
Acenaphthene	< 5	5	µg/Kg
Fluorene	< 5.6	5.6	µg/Kg
Phenanthrene	< 5.2	5.2	µg/Kg
Anthracene	< 4.5	4.5	µg/Kg
Fluoranthene	< 3.8	3.8	µg/Kg
Pyrene	< 3.5	3.5	µg/Kg
Chrysene	< 2.7	2.7	µg/Kg
Benzo (a) anthracene	< 2.7	2.7	µg/Kg
Benzo (b) fluoranthene	< 2.2	2.2	µg/Kg
Benzo (k) fluoranthene	< 2.4	2.4	µg/Kg
Benzo (a) pyrene	< 1.1	1.1	µg/Kg
Dibenzo (a,h) anthracene	< 2.4	2.4	µg/Kg
Benzo (g,h,i) perylene	< 3.5	3.5	µg/Kg
Indeno (1,2,3-cd) pyrene	< 2.6	2.6	µg/Kg

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
Biphenyl	µg/Kg	104	50	150
Coronene	µg/Kg	102	50	150

ANALYZED BY: JZL DATE/TIME: 05/30/96 17:28:56
EXTRACTED BY: MF DATE/TIME: 05/29/96 14:00:00
METHOD: 8310 Polynuclear Aromatic Hydrocarbons
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9605952-03

Thompson Professional Grp,Inc
6110 Clarkson Lane
Houston, TX 77055
ATTN: John Laser

DATE: 06/07/96

PROJECT: Soil Bor/Grnd Water Mon B7,B8
SITE: Former Gary Air Force Base
SAMPLED BY: H.Platt Thompson Engineering
SAMPLE ID: B7-7617

PROJECT NO: LPST #108133
MATRIX: SOIL
DATE SAMPLED: 05/16/96 17:08:00
DATE RECEIVED: 05/17/96

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
BENZENE	< 1	1 P	µg/Kg
TOLUENE	< 1	1 P	µg/Kg
ETHYLBENZENE	3	1 P	µg/Kg
TOTAL XYLENE	8	1 P	µg/Kg
TOTAL BTEX	11		µg/Kg
Surrogate	**% Recovery**		
1,4-Difluorobenzene	88		
4-Bromofluorobenzene	123		
METHOD 5030/8020 ***			
Analyzed by: DY			
Date: 05/30/96			
TPH by Soxhlet/IR	< 10	10	mg/Kg
METHOD 3540/418.1			
Analyzed by: DR			
Date: 05/28/96 09:00:00			
Sonication extraction	05/29/96		
METHOD 3550 ***			
Analyzed by: MF			
Date: 05/29/96 14:00:00			
Solids	81	1	% Weight
CLP Inorganics SOW			
Analyzed by: ST			
Date: 05/20/96			

(P) - Practical Quantitation Limit

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

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Certificate of Analysis No. H9-9605952-03

Thompson Professional Grp,Inc
6110 Clarkson Lane
Houston, TX 77055
ATTN: John Laser

06/07/96

PROJECT: Soil Bor/Grnd Water Mon B7,B8
SITE: Former Gary Air Force Base
SAMPLED BY: H.Platt Thompson Engineering
SAMPLE ID: B7-7617

PROJECT NO: LPST #108133
MATRIX: SOIL
DATE SAMPLED: 05/16/96 17:08:00
DATE RECEIVED: 05/17/96

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Naphthalene	< 3	3	µg/Kg
Acenaphthylene	< 1.5	1.5	µg/Kg
Acenaphthene	< 5	5	µg/Kg
Fluorene	< 5.6	5.6	µg/Kg
Phenanthrene	< 5.2	5.2	µg/Kg
Anthracene	< 4.5	4.5	µg/Kg
Fluoranthene	< 3.8	3.8	µg/Kg
Pyrene	< 3.5	3.5	µg/Kg
Chrysene	< 2.7	2.7	µg/Kg
Benzo (a) anthracene	< 2.7	2.7	µg/Kg
Benzo (b) fluoranthene	< 2.2	2.2	µg/Kg
Benzo (k) fluoranthene	< 2.4	2.4	µg/Kg
Benzo (a) pyrene	< 1.1	1.1	µg/Kg
Dibenzo (a,h) anthracene	< 2.4	2.4	µg/Kg
Benzo (g,h,i) perylene	< 3.5	3.5	µg/Kg
Indeno (1,2,3-cd) pyrene	< 2.6	2.6	µg/Kg

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
Biphenyl	µg/Kg	87	50	150
Coronene	µg/Kg	98	50	150

ANALYZED BY: JZL DATE/TIME: 05/30/96 18:19:56
EXTRACTED BY: MF DATE/TIME: 05/29/96 14:00:00
METHOD: 8310 Polynuclear Aromatic Hydrocarbons
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9605952-04

Thompson Professional Grp,Inc
6110 Clarkson Lane
Houston, TX 77055
ATTN: John Laser

DATE: 06/07/96

PROJECT: Soil Bor/Grnd Water Mon B7,B8
SITE: Former Gary Air Force Base
SAMPLED BY: H.Platt Thompson Engineering
SAMPLE ID: B8-8730

PROJECT NO: LPST #108133
MATRIX: SOIL
DATE SAMPLED: 05/16/96 16:47:00
DATE RECEIVED: 05/17/96

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
BENZENE	< 1	1 P	µg/Kg
TOLUENE	32	1 P	µg/Kg
ETHYLBENZENE	2	1 P	µg/Kg
TOTAL XYLENE	3	1 P	µg/Kg
TOTAL BTEX	37		µg/Kg
Surrogate	**% Recovery**		
1,4-Difluorobenzene	90		
4-Bromofluorobenzene	120		
METHOD 5030/8020 ***			
Analyzed by: DY			
Date: 05/30/96			
TPH by Soxhlet/IR	< 10	10	mg/Kg
METHOD 3540/418.1			
Analyzed by: DR			
Date: 05/28/96 09:00:00			
Sonication extraction	05/29/96		
METHOD 3550 ***			
Analyzed by: MF			
Date: 05/29/96 14:00:00			
Solids	80	1	% Weight
CLP Inorganics SOW			
Analyzed by: ST			
Date: 05/20/96			

(P) - Practical Quantitation Limit

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9605952-04

Thompson Professional Grp,Inc
6110 Clarkson Lane
Houston, TX 77055
ATTN: John Laser

06/07/96

PROJECT: Soil Bor/Grnd Water Mon B7,B8
SITE: Former Gary Air Force Base
SAMPLED BY: H.Platt Thompson Engineering
SAMPLE ID: B8-8730

PROJECT NO: LPST #108133
MATRIX: SOIL
DATE SAMPLED: 05/16/96 16:47:00
DATE RECEIVED: 05/17/96

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Naphthalene	< 15	15	µg/Kg
Acenaphthylene	< 7.5	7.5	µg/Kg
Acenaphthene	< 25	25	µg/Kg
Fluorene	< 28.0	28.0	µg/Kg
Phenanthrene	< 26.0	26.0	µg/Kg
Anthracene	< 22.5	22.5	µg/Kg
Fluoranthene	27	19.0	µg/Kg
Pyrene	24	17.5	µg/Kg
Chrysene	< 13.5	13.5	µg/Kg
Benzo (a) anthracene	< 13.5	13.5	µg/Kg
Benzo (b) fluoranthene	< 11.0	11.0	µg/Kg
Benzo (k) fluoranthene	< 12.0	12.0	µg/Kg
Benzo (a) pyrene	< 5.5	5.5	µg/Kg
Dibenzo (a,h) anthracene	< 12.0	12.0	µg/Kg
Benzo (g,h,i) perylene	< 17.5	17.5	µg/Kg
Indeno (1,2,3-cd) pyrene	< 13.0	13.0	µg/Kg

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
Biphenyl	µg/Kg	117	50	150
Coronene	µg/Kg	125	50	150

ANALYZED BY: JZL DATE/TIME: 05/30/96 19:40:35
EXTRACTED BY: MF DATE/TIME: 05/29/96 14:00:00
METHOD: 8310 Polynuclear Aromatic Hydrocarbons
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

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8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9605952-05

Thompson Professional Grp,Inc
6110 Clarkson Lane
Houston, TX 77055
ATTN: John Laser

DATE: 06/07/96

PROJECT: Soil Bor/Grnd Water Mon B7,B8
SITE: Former Gary Air Force Base
SAMPLED BY: H.Platt Thompson Engineering
SAMPLE ID: B8-8717

PROJECT NO: LPST #108133
MATRIX: SOIL
DATE SAMPLED: 05/16/96 17:50:00
DATE RECEIVED: 05/17/96

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
BENZENE	< 10	10 P	µg/Kg
TOLUENE	< 10	10 P	µg/Kg
ETHYLBENZENE	< 10	10 P	µg/Kg
TOTAL XYLENE	< 10	10 P	µg/Kg
TOTAL BTEX	< 10		µg/Kg
Surrogate	**% Recovery**		
1,4-Difluorobenzene	94		
4-Bromofluorobenzene	99		
METHOD 5030/8020 ***			
Analyzed by: DY			
Date: 05/30/96			
TPH by Soxhlet/IR	130	10	mg/Kg
METHOD 3540/418.1			
Analyzed by: DR			
Date: 05/28/96 09:00:00			
Sonication extraction	05/29/96		
METHOD 3550 ***			
Analyzed by: MF			
Date: 05/29/96 14:00:00			
Solids	95	1	% Weight
CLP Inorganics SOW			
Analyzed by: ST			
Date: 05/20/96			

(P) - Practical Quantitation Limit ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9605952-05

Thompson Professional Grp, Inc
6110 Clarkson Lane
Houston, TX 77055
ATTN: John Laser

06/07/96

PROJECT: Soil Bor/Grnd Water Mon B7,B8
SITE: Former Gary Air Force Base
SAMPLED BY: H.Platt Thompson Engineering
SAMPLE ID: B8-8717

PROJECT NO: LPST #108133
MATRIX: SOIL
DATE SAMPLED: 05/16/96 17:50:00
DATE RECEIVED: 05/17/96

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Naphthalene	< 30	30	µg/Kg
Acenaphthylene	< 15.0	15.0	µg/Kg
Acenaphthene	< 50	50	µg/Kg
Fluorene	< 56.0	56.0	µg/Kg
Phenanthrene	< 52.0	52.0	µg/Kg
Anthracene	< 45.0	45.0	µg/Kg
Fluoranthene	< 38.0	38.0	µg/Kg
Pyrene	< 35.0	35.0	µg/Kg
Chrysene	< 27.0	27.0	µg/Kg
Benzo (a) anthracene	< 27.0	27.0	µg/Kg
Benzo (b) fluoranthene	< 22.0	22.0	µg/Kg
Benzo (k) fluoranthene	< 24.0	24.0	µg/Kg
Benzo (a) pyrene	< 11.0	11.0	µg/Kg
Dibenzo (a,h) anthracene	< 24.0	24.0	µg/Kg
Benzo (g,h,i) perylene	< 35.0	35.0	µg/Kg
Indeno (1,2,3-cd) pyrene	< 26.0	26.0	µg/Kg

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
Biphenyl	µg/Kg	CI	50	150
Coronene	µg/Kg	85	50	150

ANALYZED BY: JZL
DATE/TIME: 05/31/96 21:57:13
EXTRACTED BY: MF
DATE/TIME: 05/29/96 14:00:00
METHOD: 8310 Polynuclear Aromatic Hydrocarbons
NOTES: * - Practical Quantitation Limit
ND - Not Detected
NA - Not Analyzed
CI - Coeluting Interference.

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9605952-06

Thompson Professional Grp,Inc
6110 Clarkson Lane
Houston, TX 77055
ATTN: John Laser

DATE: 06/07/96

PROJECT: Soil Bor/Grnd Water Mon B7,B8
SITE: Former Gary Air Force Base
SAMPLED BY: H.Platt Thompson Engineering
SAMPLE ID: B8-8720

PROJECT NO: LPST #108133
MATRIX: SOIL
DATE SAMPLED: 05/16/96 16:30:00
DATE RECEIVED: 05/17/96

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
BENZENE	< 200	200 P	µg/Kg
TOLUENE	790	200 P	µg/Kg
ETHYLBENZENE	44000	200 P	µg/Kg
TOTAL XYLENE	25000	200 P	µg/Kg
TOTAL BTEX	69790		µg/Kg
Surrogate	**% Recovery**		
1,4-Difluorobenzene	89		
4-Bromofluorobenzene	191 «		
METHOD 5030/8020 ***			
Analyzed by: DY			
Date: 05/30/96			
TPH by Soxhlet/IR	1800	50	mg/Kg
METHOD 3540/418.1			
Analyzed by: DR			
Date: 05/28/96 09:00:00			
Sonication extraction	05/29/96		
METHOD 3550 ***			
Analyzed by: MF			
Date: 05/29/96 14:00:00			
Solids	89	1	% Weight
CLP Inorganics SOW			
Analyzed by: ST			
Date: 05/20/96			

(P) - Practical Quantitation Limit « - Recovery beyond control limits.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9605952-06

Thompson Professional Grp,Inc
6110 Clarkson Lane
Houston, TX 77055
ATTN: John Laser

06/07/96

PROJECT: Soil Bor/Grnd Water Mon B7,B8
SITE: Former Gary Air Force Base
SAMPLED BY: H.Platt Thompson Engineering
SAMPLE ID: B8-8720

PROJECT NO: LPST #108133
MATRIX: SOIL
DATE SAMPLED: 05/16/96 16:30:00
DATE RECEIVED: 05/17/96

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Naphthalene	6200	1500	µg/Kg
Acenaphthylene	< 750.0	750.0	µg/Kg
Acenaphthene	< 2500	2500	µg/Kg
Fluorene	< 2800.0	2800.0	µg/Kg
Phenanthrene	< 2600.0	2600.0	µg/Kg
Anthracene	< 2250.0	2250.0	µg/Kg
Fluoranthene	< 1900.0	1900.0	µg/Kg
Pyrene	< 1750.0	1750.0	µg/Kg
Chrysene	< 1350.0	1350.0	µg/Kg
Benzo (a) anthracene	< 1350.0	1350.0	µg/Kg
Benzo (b) fluoranthene	< 1100.0	1100.0	µg/Kg
Benzo (k) fluoranthene	< 1200.0	1200.0	µg/Kg
Benzo (a) pyrene	< 550.0	550.0	µg/Kg
Dibenzo (a,h) anthracene	< 1200.0	1200.0	µg/Kg
Benzo (g,h,i) perylene	< 1750.0	1750.0	µg/Kg
Indeno (1,2,3-cd) pyrene	< 1300.0	1300.0	µg/Kg

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
Biphenyl	µg/Kg	D	50	150
Coronene	µg/Kg	D	50	150

ANALYZED BY: JZL DATE/TIME: 05/31/96 22:48:14
EXTRACTED BY: MF DATE/TIME: 05/29/96 14:00:00
METHOD: 8310 Polynuclear Aromatic Hydrocarbons
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed
D - Diluted, control limits not applicable.

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9605952-07

Thompson Professional Grp,Inc
6110 Clarkson Lane
Houston, TX 77055
ATTN: John Laser

DATE: 06/07/96

PROJECT: Soil Bor/Grnd Water Mon B7,B8
SITE: Former Gary Air Force Base
SAMPLED BY: H.Platt Thompson Engineering
SAMPLE ID: B8-8705

PROJECT NO: LPST #108133
MATRIX: SOIL
DATE SAMPLED: 05/17/96 08:45:00
DATE RECEIVED: 05/17/96

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
BENZENE	< 5	5 P	µg/Kg
TOLUENE	< 5	5 P	µg/Kg
ETHYLBENZENE	< 5	5 P	µg/Kg
TOTAL XYLENE	< 5	5 P	µg/Kg
TOTAL BTEX	< 5		µg/Kg
Surrogate	**% Recovery**		
1,4-Difluorobenzene	91		
4-Bromofluorobenzene	125		
METHOD 5030/8020 ***			
Analyzed by: DY			
Date: 05/30/96			
TPH by Soxhlet/IR	46	10	mg/Kg
METHOD 3540/418.1			
Analyzed by: DR			
Date: 05/28/96 09:00:00			
Sonication extraction	05/29/96		
METHOD 3550 ***			
Analyzed by: MF			
Date: 05/29/96 14:00:00			
Solids	94	1	% Weight
CLP Inorganics SOW			
Analyzed by: ST			
Date: 05/20/96			

(P) - Practical Quantitation Limit ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9605952-07

Thompson Professional Grp,Inc
6110 Clarkson Lane
Houston, TX 77055
ATTN: John Laser

06/07/96

PROJECT: Soil Bor/Grnd Water Mon B7,B8
SITE: Former Gary Air Force Base
SAMPLED BY: H.Platt Thompson Engineering
SAMPLE ID: B8-8705

PROJECT NO: LPST #108133
MATRIX: SOIL
DATE SAMPLED: 05/17/96 08:45:00
DATE RECEIVED: 05/17/96

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Naphthalene	< 3000	3000	µg/Kg
Acenaphthylene	< 1500.0	1500.0	µg/Kg
Acenaphthene	< 5000	5000	µg/Kg
Fluorene	< 5600.0	5600.0	µg/Kg
Phenanthrene	< 5200.0	5200.0	µg/Kg
Anthracene	< 4500.0	4500.0	µg/Kg
Fluoranthene	< 3800.0	3800.0	µg/Kg
Pyrene	3600	3500.0	µg/Kg
Chrysene	< 2700.0	2700.0	µg/Kg
Benzo (a) anthracene	< 2700.0	2700.0	µg/Kg
Benzo (b) fluoranthene	5900	2200.0	µg/Kg
Benzo (k) fluoranthene	3100	2400.0	µg/Kg
Benzo (a) pyrene	< 1100.0	1100.0	µg/Kg
Dibenzo (a,h) anthracene	< 2400.0	2400.0	µg/Kg
Benzo (g,h,i) perylene	3500	3500.0	µg/Kg
Indeno (1,2,3-cd) pyrene	< 2600.0	2600.0	µg/Kg

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
Biphenyl	µg/Kg	D	50	150
Coronene	µg/Kg	D	50	150

ANALYZED BY: JZL DATE/TIME: 05/30/96 21:22:33
EXTRACTED BY: MF DATE/TIME: 05/29/96 14:00:00
METHOD: 8310 Polynuclear Aromatic Hydrocarbons
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed
D - Diluted, control limits not applicable.

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

QUALITY CONTROL

DOCUMENTATION

SPL BATCH QUALITY CONTROL REPORT **
METHOD 8020***

PAGE

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Soil

Units: µg/Kg

Batch Id: VARE960529113500

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike Result <1>	Blank Spike Recovery %	QC Limits(**) (Mandatory) % Recovery Range
Benzene	ND	50	44	88.0	66 - 123
Toluene	ND	50	41	82.0	74 - 125
EthylBenzene	ND	50	43	86.0	84 - 125
O Xylene	ND	50	44	88.0	76 - 137
M & P Xylene	ND	100	81	81.0	81 - 131

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike Result <1>	Matrix Spike Recovery <4>	Matrix Spike Duplicate Result <1>	Matrix Spike Duplicate Recovery <5>	MS/MSD Relative % Difference	QC Limits(***) (Advisory) RPD Max.	Recovery Range
BENZENE	4	20	20	80.0	23	95.0	17.1	33	47 - 143
TOLUENE	7	20	16	45.0 *	19	60.0	28.6	35	46 - 148
ETHYLBENZENE	22	20	31	45.0	39	85.0	61.5 *	40	32 - 151
O XYLENE	8	20	15	35.0	16	40.0	13.3	24	35 - 143
M & P XYLENE	20	40	32	30.0	37	42.5	34.5	38	25 - 139

Analyst: DY
Sequence Date: 05/29/96
SPL ID of sample spiked: 9605964-04A
Sample File ID: E___918.TX0
Method Blank File ID:
Blank Spike File ID: E___899.TX0
Matrix Spike File ID: E___901.TX0
Matrix Spike Duplicate File ID: E___902.TX0

* = Values Outside QC Range
NC = Not Calculated (Sample exceeds spike by factor of 4 or more)
ND = Not Detected/Below Detection Limit
% Recovery = [(<1> - <2>) / <3>] x 100
LCS % Recovery = (<1> / <3>) x 100
Relative Percent Difference = |(<4> - <5> | / [(<4> + <5>) x 0.5] x 100
(**) = Source: SPL-Houston Historical Data (4th Q '95)
(***) = Source: SPL-Houston Historical Data (4th Q '95)

SAMPLES IN BATCH(SPL ID):

9605D61-09A 9605D61-10A 9605D61-11A 9605967-15A
9605967-16A 9605D61-12A 9605964-04A 9605964-01A
9605964-02A 9605964-05A 9605952-02A 9605952-03A
9605952-04A 9605952-07A 9605964-03A 9605952-1A
9605C94-14A 9605C94-13A 9605D61-08A

QC Officer

** SPL BATCH QUALITY CONTROL REPORT **
METHOD 8020***

PAGE

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Soil

Units: µg/Kg

Batch Id: VARE960530065000

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike Result <1>	Blank Spike Recovery %	QC Limits(**) (Mandatory) % Recovery Range
Benzene	ND	50	50	100	66 - 123
Toluene	ND	50	48	96.0	74 - 125
EthylBenzene	ND	50	49	98.0	84 - 125
O Xylene	ND	50	48	96.0	76 - 137
M & P Xylene	ND	100	92	92.0	81 - 131

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike Result <1>	Matrix Spike Recovery <4>	Matrix Spike Duplicate Result <1>	Matrix Spike Duplicate Recovery <5>	MS/MSD Relative % Difference	QC Limits(***) (Advisory) RPD Max.	Recovery Range
BENZENE	ND	20	18	90.0	17	85.0	5.71	33	47 - 143
TOLUENE	1	20	16	75.0	16	75.0	0	35	46 - 148
ETHYLBENZENE	ND	20	15	75.0	15	75.0	0	40	32 - 151
O XYLENE	ND	20	15	75.0	15	75.0	0	24	35 - 143
M & P XYLENE	ND	40	31	77.5	30	75.0	3.28	38	25 - 139

Analyst: DY
Sequence Date: 05/30/96
SPL ID of sample spiked: 9605942-13A
Sample File ID: E___943.TX0
Method Blank File ID:
Blank Spike File ID: E___929.TX0
Matrix Spike File ID: E___932.TX0
Matrix Spike Duplicate File ID: E___933.TX0

* = Values Outside QC Range
NC = Not Calculated (Sample exceeds spike by factor of 4 or more)
ND = Not Detected/Below Detection Limit
% Recovery = [(<1> - <2>) / <3>] x 100
LCS % Recovery = (<1> / <3>) x 100
Relative Percent Difference = |(<4> - <5> | / [(<4> + <5>) x 0.5] x 100
(**) = Source: SPL-Houston Historical Data (4th Q '95)
(***) = Source: SPL-Houston Historical Data (4th Q '95)

SAMPLES IN BATCH(SPL ID):

9605942-05A 9605942-08A 9605942-09A 9605942-11A
9605942-13A 9605942-12A 9605D61-18A 9605D61-15A
9605D61-19A 9605D61-14A 9605B84-02A 9605B84-03A
9605B84-07A 9605B84-05A 9605B84-06A 9605952-05A
9605952-06A

QC Officer

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

** SPL BATCH QUALITY CONTROL REPORT **
METHOD EPA 8310

Matrix: Soil
Units: µg/Kg

Batch Id: 1960530113100

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike Result <1>	Blank Spike Recovery %	QC Limits(**) (Mandatory) % Recovery Range
Naphthalene	ND	16.7	12.2	73.1	1 - 122
Acenaphthylene	ND	16.7	16.0	95.8	1 - 139
Acenaphthene	ND	16.7	13.9	83.2	1 - 124
Fluorene	ND	16.7	20.3	122	1 - 142
Phenanthrene	ND	16.7	12.5	74.8	1 - 155
Anthracene	ND	16.7	10.6	63.5	1 - 126
Fluoranthene	ND	16.7	11.6	69.5	14 - 123
Pyrene	ND	16.7	13.5	80.8	1 - 140
Chrysene	ND	16.7	10.8	64.7	1 - 199
Benzo (a) anthracene	ND	16.7	14.4	86.2	12 - 135
Benzo (b) fluoranthene	ND	16.7	14.9	89.2	6 - 150
Benzo (k) fluoranthene	ND	16.7	15.1	90.4	1 - 159
Benzo (a) pyrene	ND	16.7	8.9	53.3	1 - 128
Dibenzo (a,h) anthracene	ND	16.7	13.7	82.0	1 - 110
Benzo (g,h,i) perylene	ND	16.7	13.1	78.4	1 - 116
Indeno (1,2,3-cd) pyrene	ND	16.7	17.4	104	1 - 116

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike Result <1>	Matrix Spike Recovery <4>	Matrix Spike Duplicate Result <1>	Matrix Spike Duplicate Recovery <5>	MS/MSD Relative % Difference	QC Limits(***) (Advisory) RPD Max.	Recovery Range
NAPHTHALENE	ND	16.65	44	264 *	25	150 *	55.1 *	30	1 - 122
ACENAPHTHYLENE	ND	16.65	47	282 *	27	162 *	54.1 *	30	1 - 139
ACENAPHTHENE	ND	16.65	22	132 *	14	84.1	44.3 *	30	1 - 124
FLUORENE	ND	16.65	32	192 *	23	138	32.7 *	30	1 - 142
PHENANTHRENE	ND	16.65	130	781 *	110	661 *	16.6	30	1 - 155
ANTHRACENE	ND	16.65	12	72.1	12	72.1	0	30	1 - 126
FLUORANTHENE	ND	16.65	26	156 *	26	156 *	0	30	14 - 142
PYRENE	ND	16.65	35	210 *	34	204 *	2.90	30	1 - 140
CHRYSENE	ND	16.65	75	450 *	73	438 *	2.70	30	1 - 199
BENZO (A) ANTHRACENE	ND	16.65	70	420 *	70	420 *	0	30	12 - 135
BENZO (B) FLUORANTHENE	ND	16.65	34	204 *	33	198 *	2.99	30	6 - 150
BENZO (K) FLUORANTHENE	ND	16.65	24	144	25	150	4.08	30	1 - 159
BENZO (A) PYRENE	ND	16.65	11	66.1	11	66.1	0	30	1 - 128
DIBENZO (A,H) ANTHRACENE	ND	16.65	14	84.1	14	84.1	0	30	1 - 110
BENZO (G,H,I) PERYLENE	ND	16.65	11	66.1	12	72.1	8.68	30	1 - 116
INDENO (1,2,3-CD) PYRENE	ND	16.65	16	96.1	17	102	6.06	30	1 - 116

QC Officer

** SPL BATCH QUALITY CONTROL REPORT **

METHOD EPA 8310

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Matrix: Soil

Units: µg/Kg

Batch Id: 1960530113100

Analyst: JZL

Sequence Date: 05/30/96

SPL ID of sample spiked: 9605952-05B

Sample File ID: 960531B\004-0201

Method Blank File ID:

Blank Spike File ID: 960530B\005-0201

Matrix Spike File ID: 960531B\002-0201

Matrix Spike Duplicate File ID: 960531B\003-0201

* = Values Outside QC Range

NC = Not Calculated (Sample exceeds spike by factor of 4 or more)

ND = Not Detected/Below Detection Limit

% Recovery = [(<1> - <2>) / <3>] x 100

LCS % Recovery = (<1> / <3>) x 100

Relative Percent Difference = |(<4> - <5> | / [(<4> + <5>) x 0.5] x 100

(**) = Source: 8310, Table 3

(***) = Source: Temporary Limits

SAMPLES IN BATCH(SPL ID):

9605952-05B 9605952-06B 9605A11-02B 9605A11-06B
9605952-02B 9605952-03B 9605952-04B 9605952-07B
9605952-01B

QC Officer

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

** SPL QUALITY CONTROL REPORT **

Matrix: Soil

Reported on: 05/28/96
Analyzed on: 05/28/96
Analyst: DR

This sample was randomly selected for use in the SPL quality control program. Samples chosen are fortified with a known concentration in duplicate. The results are as follows:

TPH by Soxhlet/IR
METHOD 3540/418.1

SPL Sample ID Number	Blank Value mg/kg	Amt Added mg/kg	Matrix Spike Recovery %	Matrix Spike Duplicate Recovery %	Relative Percent Difference %	QC Limits Recovery	RPD Max.
9605952-02A	ND	200	83.5	68.5	20	68. - 125	20

9605280R -9605C28

Samples in batch:

9605952-01A 9605952-02A 9605952-03A 9605952-04A
9605952-05A 9605952-06A 9605952-07A 9605D66-01A

COMMENTS:

SPL, Incorporated

QC Officer

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

** SPL QUALITY CONTROL REPORT **

Matrix: Soil

Reported on: 05/21/96
Analyzed on: 05/20/96
Analyst: ST

This sample was randomly selected for use in the SPL quality control program. The results are as follows:

Solids
CLP Inorganics SOW

-- DUPLICATE ANALYSIS --

SPL Sample ID	Original Sample Concentration % weight	Duplicate Sample % weight	RPD	RPD Max.
9605950-09C	80	81	1.2	20

-9605848

Samples in batch:

9605950-07C	9605950-08C	9605950-09C	9605951-12C
9605952-01B	9605952-02B	9605952-03B	9605952-04B
9605952-05B	9605952-06B		

COMMENTS:

SPL Incorporated

QC Officer

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

** SPL QUALITY CONTROL REPORT **

Matrix: Soil

Reported on: 05/21/96
Analyzed on: 05/20/96
Analyst: ST

This sample was randomly selected for use in the SPL quality control program. The results are as follows:

Solids
CLP Inorganics SOW

-- DUPLICATE ANALYSIS --

SPL Sample ID	Original Sample Concentration % weight	Duplicate Sample % weight	RPD	RPD Max.
9605952-07B	94	93	1.1	20

-9605849

Samples in batch:

9605952-07B	9605953-03C	9605953-04C	9605953-13C
9605954-02C	9605954-04C	9605954-08C	9605956-01C

COMMENTS:

SPL, Incorporated

QC Officer

CHAIN OF CUSTODY

AND

SAMPLE RECEIPT CHECKLIST

9605952 TA of 5/18/96

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

Former Gary Air Force Base
LPST # 108133
5-16-96

Soil Boring /Ground Water Monitoring Well No. B7, B8

Caldwell County, Texas

Field Sample No./ Identification	Date and Time	Filtered Yes	Filtered No	Sample Container (SIZE/MAT'L)	Sample Type (Liquid, Sludge, Etc.)	Preservative	ANALYSIS REQUESTED BTEX	TPH	PAH	LABORATORY REMARKS
B7-7622	2:33 P		✓	2" x 2" GLASS	Soil	None	EPA 8020	EPA 418.1 Soxlet EPA 3540 extraction	EPA 8310	
B7-7630	2:47 P		✓	"	"	"	"	"	"	
B7-7617	5:08 P		✓	"	"	"	"	"	"	
B8-8730	4:47 P		✓	"	"	"	"	"	"	
B8-8717	5:50 P		✓	"	"	"	"	"	"	
B8-8720	4:30 P		✓	"	"	"	"	"	"	
	5-17-96									
B8-8705	8:45 A		✓	"	"	"	"	"	"	

Samplers: (Signature)	Relinquished by: (Signature)	Date: 5-17-96 Time: 1450	Received by: (Signature)	Date: Time:	Intact
	Relinquished by: (Signature)	Date: Time:	Received by: (Signature)	Date: Time:	Intact
Affiliation: Thompson Professional Group, Inc. 610 Clarkson Lane Houston, TX 77055 (713) 956-9100	Relinquished by: (Signature)	Date: Time:	Received by: (Signature)	Date: Time:	Intact 5°
SAMPLER REMARKS:			Received for laboratory: (SIGNATURE)	Date: 5-17-96 Time: 2:50	Laboratory No.
Seal #			Data Results to:		

SPL Houston Environmental Laboratory

Sample Login Checklist

Date:	Time:
5/17/96	1450

SPL Sample ID:
9605952

			Yes	No
1	Chain-of-Custody (COC) form is present.		✓	
2	COC is properly completed.		✓	
3	If no, Non-Conformance Worksheet has been completed.			
4	Custody seals are present on the shipping container.		✓	
5	If yes, custody seals are intact.		✓	
6	All samples are tagged or labeled.		✓	
7	If no, Non-Conformance Worksheet has been completed.			
8	Sample containers arrived intact		✓	
9	Temperature of samples upon arrival:		5°C	
10	Method of sample delivery to SPL:	**SPL Delivery**		
		Client Delivery	✓	
		FedEx Delivery (airbill #)		
		Other:		
11	Method of sample disposal:	SPL Disposal	✓	
		HOLD		
		Return to Client		

Name:	Date:
S. West	5/17/96

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Southern Petroleum Laboratories, Inc.

Certificate of Analysis Number: 96-05-D61

Approved for Release by:

Brent Barron, Client Services Supervisor

Date: 6/19/96

Greg Grandits
Laboratory Director

Idelis Williams
Quality Assurance Officer

The attached analytical data package may not be reproduced except in full without the express written approval of this laboratory.

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II. APPENDICES

Appendix I - Summary of Results
Appendix II - Laboratory Results

INTRODUCTION

SPL is pleased to present the following report to Thompson Engineering for the Corps of Engineer project LPST for former Gary Air Force Base LPST #108133 received on May 17, 1996. The scope of work included nineteen (19) SOIL samples for BTEX, Total Petroleum Hydrocarbons (TPH) by Soxhlet, and PAHs as well as three (3) WATER samples for BTEX and three (3) WATER sample for TPH. All samples were received at a temperature of 6 degrees C.

GENERAL

The methods employed for this project are listed in the laboratory method section.

LABORATORY METHODS

The methods that were employed in this project were BTEX by SW846 method 5030/8020, TPH by Soxhlet/IR by method 3540/418.1 and Polynuclear Aromatics Hydrocarbons (LCPAHS) by SW846 method 3550/8310.

DISCUSSION AND RECOMMENDATIONS

Samples "G1-1324", "G1-3324", "G1-4324", "G1-5324" and "G1-7324" were received out of holding time. The client was informed about the conditions of the samples upon receipt at the laboratory and SPL was advised not to run the analysis.

Due to a laboratory error sample "B5-5420" was analyzed for BTEX outside of the regulatory Holding Time. The results reported for this analysis should be considered minimum values.

The results for the samples chosen for the matrix spike (MS), matrix spike duplicate (MSD) recoveries as well as the relative percent difference (RPD) between the matrix spike and the matrix spike duplicate for this project were acceptable except for the RPD between the MS,MSD for Acenaphthylene for the 8310, Toluene in batch VARE960528152200, Toluene, Ethybenzene in VARE960529113500 and O Xylene in VARD960612130900. The laboratory control sample (LCS) was well within the quality control (QC) limit criteria.

All of the detection limits and results have been based on the weight of the samples.

APPENDIX I

SUMMARY TABLE OF RESULTS for BTEXS

SAMPLE ID	DATE SAMPLED	SPL ID	MATRIX	COMPOUND	RESULTS
B-1-1022	05/14/96	9605D61-01	SOIL	Benzene Toluene Ethylbenzene Total Xylene Total Btex	< 1 µg/Kg < 1 µg/Kg 2 µg/Kg 6 µg/Kg 8 µg/Kg
B1-1035	05/14/96	9605D61-02	SOIL	Benzene Toluene Ethylbenzene Total Xylene Total Btex	39 µg/Kg < 5 µg/Kg 180 µg/Kg 77 µg/Kg 296 µg/Kg
B1-1026	05/14/96	9605D61-03	SOIL	Benzene Toluene Ethylbenzene Total Xylene Total Btex	300 µg/Kg < 50 µg/Kg 1700 µg/Kg 1750 µg/Kg 3750 µg/Kg
B2-2130	05/14/96	9605D61-04	SOIL	Benzene Toluene Ethylbenzene Total Xylene Total Btex	< 1 µg/Kg < 1 µg/Kg < 1 µg/Kg < 1 µg/Kg < 1 µg/Kg
B2-2117	05/15/96	9605D61-05	SOIL	Benzene Toluene Ethylbenzene Total Xylene Total Btex	2 µg/Kg 2 µg/Kg 4 µg/Kg 3 µg/Kg 11 µg/Kg
B2-2121	05/15/96	9605D61-06	SOIL	Benzene Toluene Ethylbenzene Total Xylene Total Btex	< 1 µg/Kg < 1 µg/Kg < 1 µg/Kg < 1 µg/Kg < 1 µg/Kg
B3-3230	05/15/96	9605D61-07	SOIL	Benzene Toluene Ethylbenzene Total Xylene Total Btex	< 1 µg/Kg < 1 µg/Kg < 1 µg/Kg < 1 µg/Kg < 1 µg/Kg

B3-3217	05/15/96	9605D61-08	SOIL	Benzene Toluene Ethylbenzene Total Xylene Total Btex	< 1 µg/Kg < 1 µg/Kg < 1 µg/Kg < 1 µg/Kg < 1 µg/Kg
B3-3222	05/15/96	9605D61-09	SOIL	Benzene Toluene Ethylbenzene Total Xylene Total Btex	< 1 µg/Kg < 1 µg/Kg 2 µg/Kg < 1 µg/Kg 2 µg/Kg
B4-4330	05/15/96	9605D61-10	SOIL	Benzene Toluene Ethylbenzene Total Xylene Total Btex	< 1 µg/Kg < 1 µg/Kg < 1 µg/Kg 2 µg/Kg 2 µg/Kg
B4-4316	05/15/96	9605D61-11	SOIL	Benzene Toluene Ethylbenzene Total Xylene Total Btex	< 1 µg/Kg < 1 µg/Kg < 1 µg/Kg < 1 µg/Kg < 1 µg/Kg
B4-4318	05/15/96	9605D61-12	SOIL	Benzene Toluene Ethylbenzene Total Xylene Total Btex	< 5 µg/Kg < 5 µg/Kg 110 µg/Kg 135 µg/Kg 245 µg/Kg
B5-5430	05/16/96	9605D61-13	SOIL	Benzene Toluene Ethylbenzene Total Xylene Total Btex	18 µg/Kg 19 µg/Kg 5 µg/Kg 25 µg/Kg 67 µg/Kg
B5-5417	05/16/96	9605D61-14	SOIL	Benzene Toluene Ethylbenzene Total Xylene Total Btex	630 µg/Kg 1700 µg/Kg 11000 µg/Kg 20200 µg/Kg 33530 µg/Kg
B5-5414	05/16/96	9605D61-15	SOIL	Benzene Toluene Ethylbenzene Total Xylene Total Btex	67 µg/Kg 660 µg/Kg 580 µg/Kg 2100 µg/Kg 3407 µg/Kg

B5-5414	05/16/96	9605D61-16	SOIL	Benzene Toluene Ethylbenzene Total Xylene Total Btex	10 µg/Kg <10 µg/Kg 160 µg/Kg 1800 µg/Kg 2050 µg/Kg
B6-6530	05/16/96	9605D61-17	SOIL	Benzene Toluene Ethylbenzene Total Xylene Total Btex	15 µg/Kg < 5 µg/Kg < 5 µg/Kg < 5 µg/Kg 15 µg/Kg
B6-6517	05/16/96	9605D61-18	SOIL	Benzene Toluene Ethylbenzene Total Xylene Total Btex	< 10 µg/Kg < 10 µg/Kg 14 µg/Kg 41 µg/Kg 55 µg/Kg
B6-6520	05/16/96	9605D61-19	SOIL	Benzene Toluene Ethylbenzene Total Xylene Total Btex	60 µg/Kg < 50 µg/Kg 2500 µg/Kg 2630 µg/Kg 5190 µg/Kg

SUMMARY TABLE OF RESULTS for BTEXW

SAMPLE ID	DATE SAMPLED	SPL ID	MATRIX	COMPOUND	RESULTS
G1-1234	05/16/96	9605D61-20	WATER	Benzene Toluene Ethylbenzene Total Xylene Total Btex	1500 µg/L 8 µg/L 170 µg/L < 5 µg/L 1678 µg/L
G1-3234	05/16/96	9605D61-21	WATER	Benzene Toluene Ethylbenzene Total Xylene Total Btex	< 1 µg/L < 1 µg/L < 1 µg/L < 1 µg/L < 1 µg/L
G1-4234	05/16/96	9605D61-22	WATER	Benzene Toluene Ethylbenzene Total Xylene Total Btex	< 1 µg/L < 1 µg/L < 1 µg/L 1 µg/L 1 µg/L

SAMPLE TESTING RESULTS

Contract No: DACA63-92-D-0047 Site No: Gary AFB #10350 Tanks 8-11 San Marcos, TX Zone: 4

Order No: 0008 Sampler: Mike Soto

Date Sampled	Lab ID#	Field Description	Matrix	TRPH	BTEX	Lead
6/9/94	2603	GAFB-10-350-08-BH-OX	Soil	16705 ppm	83.04 ppm	<5 ppm
6/9/94	2604	GAFB-10-350-10-BH-OX	Soil	1400 ppm	<1.17 ppm	<5 ppm
6/9/94	2606	GAFB-10-350-10-WW-OX	Soil	<5 ppm	<0.6 ppm	7.5 ppm
6/9/94	2607	GAFB-10-350-11-BH-OX	Soil	10285 ppm	3.94 ppm	6.1 ppm
6/9/94	2608	GAFB-10-350-11-SEW-OX	Soil	<5 ppm	<0.6 ppm	<5 ppm
6/9/94	2601	TRIP BLANK	Water	N/A	<0.030 ppm	N/A
6/9/94	2602	GAFB-10-350-08-BH-OX/RB	Water	<0.200 ppm	<0.030 ppm	<0.1 ppm
6/9/94	2605	GAFB-10-350-10-BH-OX/QC	Soil	1195 ppm	<0.87 ppm	<5 ppm

SAMPLE TESTING RESULTS

Contract No: DACA63-92-D-0047 Site No: Gary AFB #10350 Tanks 8-11 San Marcos, TX Zone: 4

Order No: 0008 Sampler: Mike Soto

Date Sampled	Lab ID#	Field Description	Matrix	TRPH	BTEX	Lead
6/24/94	4003	GAFB-10-350-PP-BH	Soil	900 ppm	<0.6 ppm	5.1 ppm
6/24/94	4004	GAFB-10-350-PP-SPA	Soil	785 ppm	<2.69 ppm	55.2 ppm
6/24/94	4005	GAFB-10-350-PP-SPB	Soil	565 ppm	<0.66 ppm	22.1 ppm

SUMMARY TABLE OF RESULTS for POLYNUCLEAR AROMATICHYDROCARBONS

SAMPLE ID	DATE SAMPLED	SPL ID	MATRIX	COMPOUND	RESULTS
B1-1022	5/14/96	9605D61-01	SOIL	Naphthalene	< 60.0 µg/Kg
				Acenaphthylene	< 30.0 µg/Kg
				Acenaphthene	< 100.0 µg/Kg
				Fluorene	< 112.0 µg/Kg
				Phenanthrene	< 104.0 µg/Kg
				Anthracene	< 90.0 µg/Kg
				Fluoranthene	< 76.0 µg/Kg
				Pyrene	< 70.0 µg/Kg
				Chrysene	< 54.0 µg/Kg
				Benzo a anthracene	< 54.0 µg/Kg
				Benzo b fluoranthene	< 44.0 µg/Kg
				Benzo k fluoranthene	< 48.0 µg/Kg
				Benzo a pyrene	< 22.0 µg/Kg
				Dibenzo a,h, anthracene	< 48.0 µg/Kg
				Benzo g,h,i perylene	< 70.0 µg/Kg
				Indeno 1,2,3-cd pyrene	< 52.0 µg/Kg
B1-1035	05/14/96	9605D61-02	SOIL	Naphthalene	< 32 µg/Kg
				Acenaphthylene	< 1.5 µg/Kg
				Acenaphthene	< 5.0 µg/Kg
				Fluorene	< 5.6 µg/Kg
				Phenanthrene	< 5.2 µg/Kg
				Anthracene	< 4.5 µg/Kg
				Fluoranthene	< 3.8 µg/Kg
				Pyrene	< 3.5 µg/Kg
				Chrysene	< 2.7 µg/Kg
				Benzo a anthracene	< 2.7 µg/Kg
				Benzo b fluoranthene	< 2.2 µg/Kg
				Benzo k fluoranthene	< 2.4 µg/Kg
				Benzo a pyrene	< 1.1 µg/Kg
				Dibenzo a,h, anthracene	< 2.4 µg/Kg
				Benzo g,h,i perylene	< 3.5 µg/Kg
				Indeno 1,2,3-cd pyrene	< 2.6 µg/Kg

B1-1026	05/14/96	9605D61-03	SOIL	Naphthalene	900 µg/Kg
				Acenaphthylene	< 150.0 µg/Kg
				Acenaphthene	< 500 µg/Kg
				Fluorene	< 560.0 µg/Kg
				Phenanthrene	< 520.0 µg/Kg
				Anthracene	< 450.0 µg/Kg
				Fluoranthene	< 380.0 µg/Kg
				Pyrene	< 350.0 µg/Kg
				Chrysene	< 270.0 µg/Kg
				Benzo a anthracene	< 270.0 µg/Kg
				Benzo b fluoranthene	< 220.0 µg/Kg
				Benzo k fluoranthene	< 240.0 µg/Kg
				Benzo a pyrene	< 110.0 µg/Kg
				Dibenzo a,h, anthracene	< 240.0 µg/Kg
				Benzo g,h,i perylene	< 350.0 µg/Kg
				Indeno 1,2,3-cd pyrene	< 260.0 µg/Kg
B2-2130	05/15/96	9605D61-04	SOIL	Naphthalene	< 3.0 µg/Kg
				Acenaphthylene	< 1.5 µg/Kg
				Acenaphthene	< 5.0 µg/Kg
				Fluorene	< 5.6 µg/Kg
				Phenanthrene	< 5.2 µg/Kg
				Anthracene	< 4.5 µg/Kg
				Fluoranthene	< 3.8 µg/Kg
				Pyrene	< 3.5 µg/Kg
				Chrysene	< 2.7 µg/Kg
				Benzo a anthracene	< 2.7 µg/Kg
				Benzo b fluoranthene	< 2.2 µg/Kg
				Benzo k fluoranthene	< 2.4 µg/Kg
				Benzo a pyrene	< 1.1 µg/Kg
				Dibenzo a,h, anthracene	< 2.4 µg/Kg
				Benzo g,h,i perylene	< 3.5 µg/Kg
				Indeno 1,2,3-cd pyrene	< 2.6 µg/Kg

B2-2117	05/15/96	9605D61-05	SOIL	Naphthalene	< 3 µg/Kg
				Acenaphthylene	< 1.5 µg/Kg
				Acenaphthene	< 5 µg/Kg
				Fluorene	< 5.6 µg/Kg
				Phenanthrene	< 5.2 µg/Kg
				Anthracene	< 4.5 µg/Kg
				Fluoranthene	< 3.8 µg/Kg
				Pyrene	< 3.5 µg/Kg
				Chrysene	< 2.7 µg/Kg
				Benzo a anthracene	< 2.7 µg/Kg
				Benzo b fluoranthene	< 2.2 µg/Kg
				Benzo k fluoranthene	< 2.4 µg/Kg
				Benzo a pyrene	< 1.1 µg/Kg
				Dibenzo a,h, anthracene	< 2.4 µg/Kg
				Benzo g,h,i perylene	< 3.5 µg/Kg
				Indeno 1,2,3-cd pyrene	< 2.6 µg/Kg
B2-2121	05/15/96	9605D61-06	SOIL	Naphthalene	< 3 µg/Kg
				Acenaphthylene	< 1.5 µg/Kg
				Acenaphthene	< 5 µg/Kg
				Fluorene	< 5.6 µg/Kg
				Phenanthrene	< 5.2 µg/Kg
				Anthracene	< 4.5 µg/Kg
				Fluoranthene	< 3.8 µg/Kg
				Pyrene	< 3.5 µg/Kg
				Chrysene	< 2.7 µg/Kg
				Benzo a anthracene	< 2.7 µg/Kg
				Benzo b fluoranthene	< 2.2 µg/Kg
				Benzo k fluoranthene	< 2.4 µg/Kg
				Benzo a pyrene	< 1.1 µg/Kg
				Dibenzo a,h, anthracene	< 2.4 µg/Kg
				Benzo g,h,i perylene	< 3.5 µg/Kg
				Indeno 1,2,3-cd pyrene	< 2.6 µg/Kg

B3-3230	05/15/96	9605D61-07	SOIL	Naphthalene	< 3 µg/Kg
				Acenaphthylene	< 1.5 µg/Kg
				Acenaphthene	< 5 µg/Kg
				Fluorene	< 5.6 µg/Kg
				Phenanthrene	< 5.2 µg/Kg
				Anthracene	< 4.5 µg/Kg
				Fluoranthene	< 3.8 µg/Kg
				Pyrene	< 3.8 µg/Kg
				Chrysene	< 2.7 µg/Kg
				Benzo a anthracene	< 2.7 µg/Kg
				Benzo b fluoranthene	< 2.2 µg/Kg
				Benzo k fluoranthene	< 2.4 µg/Kg
				Benzo a pyrene	< 1.1 µg/Kg
				Dibenzo a,h, anthracene	< 2.4 µg/Kg
				Benzo g,h,i perylene	< 3.5 µg/Kg
				Indeno 1,2,3-cd pyrene	< 2.6 µg/Kg
B3-3217	05/15/96	9605D61-08	SOIL	Naphthalene	< 15 µg/Kg
				Acenaphthylene	< 7.5 µg/Kg
				Acenaphthene	< 25 µg/Kg
				Fluorene	< 28.0 µg/Kg
				Phenanthrene	< 26.0 µg/Kg
				Anthracene	< 22.5 µg/Kg
				Fluoranthene	< 19.0 µg/Kg
				Pyrene	< 17.5 µg/Kg
				Chrysene	< 13.5 µg/Kg
				Benzo a anthracene	< 13.5 µg/Kg
				Benzo b fluoranthene	< 11.0 µg/Kg
				Benzo k fluoranthene	< 12.0 µg/Kg
				Benzo a pyrene	< 5.5 µg/Kg
				Dibenzo a,h, anthracene	< 12.0 µg/Kg
				Benzo g,h,i perylene	< 17.5 µg/Kg
				Indeno 1,2,3-cd pyrene	< 13.0 µg/Kg

B3-3222	05/15/96	9605D61-09	SOIL	Naphthalene	< 15 µg/Kg
				Acenaphthylene	< 7.5 µg/Kg
				Acenaphthene	< 25 µg/Kg
				Fluorene	< 28.0 µg/Kg
				Phenanthrene	< 26.0 µg/Kg
				Anthracene	< 22.5 µg/Kg
				Fluoranthene	< 19.0 µg/Kg
				Pyrene	< 17.5 µg/Kg
				Chrysene	< 13.5 µg/Kg
				Benzo a anthracene	< 13.5 µg/Kg
				Benzo b fluoranthene	< 11.0 µg/Kg
				Benzo k fluoranthene	< 12.0 µg/Kg
				Benzo a pyrene	< 5.5 µg/Kg
				Dibenzo a,h, anthracene	< 12.0 µg/Kg
				Benzo g,h,i perylene	< 17.5 µg/Kg
				Indeno 1,2,3-cd pyrene	< 13.0 µg/Kg
B4-4330	05/15/96	9605D61-10	SOIL	Naphthalene	< 15 µg/Kg
				Acenaphthylene	< 7.5 µg/Kg
				Acenaphthene	< 25 µg/Kg
				Fluorene	< 28.0 µg/Kg
				Phenanthrene	< 26.0 µg/Kg
				Anthracene	< 22.5 µg/Kg
				Fluoranthene	< 19.0 µg/Kg
				Pyrene	< 17.5 µg/Kg
				Chrysene	< 13.5 µg/Kg
				Benzo a anthracene	< 13.5 µg/Kg
				Benzo b fluoranthene	< 11.0 µg/Kg
				Benzo k fluoranthene	< 12.0 µg/Kg
				Benzo a pyrene	< 5.5 µg/Kg
				Dibenzo a,h, anthracene	< 12.0 µg/Kg
				Benzo g,h,i perylene	< 17.5 µg/Kg
				Indeno 1,2,3-cd pyrene	< 13.0 µg/Kg

`4-4316	05/15/96	9605D61-11	SOIL	Naphthalene	< 3 µg/Kg
				Acenaphthylene	< 1.5 µg/Kg
				Acenaphthene	< 5 µg/Kg
				Fluorene	< 5.6 µg/Kg
				Phenanthrene	< 5.2 µg/Kg
				Anthracene	< 4.5 µg/Kg
				Fluoranthene	< 3.8 µg/Kg
				Pyrene	< 3.5 µg/Kg
				Chrysene	< 2.7 µg/Kg
				Benzo a anthracene	< 2.7 µg/Kg
				Benzo b fluoranthene	< 2.2 µg/Kg
				Benzo k fluoranthene	< 2.4 µg/Kg
				Benzo a pyrene	< 1.1 µg/Kg
				Dibenzo a,h, anthracene	< 2.4 µg/Kg
				Benzo g,h,i perylene	< 3.5 µg/Kg
				Indeno 1,2,3-cd pyrene	< 2.6 µg/Kg
B4-4318	05/15/96	9605D61-12	SOIL	Naphthalene	< 60 µg/Kg
				Acenaphthylene	< 30.0 µg/Kg
				Acenaphthene	< 100 µg/Kg
				Fluorene	< 112.0 µg/Kg
				Phenanthrene	< 104.0 µg/Kg
				Anthracene	< 90.0 µg/Kg
				Fluoranthene	< 76.0 µg/Kg
				Pyrene	< 70.0 µg/Kg
				Chrysene	120 µg/Kg
				Benzo a anthracene	< 54.0 µg/Kg
				Benzo b fluoranthene	< 44.0 µg/Kg
				Benzo k fluoranthene	< 48.0 µg/Kg
				Benzo a pyrene	< 22.0 µg/Kg
				Dibenzo a,h, anthracene	< 48.0 µg/Kg
				Benzo g,h,i perylene	< 70.0 µg/Kg
				Indeno 1,2,3-cd pyrene	< 52.0 µg/Kg

B5-5430	05/16/96	9605D61-13	SOIL	Naphthalene	< 15 µg/Kg
				Acenaphthylene	< 7.5 µg/Kg
				Acenaphthene	< 25 µg/Kg
				Fluorene	< 28.0 µg/Kg
				Phenanthrene	< 26.0 µg/Kg
				Anthracene	< 22.5 µg/Kg
				Fluoranthene	< 19.0 µg/Kg
				Pyrene	< 17.5 µg/Kg
				Chrysene	< 13.5 µg/Kg
				Benzo a anthracene	< 13.5 µg/Kg
				Benzo b fluoranthene	< 11.0 µg/Kg
				Benzo k fluoranthene	< 12.0 µg/Kg
				Benzo a pyrene	< 5.5 µg/Kg
				Dibenzo a,h, anthracene	< 12.0 µg/Kg
				Benzo g,h,i perylene	< 17.5 µg/Kg
				Indeno 1,2,3-cd pyrene	< 13.0 µg/Kg
B5-5417	05/16/96	9605D61-14	SOIL	Naphthalene	2000 µg/Kg
				Acenaphthylene	< 30.0 µg/Kg
				Acenaphthene	< 100 µg/Kg
				Fluorene	< 112.0 µg/Kg
				Phenanthrene	< 104.0 µg/Kg
				Anthracene	< 90.0 µg/Kg
				Fluoranthene	< 76.0 µg/Kg
				Pyrene	< 70.0 µg/Kg
				Chrysene	74 µg/Kg
				Benzo a anthracene	< 54.0 µg/Kg
				Benzo b fluoranthene	< 44.0 µg/Kg
				Benzo k fluoranthene	< 48.0 µg/Kg
				Benzo a pyrene	< 22.0 µg/Kg
				Dibenzo a,h, anthracene	< 48.0 µg/Kg
				Benzo g,h,i perylene	< 70.0 µg/Kg
				Indeno 1,2.3-cd pyrene	< 52.0 µg/Kg

B5-5414	05/16/96	9605D61-15	SOIL	Naphthalene	< 300 µg/Kg
				Acenaphthylene	< 150.0 µg/Kg
				Acenaphthene	< 500 µg/Kg
				Fluorene	< 560.0 µg/Kg
				Phenanthrene	1900 µg/Kg
				Anthracene	480 µg/Kg
				Fluoranthene	2200 µg/Kg
				Pyrene	1300 µg/Kg
				Chrysene	590 µg/Kg
				Benzo a anthracene	780 µg/Kg
				Benzo b fluoranthene	500 µg/Kg
				Benzo k fluoranthene	< 240.0 µg/Kg
				Benzo a pyrene	< 110.0 µg/Kg
				Dibenzo a,h, anthracene	< 240.0 µg/Kg
				Benzo g,h,i perylene	< 350.0 µg/Kg
				Indeno 1,2,3-cd pyrene	< 260.0 µg/Kg
B5-5420	05/16/96	9605D61-16	SOIL	Naphthalene	1700 µg/Kg
				Acenaphthylene	< 30.0 µg/Kg
				Acenaphthene	< 100 µg/Kg
				Fluorene	< 112.0 µg/Kg
				Phenanthrene	< 104.0 µg/Kg
				Anthracene	< 90.0 µg/Kg
				Fluoranthene	< 76.0 µg/Kg
				Pyrene	< 70.0 µg/Kg
				Chrysene	< 54.0 µg/Kg
				Benzo a anthracene	< 54.0 µg/Kg
				Benzo b fluoranthene	< 44.0 µg/Kg
				Benzo k fluoranthene	< 48.0 µg/Kg
				Benzo a pyrene	< 22.0 µg/Kg
				Dibenzo a,h, anthracene	< 48.0 µg/Kg
				Benzo g,h,i perylene	< 70.0 µg/Kg
				Indeno 1,2,3-cd pyrene	< 52.0 µg/Kg

B6-6530	05/16/96	9605D61-17	SOIL	Naphthalene	4 µg/Kg
				Acenaphthylene	< 1.5 µg/Kg
				Acenaphthene	< 5 µg/Kg
				Fluorene	< 5.6 µg/Kg
				Phenanthrene	< 5.2 µg/Kg
				Anthracene	< 4.5 µg/Kg
				Fluoranthene	< 3.8 µg/Kg
				Pyrene	< 3.5 µg/Kg
				Chrysene	< 2.7 µg/Kg
				Benzo a anthracene	< 2.7 µg/Kg
				Benzo b fluoranthene	< 2.2 µg/Kg
				Benzo k fluoranthene	< 2.4 µg/Kg
				Benzo a pyrene	< 1.1 µg/Kg
				Dibenzo a,h, anthracene	< 2.4 µg/Kg
				Benzo g,h,i perylene	< 3.5 µg/Kg
				Indeno 1,2,3-cd pyrene	< 2.6 µg/Kg
B6-6517	05/16/96	9605D61-18	SOIL	Naphthalene	< 150 µg/Kg
				Acenaphthylene	< 75.0 µg/Kg
				Acenaphthene	< 250 µg/Kg
				Fluorene	< 280.0 µg/Kg
				Phenanthrene	< 260.0 µg/Kg
				Anthracene	< 225.0 µg/Kg
				Fluoranthene	< 190.0 µg/Kg
				Pyrene	< 175.0 µg/Kg
				Chrysene	< 135.0 µg/Kg
				Benzo a anthracene	< 135.0 µg/Kg
				Benzo b fluoranthene	< 110.0 µg/Kg
				Benzo k fluoranthene	< 120.0 µg/Kg
				Benzo a pyrene	< 55.0 µg/Kg
				Dibenzo a,h, anthracene	< 120.0 µg/Kg
				Benzo g,h,i perylene	< 175.0 µg/Kg
				Indeno 1,2,3-cd pyrene	< 130.0 µg/Kg

B6-6520	05/16/96	9605D61-19	SOIL	Naphthalene	2100 µg/Kg
				Acenaphthylene	< 375.0 µg/Kg
				Acenaphthene	< 1250 µg/Kg
				Fluorene	< 1400.0 µg/Kg
				Phenanthrene	< 1300.0 µg/Kg
				Anthracene	< 1125.0 µg/Kg
				Fluoranthene	< 950.0 µg/Kg
				Pyrene	< 875.0 µg/Kg
				Chrysene	< 675.0 µg/Kg
				Benzo a anthracene	< 675.0 µg/Kg
				Benzo b fluoranthene	< 550.0 µg/Kg
				Benzo k fluoranthene	< 600.0 µg/Kg
				Benzo a pyrene	< 275.0 µg/Kg
				Dibenzo a,h, anthracene	< 600.0 µg/Kg
				Benzo g,h,i perylene	< 875.0 µg/Kg
				Indeno 1,2,3-cd pyrene	< 650.0 µg/Kg

SUMMARY TABLE OF RESULTS for TPH BY SOXHLET

SAMPLE ID	DATE SAMPLED	SPL ID	MATRIX	COMPOUND	RESULTS
B1-1022	05/14/96	9605D61-01	SOIL	TPH by Soxhlet	17 mg/Kg
B1-1035	05/14/96	9605D61-02	SOIL	TPH by Soxhlet	34 mg/Kg
B1-1026	05/14/96	9605D61-03	SOIL	TPH by Soxhlet	270 mg/Kg
B2-2130	05/15/96	9605D61-04	SOIL	TPH by Soxhlet	13 mg/Kg
B2-2117	05/15/96	9605D61-05	SOIL	TPH by Soxhlet	32 mg/Kg
B2-2121	05/15/96	9605D61-06	SOIL	TPH by Soxhlet	< 10 mg/Kg
B3-3230	05/15/96	9605D61-07	SOIL	TPH by Soxhlet	< 10 mg/Kg
B3-3217	05/15/96	9605D61-08	SOIL	TPH by Soxhlet	< 10 mg/Kg
B3-3222	05/15/96	9605D61-09	SOIL	TPH by Soxhlet	< 10 mg/Kg
B4-4330	05/15/96	9605D61-10	SOIL	TPH by Soxhlet	< 10 mg/Kg
B4-4316	05/15/96	9605D61-11	SOIL	TPH by Soxhlet	12 mg/Kg
B4-4318	05/15/96	9605D61-12	SOIL	TPH by Soxhlet	150 mg/Kg
B5-5430	05/16/96	9605D61-13	SOIL	TPH by Soxhlet	< 10 mg/Kg
B5-5417	05/16/96	9605D61-14	SOIL	TPH by Soxhlet	4300 mg/Kg
B5-5414	05/16/96	9605D61-15	SOIL	TPH by Soxhlet	62 mg/Kg
B5-5420	05/16/96	9605D61-16	SOIL	TPH by Soxhlet	610 mg/Kg
B6-6530	05/16/96	9605D61-17	SOIL	TPH by Soxhlet	15 mg/Kg
B6-6517	05/16/96	9605D61-18	SOIL	TPH by Soxhlet	190 mg/Kg
B6-6520	05/16/96	9605D61-19	SOIL	TPH by Soxhlet	6300 mg/Kg

SUMMARY TABLE OF RESULTS for SOLIDS

SAMPLE ID	DATE SAMPLED	SPL ID	MATRIX	COMPOUND	RESULTS
B1-1022	05/14/96	9605D61-01	SOIL	Solids	81 % Wt
B1-1035	05/14/96	9605D61-02	SOIL	Solids	78 % Wt
B1-1026	05/14/96	9605D61-03	SOIL	Solids	86 % Wt
B2-2130	05/15/96	9605D61-04	SOIL	Solids	80 % Wt
B2-2117	05/15/96	9605D61-05	SOIL	Solids	85 % Wt
B2-2121	05/15/96	9605D61-06	SOIL	Solids	74 % Wt
B3-3230	05/15/96	9605D61-07	SOIL	Solids	80 % Wt
B3-3217	05/15/96	9605D61-08	SOIL	Solids	89 % Wt
B3-3222	05/15/96	9605D61-09	SOIL	Solids	78 % Wt
B4-4330	05/15/96	9605D61-10	SOIL	Solids	80 % Wt
B4-4316	05/15/96	9605D61-11	SOIL	Solids	84 % Wt
B4-4318	05/15/96	9605D61-12	SOIL	Solids	82 % Wt
B5-5430	05/16/96	9605D61-13	SOIL	Solids	81 % Wt
B5-5417	05/16/96	9605D61-14	SOIL	Solids	84 % Wt
B5-5414	05/16/96	9605D61-15	SOIL	Solids	82 % Wt
B5-5420	05/16/96	9605D61-16	SOIL	Solids	86 % Wt
B6-6530	05/16/96	9605D61-17	SOIL	Solids	80 % Wt
B6-6517	05/16/96	9605D61-18	SOIL	Solids	88 % Wt
B6-6520	05/16/96	9605D61-19	SOIL	Solids	90 % Wt

SUMMARY TABLE OF RESULTS for TPH BY 418.1

SAMPLE ID	DATE SAMPLED	SPL ID	MATRIX	COMPOUND	RESULTS
G1-5234	05/16/96	9605D61-23	WATER	TPH	7 mg/L
G1-7234	05/16/96	9605D61-24	WATER	TPH	< 0.5 mg/L
G1-8234	05/16/96	9605D61-25	WATER	TPH	< 0.5 mg/L

APPENDIX II

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9605D61-01

Thompson Professional Grp,Inc
6110 Clarkson Lane
Houston, TX 77055
ATTN: L.J. Wieting

DATE: 06/17/96

PROJECT: Soil Bore/GWM B1,B2 &B3
SITE: Caldwell County, TX
SAMPLED BY: H.Platt Thompson Engineering
SAMPLE ID: B1-1022

PROJECT NO: LPST #108133
MATRIX: SOIL
DATE SAMPLED: 05/14/96 10:58:00
DATE RECEIVED: 05/17/96

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
BENZENE	< 1	1 P	µg/Kg
TOLUENE	< 1	1 P	µg/Kg
ETHYLBENZENE	2	1 P	µg/Kg
TOTAL XYLENE	6	1 P	µg/Kg
TOTAL BTEX	8		µg/Kg
Surrogate	**% Recovery**		
1,4-Difluorobenzene	110		
4-Bromofluorobenzene	97		
METHOD 5030/8020 ***			
Analyzed by: FAB			
Date: 05/28/96			
TPH by Soxhlet/IR	17	10	mg/Kg
METHOD 3540/418.1			
Analyzed by: JN			
Date: 06/06/96 08:00:00			
Sonication extraction	05/28/96		
METHOD 3550 ***			
Analyzed by: LD			
Date: 05/28/96 15:00:00			
Solids	81	1	% Weight
CLP Inorganics SOW			
Analyzed by: CA			
Date: 05/29/96			

(P) - Practical Quantitation Limit

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9605D61-01

Thompson Professional Grp,Inc
6110 Clarkson Lane
Houston, TX 77055
ATTN: L.J. Wieting

06/15/96

PROJECT: Soil Bore/GWM B1,B2 &B3
SITE: Caldwell County, TX
SAMPLED BY: H.Platt Thompson Engineering
SAMPLE ID: B1-1022

PROJECT NO: LPST #108133
MATRIX: SOIL
DATE SAMPLED: 05/14/96 10:58:00
DATE RECEIVED: 05/17/96

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Naphthalene	< 60.0	60.0	µg/Kg
Acenaphthylene	< 30.0	30.0	µg/Kg
Acenaphthene	< 100.0	100.0	µg/Kg
Fluorene	< 112.0	112.0	µg/Kg
Phenanthrene	< 104.0	104.0	µg/Kg
Anthracene	< 90.0	90.0	µg/Kg
Fluoranthene	< 76.0	76.0	µg/Kg
Pyrene	< 70.0	70.0	µg/Kg
Chrysene	< 54.0	54.0	µg/Kg
Benzo (a) anthracene	< 54.0	54.0	µg/Kg
Benzo (b) fluoranthene	< 44.0	44.0	µg/Kg
Benzo (k) fluoranthene	< 48.0	48.0	µg/Kg
Benzo (a) pyrene	< 22.0	22.0	µg/Kg
Dibenzo (a,h) anthracene	< 48.0	48.0	µg/Kg
Benzo (g,h,i) perylene	< 70.0	70.0	µg/Kg
Indeno (1,2,3-cd) pyrene	< 52.0	52.0	µg/Kg

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
Biphenyl	µg/Kg	103	50	150
Coronene	µg/Kg	75	50	150

ANALYZED BY: JZL
DATE/TIME: 05/30/96 03:15:21
EXTRACTED BY: LD
DATE/TIME: 05/28/96 15:00:00
METHOD: 8310 Polynuclear Aromatic Hydrocarbons
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9605D61-02

Thompson Professional Grp,Inc
6110 Clarkson Lane
Houston, TX 77055
ATTN: L.J. Wieting

DATE: 06/15/96

PROJECT: Soil Bore/GWM B1,B2 &B3
SITE: Caldwell County, TX
SAMPLED BY: H.Platt Thompson Engineering
SAMPLE ID: B1-1035

PROJECT NO: LPST #108133
MATRIX: SOIL
DATE SAMPLED: 05/14/96 11:20:00
DATE RECEIVED: 05/17/96

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
BENZENE	39	5 P	µg/Kg
TOLUENE	< 5	5 P	µg/Kg
ETHYLBENZENE	180	5 P	µg/Kg
TOTAL XYLENE	77	5 P	µg/Kg
TOTAL BTEX	296		µg/Kg
Surrogate	**% Recovery**		
1,4-Difluorobenzene	120		
4-Bromofluorobenzene	137		
METHOD 5030/8020 ***			
Analyzed by: DY			
Date: 05/28/96			
TPH by Soxhlet/IR	34	10	mg/Kg
METHOD 3540/418.1			
Analyzed by: JN			
Date: 06/06/96 08:00:00			
Sonication extraction	05/28/96		
METHOD 3550 ***			
Analyzed by: LD			
Date: 05/28/96 15:00:00			
Solids	78	1	% Weight
CLP Inorganics SOW			
Analyzed by: CA			
Date: 05/29/96			

(P) - Practical Quantitation Limit

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9605D61-02

Thompson Professional Grp,Inc
6110 Clarkson Lane
Houston, TX 77055
ATTN: L.J. Wieting

06/15/96

PROJECT: Soil Bore/GWM B1,B2 &B3
SITE: Caldwell County, TX
SAMPLED BY: H.Platt Thompson Engineering
SAMPLE ID: B1-1035

PROJECT NO: LPST #108133
MATRIX: SOIL
DATE SAMPLED: 05/14/96 11:20:00
DATE RECEIVED: 05/17/96

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Naphthalene	32	3.0	µg/Kg
Acenaphthylene	< 1.5	1.5	µg/Kg
Acenaphthene	< 5.0	5.0	µg/Kg
Fluorene	< 5.6	5.6	µg/Kg
Phenanthrene	< 5.2	5.2	µg/Kg
Anthracene	< 4.5	4.5	µg/Kg
Fluoranthene	< 3.8	3.8	µg/Kg
Pyrene	< 3.5	3.5	µg/Kg
Chrysene	< 2.7	2.7	µg/Kg
Benzo (a) anthracene	< 2.7	2.7	µg/Kg
Benzo (b) fluoranthene	< 2.2	2.2	µg/Kg
Benzo (k) fluoranthene	< 2.4	2.4	µg/Kg
Benzo (a) pyrene	< 1.1	1.1	µg/Kg
Dibenzo (a,h) anthracene	< 2.4	2.4	µg/Kg
Benzo (g,h,i) perylene	< 3.5	3.5	µg/Kg
Indeno (1,2,3-cd) pyrene	< 2.6	2.6	µg/Kg

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
Biphenyl	µg/Kg	CI	50	150
Coronene	µg/Kg	95	50	150

ANALYZED BY: JZL DATE/TIME: 06/04/96 10:14:40
EXTRACTED BY: LD DATE/TIME: 05/28/96 15:00:00
METHOD: 8310 Polynuclear Aromatic Hydrocarbons
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed
CI - Coeluting Interference.

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9605D61-03

Thompson Professional Grp,Inc
6110 Clarkson Lane
Houston, TX 77055
ATTN: L.J. Wieting

DATE: 06/15/96

PROJECT: Soil Bore/GWM B1,B2 &B3
SITE: Caldwell County, TX
SAMPLED BY: H.Platt Thompson Engineering
SAMPLE ID: B1-1026

PROJECT NO: LPST #108133
MATRIX: SOIL
DATE SAMPLED: 05/14/96 11:04:00
DATE RECEIVED: 05/17/96

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
BENZENE	300	50 P	µg/Kg
TOLUENE	< 50	50 P	µg/Kg
ETHYLBENZENE	1700	50 P	µg/Kg
TOTAL XYLENE	1750	50 P	µg/Kg
TOTAL BTEX	3750		µg/Kg
Surrogate	**% Recovery**		
1,4-Difluorobenzene	120		
4-Bromofluorobenzene	85		
METHOD 5030/8020 ***			
Analyzed by: DY			
Date: 05/28/96			
TPH by Soxhlet/IR	270	10	mg/Kg
METHOD 3540/418.1			
Analyzed by: JN			
Date: 06/06/96 08:00:00			
Sonication extraction	05/28/96		
METHOD 3550 ***			
Analyzed by: LD			
Date: 05/28/96 15:00:00			
Solids	86	1	% Weight
CLP Inorganics SOW			
Analyzed by: CA			
Date: 05/29/96			

(P) - Practical Quantitation Limit

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9605D61-03

Thompson Professional Grp, Inc
6110 Clarkson Lane
Houston, TX 77055
ATTN: L.J. Wieting

06/15/96

PROJECT: Soil Bore/GWM B1,B2 &B3
SITE: Caldwell County, TX
SAMPLED BY: H.Platt Thompson Engineering
SAMPLE ID: B1-1026

PROJECT NO: LPST #108133
MATRIX: SOIL
DATE SAMPLED: 05/14/96 11:04:00
DATE RECEIVED: 05/17/96

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Naphthalene	900	300	µg/Kg
Acenaphthylene	< 150.0	150.0	µg/Kg
Acenaphthene	< 500	500	µg/Kg
Fluorene	< 560.0	560.0	µg/Kg
Phenanthrene	< 520.0	520.0	µg/Kg
Anthracene	< 450.0	450.0	µg/Kg
Fluoranthene	< 380.0	380.0	µg/Kg
Pyrene	< 350.0	350.0	µg/Kg
Chrysene	< 270.0	270.0	µg/Kg
Benzo (a) anthracene	< 270.0	270.0	µg/Kg
Benzo (b) fluoranthene	< 220.0	220.0	µg/Kg
Benzo (k) fluoranthene	< 240.0	240.0	µg/Kg
Benzo (a) pyrene	< 110.0	110.0	µg/Kg
Dibenzo (a,h) anthracene	< 240.0	240.0	µg/Kg
Benzo (g,h,i) perylene	< 350.0	350.0	µg/Kg
Indeno (1,2,3-cd) pyrene	< 260.0	260.0	µg/Kg

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
Biphenyl	µg/Kg	D	50	150
Coronene	µg/Kg	D	50	150

ANALYZED BY: JZL
DATE/TIME: 06/04/96 08:32:33
EXTRACTED BY: LD
DATE/TIME: 05/28/96 15:00:00
METHOD: 8310 Polynuclear Aromatic Hydrocarbons
NOTES: * - Practical Quantitation Limit
ND - Not Detected
NA - Not Analyzed
D - Diluted, control limits not applicable.

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9605D61-04

Thompson Professional Grp,Inc
6110 Clarkson Lane
Houston, TX 77055
ATTN: L.J. Wieting

DATE: 06/14/96

PROJECT: Soil Bore/GWM B1,B2 &B3
SITE: Caldwell County, TX
SAMPLED BY: H.Platt Thompson Engineering
SAMPLE ID: B2-2130

PROJECT NO: LPST #108133
MATRIX: SOIL
DATE SAMPLED: 05/15/96 09:50:00
DATE RECEIVED: 05/17/96

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
BENZENE	< 1	1 P	µg/Kg
TOLUENE	< 1	1 P	µg/Kg
ETHYLBENZENE	< 1	1 P	µg/Kg
TOTAL XYLENE	< 1	1 P	µg/Kg
TOTAL BTEX	< 1		µg/Kg
Surrogate	**% Recovery**		
1,4-Difluorobenzene	97		
4-Bromofluorobenzene	98		
METHOD 5030/8020 ***			
Analyzed by: AA			
Date: 05/29/96			
TPH by Soxhlet/IR	13	10	mg/Kg
METHOD 3540/418.1			
Analyzed by: JN			
Date: 06/06/96 08:00:00			

(P) - Practical Quantitation Limit ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9605D61-04

Thompson Professional Grp,Inc
6110 Clarkson Lane
Houston, TX 77055
ATTN: L.J. Wieting

DATE: 06/15/96

PROJECT: Soil Bore/GWM B1,B2 &B3
SITE: Caldwell County, TX
SAMPLED BY: H.Platt Thompson Engineering
SAMPLE ID: B2-2130

PROJECT NO: LPST #108133
MATRIX: SOIL
DATE SAMPLED: 05/15/96 09:50:00
DATE RECEIVED: 05/17/96

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Sonication extraction METHOD 3550 *** Analyzed by: LD Date: 05/28/96 15:00:00	05/28/96		
Solids CLP Inorganics SOW Analyzed by: CA Date: 05/29/96	80	1	% Weight

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9605D61-04

Thompson Professional Grp,Inc
6110 Clarkson Lane
Houston, TX 77055
ATTN: L.J. Wieting

06/15/96

PROJECT: Soil Bore/GWM B1,B2 &B3
SITE: Caldwell County, TX
SAMPLED BY: H.Platt Thompson Engineering
SAMPLE ID: B2-2130

PROJECT NO: LPST #108133
MATRIX: SOIL
DATE SAMPLED: 05/15/96 09:50:00
DATE RECEIVED: 05/17/96

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Naphthalene	< 3.0	3.0	µg/Kg
Acenaphthylene	< 1.5	1.5	µg/Kg
Acenaphthene	< 5.0	5.0	µg/Kg
Fluorene	< 5.6	5.6	µg/Kg
Phenanthrene	< 5.2	5.2	µg/Kg
Anthracene	< 4.5	4.5	µg/Kg
Fluoranthene	< 3.8	3.8	µg/Kg
Pyrene	< 3.5	3.5	µg/Kg
Chrysene	< 2.7	2.7	µg/Kg
Benzo (a) anthracene	< 2.7	2.7	µg/Kg
Benzo (b) fluoranthene	< 2.2	2.2	µg/Kg
Benzo (k) fluoranthene	< 2.4	2.4	µg/Kg
Benzo (a) pyrene	< 1.1	1.1	µg/Kg
Dibenzo (a,h) anthracene	< 2.4	2.4	µg/Kg
Benzo (g,h,i) perylene	< 3.5	3.5	µg/Kg
Indeno (1,2,3-cd) pyrene	< 2.6	2.6	µg/Kg

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
Biphenyl	µg/Kg	84	50	150
Coronene	µg/Kg	103	50	150

ANALYZED BY: JZL
DATE/TIME: 06/04/96 09:23:34
EXTRACTED BY: LD
DATE/TIME: 05/28/96 15:00:00
METHOD: 8310 Polynuclear Aromatic Hydrocarbons
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9605D61-05

Thompson Professional Grp,Inc
6110 Clarkson Lane
Houston, TX 77055
ATTN: L.J. Wieting

DATE: 06/15/96

PROJECT: Soil Bore/GWM B1,B2 &B3
SITE: Caldwell County, TX
SAMPLED BY: H.Platt Thompson Engineering
SAMPLE ID: B2-2117

PROJECT NO: LPST #108133
MATRIX: SOIL
DATE SAMPLED: 05/15/96 11:43:00
DATE RECEIVED: 05/17/96

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
BENZENE	2	1 P	µg/Kg
TOLUENE	2	1 P	µg/Kg
ETHYLBENZENE	4	1 P	µg/Kg
TOTAL XYLENE	3	1 P	µg/Kg
TOTAL BTEX	11		µg/Kg
Surrogate	**% Recovery**		
1,4-Difluorobenzene	85		
4-Bromofluorobenzene	88		
METHOD 5030/8020 ***			
Analyzed by: AA			
Date: 05/29/96			
TPH by Soxhlet/IR	32	10	mg/Kg
METHOD 3540/418.1			
Analyzed by: JN			
Date: 06/06/96 08:00:00			
Sonication extraction	05/28/96		
METHOD 3550 ***			
Analyzed by: LD			
Date: 05/28/96 15:00:00			
Solids	85	1	% Weight
CLP Inorganics SOW			
Analyzed by: CA			
Date: 05/29/96			

(P) - Practical Quantitation Limit

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9605D61-05

Thompson Professional Grp,Inc
6110 Clarkson Lane
Houston, TX 77055
ATTN: L.J. Wieting

06/15/96

PROJECT: Soil Bore/GWM B1,B2 &B3
SITE: Caldwell County, TX
SAMPLED BY: H.Platt Thompson Engineering
SAMPLE ID: B2-2117

PROJECT NO: LPST #108133
MATRIX: SOIL
DATE SAMPLED: 05/15/96 11:43:00
DATE RECEIVED: 05/17/96

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Naphthalene	< 3	3	µg/Kg
Acenaphthylene	< 1.5	1.5	µg/Kg
Acenaphthene	< 5	5	µg/Kg
Fluorene	< 5.6	5.6	µg/Kg
Phenanthrene	< 5.2	5.2	µg/Kg
Anthracene	< 4.5	4.5	µg/Kg
Fluoranthene	< 3.8	3.8	µg/Kg
Pyrene	< 3.5	3.5	µg/Kg
Chrysene	< 2.7	2.7	µg/Kg
Benzo (a) anthracene	< 2.7	2.7	µg/Kg
Benzo (b) fluoranthene	< 2.2	2.2	µg/Kg
Benzo (k) fluoranthene	< 2.4	2.4	µg/Kg
Benzo (a) pyrene	< 1.1	1.1	µg/Kg
Dibenzo (a,h) anthracene	< 2.4	2.4	µg/Kg
Benzo (g,h,i) perylene	< 3.5	3.5	µg/Kg
Indeno (1,2,3-cd) pyrene	< 2.6	2.6	µg/Kg

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
Biphenyl	µg/Kg	79	50	150
Coronene	µg/Kg	99	50	150

ANALYZED BY: JZL
DATE/TIME: 06/04/96 11:05:42
EXTRACTED BY: LD
DATE/TIME: 05/28/96 15:00:00
METHOD: 8310 Polynuclear Aromatic Hydrocarbons
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9605D61-06

Thompson Professional Grp,Inc
6110 Clarkson Lane
Houston, TX 77055
ATTN: L.J. Wieting

DATE: 06/14/96

PROJECT: Soil Bore/GWM B1,B2 &B3
SITE: Caldwell County, TX
SAMPLED BY: H.Platt Thompson Engineering
SAMPLE ID: B2-2121

PROJECT NO: LPST #108133
MATRIX: SOIL
DATE SAMPLED: 05/15/96 09:15:00
DATE RECEIVED: 05/17/96

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
BENZENE	< 1	1 P	µg/Kg
TOLUENE	< 1	1 P	µg/Kg
ETHYLBENZENE	< 1	1 P	µg/Kg
TOTAL XYLENE	< 1	1 P	µg/Kg
TOTAL BTEX	< 1		µg/Kg
Surrogate	**% Recovery**		
1,4-Difluorobenzene	95		
4-Bromofluorobenzene	99		
METHOD 5030/8020 ***			
Analyzed by: AA			
Date: 05/29/96			
TPH by Soxhlet/IR	< 10	10	mg/Kg
METHOD 3540/418.1			
Analyzed by: JN			
Date: 06/06/96 08:00:00			

(P) - Practical Quantitation Limit ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9605D61-06

Thompson Professional Grp,Inc
6110 Clarkson Lane
Houston, TX 77055
ATTN: L.J. Wieting

DATE: 06/15/96

PROJECT: Soil Bore/GWM B1,B2 &B3
SITE: Caldwell County, TX
SAMPLED BY: H.Platt Thompson Engineering
SAMPLE ID: B2-2121

PROJECT NO: LPST #108133
MATRIX: SOIL
DATE SAMPLED: 05/15/96 09:15:00
DATE RECEIVED: 05/17/96

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Sonication extraction METHOD 3550 *** Analyzed by: LD Date: 05/28/96 15:00:00	05/28/96		
Solids CLP Inorganics SOW Analyzed by: CA Date: 05/29/96	74	1	% Weight

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9605D61-06

Thompson Professional Grp,Inc
6110 Clarkson Lane
Houston, TX 77055
ATTN: L.J. Wieting

06/15/96

PROJECT: Soil Bore/GWM B1,B2 &B3
SITE: Caldwell County, TX
SAMPLED BY: H.Platt Thompson Engineering
SAMPLE ID: B2-2121

PROJECT NO: LPST #108133
MATRIX: SOIL
DATE SAMPLED: 05/15/96 09:15:00
DATE RECEIVED: 05/17/96

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Naphthalene	< 3	3	µg/Kg
Acenaphthylene	< 1.5	1.5	µg/Kg
Acenaphthene	< 5	5	µg/Kg
Fluorene	< 5.6	5.6	µg/Kg
Phenanthrene	< 5.2	5.2	µg/Kg
Anthracene	< 4.5	4.5	µg/Kg
Fluoranthene	< 3.8	3.8	µg/Kg
Pyrene	< 3.5	3.5	µg/Kg
Chrysene	< 2.7	2.7	µg/Kg
Benzo (a) anthracene	< 2.7	2.7	µg/Kg
Benzo (b) fluoranthene	< 2.2	2.2	µg/Kg
Benzo (k) fluoranthene	< 2.4	2.4	µg/Kg
Benzo (a) pyrene	< 1.1	1.1	µg/Kg
Dibenzo (a,h) anthracene	< 2.4	2.4	µg/Kg
Benzo (g,h,i) perylene	< 3.5	3.5	µg/Kg
Indeno (1,2,3-cd) pyrene	< 2.6	2.6	µg/Kg

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
Biphenyl	µg/Kg	85	50	150
Coronene	µg/Kg	99	50	150

ANALYZED BY: JZL
DATE/TIME: 06/04/96 11:56:44
EXTRACTED BY: LD
DATE/TIME: 05/28/96 15:00:00
METHOD: 8310 Polynuclear Aromatic Hydrocarbons
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9605D61-07

Thompson Professional Grp,Inc
6110 Clarkson Lane
Houston, TX 77055
ATTN: L.J. Wieting

DATE: 06/14/96

PROJECT: Soil Bore/GWM B1,B2 &B3
SITE: Caldwell County, TX
SAMPLED BY: H.Platt Thompson Engineering
SAMPLE ID: B3-3230

PROJECT NO: LPST #108133
MATRIX: SOIL
DATE SAMPLED: 05/15/96 11:25:00
DATE RECEIVED: 05/17/96

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
BENZENE	< 1	1 P	µg/Kg
TOLUENE	< 1	1 P	µg/Kg
ETHYLBENZENE	< 1	1 P	µg/Kg
TOTAL XYLENE	< 1	1 P	µg/Kg
TOTAL BTEX	< 1		µg/Kg
Surrogate	**% Recovery**		
1,4-Difluorobenzene	97		
4-Bromofluorobenzene	99		
METHOD 5030/8020 ***			
Analyzed by: AA			
Date: 05/29/96			
TPH by Soxhlet/IR	< 10	10	mg/Kg
METHOD 3540/418.1			
Analyzed by: JN			
Date: 06/06/96 08:00:00			

(P) - Practical Quantitation Limit ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9605D61-07

Thompson Professional Grp,Inc
6110 Clarkson Lane
Houston, TX 77055
ATTN: L.J. Wieting

DATE: 06/15/96

PROJECT: Soil Bore/GWM B1,B2 &B3
SITE: Caldwell County, TX
SAMPLED BY: H.Platt Thompson Engineering
SAMPLE ID: B3-3230

PROJECT NO: LPST #108133
MATRIX: SOIL
DATE SAMPLED: 05/15/96 11:25:00
DATE RECEIVED: 05/17/96

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Sonication extraction METHOD 3550 *** Analyzed by: LD Date: 05/28/96 15:00:00	05/28/96		
Solids CLP Inorganics SOW Analyzed by: CA Date: 05/29/96	80	1	% Weight

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9605D61-07

Thompson Professional Grp,Inc
6110 Clarkson Lane
Houston, TX 77055
ATTN: L.J. Wieting

06/15/96

PROJECT: Soil Bore/GWM B1,B2 &B3
SITE: Caldwell County, TX
SAMPLED BY: H.Platt Thompson Engineering
SAMPLE ID: B3-3230

PROJECT NO: LPST #108133
MATRIX: SOIL
DATE SAMPLED: 05/15/96 11:25:00
DATE RECEIVED: 05/17/96

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Naphthalene	< 3	3	µg/Kg
Acenaphthylene	< 1.5	1.5	µg/Kg
Acenaphthene	< 5	5	µg/Kg
Fluorene	< 5.6	5.6	µg/Kg
Phenanthrene	< 5.2	5.2	µg/Kg
Anthracene	< 4.5	4.5	µg/Kg
Fluoranthene	< 3.8	3.8	µg/Kg
Pyrene	< 3.8	3.5	µg/Kg
Chrysene	< 2.7	2.7	µg/Kg
Benzo (a) anthracene	< 2.7	2.7	µg/Kg
Benzo (b) fluoranthene	< 2.2	2.2	µg/Kg
Benzo (k) fluoranthene	< 2.4	2.4	µg/Kg
Benzo (a) pyrene	< 1.1	1.1	µg/Kg
Dibenzo (a,h) anthracene	< 2.4	2.4	µg/Kg
Benzo (g,h,i) perylene	< 3.5	3.5	µg/Kg
Indeno (1,2,3-cd) pyrene	< 2.6	2.6	µg/Kg

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
Biphenyl	µg/Kg	69	50	150
Coronene	µg/Kg	93	50	150

ANALYZED BY: JZL
DATE/TIME: 06/03/96 18:56:23
EXTRACTED BY: LD
DATE/TIME: 05/28/96 15:00:00
METHOD: 8310 Polynuclear Aromatic Hydrocarbons
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9605D61-08

Thompson Professional Grp,Inc
6110 Clarkson Lane
Houston, TX 77055
ATTN: L.J. Wieting

DATE: 06/14/96

PROJECT: Soil Bore/GWM B1,B2 &B3
SITE: Caldwell County, TX
SAMPLED BY: H.Platt Thompson Engineering
SAMPLE ID: B3-3217

PROJECT NO: LPST #108133
MATRIX: SOIL
DATE SAMPLED: 05/15/96 15:34:00
DATE RECEIVED: 05/17/96

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
BENZENE	< 1	1 P	µg/Kg
TOLUENE	< 1	1 P	µg/Kg
ETHYLBENZENE	< 1	1 P	µg/Kg
TOTAL XYLENE	< 1	1 P	µg/Kg
TOTAL BTEX	< 1		µg/Kg
Surrogate	**% Recovery**		
1,4-Difluorobenzene	91		
4-Bromofluorobenzene	98		
METHOD 5030/8020 ***			
Analyzed by: DY			
Date: 05/29/96			
TPH by Soxhlet/IR	< 10	10	mg/Kg
METHOD 3540/418.1			
Analyzed by: JN			
Date: 06/06/96 08:00:00			

(P) - Practical Quantitation Limit ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9605D61-08

Thompson Professional Grp,Inc
6110 Clarkson Lane
Houston, TX 77055
ATTN: L.J. Wieting

DATE: 06/15/96

PROJECT: Soil Bore/GWM B1,B2 &B3
SITE: Caldwell County, TX
SAMPLED BY: H.Platt Thompson Engineering
SAMPLE ID: B3-3217

PROJECT NO: LPST #108133
MATRIX: SOIL
DATE SAMPLED: 05/15/96 15:34:00
DATE RECEIVED: 05/17/96

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Sonication extraction METHOD 3550 *** Analyzed by: LD Date: 05/28/96 15:00:00	05/28/96		
Solids CLP Inorganics SOW Analyzed by: CA Date: 05/29/96	89	1	% Weight

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9605D61-08

Thompson Professional Grp,Inc
6110 Clarkson Lane
Houston, TX 77055
ATTN: L.J. Wieting

06/15/96

PROJECT: Soil Bore/GWM B1,B2 &B3
SITE: Caldwell County, TX
SAMPLED BY: H.Platt Thompson Engineering
SAMPLE ID: B3-3217

PROJECT NO: LPST #108133
MATRIX: SOIL
DATE SAMPLED: 05/15/96 15:34:00
DATE RECEIVED: 05/17/96

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Naphthalene	< 15	15	µg/Kg
Acenaphthylene	< 7.5	7.5	µg/Kg
Acenaphthene	< 25	25	µg/Kg
Fluorene	< 28.0	28.0	µg/Kg
Phenanthrene	< 26.0	26.0	µg/Kg
Anthracene	< 22.5	22.5	µg/Kg
Fluoranthene	< 19.0	19.0	µg/Kg
Pyrene	< 17.5	17.5	µg/Kg
Chrysene	< 13.5	13.5	µg/Kg
Benzo (a) anthracene	< 13.5	13.5	µg/Kg
Benzo (b) fluoranthene	< 11.0	11.0	µg/Kg
Benzo (k) fluoranthene	< 12.0	12.0	µg/Kg
Benzo (a) pyrene	< 5.5	5.5	µg/Kg
Dibenzo (a,h) anthracene	< 12.0	12.0	µg/Kg
Benzo (g,h,i) perylene	< 17.5	17.5	µg/Kg
Indeno (1,2,3-cd) pyrene	< 13.0	13.0	µg/Kg

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
Biphenyl	µg/Kg	32 «	50	150
Coronene	µg/Kg	92	50	150

ANALYZED BY: JZL
DATE/TIME: 06/03/96 23:11:23
EXTRACTED BY: LD
DATE/TIME: 05/28/96 15:00:00
METHOD: 8310 Polynuclear Aromatic Hydrocarbons
NOTES: * - Practical Quantitation Limit
ND - Not Detected
NA - Not Analyzed
« - Recovery outside of control limits.

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9605D61-09

Thompson Professional Grp,Inc
6110 Clarkson Lane
Houston, TX 77055
ATTN: L.J. Wieting

DATE: 06/15/96

PROJECT: Soil Bore/GWM B1,B2 &B3
SITE: Caldwell County, TX
SAMPLED BY: H.Platt Thompson Engineering
SAMPLE ID: B3-3222

PROJECT NO: LPST #108133
MATRIX: SOIL
DATE SAMPLED: 05/15/96 15:35:00
DATE RECEIVED: 05/17/96

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
BENZENE	< 1	1 P	µg/Kg
TOLUENE	< 1	1 P	µg/Kg
ETHYLBENZENE	2	1 P	µg/Kg
TOTAL XYLENE	ND	1 P	µg/Kg
TOTAL BTEX	2		µg/Kg
Surrogate	**% Recovery**		
1,4-Difluorobenzene	89		
4-Bromofluorobenzene	107		
METHOD 5030/8020 ***			
Analyzed by: DY			
Date: 05/29/96			
TPH by Soxhlet/IR	< 10	10	mg/Kg
METHOD 3540/418.1			
Analyzed by: JN			
Date: 06/06/96 08:00:00			

(P) - Practical Quantitation Limit ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9605D61-09

Thompson Professional Grp,Inc
6110 Clarkson Lane
Houston, TX 77055
ATTN: L.J. Wieting

DATE: 06/15/96

PROJECT: Soil Bore/GWM B1,B2 &B3
SITE: Caldwell County, TX
SAMPLED BY: H.Platt Thompson Engineering
SAMPLE ID: B3-3222

PROJECT NO: LPST #108133
MATRIX: SOIL
DATE SAMPLED: 05/15/96 15:35:00
DATE RECEIVED: 05/17/96

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Sonication extraction METHOD 3550 *** Analyzed by: LD Date: 05/28/96 15:00:00	05/28/96		
Solids CLP Inorganics SOW Analyzed by: CA Date: 05/29/96	78	1	% Weight

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9605D61-09

Thompson Professional Grp,Inc
6110 Clarkson Lane
Houston, TX 77055
ATTN: L.J. Wieting

06/15/96

PROJECT: Soil Bore/GWM B1,B2 &B3
SITE: Caldwell County, TX
SAMPLED BY: H.Platt Thompson Engineering
SAMPLE ID: B3-3222

PROJECT NO: LPST #108133
MATRIX: SOIL
DATE SAMPLED: 05/15/96 15:35:00
DATE RECEIVED: 05/17/96

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Naphthalene	< 15	15	µg/Kg
Acenaphthylene	< 7.5	7.5	µg/Kg
Acenaphthene	< 25	25	µg/Kg
Fluorene	< 28.0	28.0	µg/Kg
Phenanthrene	< 26.0	26.0	µg/Kg
Anthracene	< 22.5	22.5	µg/Kg
Fluoranthene	< 19.0	19.0	µg/Kg
Pyrene	< 17.5	17.5	µg/Kg
Chrysene	< 13.5	13.5	µg/Kg
Benzo (a) anthracene	< 13.5	13.5	µg/Kg
Benzo (b) fluoranthene	< 11.0	11.0	µg/Kg
Benzo (k) fluoranthene	< 12.0	12.0	µg/Kg
Benzo (a) pyrene	< 5.5	5.5	µg/Kg
Dibenzo (a,h) anthracene	< 12.0	12.0	µg/Kg
Benzo (g,h,i) perylene	< 17.5	17.5	µg/Kg
Indeno (1,2,3-cd) pyrene	< 13.0	13.0	µg/Kg

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
Biphenyl	µg/Kg	49 «	50	150
Coronene	µg/Kg	90	50	150

ANALYZED BY: JZL
DATE/TIME: 06/04/96 01:44:22
EXTRACTED BY: LD
DATE/TIME: 05/28/96 15:00:00
METHOD: 8310 Polynuclear Aromatic Hydrocarbons
NOTES: * - Practical Quantitation Limit
ND - Not Detected
NA - Not Analyzed
« - Recovery outside of control limits.

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9605D61-10

Thompson Professional Grp,Inc
6110 Clarkson Lane
Houston, TX 77055
ATTN: L.J. Wieting

DATE: 06/15/96

PROJECT: Soil Bore/GWM B1,B2 &B3
SITE: Caldwell County, TX
SAMPLED BY: H.Platt Thompson Engineering
SAMPLE ID: B4-4330

PROJECT NO: LPST #108133
MATRIX: SOIL
DATE SAMPLED: 05/15/96 15:10:00
DATE RECEIVED: 05/17/96

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
BENZENE	< 1	1 P	µg/Kg
TOLUENE	< 1	1 P	µg/Kg
ETHYLBENZENE	< 1	1 P	µg/Kg
TOTAL XYLENE	2	1 P	µg/Kg
TOTAL BTEX	2		µg/Kg
Surrogate	**% Recovery**		
1,4-Difluorobenzene	90		
4-Bromofluorobenzene	97		
METHOD 5030/8020 ***			
Analyzed by: DY			
Date: 05/29/96			
TPH by Soxhlet/IR	< 10	10	mg/Kg
METHOD 3540/418.1			
Analyzed by: JN			
Date: 06/06/96 08:00:00			
Sonication extraction	05/28/96		
METHOD 3550 ***			
Analyzed by: LD			
Date: 05/28/96 15:00:00			
Solids	80	1	% Weight
CLP Inorganics SOW			
Analyzed by: CA			
Date: 05/29/96			

(P) - Practical Quantitation Limit

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9605D61-10

Thompson Professional Grp,Inc
6110 Clarkson Lane
Houston, TX 77055
ATTN: L.J. Wieting

06/15/96

PROJECT: Soil Bore/GWM B1,B2 &B3
SITE: Caldwell County, TX
SAMPLED BY: H.Platt Thompson Engineering
SAMPLE ID: B4-4330

PROJECT NO: LPST #108133
MATRIX: SOIL
DATE SAMPLED: 05/15/96 15:10:00
DATE RECEIVED: 05/17/96

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Naphthalene	< 15	15	µg/Kg
Acenaphthylene	< 7.5	7.5	µg/Kg
Acenaphthene	< 25	25	µg/Kg
Fluorene	< 28.0	28.0	µg/Kg
Phenanthrene	< 26.0	26.0	µg/Kg
Anthracene	< 22.5	22.5	µg/Kg
Fluoranthene	< 19.0	19.0	µg/Kg
Pyrene	< 17.5	17.5	µg/Kg
Chrysene	< 13.5	13.5	µg/Kg
Benzo (a) anthracene	< 13.5	13.5	µg/Kg
Benzo (b) fluoranthene	< 11.0	11.0	µg/Kg
Benzo (k) fluoranthene	< 12.0	12.0	µg/Kg
Benzo (a) pyrene	< 5.5	5.5	µg/Kg
Dibenzo (a,h) anthracene	< 12.0	12.0	µg/Kg
Benzo (g,h,i) perylene	< 17.5	17.5	µg/Kg
Indeno (1,2,3-cd) pyrene	< 13.0	13.0	µg/Kg

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
Biphenyl	µg/Kg	54	50	150
Coronene	µg/Kg	92	50	150

ANALYZED BY: JZL DATE/TIME: 06/04/96 05:08:28
EXTRACTED BY: LD DATE/TIME: 05/28/96 15:00:00
METHOD: 8310 Polynuclear Aromatic Hydrocarbons
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9605D61-11

Thompson Professional Grp,Inc
6110 Clarkson Lane
Houston, TX 77055
ATTN: L.J. Wieting

DATE: 06/14/96

PROJECT: Soil Bore/GWM B1,B2 &B3
SITE: Caldwell County, TX
SAMPLED BY: H.Platt Thompson Engineering
SAMPLE ID: B4-4316

PROJECT NO: LPST #108133
MATRIX: SOIL
DATE SAMPLED: 05/15/96 16:25:00
DATE RECEIVED: 05/17/96

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
BENZENE	< 1	1 P	µg/Kg
TOLUENE	< 1	1 P	µg/Kg
ETHYLBENZENE	< 1	1 P	µg/Kg
TOTAL XYLENE	< 1	1 P	µg/Kg
TOTAL BTEX	< 1		µg/Kg
Surrogate	**% Recovery**		
1,4-Difluorobenzene	88		
4-Bromofluorobenzene	90		
METHOD 5030/8020 ***			
Analyzed by: DY			
Date: 05/29/96			
TPH by Soxhlet/IR	12	10	mg/Kg
METHOD 3540/418.1			
Analyzed by: JN			
Date: 06/06/96 08:00:00			

(P) - Practical Quantitation Limit ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9605D61-11

Thompson Professional Grp,Inc
6110 Clarkson Lane
Houston, TX 77055
ATTN: L.J. Wieting

DATE: 06/15/96

PROJECT: Soil Bore/GWM B1,B2 &B3
SITE: Caldwell County, TX
SAMPLED BY: H.Platt Thompson Engineering
SAMPLE ID: B4-4316

PROJECT NO: LPST #108133
MATRIX: SOIL
DATE SAMPLED: 05/15/96 16:25:00
DATE RECEIVED: 05/17/96

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Sonication extraction METHOD 3550 *** Analyzed by: LD Date: 05/28/96 15:00:00	05/28/96		
Solids CLP Inorganics SOW Analyzed by: CA Date: 05/29/96	84	1	% Weight

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9605D61-11

Thompson Professional Grp,Inc
6110 Clarkson Lane
Houston, TX 77055
ATTN: L.J. Wieting

06/15/96

PROJECT: Soil Bore/GWM B1,B2 &B3
SITE: Caldwell County, TX
SAMPLED BY: H.Platt Thompson Engineering
SAMPLE ID: B4-4316

PROJECT NO: LPST #108133
MATRIX: SOIL
DATE SAMPLED: 05/15/96 16:25:00
DATE RECEIVED: 05/17/96

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Naphthalene	< 3	3	µg/Kg
Acenaphthylene	< 1.5	1.5	µg/Kg
Acenaphthene	< 5	5	µg/Kg
Fluorene	< 5.6	5.6	µg/Kg
Phenanthrene	< 5.2	5.2	µg/Kg
Anthracene	< 4.5	4.5	µg/Kg
Fluoranthene	< 3.8	3.8	µg/Kg
Pyrene	< 3.5	3.5	µg/Kg
Chrysene	< 2.7	2.7	µg/Kg
Benzo (a) anthracene	< 2.7	2.7	µg/Kg
Benzo (b) fluoranthene	< 2.2	2.2	µg/Kg
Benzo (k) fluoranthene	< 2.4	2.4	µg/Kg
Benzo (a) pyrene	< 1.1	1.1	µg/Kg
Dibenzo (a,h) anthracene	< 2.4	2.4	µg/Kg
Benzo (g,h,i) perylene	< 3.5	3.5	µg/Kg
Indeno (1,2,3-cd) pyrene	< 2.6	2.6	µg/Kg

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
Biphenyl	µg/Kg	68	50	150
Coronene	µg/Kg	100	50	150

ANALYZED BY: JZL
DATE/TIME: 06/03/96 19:47:25
EXTRACTED BY: LD
DATE/TIME: 05/28/96 15:00:00
METHOD: 8310 Polynuclear Aromatic Hydrocarbons
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9605D61-12

Thompson Professional Grp,Inc
6110 Clarkson Lane
Houston, TX 77055
ATTN: L.J. Wieting

DATE: 06/15/96

PROJECT: Soil Bore/GWM B1,B2 &B3
SITE: Caldwell County, TX
SAMPLED BY: H.Platt Thompson Engineering
SAMPLE ID: B4-4318

PROJECT NO: LPST #108133
MATRIX: SOIL
DATE SAMPLED: 05/15/96 14:50:00
DATE RECEIVED: 05/17/96

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
BENZENE	< 5	5 P	µg/Kg
TOLUENE	< 5	5 P	µg/Kg
ETHYLBENZENE	110	5 P	µg/Kg
TOTAL XYLENE	135	5 P	µg/Kg
TOTAL BTEX	245		µg/Kg
Surrogate	**% Recovery**		
1,4-Difluorobenzene	83		
4-Bromofluorobenzene	133		
METHOD 5030/8020 ***			
Analyzed by: DY			
Date: 05/29/96			
TPH by Soxhlet/IR	150	10	mg/Kg
METHOD 3540/418.1			
Analyzed by: JN			
Date: 06/06/96 08:00:00			
Sonication extraction	05/28/96		
METHOD 3550 ***			
Analyzed by: LD			
Date: 05/28/96 15:00:00			
Solids	82	1	% Weight
CLP Inorganics SOW			
Analyzed by: CA			
Date: 05/29/96			

(P) - Practical Quantitation Limit

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9605D61-12

Thompson Professional Grp,Inc
6110 Clarkson Lane
Houston, TX 77055
ATTN: L.J. Wieting

06/15/96

PROJECT: Soil Bore/GWM B1,B2 &B3
SITE: Caldwell County, TX
SAMPLED BY: H.Platt Thompson Engineering
SAMPLE ID: B4-4318

PROJECT NO: LPST #108133
MATRIX: SOIL
DATE SAMPLED: 05/15/96 14:50:00
DATE RECEIVED: 05/17/96

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Naphthalene	< 60	60	µg/Kg
Acenaphthylene	< 30.0	30.0	µg/Kg
Acenaphthene	< 100	100	µg/Kg
Fluorene	< 112.0	112.0	µg/Kg
Phenanthrene	< 104.0	104.0	µg/Kg
Anthracene	< 90.0	90.0	µg/Kg
Fluoranthene	< 76.0	76.0	µg/Kg
Pyrene	< 70.0	70.0	µg/Kg
Chrysene	120	54.0	µg/Kg
Benzo (a) anthracene	< 54.0	54.0	µg/Kg
Benzo (b) fluoranthene	< 44.0	44.0	µg/Kg
Benzo (k) fluoranthene	< 48.0	48.0	µg/Kg
Benzo (a) pyrene	< 22.0	22.0	µg/Kg
Dibenzo (a,h) anthracene	< 48.0	48.0	µg/Kg
Benzo (g,h,i) perylene	< 70.0	70.0	µg/Kg
Indeno (1,2,3-cd) pyrene	< 52.0	52.0	µg/Kg

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
Biphenyl	µg/Kg	D	50	150
Coronene	µg/Kg	D	50	150

ANALYZED BY: JZL DATE/TIME: 06/04/96 00:02:22
EXTRACTED BY: LD DATE/TIME: 05/28/96 15:00:00
METHOD: 8310 Polynuclear Aromatic Hydrocarbons
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed
D - Diluted, control limits not applicable.

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9605D61-13

Thompson Professional Grp,Inc
6110 Clarkson Lane
Houston, TX 77055
ATTN: L.J. Wieting

DATE: 06/15/96

PROJECT: Soil Bore/GWM B1,B2 &B3
SITE: Caldwell County, TX
SAMPLED BY: H.Platt Thompson Engineering
SAMPLE ID: B5-5430

PROJECT NO: LPST #108133
MATRIX: SOIL
DATE SAMPLED: 05/16/96 09:25:00
DATE RECEIVED: 05/17/96

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
BENZENE	18	1 P	µg/Kg
TOLUENE	19	1 P	µg/Kg
ETHYLBENZENE	5	1 P	µg/Kg
TOTAL XYLENE	25	1 P	µg/Kg
TOTAL BTEX	67		µg/Kg
Surrogate	**% Recovery**		
1,4-Difluorobenzene	105		
4-Bromofluorobenzene	129		
METHOD 5030/8020 ***			
Analyzed by: FAB			
Date: 05/30/96			
TPH by Soxhlet/IR	< 10	10	mg/Kg
METHOD 3540/418.1			
Analyzed by: JN			
Date: 06/06/96 08:00:00			
Sonication extraction	05/28/96		
METHOD 3550 ***			
Analyzed by: LD			
Date: 05/28/96 15:00:00			
Solids	81	1	% Weight
CLP Inorganics SOW			
Analyzed by: CA			
Date: 05/29/96			

(P) - Practical Quantitation Limit

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9605D61-13

Thompson Professional Grp,Inc
6110 Clarkson Lane
Houston, TX 77055
ATTN: L.J. Wieting

06/15/96

PROJECT: Soil Bore/GWM B1,B2 &B3
SITE: Caldwell County, TX
SAMPLED BY: H.Platt Thompson Engineering
SAMPLE ID: B5-5430

PROJECT NO: LPST #108133
MATRIX: SOIL
DATE SAMPLED: 05/16/96 09:25:00
DATE RECEIVED: 05/17/96

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Naphthalene	< 15	15	µg/Kg
Acenaphthylene	< 7.5	7.5	µg/Kg
Acenaphthene	< 25	25	µg/Kg
Fluorene	< 28.0	28.0	µg/Kg
Phenanthrene	< 26.0	26.0	µg/Kg
Anthracene	< 22.5	22.5	µg/Kg
Fluoranthene	< 19.0	19.0	µg/Kg
Pyrene	< 17.5	17.5	µg/Kg
Chrysene	< 13.5	13.5	µg/Kg
Benzo (a) anthracene	< 13.5	13.5	µg/Kg
Benzo (b) fluoranthene	< 11.0	11.0	µg/Kg
Benzo (k) fluoranthene	< 12.0	12.0	µg/Kg
Benzo (a) pyrene	< 5.5	5.5	µg/Kg
Dibenzo (a,h) anthracene	< 12.0	12.0	µg/Kg
Benzo (g,h,i) perylene	< 17.5	17.5	µg/Kg
Indeno (1,2,3-cd) pyrene	< 13.0	13.0	µg/Kg

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
Biphenyl	µg/Kg	58	50	150
Coronene	µg/Kg	90	50	150

ANALYZED BY: JZL
DATE/TIME: 06/03/96 22:20:23
EXTRACTED BY: LD
DATE/TIME: 05/28/96 15:00:00
METHOD: 8310 Polynuclear Aromatic Hydrocarbons
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9605D61-14

Thompson Professional Grp,Inc
6110 Clarkson Lane
Houston, TX 77055
ATTN: L.J. Wieting

DATE: 06/15/96

PROJECT: Soil Bore/GWM B1,B2 &B3
SITE: Caldwell County, TX
SAMPLED BY: H.Platt Thompson Engineering
SAMPLE ID: B5-5417

PROJECT NO: LPST #108133
MATRIX: SOIL
DATE SAMPLED: 05/16/96 11:44:00
DATE RECEIVED: 05/17/96

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
BENZENE	630	200 P	µg/Kg
TOLUENE	1700	200 P	µg/Kg
ETHYLBENZENE	11000	200 P	µg/Kg
TOTAL XYLENE	20200	200 P	µg/Kg
TOTAL BTEX	33530		µg/Kg
Surrogate	**% Recovery**		
1,4-Difluorobenzene	126 «		
4-Bromofluorobenzene	125		
METHOD 5030/8020 ***			
Analyzed by: DY			
Date: 05/30/96			
TPH by Soxhlet/IR	4300	200	mg/Kg
METHOD 3540/418.1			
Analyzed by: JN			
Date: 06/06/96 08:00:00			
Sonication extraction	05/28/96		
METHOD 3550 ***			
Analyzed by: LD			
Date: 05/28/96 15:00:00			
Solids	84	1	% Weight
CLP Inorganics SOW			
Analyzed by: CA			
Date: 05/29/96			

(P) - Practical Quantitation Limit « - Recovery beyond control limits.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9605D61-14

Thompson Professional Grp,Inc
6110 Clarkson Lane
Houston, TX 77055
ATTN: L.J. Wieting

06/15/96

PROJECT: Soil Bore/GWM B1,B2 &B3
SITE: Caldwell County, TX
SAMPLED BY: H.Platt Thompson Engineering
SAMPLE ID: B5-5417

PROJECT NO: LPST #108133
MATRIX: SOIL
DATE SAMPLED: 05/16/96 11:44:00
DATE RECEIVED: 05/17/96

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Naphthalene	2000	600	µg/Kg
Acenaphthylene	< 30.0	30.0	µg/Kg
Acenaphthene	< 100	100	µg/Kg
Fluorene	< 112.0	112.0	µg/Kg
Phenanthrene	< 104.0	104.0	µg/Kg
Anthracene	< 90.0	90.0	µg/Kg
Fluoranthene	< 76.0	76.0	µg/Kg
Pyrene	< 70.0	70.0	µg/Kg
Chrysene	74	54.0	µg/Kg
Benzo (a) anthracene	< 54.0	54.0	µg/Kg
Benzo (b) fluoranthene	< 44.0	44.0	µg/Kg
Benzo (k) fluoranthene	< 48.0	48.0	µg/Kg
Benzo (a) pyrene	< 22.0	22.0	µg/Kg
Dibenzo (a,h) anthracene	< 48.0	48.0	µg/Kg
Benzo (g,h,i) perylene	< 70.0	70.0	µg/Kg
Indeno (1,2,3-cd) pyrene	< 52.0	52.0	µg/Kg

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
Biphenyl	µg/Kg	D	50	150
Coronene	µg/Kg	D	50	150

ANALYZED BY: JZL DATE/TIME: 06/04/96 19:09:10
EXTRACTED BY: LD DATE/TIME: 05/28/96 15:00:00
METHOD: 8310 Polynuclear Aromatic Hydrocarbons
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed
D - Diluted, control limits not applicable.

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9605D61-15

Thompson Professional Grp,Inc
6110 Clarkson Lane
Houston, TX 77055
ATTN: L.J. Wieting

DATE: 06/15/96

PROJECT: Soil Bore/GWM B1,B2 &B3
SITE: Caldwell County, TX
SAMPLED BY: H.Platt Thompson Engineering
SAMPLE ID: B5-5414

PROJECT NO: LPST #108133
MATRIX: SOIL
DATE SAMPLED: 05/16/96 08:55:00
DATE RECEIVED: 05/17/96

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
BENZENE	67	50 P	µg/Kg
TOLUENE	660	50 P	µg/Kg
ETHYLBENZENE	580	50 P	µg/Kg
TOTAL XYLENE	2100	50 P	µg/Kg
TOTAL BTEX	3407		µg/Kg
Surrogate	**% Recovery**		
1,4-Difluorobenzene	112		
4-Bromofluorobenzene	95		
METHOD 5030/8020 ***			
Analyzed by: DY			
Date: 05/30/96			
TPH by Soxhlet/IR	62	10	mg/Kg
METHOD 3540/418.1			
Analyzed by: JN			
Date: 06/06/96 08:00:00			
Sonication extraction	05/28/96		
METHOD 3550 ***			
Analyzed by: LD			
Date: 05/28/96 15:00:00			
Solids	82	1	% Weight
CLP Inorganics SOW			
Analyzed by: CA			
Date: 05/29/96			

(P) - Practical Quantitation Limit

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9605D61-15

Thompson Professional Grp,Inc
6110 Clarkson Lane
Houston, TX 77055
ATTN: L.J. Wieting

06/15/96

PROJECT: Soil Bore/GWM B1,B2 &B3
SITE: Caldwell County, TX
SAMPLED BY: H.Platt Thompson Engineering
SAMPLE ID: B5-5414

PROJECT NO: LPST #108133
MATRIX: SOIL
DATE SAMPLED: 05/16/96 08:55:00
DATE RECEIVED: 05/17/96

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Naphthalene	< 300	300	µg/Kg
Acenaphthylene	< 150.0	150.0	µg/Kg
Acenaphthene	< 500	500	µg/Kg
Fluorene	< 560.0	560.0	µg/Kg
Phenanthrene	1900	520.0	µg/Kg
Anthracene	480	450.0	µg/Kg
Fluoranthene	2200	380.0	µg/Kg
Pyrene	1300	350.0	µg/Kg
Chrysene	590	270.0	µg/Kg
Benzo (a) anthracene	780	270.0	µg/Kg
Benzo (b) fluoranthene	500	220.0	µg/Kg
Benzo (k) fluoranthene	< 240.0	240.0	µg/Kg
Benzo (a) pyrene	< 110.0	110.0	µg/Kg
Dibenzo (a,h) anthracene	< 240.0	240.0	µg/Kg
Benzo (g,h,i) perylene	< 350.0	350.0	µg/Kg
Indeno (1,2,3-cd) pyrene	< 260.0	260.0	µg/Kg

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
Biphenyl	µg/Kg	D	50	150
Coronene	µg/Kg	D	50	150

ANALYZED BY: JZL DATE/TIME: 06/04/96 07:41:32
EXTRACTED BY: LD DATE/TIME: 05/28/96 15:00:00
METHOD: 8310 Polynuclear Aromatic Hydrocarbons
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed
D - Diluted, control limits not applicable.

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9605D61-16

Thompson Professional Grp,Inc
6110 Clarkson Lane
Houston, TX 77055
ATTN: L.J. Wieting

DATE: 06/15/96

PROJECT: Soil Bore/GWM B1,B2 &B3
SITE: Caldwell County, TX
SAMPLED BY: H.Platt Thompson Engineering
SAMPLE ID: B5-5420

PROJECT NO: LPST #108133
MATRIX: SOIL
DATE SAMPLED: 05/16/96 09:15:00
DATE RECEIVED: 05/17/96

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
BENZENE	10	10 P	µg/Kg
TOLUENE	< 10	10 P	µg/Kg
ETHYLBENZENE	160	10 P	µg/Kg
TOTAL XYLENE	1880	10 P	µg/Kg
TOTAL BTEX	2050		µg/Kg
Surrogate	**% Recovery**		
1,4-Difluorobenzene	108		
4-Bromofluorobenzene	192 «		
METHOD 5030/8020 ***			
Analyzed by: FAB			
Date: 06/12/96			
TPH by Soxhlet/IR	610	10	mg/Kg
METHOD 3540/418.1			
Analyzed by: JN			
Date: 06/06/96 08:00:00			
Sonication extraction	05/28/96		
METHOD 3550 ***			
Analyzed by: LD			
Date: 05/28/96 15:00:00			
Solids	86	1	% Weight
CLP Inorganics SOW			
Analyzed by: CA			
Date: 05/29/96			

(P) - Practical Quantitation Limit « - Recovery beyond control limits.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9605D61-16

Thompson Professional Grp,Inc
6110 Clarkson Lane
Houston, TX 77055
ATTN: L.J. Wieting

06/15/96

PROJECT: Soil Bore/GWM B1,B2 &B3
SITE: Caldwell County, TX
SAMPLED BY: H.Platt Thompson Engineering
SAMPLE ID: B5-5420

PROJECT NO: LPST #108133
MATRIX: SOIL
DATE SAMPLED: 05/16/96 09:15:00
DATE RECEIVED: 05/17/96

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Naphthalene	1700	600	µg/Kg
Acenaphthylene	< 30.0	30.0	µg/Kg
Acenaphthene	< 100	100	µg/Kg
Fluorene	< 112.0	112.0	µg/Kg
Phenanthrene	< 104.0	104.0	µg/Kg
Anthracene	< 90.0	90.0	µg/Kg
Fluoranthene	< 76.0	76.0	µg/Kg
Pyrene	< 70.0	70.0	µg/Kg
Chrysene	< 54.0	54.0	µg/Kg
Benzo (a) anthracene	< 54.0	54.0	µg/Kg
Benzo (b) fluoranthene	< 44.0	44.0	µg/Kg
Benzo (k) fluoranthene	< 48.0	48.0	µg/Kg
Benzo (a) pyrene	< 22.0	22.0	µg/Kg
Dibenzo (a,h) anthracene	< 48.0	48.0	µg/Kg
Benzo (g,h,i) perylene	< 70.0	70.0	µg/Kg
Indeno (1,2,3-cd) pyrene	< 52.0	52.0	µg/Kg

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
Biphenyl	µg/Kg	D	50	150
Coronene	µg/Kg	D	50	150

ANALYZED BY: JZL
DATE/TIME: 06/04/96 20:00:10
EXTRACTED BY: LD
DATE/TIME: 05/28/96 15:00:00
METHOD: 8310 Polynuclear Aromatic Hydrocarbons
NOTES: * - Practical Quantitation Limit
ND - Not Detected
NA - Not Analyzed
D - Diluted, control limits not applicable.

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9605D61-17

Thompson Professional Grp,Inc
6110 Clarkson Lane
Houston, TX 77055
ATTN: L.J. Wieting

DATE: 06/14/96

PROJECT: Soil Bore/GWM B1,B2 &B3
SITE: Caldwell County, TX
SAMPLED BY: H.Platt Thompson Engineering
SAMPLE ID: B6-6530

PROJECT NO: LPST #108133
MATRIX: SOIL
DATE SAMPLED: 05/16/96 10:55:00
DATE RECEIVED: 05/17/96

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
BENZENE	15	5 P	µg/Kg
TOLUENE	< 5	5 P	µg/Kg
ETHYLBENZENE	< 5	5 P	µg/Kg
TOTAL XYLENE	< 5	5 P	µg/Kg
TOTAL BTEX	15		µg/Kg
Surrogate	**% Recovery**		
1,4-Difluorobenzene	100		
4-Bromofluorobenzene	102		
METHOD 5030/8020 ***			
Analyzed by: YN			
Date: 05/30/96			
TPH by Soxhlet/IR	15	10	mg/Kg
METHOD 3540/418.1			
Analyzed by: JN			
Date: 06/06/96 08:00:00			

(P) - Practical Quantitation Limit ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
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HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9605D61-17

Thompson Professional Grp,Inc
6110 Clarkson Lane
Houston, TX 77055
ATTN: L.J. Wieting

DATE: 06/15/96

PROJECT: Soil Bore/GWM B1,B2 &B3
SITE: Caldwell County, TX
SAMPLED BY: H.Platt Thompson Engineering
SAMPLE ID: B6-6530

PROJECT NO: LPST #108133
MATRIX: SOIL
DATE SAMPLED: 05/16/96 10:55:00
DATE RECEIVED: 05/17/96

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Sonication extraction METHOD 3550 *** Analyzed by: LD Date: 05/28/96 15:00:00	05/28/96		
Solids CLP Inorganics SOW Analyzed by: CA Date: 05/29/96	80	1	% Weight

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
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HOUSTON, TEXAS 77054
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Certificate of Analysis No. H9-9605D61-17

Thompson Professional Grp,Inc
6110 Clarkson Lane
Houston, TX 77055
ATTN: L.J. Wieting

06/15/96

PROJECT: Soil Bore/GWM B1,B2 &B3
SITE: Caldwell County, TX
SAMPLED BY: H.Platt Thompson Engineering
SAMPLE ID: B6-6530

PROJECT NO: LPST #108133
MATRIX: SOIL
DATE SAMPLED: 05/16/96 10:55:00
DATE RECEIVED: 05/17/96

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Naphthalene	4	3	µg/Kg
Acenaphthylene	< 1.5	1.5	µg/Kg
Acenaphthene	< 5	5	µg/Kg
Fluorene	< 5.6	5.6	µg/Kg
Phenanthrene	< 5.2	5.2	µg/Kg
Anthracene	< 4.5	4.5	µg/Kg
Fluoranthene	< 3.8	3.8	µg/Kg
Pyrene	< 3.5	3.5	µg/Kg
Chrysene	< 2.7	2.7	µg/Kg
Benzo (a) anthracene	< 2.7	2.7	µg/Kg
Benzo (b) fluoranthene	< 2.2	2.2	µg/Kg
Benzo (k) fluoranthene	< 2.4	2.4	µg/Kg
Benzo (a) pyrene	< 1.1	1.1	µg/Kg
Dibenzo (a,h) anthracene	< 2.4	2.4	µg/Kg
Benzo (g,h,i) perylene	< 3.5	3.5	µg/Kg
Indeno (1,2,3-cd) pyrene	< 2.6	2.6	µg/Kg

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
Biphenyl	µg/Kg	65	50	150
Coronene	µg/Kg	97	50	150

ANALYZED BY: JZL DATE/TIME: 06/03/96 20:38:25
EXTRACTED BY: LD DATE/TIME: 05/28/96 15:00:00
METHOD: 8310 Polynuclear Aromatic Hydrocarbons
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9605D61-18

Thompson Professional Grp,Inc
6110 Clarkson Lane
Houston, TX 77055
ATTN: L.J. Wieting

DATE: 06/15/96

PROJECT: Soil Bore/GWM B1,B2 &B3
SITE: Caldwell County, TX
SAMPLED BY: H.Platt Thompson Engineering
SAMPLE ID: B6-6517

PROJECT NO: LPST #108133
MATRIX: SOIL
DATE SAMPLED: 05/16/96 13:37:00
DATE RECEIVED: 05/17/96

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
BENZENE	< 10	10 P	µg/Kg
TOLUENE	< 10	10 P	µg/Kg
ETHYLBENZENE	14	10 P	µg/Kg
TOTAL XYLENE	41	10 P	µg/Kg
TOTAL BTEX	55		µg/Kg
Surrogate	**% Recovery**		
1,4-Difluorobenzene	90		
4-Bromofluorobenzene	130		
METHOD 5030/8020 ***			
Analyzed by: DY			
Date: 05/30/96			
TPH by Soxhlet/IR	190	10	mg/Kg
METHOD 3540/418.1			
Analyzed by: JN			
Date: 06/06/96 08:00:00			
Sonication extraction	05/28/96		
METHOD 3550 ***			
Analyzed by: LD			
Date: 05/28/96 15:00:00			
Solids	88	1	% Weight
CLP Inorganics SOW			
Analyzed by: CA			
Date: 05/29/96			

(P) - Practical Quantitation Limit

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9605D61-18

Thompson Professional Grp,Inc
6110 Clarkson Lane
Houston, TX 77055
ATTN: L.J. Wieting

06/15/96

PROJECT: Soil Bore/GWM B1,B2 &B3
SITE: Caldwell County, TX
SAMPLED BY: H.Platt Thompson Engineering
SAMPLE ID: B6-6517

PROJECT NO: LPST #108133
MATRIX: SOIL
DATE SAMPLED: 05/16/96 13:37:00
DATE RECEIVED: 05/17/96

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Naphthalene	< 150	150	µg/Kg
Acenaphthylene	< 75.0	75.0	µg/Kg
Acenaphthene	< 250	250	µg/Kg
Fluorene	< 280.0	280.0	µg/Kg
Phenanthrene	< 260.0	260.0	µg/Kg
Anthracene	< 225.0	225.0	µg/Kg
Fluoranthene	< 190.0	190.0	µg/Kg
Pyrene	< 175.0	175.0	µg/Kg
Chrysene	< 135.0	135.0	µg/Kg
Benzo (a) anthracene	< 135.0	135.0	µg/Kg
Benzo (b) fluoranthene	< 110.0	110.0	µg/Kg
Benzo (k) fluoranthene	< 120.0	120.0	µg/Kg
Benzo (a) pyrene	< 55.0	55.0	µg/Kg
Dibenzo (a,h) anthracene	< 120.0	120.0	µg/Kg
Benzo (g,h,i) perylene	< 175.0	175.0	µg/Kg
Indeno (1,2,3-cd) pyrene	< 130.0	130.0	µg/Kg

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
Biphenyl	µg/Kg	D	50	150
Coronene	µg/Kg	D	50	150

ANALYZED BY: JZL
DATE/TIME: 06/04/96 18:18:11
EXTRACTED BY: LD
DATE/TIME: 05/28/96 15:00:00
METHOD: 8310 Polynuclear Aromatic Hydrocarbons
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed
D - Diluted, control limits not applicable.

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9605D61-19

Thompson Professional Grp,Inc
6110 Clarkson Lane
Houston, TX 77055
ATTN: L.J. Wieting

DATE: 06/15/96

PROJECT: Soil Bore/GWM B1,B2 &B3
SITE: Caldwell County, TX
SAMPLED BY: H.Platt Thompson Engineering
SAMPLE ID: B6-6520

PROJECT NO: LPST #108133
MATRIX: SOIL
DATE SAMPLED: 05/16/96 10:45:00
DATE RECEIVED: 05/17/96

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
BENZENE	60	50 P	µg/Kg
TOLUENE	< 50	50 P	µg/Kg
ETHYLBENZENE	2500	50 P	µg/Kg
TOTAL XYLENE	2630	50 P	µg/Kg
TOTAL BTEX	5190		µg/Kg
Surrogate	**% Recovery**		
1,4-Difluorobenzene	74 «		
4-Bromofluorobenzene	136		
METHOD 5030/8020 ***			
Analyzed by: DY			
Date: 05/30/96			
TPH by Soxhlet/IR	6300	200	mg/Kg
METHOD 3540/418.1			
Analyzed by: JN			
Date: 06/06/96 08:00:00			
Sonication extraction	05/28/96		
METHOD 3550 ***			
Analyzed by: LD			
Date: 05/28/96 15:00:00			
Solids	90	1	% Weight
CLP Inorganics SOW			
Analyzed by: CA			
Date: 05/29/96			

(P) - Practical Quantitation Limit « - Recovery beyond control limits.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9605D61-19

Thompson Professional Grp,Inc
6110 Clarkson Lane
Houston, TX 77055
ATTN: L.J. Wieting

06/15/96

PROJECT: Soil Bore/GWM B1,B2 &B3
SITE: Caldwell County, TX
SAMPLED BY: H.Platt Thompson Engineering
SAMPLE ID: B6-6520

PROJECT NO: LPST #108133
MATRIX: SOIL
DATE SAMPLED: 05/16/96 10:45:00
DATE RECEIVED: 05/17/96

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Naphthalene	2100	750	µg/Kg
Acenaphthylene	< 375.0	375.0	µg/Kg
Acenaphthene	< 1250	1250	µg/Kg
Fluorene	< 1400.0	1400.0	µg/Kg
Phenanthrene	< 1300.0	1300.0	µg/Kg
Anthracene	< 1125.0	1125.0	µg/Kg
Fluoranthene	< 950.0	950.0	µg/Kg
Pyrene	< 875.0	875.0	µg/Kg
Chrysene	< 675.0	675.0	µg/Kg
Benzo (a) anthracene	< 675.0	675.0	µg/Kg
Benzo (b) fluoranthene	< 550.0	550.0	µg/Kg
Benzo (k) fluoranthene	< 600.0	600.0	µg/Kg
Benzo (a) pyrene	< 275.0	275.0	µg/Kg
Dibenzo (a,h) anthracene	< 600.0	600.0	µg/Kg
Benzo (g,h,i) perylene	< 875.0	875.0	µg/Kg
Indeno (1,2,3-cd) pyrene	< 650.0	650.0	µg/Kg

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
Biphenyl	µg/Kg	D	50	150
Coronene	µg/Kg	D	50	150

ANALYZED BY: JZL DATE/TIME: 06/04/96 20:51:09
EXTRACTED BY: LD DATE/TIME: 05/28/96 15:00:00
METHOD: 8310 Polynuclear Aromatic Hydrocarbons
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed
D - Diluted, control limits not applicable.

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9605D61-20

Thompson Professional Grp,Inc
6110 Clarkson Lane
Houston, TX 77055
ATTN: L.J. Wieting

DATE: 06/14/96

PROJECT: Soil Bore/GWM B1,B2 &B3
SITE: Caldwell County, TX
SAMPLED BY: H.Platt Thompson Engineering
SAMPLE ID: G1-1234

PROJECT NO: LPST #108133
MATRIX: WATER
DATE SAMPLED: 05/16/96 11:05:00
DATE RECEIVED: 05/17/96

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
BENZENE	1500	5 P	µg/L
TOLUENE	8	5 P	µg/L
ETHYLBENZENE	170	5 P	µg/L
TOTAL XYLENE	< 5	5 P	µg/L
TOTAL BTEX	1678		µg/L

Surrogate	% Recovery
1,4-Difluorobenzene	144 «
4-Bromofluorobenzene	143

METHOD 5030/8020 ***
Analyzed by: VHZ
Date: 05/28/96

(P) - Practical Quantitation Limit ND - Not detected.
« - Recovery beyond control limits.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9605D61-21

Thompson Professional Grp,Inc
6110 Clarkson Lane
Houston, TX 77055
ATTN: L.J. Wieting

DATE: 06/14/96

PROJECT: Soil Bore/GWM B1,B2 &B3
SITE: Caldwell County, TX
SAMPLED BY: H.Platt Thompson Engineering
SAMPLE ID: G1-3234

PROJECT NO: LPST #108133
MATRIX: WATER
DATE SAMPLED: 05/16/96 15:15:00
DATE RECEIVED: 05/17/96

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
BENZENE	< 1	1 P	µg/L
TOLUENE	< 1	1 P	µg/L
ETHYLBENZENE	< 1	1 P	µg/L
TOTAL XYLENE	< 1	1 P	µg/L
TOTAL BTEX	< 1		µg/L

Surrogate	% Recovery
1,4-Difluorobenzene	100
4-Bromofluorobenzene	79

METHOD 5030/8020 ***
Analyzed by: VHZ
Date: 05/28/96

(P) - Practical Quantitation Limit ND - Not detected.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9605D61-22

Thompson Professional Grp,Inc
6110 Clarkson Lane
Houston, TX 77055
ATTN: L.J. Wieting

DATE: 06/15/96

PROJECT: Soil Bore/GWM B1,B2 &B3
SITE: Caldwell County, TX
SAMPLED BY: H.Platt Thompson Engineering
SAMPLE ID: G1-4234

PROJECT NO: LPST #108133
MATRIX: WATER
DATE SAMPLED: 05/16/96 11:25:00
DATE RECEIVED: 05/17/96

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
BENZENE	< 1	1 P	µg/L
TOLUENE	< 1	1 P	µg/L
ETHYLBENZENE	< 1	1 P	µg/L
TOTAL XYLENE	1	1 P	µg/L
TOTAL BTEX	1		µg/L

Surrogate	% Recovery
1,4-Difluorobenzene	100
4-Bromofluorobenzene	93

METHOD 5030/8020 ***
Analyzed by: VHZ
Date: 05/28/96

(P) - Practical Quantitation Limit

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9605D61-23

Thompson Professional Grp,Inc
6110 Clarkson Lane
Houston, TX 77055
ATTN: L.J. Wieting

DATE: 06/15/96

PROJECT: Soil Bore/GWM B1,B2 &B3
SITE: Caldwell County, TX
SAMPLED BY: H.Platt Thompson Engineering
SAMPLE ID: G1-5234

PROJECT NO: LPST #108133
MATRIX: WATER
DATE SAMPLED: 05/16/96 11:10:00
DATE RECEIVED: 05/17/96

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Total Recoverable Petroleum Hydrocarbons Method 418.1* Analyzed by: LD Date: 06/03/96 14:00:00	7	0.5	mg/L

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9605D61-24

Thompson Professional Grp,Inc
6110 Clarkson Lane
Houston, TX 77055
ATTN: L.J. Wieting

DATE: 06/15/96

PROJECT: Soil Bore/GWM B1,B2 &B3
SITE: Caldwell County, TX
SAMPLED BY: H.Platt Thompson Engineering
SAMPLE ID: G1-7234

PROJECT NO: LPST #108133
MATRIX: WATER
DATE SAMPLED: 05/16/96 15:20:00
DATE RECEIVED: 05/17/96

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Total Recoverable Petroleum Hydrocarbons Method 418.1* Analyzed by: LD Date: 06/03/96 14:00:00	< 0.5	0.5	mg/L

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9605D61-25

Thompson Professional Grp,Inc
6110 Clarkson Lane
Houston, TX 77055
ATTN: L.J. Wieting

DATE: 06/15/96

PROJECT: Soil Bore/GWM B1,B2 &B3
SITE: Caldwell County, TX
SAMPLED BY: H.Platt Thompson Engineering
SAMPLE ID: G1-8234

PROJECT NO: LPST #108133
MATRIX: WATER
DATE SAMPLED: 05/16/96 11:25:00
DATE RECEIVED: 05/17/96

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Total Recoverable Petroleum Hydrocarbons Method 418.1* Analyzed by: LD Date: 06/03/96 14:00:00	< 0.5	0.5	mg/L

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

QUALITY CONTROL

DOCUMENTATION

** SPL BATCH QUALITY CONTROL REPORT **
METHOD 8020***

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Matrix: Soil
Units: µg/Kg

Batch Id: VARD960525101700

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike Result <1>	Blank Spike Recovery %	QC Limits(**) (Mandatory) % Recovery Range
Benzene	ND	50	55	110	66 - 123
Toluene	ND	50	50	100	74 - 125
EthylBenzene	ND	50	50	100	84 - 125
O Xylene	ND	50	47	94.0	76 - 137
M & P Xylene	ND	100	89	89.0	81 - 131

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike Result <1>	Matrix Spike Recovery <4>	Matrix Spike Duplicate Result <1>	Matrix Spike Duplicate Recovery <5>	MS/MSD Relative % Difference	QC Limits(***) (Advisory) RPD Max.	Recovery Range
BENZENE	ND	20	19	95.0	19	95.0	0	33	47 - 143
TOLUENE	ND	20	17	85.0	17	85.0	0	35	46 - 148
ETHYLBENZENE	ND	20	15	75.0	15	75.0	0	40	32 - 151
O XYLENE	ND	20	14	70.0	14	70.0	0	24	35 - 143
M & P XYLENE	ND	40	24	60.0	24	60.0	0	38	25 - 139

Analyst: DY
Sequence Date: 05/25/96
SPL ID of sample spiked: 9605922-01A
Sample File ID: D___662.TX0
Method Blank File ID:
Blank Spike File ID: D___656.TX0
Matrix Spike File ID: D___660.TX0
Matrix Spike Duplicate File ID: D___661.TX0

* = Values Outside QC Range
NC = Not Calculated (Sample exceeds spike by factor of 4 or more)
ND = Not Detected/Below Detection Limit
% Recovery = [(<1> - <2>) / <3>] x 100
LCS % Recovery = (<1> / <3>) x 100
Relative Percent Difference = |(<4> - <5> | / [(<4> + <5>) x 0.5] x 100
(**) = Source: SPL-Houston Historical Data (4th Q '95)
(***) = Source: SPL-Houston Historical Data (4th Q '95)

SAMPLES IN BATCH(SPL ID):

9605922-07A 9605922-08A 9605967-01A 9605967-02A
9605967-03A 9605967-04A 9605D61-01A 9605922-01A
9605922-05A

QC Officer

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

** SPL BATCH QUALITY CONTROL REPORT **
METHOD 8020***

Matrix: Soil
Units: µg/Kg

Batch Id: VARE960528152200

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike Result <1>	Blank Spike Recovery %	QC Limits(**) (Mandatory) % Recovery Range
Benzene	ND	50	52	104	66 - 123
Toluene	ND	50	52	104	74 - 125
EthylBenzene	ND	50	52	104	84 - 125
O Xylene	ND	50	52	104	76 - 137
M & P Xylene	ND	100	100	100	81 - 131

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike Result <1>	Matrix Spike Recovery <4>	Matrix Spike Duplicate Result <1>	Matrix Spike Duplicate Recovery <5>	MS/MSD Relative % Difference	QC Limits(***) (Advisory) RPD Max.	Recovery Range
BENZENE	1	20	18	85.0	20	95.0	11.1	33	47 - 143
TOLUENE	10	20	16	30.0 *	19	45.0 *	40.0 *	35	46 - 148
ETHYLBENZENE	ND	20	15	75.0	20	100	28.6	40	32 - 151
O XYLENE	ND	20	16	80.0	20	100	22.2	24	35 - 143
M & P XYLENE	ND	40	32	80.0	41	102	24.2	38	25 - 139

Analyst: DY
Sequence Date: 05/28/96
SPL ID of sample spiked: 9605942-02A
Sample File ID: E___874.TX0
Method Blank File ID:
Blank Spike File ID: E___868.TX0
Matrix Spike File ID: E___871.TX0
Matrix Spike Duplicate File ID: E___898.TX0

* = Values Outside QC Range
NC = Not Calculated (Sample exceeds spike by factor of 4 or more)
ND = Not Detected/Below Detection Limit
% Recovery = [(<1> - <2>) / <3>] x 100
LCS % Recovery = (<1> / <3>) x 100
Relative Percent Difference = |(<4> - <5> | / [(<4> + <5>) x 0.5] x 100
(**) = Source: SPL-Houston Historical Data (4th Q '95)
(***) = Source: SPL-Houston Historical Data (4th Q '95)

SAMPLES IN BATCH(SPL ID):

9605D61-03A 9605D61-02A 9605C94-15A 9605C94-16A
9605C94-23A 9605C94-24A 9605C94-25A 9605C94-28A
9605C94-30A 9605C94-31A 9605C94-32A 9605942-01A
9605942-03A 9605942-04A 9605C94-03A 9605C94-22A
9605C14-01A 9605942-02A

QC Officer

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

** SPL BATCH QUALITY CONTROL REPORT **
METHOD 8020***

Matrix: Soil
Units: µg/Kg

Batch Id: HP_P960529042100

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike Result <1>	Blank Spike Recovery %	QC Limits(**) (Mandatory) % Recovery Range
Benzene	ND	50	55	110	66 - 123
Toluene	ND	50	61	122	74 - 125
EthylBenzene	ND	50	58	116	84 - 125
O Xylene	ND	50	44	88.0	76 - 137
M & P Xylene	ND	100	96	96.0	81 - 131

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike Result <1>	Matrix Spike Recovery <4>	Matrix Spike Duplicate Result <1>	Matrix Spike Duplicate Recovery <5>	MS/MSD Relative % Difference	QC Limits(***) (Advisory) RPD Max.	Recovery Range
BENZENE	ND	20	12	60.0	13	65.0	8.00	33	47 - 143
TOLUENE	ND	20	24	120	26	130	8.00	35	46 - 148
ETHYLBENZENE	ND	20	23	115	23	115	0	40	32 - 151
O XYLENE	ND	20	17	85.0	18	90.0	5.71	24	35 - 143
M & P XYLENE	ND	40	35	87.5	38	95.0	8.22	38	25 - 139

Analyst: AA/
Sequence Date: 05/31/96
SPL ID of sample spiked: 9605D61-04A
Sample File ID: PP__828.TX0
Method Blank File ID:
Blank Spike File ID: PP__840A.TX0
Matrix Spike File ID: PP__843.TX0
Matrix Spike Duplicate File ID: PP__842.TX0

* = Values Outside QC Range
NC = Not Calculated (Sample exceeds spike by factor of 4 or more)
ND = Not Detected/Below Detection Limit
% Recovery = [(<1> - <2>) / <3>] x 100
LCS % Recovery = (<1> / <3>) x 100
Relative Percent Difference = |(<4> - <5> | / [(<4> + <5>) x 0.5] x 100
(**) = Source: SPL-Houston Historical Data (4th Q '95)
(***) = Source: SPL-Houston Historical Data (4th Q '95)

SAMPLES IN BATCH(SPL ID): 9605D61-04A 9605D61-05A 9605D61-06A 9605D61-07A 9605967-17A 9605D61-14A

QC Officer

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

** SPL BATCH QUALITY CONTROL REPORT **
METHOD 8020***

Matrix: Soil
Units: µg/Kg

Batch Id: VARE960529113500

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike Result <1>	Blank Spike Recovery %	QC Limits(**) (Mandatory) % Recovery Range
Benzene	ND	50	44	88.0	66 - 123
Toluene	ND	50	41	82.0	74 - 125
EthylBenzene	ND	50	43	86.0	84 - 125
O Xylene	ND	50	44	88.0	76 - 137
M & P Xylene	ND	100	81	81.0	81 - 131

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike Result <1>	Matrix Spike Recovery <4>	Matrix Spike Duplicate Result <1>	Matrix Spike Duplicate Recovery <5>	MS/MSD Relative % Difference	QC Limits(***) (Advisory) RPD Max.	Recovery Range
BENZENE	4	20	20	80.0	23	95.0	17.1	33	47 - 143
TOLUENE	7	20	16	45.0 *	19	60.0	28.6	35	46 - 148
ETHYLBENZENE	22	20	31	45.0	39	85.0	61.5 *	40	32 - 151
O XYLENE	8	20	15	35.0	16	40.0	13.3	24	35 - 143
M & P XYLENE	20	40	32	30.0	37	42.5	34.5	38	25 - 139

Analyst: DY
Sequence Date: 05/29/96
SPL ID of sample spiked: 9605964-04A
Sample File ID: E___918.TX0
Method Blank File ID:
Blank Spike File ID: E___899.TX0
Matrix Spike File ID: E___901.TX0
Matrix Spike Duplicate File ID: E___902.TX0

* = Values Outside QC Range
NC = Not Calculated (Sample exceeds spike by factor of 4 or more)
ND = Not Detected/Below Detection Limit
% Recovery = [(<1> - <2>) / <3>] x 100
LCS % Recovery = (<1> / <3>) x 100
Relative Percent Difference = |(<4> - <5> | / [(<4> + <5>) x 0.5] x 100
(**) = Source: SPL-Houston Historical Data (4th Q '95)
(***) = Source: SPL-Houston Historical Data (4th Q '95)

SAMPLES IN BATCH(SPL ID):

9605D61-09A 9605D61-10A 9605D61-11A 9605967-15A
9605967-16A 9605D61-12A 9605964-04A 9605964-01A
9605964-02A 9605964-05A 9605952-02A 9605952-03A
9605952-04A 9605952-07A 9605964-03A 9605952-1A
9605C94-14A 9605C94-13A 9605D61-08A

QC Officer

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

** SPL BATCH QUALITY CONTROL REPORT **
METHOD 8020***

Matrix: Soil
Units: µg/Kg

Batch Id: VARD960529183100

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike Result <1>	Blank Spike Recovery %	QC Limits(**) (Mandatory) % Recovery Range
Benzene	ND	50	50	100	66 - 123
Toluene	ND	50	45	90.0	74 - 125
EthylBenzene	ND	50	50	100	84 - 125
O Xylene	ND	50	50	100	76 - 137
M & P Xylene	ND	100	100	100	81 - 131

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike Result <1>	Matrix Spike Recovery <4>	Matrix Spike Duplicate Result <1>	Matrix Spike Duplicate Recovery <5>	MS/MSD Relative % Difference	QC Limits(***) (Advisory) RPD Max.	Recovery Range
BENZENE	ND	50	66	132	67	134	1.50	33	47 - 143
TOLUENE	ND	150	132	88.0	131	87.3	0.799	35	46 - 148
ETHYLBENZENE	ND	50	47	94.0	48	96.0	2.11	40	32 - 151
O XYLENE	19	100	101	82.0	102	83.0	1.21	24	35 - 143
M & P XYLENE	8	100	103	95.0	103	95.0	0	38	25 - 139

Analyst: fab
Sequence Date: 05/30/96
SPL ID of sample spiked: 9605967-14A
Sample File ID: D___723.TX0
Method Blank File ID:
Blank Spike File ID: D___734.TX0
Matrix Spike File ID: D___742.TX0
Matrix Spike Duplicate File ID: D___743.TX0

* = Values Outside QC Range
NC = Not Calculated (Sample exceeds spike by factor of 4 or more)
ND = Not Detected/Below Detection Limit
% Recovery = [(<1> - <2>) / <3>] x 100
LCS % Recovery = (<1> / <3>) x 100
Relative Percent Difference = |(<4> - <5> | / [(<4> + <5>) x 0.5] x 100
(**) = Source: SPL-Houston Historical Data (4th Q '95)
(***) = Source: SPL-Houston Historical Data (4th Q '95)

SAMPLES IN BATCH(SPL ID):

9605955-05A 9605967-14A 9605955-07A 9605967-18A
9605967-19A 9605967-20A 9605967-21A 9605955-02A
9605967-22A 9605A83-01A 9605A83-02A 9605955-03A
9605955-04A 9605955-08A 9605956-01A 9605956-02A
9605D61-13A

QC Officer

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

** SPL BATCH QUALITY CONTROL REPORT **
METHOD 8020***

Matrix: Soil
Units: µg/Kg

Batch Id: VARE960530065000

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike Result <1>	Blank Spike Recovery %	QC Limits(**) (Mandatory) % Recovery Range
Benzene	ND	50	50	100	66 - 123
Toluene	ND	50	48	96.0	74 - 125
EthylBenzene	ND	50	49	98.0	84 - 125
O Xylene	ND	50	48	96.0	76 - 137
M & P Xylene	ND	100	92	92.0	81 - 131

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike Result <1>	Matrix Spike Recovery <4>	Matrix Spike Duplicate Result <1>	Matrix Spike Duplicate Recovery <5>	MS/MSD Relative % Difference	QC Limits(***) (Advisory) RPD Max.	Recovery Range
BENZENE	ND	20	18	90.0	17	85.0	5.71	33	47 - 143
TOLUENE	1	20	16	75.0	16	75.0	0	35	46 - 148
ETHYLBENZENE	ND	20	15	75.0	15	75.0	0	40	32 - 151
O XYLENE	ND	20	15	75.0	15	75.0	0	24	35 - 143
M & P XYLENE	ND	40	31	77.5	30	75.0	3.28	38	25 - 139

Analyst: DY
Sequence Date: 05/30/96
SPL ID of sample spiked: 9605942-13A
Sample File ID: E___943.TX0
Method Blank File ID:
Blank Spike File ID: E___929.TX0
Matrix Spike File ID: E___932.TX0
Matrix Spike Duplicate File ID: E___933.TX0

* = Values Outside QC Range
NC = Not Calculated (Sample exceeds spike by factor of 4 or more)
ND = Not Detected/Below Detection Limit
% Recovery = [(<1> - <2>) / <3>] x 100
LCS % Recovery = (<1> / <3>) x 100
Relative Percent Difference = |(<4> - <5> | / [(<4> + <5>) x 0.5] x 100
(**) = Source: SPL-Houston Historical Data (4th Q '95)
(***) = Source: SPL-Houston Historical Data (4th Q '95)

SAMPLES IN BATCH(SPL ID):

9605942-05A 9605942-08A 9605942-09A 9605942-11A
9605942-13A 9605942-12A 9605D61-18A 9605D61-15A
9605D61-19A 9605D61-14A 9605B84-02A 9605B84-03A
9605B84-07A 9605B84-05A 9605B84-06A 9605952-05A
9605952-06A

QC Officer

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

* SPL BATCH QUALITY CONTROL REPORT **
METHOD 8020***

Matrix: Soil
Units: µg/Kg

Batch Id: VARD960612130900

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike Result <1>	Blank Spike Recovery %	QC Limits(**) (Mandatory) % Recovery Range
Benzene	ND	50	50	100	66 - 123
Toluene	ND	50	53	106	74 - 125
EthylBenzene	ND	50	55	110	84 - 125
O Xylene	ND	50	57	114	76 - 137
M & P Xylene	ND	100	110	110	81 - 131

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike Result <1>	Matrix Spike Recovery <4>	Matrix Spike Duplicate Result <1>	Matrix Spike Duplicate Recovery <5>	MS/MSD Relative % Difference	QC Limits(***) (Advisory) RPD Max.	QC Limits(***) (Advisory) Recovery Range
BENZENE	ND	20	21	105	16	80.0	27.0	33	47 - 143
TOLUENE	ND	20	20	100	17	85.0	16.2	35	46 - 148
ETHYLBENZENE	ND	20	22	110	17	85.0	25.6	40	32 - 151
O XYLENE	ND	20	22	110	17	85.0	25.6 *	24	35 - 143
M & P XYLENE	ND	40	45	112	34	85.0	27.4	38	25 - 139

Analyst: YN
Sequence Date: 06/12/96
SPL ID of sample spiked: 9606484-01A
Sample File ID: D___101.TX0
Method Blank File ID:
Blank Spike File ID: D___083.TX0
Matrix Spike File ID: D___098.TX0
Matrix Spike Duplicate File ID: D___117.TX0

* = Values Outside QC Range
NC = Not Calculated (Sample exceeds spike by factor of 4 or more)
ND = Not Detected/Below Detection Limit
% Recovery = [(<1> - <2>) / <3>] x 100
LCS % Recovery = (<1> / <3>) x 100
Relative Percent Difference = |(<4> - <5> | / [(<4> + <5>) x 0.5] x 100
(**) = Source: SPL-Houston Historical Data (4th Q '95)
(***) = Source: SPL-Houston Historical Data (4th Q '95)

SAMPLES IN BATCH(SPL ID):

9606484-02A 9606484-03A 9606484-05A 9606484-01A
9606484-07A 9606484-06A 9606484-09A 9606484-10A
9606484-11A 9606484-12A 9606484-13A 9606451-03A
9606484-14A 9605D61-16A 9606351-02A 9606351-08A
9606351-09A

QC Officer

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

** SPL BATCH QUALITY CONTROL REPORT **
METHOD 8020***

Matrix: Soil
Units: µg/Kg

Batch Id: HP_0960530102100

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike Result <1>	Blank Spike Recovery %	QC Limits(**) (Mandatory) % Recovery Range
Benzene	ND	50	42	84.0	66 - 123
Toluene	ND	150	130	86.7	74 - 125
EthylBenzene	ND	50	47	94.0	84 - 125
O Xylene	ND	100	91	91.0	76 - 137
M & P Xylene	ND	200	180	90.0	81 - 131

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike Result <1>	Matrix Spike Recovery <4>	Matrix Spike Duplicate Result <1>	Matrix Spike Duplicate Recovery <5>	MS/MSD Relative % Difference	QC Limits(***) (Advisory) RPD Max.	Recovery Range
BENZENE	ND	50	40	80.0	42	84.0	4.88	33	47 - 143
TOLUENE	ND	150	120	80.0	120	80.0	0	35	46 - 148
ETHYLBENZENE	ND	50	41	82.0	40	80.0	2.47	40	32 - 151
O XYLENE	ND	100	80	80.0	76	76.0	5.13	24	35 - 143
M & P XYLENE	ND	100	83	83.0	79	79.0	4.94	38	25 - 139

Analyst: YN
Sequence Date: 05/31/96
SPL ID of sample spiked: 9605A21-01A
Sample File ID: OO__060.TX0
Method Blank File ID:
Blank Spike File ID: OO__056.TX0
Matrix Spike File ID: OO__057.TX0
Matrix Spike Duplicate File ID: OO__058.TX0

* = Values Outside QC Range
NC = Not Calculated (Sample exceeds spike by factor of 4 or more)
ND = Not Detected/Below Detection Limit
% Recovery = [(<1> - <2>) / <3>] x 100
LCS % Recovery = (<1> / <3>) x 100
Relative Percent Difference = |(<4> - <5>) | / [(<4> + <5>) x 0.5] x 100
(**) = Source: SPL-Houston Historical Data (4th Q '95)
(***) = Source: SPL-Houston Historical Data (4th Q '95)

SAMPLES IN BATCH(SPL ID):

9605A21-06A 9605A21-07A 9605A21-08A 9605A21-01A
9605A21-11A 9605A21-12A 9605A21-13A 9605A21-09A
9605A21-10A 9605A20-01A 9605954-14A 9605A20-02A
9605D61-17A 9605955-06A 9605A21-02A 9605A21-03A
9605A21-04A 9605A21-05A

QC Officer

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

** SPL BATCH QUALITY CONTROL REPORT **

METHOD EPA 8310

Matrix: Soil

Units: µg/Kg

Batch Id: 1960529142900

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike Result <1>	Blank Spike Recovery %	QC Limits(**) (Mandatory) % Recovery Range
Naphthalene	ND	16.7	9.8	58.7	1 - 122
Acenaphthylene	ND	16.7	11.0	65.9	1 - 139
Acenaphthene	ND	16.7	9.2	55.1	1 - 124
Fluorene	ND	16.7	8.3	49.7	1 - 142
Phenanthrene	ND	16.7	9.8	58.7	1 - 155
Anthracene	ND	16.7	10	59.9	1 - 126
Fluoranthene	ND	16.7	10	59.9	14 - 123
Pyrene	ND	16.7	9.7	58.1	1 - 140
Chrysene	ND	16.7	9.5	56.9	1 - 199
Benzo (a) anthracene	ND	16.7	12.9	77.2	12 - 135
Benzo (b) fluoranthene	ND	16.7	13.3	79.6	6 - 150
Benzo (k) fluoranthene	ND	16.7	13.1	78.4	1 - 159
Benzo (a) pyrene	ND	16.7	10.6	63.5	1 - 128
Dibenzo (a,h) anthracene	ND	16.7	12.6	75.4	1 - 110
Benzo (g,h,i) perylene	ND	16.7	13.0	77.8	1 - 116
Indeno (1,2,3-cd) pyrene	ND	16.7	13.8	82.6	1 - 116

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike Result <1>	Matrix Spike Recovery <4>	Matrix Spike Duplicate Result <1>	Matrix Spike Duplicate Recovery <5>	MS/MSD Relative % Difference	QC Limits(***) (Advisory) RPD Max.	Recovery Range
NAPHTHALENE	ND	16.6	10.1	60.8	12.8	77.1	23.6	30	1 - 122
ACENAPHTHYLENE	ND	16.6	14.3	86.1	16.3	98.2	13.1	30	1 - 139
ACENAPHTHENE	ND	16.6	11.7	70.5	13.1	78.9	11.2	30	1 - 124
FLUORENE	ND	16.6	11.9	71.7	14.2	85.5	17.6	30	1 - 142
PHENANTHRENE	ND	16.6	13.6	81.9	14.7	88.6	7.86	30	1 - 155
ANTHRACENE	ND	16.6	14.2	85.5	15.6	94.0	9.47	30	1 - 126
FLUORANTHENE	ND	16.6	16.6	100	15.5	93.4	6.83	30	14 - 142
PYRENE	ND	16.6	14.6	88.0	13.9	83.7	5.01	30	1 - 140
CHRYSENE	ND	16.6	14.5	87.3	14.4	86.7	0.690	30	1 - 199
BENZO (A) ANTHRACENE	ND	16.6	14.9	89.8	14.9	89.8	0	30	12 - 135
BENZO (B) FLUORANTHENE	ND	16.6	15.7	94.6	15.0	90.4	4.54	30	6 - 150
BENZO (K) FLUORANTHENE	ND	16.6	14.6	88.0	14.9	89.8	2.02	30	1 - 159
BENZO (A) PYRENE	ND	16.6	14.2	85.5	14.6	88.0	2.88	30	1 - 128
DIBENZO (A,H) ANTHRACENE	ND	16.6	15.0	90.4	14.7	88.6	2.01	30	1 - 110
BENZO (G,H,I) PERYLENE	ND	16.6	17.5	105	14.8	89.2	16.3	30	1 - 116
INDENO (1,2,3-CD) PYRENE	ND	16.6	14.4	86.7	16.3	98.2	12.4	30	1 - 116

QC Officer

** SPL BATCH QUALITY CONTROL REPORT **

METHOD EPA 8310

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Matrix: Soil

Units: µg/Kg

Batch Id: 1960529142900

Analyst: JZL

Sequence Date: 05/29/96

SPL ID of sample spiked: 9605216-15B

Sample File ID: 960515B\006-0101

Method Blank File ID:

Blank Spike File ID: 960529A\005-0101

Matrix Spike File ID: 960515A\003-0101

Matrix Spike Duplicate File ID: 960515A\004-0101

* = Values Outside QC Range

NC = Not Calculated (Sample exceeds spike by factor of 4 or more)

ND = Not Detected/Below Detection Limit

% Recovery = [(<1> - <2>) / <3>] x 100

LCS % Recovery = (<1> / <3>) x 100

Relative Percent Difference = |(<4> - <5> | / [(<4> + <5>) x 0.5] x 100

(**) = Source: 8310, Table 3

(***) = Source: Temporary Limits

SAMPLES IN BATCH(SPL ID): 9605D61-01B 9605D61-03B

QC Officer

SPL BATCH QUALITY CONTROL REPORT **

METHOD EPA 8310

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Matrix: Soil

Units: µg/Kg

Batch Id: 1960529142910

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike Result <1>	Blank Spike Recovery %	QC Limits(**) (Mandatory) % Recovery Range
Naphthalene	ND	16.7	9.8	58.7	1 - 122
Acenaphthylene	ND	16.7	11.0	65.9	1 - 139
Acenaphthene	ND	16.7	9.2	55.1	1 - 124
Fluorene	ND	16.7	8.3	49.7	1 - 142
Phenanthrene	ND	16.7	9.8	58.7	1 - 155
Anthracene	ND	16.7	10.3	61.7	1 - 126
Fluoranthene	ND	16.7	10.3	61.7	14 - 123
Pyrene	ND	16.7	9.7	58.1	1 - 140
Chrysene	ND	16.7	9.5	56.9	1 - 199
Benzo (a) anthracene	ND	16.7	12.9	77.2	12 - 135
Benzo (b) fluoranthene	ND	16.7	13.3	79.6	6 - 150
Benzo (k) fluoranthene	ND	16.7	13.1	78.4	1 - 159
Benzo (a) pyrene	ND	16.7	10.6	63.5	1 - 128
Dibenzo (a,h) anthracene	ND	16.7	12.6	75.4	1 - 110
Benzo (g,h,i) perylene	ND	16.7	13.0	77.8	1 - 116
Indeno (1,2,3-cd) pyrene	ND	16.7	13.8	82.6	1 - 116

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike Result <1>	Matrix Spike Recovery <4>	Matrix Spike Duplicate Result <1>	Matrix Spike Duplicate Recovery <5>	MS/MSD Relative % Difference	QC Limits(***) (Advisory) RPD Max.	Recovery Range
NAPHTHALENE	ND	16.65	10	60.1	13	78.1	26.0	30	1 - 122
ACENAPHTHYLENE	ND	16.65	19	114	14	84.1	30.2 *	30	1 - 139
ACENAPHTHENE	ND	16.65	12	72.1	12	72.1	0	30	1 - 124
FLUORENE	ND	16.65	10	60.1	9.6	57.7	4.07	30	1 - 142
PHENANTHRENE	ND	16.65	9.1	54.7	7.3	43.8	22.1	30	1 - 155
ANTHRACENE	ND	16.65	9.1	54.7	9.5	57.1	4.29	30	1 - 126
FLUORANTHENE	ND	16.65	7.8	46.8	7.7	46.2	1.29	30	14 - 142
PYRENE	ND	16.65	11	66.1	12	72.1	8.68	30	1 - 140
CHRYSENE	ND	16.65	9.5	57.1	10	60.1	5.12	30	1 - 199
BENZO (A) ANTHRACENE	ND	16.65	13	78.1	14	84.1	7.40	30	12 - 135
BENZO (B) FLUORANTHENE	ND	16.65	12	72.1	13	78.1	7.99	30	6 - 150
BENZO (K) FLUORANTHENE	ND	16.65	13	78.1	13	78.1	0	30	1 - 159
BENZO (A) PYRENE	ND	16.65	8.1	48.6	8.5	51.1	5.02	30	1 - 128
DIBENZO (A,H) ANTHRACENE	ND	16.65	12	72.1	13	78.1	7.99	30	1 - 110
BENZO (G,H,I) PERYLENE	ND	16.65	12	72.1	13	78.1	7.99	30	1 - 116
INDENO (1,2,3-CD) PYRENE	ND	16.65	15	90.1	15	90.1	0	30	1 - 116

QC Officer

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

** SPL BATCH QUALITY CONTROL REPORT **
METHOD EPA 8310

Matrix: Soil
Units: µg/Kg

Batch Id: 1960529142910

Analyst: JZL
Sequence Date: 05/29/96
SPL ID of sample spiked: 9605D61-04B
Sample File ID: 960603B\018-0401
Method Blank File ID:
Blank Spike File ID: 960529A\005-0101
Matrix Spike File ID: 960531B\014-0501
Matrix Spike Duplicate File ID: 960531B\015-0501

* = Values Outside QC Range
NC = Not Calculated (Sample exceeds spike by factor of 4 or more)
ND = Not Detected/Below Detection Limit
% Recovery = [(<1> - <2>) / <3>] x 100
LCS % Recovery = (<1> / <3>) x 100
Relative Percent Difference = |(<4> - <5> | / [(<4> + <5>) x 0.5] x 100
(**) = Source: 8310, Table 3
(***) = Source: Temporary Limits

SAMPLES IN BATCH(SPL ID):

9605D61-17B	9605D61-13B	9605D61-08B	9605D61-12B
9605D61-14B	9605D61-09B	9605D61-05B	9605D61-10B
9605D61-16B	9605D61-15B	9605D61-04B	9605D61-05B
9605D61-06B	9605D61-18B	9605D61-14B	9605D61-16B
9605D61-19B	9605D61-07B	9605D61-11B	

QC Officer

SPL BATCH QUALITY CONTROL REPORT **

METHOD 8020***

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Matrix: Aqueous

Units: µg/L

Batch Id: HP_R960528111700

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike Result <1>	Blank Spike Recovery %	QC Limits(**) (Mandatory) % Recovery Range
Benzene	ND	50	36	72.0	62 - 121
Toluene	ND	50	45	90.0	66 - 136
EthylBenzene	ND	50	50	100	70 - 136
O Xylene	ND	50	54	108	74 - 134
M & P Xylene	ND	100	110	110	77 - 140

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike Result <1>	Matrix Spike Recovery <4>	Matrix Spike Duplicate Result <1>	Matrix Spike Duplicate Recovery <5>	MS/MSD Relative % Difference	QC Limits(***) (Advisory) RPD Max.	QC Limits(***) (Advisory) Recovery Range
BENZENE	ND	20	20	100	22	110	9.52	25	39 - 150
TOLUENE	ND	20	19	95.0	21	105	10.0	26	56 - 134
ETHYLBENZENE	ND	20	18	90.0	19	95.0	5.41	38	61 - 128
O XYLENE	ND	20	19	95.0	21	105	10.0	29	40 - 130
M & P XYLENE	1	40	38	92.5	41	100	7.79	20	43 - 152

Analyst: VHZ

Sequence Date: 05/28/96

SPL ID of sample spiked: 9605D61-22A

Sample File ID: R___212.TX0

Method Blank File ID:

Blank Spike File ID: R___209.TX0

Matrix Spike File ID: R___216.TX0

Matrix Spike File ID: R___217.TX0

* = Values Outside QC Range

NC = Not Calculated (Sample exceeds spike by factor of 4 or more)

ND = Not Detected/Below Detection Limit

% Recovery = [(<1> - <2>) / <3>] x 100

LCS % Recovery = (<1> / <3>) x 100

Relative Percent Difference = |(<4> - <5> | / [(<4> + <5>) x 0.5] x 100

(**) = Source: SPL-Houston Historical Data (3rd Q '95)

(***) = Source: SPL-Houston Historical Data (4th Q '94)

SAMPLES IN BATCH(SPL ID):

9605825-02A 9605825-06A 9605825-07A 9605825-11A
9605878-03A 9605B45-01A 9605B45-02A 9605B50-01A
9605B50-02A 9605B50-03A 9605B62-02A 9605B62-03A
9605B62-06A 9605C84-01A 9605D61-22A 9605D61-21A
9605D61-20A

QC Officer

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

** SPL QUALITY CONTROL REPORT **

Matrix: Soil

Reported on: 06/06/96
Analyzed on: 06/06/96
Analyst: JN

This sample was randomly selected for use in the SPL quality control program. Samples chosen are fortified with a known concentration in duplicate. The results are as follows:

TPH by Soxhlet/IR
METHOD 3540/418.1

SPL Sample ID Number	Blank Value mg/kg	Amt Added mg/kg	Matrix Spike Recovery %	Matrix Spike Duplicate Recovery %	Relative Percent Difference %	QC Limits Recovery	RPD Max.
9605D61-04A	ND	203	89.2	93.6	4.8	68. - 125	20

960606JN -9606203

Samples in batch:

9605D61-01A	9605D61-02A	9605D61-03A	9605D61-04A
9605D61-05A	9605D61-06A	9605D61-07A	9605D61-08A
9605D61-09A	9605D61-10A	9605D61-11A	9605D61-12A
9605D61-13A	9605D61-14A	9605D61-15A	9605D61-16A
9605D61-17A	9605D61-18A	9605D61-19A	

COMMENTS:

SPL, Incorporated

Cynthia Schnell

QC Officer

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

** SPL QUALITY CONTROL REPORT **

Matrix: Aqueous

Reported on: 06/03/96
Analyzed on: 06/03/96
Analyst: LD

This sample was randomly selected for use in the SPL quality control program. Samples chosen are fortified with a known concentration in duplicate. The results are as follows:

Total Recoverable Petroleum Hydrocarbons
Method 418.1*

SPL Sample ID Number	Blank Value mg/l	Amt Added mg/l	Matrix Spike Recovery %	Matrix Spike Duplicate Recovery %	Relative Percent Difference %	QC Limits Recovery	RPD Max.
BLANK	ND	4.0	105	102	2.9	82. - 112	9.8

960603DR -9606068

Samples in batch:

9605C92-01B	9605C92-07B	9605C96-01B	9605C96-02B
9605C96-03B	9605C96-04B	9605C96-05B	9605C96-06B
9605C96-07B	9605D61-23A	9605D61-24A	9605D61-25A
9605D71-01B	9605D71-02B	9605E28-01B	9605E28-02B
9605E28-03B	9605E28-04B	9605E28-05B	9605E42-01B

COMMENTS:

SPL Incorporated

QC Officer

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

** SPL QUALITY CONTROL REPORT **

Matrix: Soil

Reported on: 05/30/96
Analyzed on: 05/29/96
Analyst: CA

This sample was randomly selected for use in the SPL quality control program. The results are as follows:

Solids
CLP Inorganics SOW

-- DUPLICATE ANALYSIS --

SPL Sample ID	Original Sample Concentration wt. %	Duplicate Sample wt. %	RPD	RPD Max.
9605D54-01H	96	97	1.0	20

-9605B70

Samples in batch:

9605D54-01H 9605D61-01B 9605D61-02B 9605D61-03B
9605D61-04B 9605D61-05B 9605D61-06B 9605D61-07B
9605D61-08B 9605D61-09B

COMMENTS:

ST

SPL, Incorporated

QC Officer

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

** SPL QUALITY CONTROL REPORT **

Matrix: Soil

Reported on: 05/30/96
Analyzed on: 05/29/96
Analyst: CA

This sample was randomly selected for use in the SPL quality control program. The results are as follows:

Solids
CLP Inorganics SOW

-- DUPLICATE ANALYSIS --

SPL Sample ID	Original Sample Concentration wt. %	Duplicate Sample wt. %	RPD	RPD Max.
9605D61-16B	85	87	2.3	20

-9605B71

Samples in batch:

9605D61-10B 9605D61-11B 9605D61-12B 9605D61-13B
9605D61-14B 9605D61-15B 9605D61-16B 9605D61-17B
9605D61-18B 9605D61-19B

COMMENTS:
ST

SPL, Incorporated

QC Officer

CHAIN OF CUSTODY

AND

SAMPLE RECEIPT CHECKLIST

1

#128 9605D61

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

Former Gary Air Force Base LPST # 108133 5-14-96	Soil Boring /Ground Water Monitoring Well No. B1, B2 B3	Caldwell County, Texas

Field Sample No./ Identification	Date and Time	Filtered Yes	Filtered No	Sample Container (SIZE/MAT'L)	Sample Type (Liquid, Sludge, Etc.)	Preservative	ANALYSIS REQUESTED BTEX	TPH	PAH	LABORATORY REMARKS
B1-1022	10:58		✓	2" x 2" Glass	Soil	None	EPA 8020	EPA 418.1 soxlet extraction EPA 9540	EPA 8310	
B1-1035	11:20 A		✓	"	"	"	"	"	"	
B1-1026	11:04A		✓	"	"	"	"	"	"	
	5-15-96									
B2-2130	9:50 A		✓	"	"	"	"	"	"	
B2-2117	11:43A		✓	"	"	"	"	"	"	
B2-2121	9:15A		✓	"	"	"	"	"	"	
B3-3230	11:25A		✓	"	"	"	"	"	"	
B3-3217	3:34 P		✓	"	"	"	"	"	"	
B3-3222	3:35 P		✓	"	"	"	"	"	"	

Samplers: (Signature)	Relinquished by: (Signature)	Date: 5/16/96 Time: 6:37 P	Received by: (Signature)	Date: Time:	Intact
	Relinquished by: (Signature)	Date: Time:	Received by: (Signature)	Date: 5/17/96 Time: 1000	Intact 6°C
Affiliation: Thompson Professional Group, Inc. 6110 Clarkson Lane Houston, TX 77055 (713) 956-4100	Relinquished by: (Signature)	Date: Time:	Received by: (Signature)	Date: Time:	Intact
SAMPLER REMARKS:			Received for laboratory: (SIGNATURE)	Date: Time:	Laboratory No.
Seal #			Data Results to:		

9605D61

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

Former Gary Air Force Base
LPST # 108133
5-15-96

Soil Boring /Ground Water Monitoring Well No. B4 B5, B6

Caldwell County, Texas

Field Sample No./ Identification	Date and Time	Filtered Yes	Filtered No	Sample Container (SIZE/MAT'L)	Sample Type (Liquid, Sludge, Etc.)	Preservative	ANALYSIS REQUESTED BTEX	TPH	PAH	LABORATORY REMARKS
B4-1330	3:10 P		✓	2" x 2" Glass	Soil	None	EPA 8020	EPA 418.1 Soxlet extraction EPA 3540	EPA 8310	
B4-1316	4:25 P		✓	"	"	"	"	"	"	
B4-1318	2:50 P		✓	"	"	"	"	"	"	
	5-16-96									
B5-5430	09:25 A		✓	"	"	"	"	"	"	
B5-5417	11:44 A		✓	"	"	"	"	"	"	
B5-5414	08:55 A		✓	"	"	"	"	"	"	
B5-5420	09:15 A		✓	"	"	"	"	"	"	
B6-1530	10:55 A		✓	"	"	"	"	"	"	
B6-1517	1:37 P		✓	"	"	"	"	"	"	

Samplers: (Signature)	Relinquished by: (Signature)	Date: 5/16/96 Time: 6:37 P	Received by: (Signature)	Date: Time:	Intact
	Relinquished by: (Signature)	Date: Time:	Received by: (Signature)	Date: 5/17/96 Time: 1000	Intact 6°C
Affiliation: Thompson Professional Group Inc. 6110 Clarkson Lane Houston, TX 77055 (713) 956-4100	Relinquished by: (Signature)	Date: Time:	Received by: (Signature)	Date: Time:	Intact
SAMPLER REMARKS:			Received for laboratory: (SIGNATURE)	Date: Time:	Laboratory No.
Seal #			Data Results to:		

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

Former Gary Air Force Base LPST # 108133 5-16-96	Soil Boring /Ground Water Monitoring Well No. 86 GW1	Caldwell County, Texas

Field Sample No./ Identification	Date and Time	Filtered Yes	Filtered No	Sample Container (SIZE/MAT'L)	Sample Type (Liquid, Sludge, Etc.)	Preservative	ANALYSIS REQUESTED	LABORATORY REMARKS
BL-1520	10:45A		✓	2" x 2" Glass	Soil	None	BTEX EPA 8020; TPH EPA 418.1; EPA 3540 Soxlet extraction; PAH EPA 8310	
G1-1234	11:05A		✓	2-40 ml Glass	GW	HCL	BTEX EPA 8020	pH = 1 5/22/96
G1-3234	3:15P		✓	"	"	"	"	
G1-4234	11:25A		✓	"	"	"	"	
G1-5234	11:10A		✓	1L Glass	"	"	TPH EPA 418.1; EPA 3540 Soxlet extraction	
G1-7234	3:20P		✓	"	"	"	"	
G1-8234	11:25A		✓	"	"	"	"	
G1-1324	11:15A		✓	1L Amber	"	None	PAH EPA 8310	Samples expired do not run per L.W.
G1-3324	3:25P		✓	"	"	"	"	
G1-4324	11:25A		✓	"	"	"	"	

Samplers: (Signature)	Relinquished by: (Signature)	Date: 5/16/96 Time: 6:37	Received by: (Signature)	Date: Time:	Intact
Affiliation	Relinquished by: (Signature)	Date: Time:	Received by: (Signature) S West	Date: 5/17/96 Time: 1000	Intact 6°C
Thompson Professional Group, Inc. 6110 Clarkson Lane Houston, TX 77055 (713) 956-4100	Relinquished by: (Signature)	Date: Time:	Received by: (Signature)	Date: Time:	Intact

SAMPLER REMARKS:

Seal #

Received for laboratory: (SIGNATURE) Date: Time:

Data Results to:

Laboratory No.

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

Former Gary Air Force Base LPST # 108133 5-16-96	Soil Boring /Ground Water Monitoring Well No. GW1	Caldwell County, Texas

Field Sample No./ Identification	Date and Time	Filtered Yes	Filtered No	Sample Container (SIZE/MAT'L)	Sample Type (Liquid, Sludge, Etc.)	Preservative	ANALYSIS REQUESTED	LABORATORY REMARKS
G1-5324	11:20A		✓	1L Amber	GW	None	pH, conductivity, DO, turbidity	
G1-7324	11:25A		✓	"	"	"	"	

Samplers: (Signature)	Relinquished by: (Signature)	Date: 5/16/96 Time: 6:37 p	Received by: (Signature)	Date: Time:	Intact
	Relinquished by: (Signature)	Date: Time:	Received by: (Signature) S West	Date: 5/17/96 Time: 1000	Intact 6°C
Affiliation: Thompson Professional Group Inc 6110 Clarkson Lane Houston, TX 77055 (713) 956-4100	Relinquished by: (Signature)	Date: Time:	Received by: (Signature)	Date: Time:	Intact
SAMPLER REMARKS:			Received for laboratory: (SIGNATURE)	Date: Time:	Laboratory No.
Seal #			Data Results to:		

SPL Houston Environmental Laboratory

Sample Login Checklist

Date:	Time:
5/17/96	1000

SPL Sample ID:
9605D61

			Yes	No
1	Chain-of-Custody (COC) form is present.		✓	
2	COC is properly completed.		✓	
3	If no, Non-Conformance Worksheet has been completed.			
4	Custody seals are present on the shipping container.		✓	
5	If yes, custody seals are intact.		✓	
6	All samples are tagged or labeled.		✓	
7	If no, Non-Conformance Worksheet has been completed.			
8	Sample containers arrived intact		✓	
9	Temperature of samples upon arrival:		6° C	
10	Method of sample delivery to SPL:	**SPL Delivery**		
		Client Delivery		
		FedEx Delivery (airbill #)	8277361922	
		Other:		
11	Method of sample disposal:	SPL Disposal	✓	
		HOLD		
		Return to Client		

Name:	Date:
S West	5/17/96

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Southern Petroleum Laboratories, Inc.

Certificate of Analysis Number: 96-05-F42

Approved for Release by:

Brent Barron, Client Services Supervisor

Date: 6/19/96

Greg Grandits
Laboratory Director

Idelis Williams
Quality Assurance Officer

The attached analytical data package may not be reproduced except in full without the express written approval of this laboratory.

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II. APPENDICES

Appendix I - Summary of Results
Appendix II - Laboratory Results

INTRODUCTION

SPL is pleased to present the following report to Thompson Engineering for the Corps of Engineer project USACE for former Gary Air Force Base received on May 31, 1996. The scope of work included two (2) WATER samples for BTEX and one (1) WATER sample for PAH analyses. All samples were received at a temperature of 4 degrees C.

GENERAL

The methods employed for this project are listed in the laboratory method section.

LABORATORY METHODS

The methods that were employed in this project were BTEX by SW846 method 5030/8020 and Polynuclear Aromatics Hydrocarbons (LCPAHW) by SW846 method 3510/8310.

DISCUSSION AND RECOMMENDATIONS

The results for the sample chosen for the matrix spike (MS), matrix spike duplicate (MSD) recoveries as well as the relative percent difference (RPD) between the matrix spike and the matrix spike duplicate for this project were acceptable except for the RPD between the MS,MSD for M & P Xylene in batch HP_U960606051300. The laboratory control sample (LCS) was well within the quality control (QC) limit criteria.

All of the detection limits and results have been based on the weight of the sample.

APPENDIX I

SUMMARY TABLE OF RESULTS for BTEXW

SAMPLE ID	DATE SAMPLED	SPL ID	MATRIX	COMPOUND	RESULTS
MW-1-7471	05/30/96	9605F42-01	WATER	Benzene Toluene Ethylbenzene Total Xylene Total Btex	1000 µg/L 9 µg/L 110 µg/L < 5 µg/L 1119 µg/L
MW-1-7472	05/30/96	9605F42-02	WATER	Benzene Toluene Ethylbenzene Total Xylene Total Btex	1100 µg/L 7 µg/L 110 µg/L < 5 µg/L 1217 µg/L

SUMMARY TABLE OF RESULTS for POLYNUCLEAR AROMATICHYDROCARBONS

SAMPLE ID	DATE SAMPLED	SPL ID	MATRIX	COMPOUND	RESULTS
MW-1-7473	05/30/96	9605F42-01	WATER	Naphthalene	170 μg/L
				Acenaphthylene	< 10.00 μg/L
				Acenaphthene	< 20.0 μg/L
				Fluorene	< 40.0 μg/L
				Phenanthrene	< 40.0 μg/L
				Anthracene	< 20.0 μg/L
				Fluoranthene	< 20.0 μg/L
				Pyrene	< 20.0 μg/L
				Chrysene	< 16.00 μg/L
				Benzo a anthracene	< 16.00 μg/L
				Benzo b fluoranthene	< 12.00 μg/L
				Benzo k fluoranthene	< 14.00 μg/L
				Benzo a pyrene	< 6.00 μg/L
				Dibenzo a,h, anthracene	< 14.00 μg/L
				Benzo g,h,i perylene	< 20.0 μg/L
				Indeno 1,2,3-cd pyrene	< 16.00 μg/L

APPENDIX II

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9605F42-01

Thompson Professional Grp,Inc
6110 Clarkson Lane
Houston, TX 77055
ATTN: L.J. Wieting

DATE: 06/18/96

PROJECT: USACE
SITE: Former Gary AFB
SAMPLED BY: H.Platt Thompson Engineering
SAMPLE ID: MW-1-7471

PROJECT NO: 867.09.01
MATRIX: WATER
DATE SAMPLED: 05/30/96 13:13:00
DATE RECEIVED: 05/31/96

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
BENZENE	1000	5 P	µg/L
TOLUENE	9	5 P	µg/L
ETHYLBENZENE	110	5 P	µg/L
TOTAL XYLENE	< 5	5 P	µg/L
TOTAL BTEX	1119		µg/L

Surrogate	% Recovery
1,4-Difluorobenzene	CI
4-Bromofluorobenzene	107

METHOD 5030/8020 ***
Analyzed by: LJ
Date: 06/07/96

(P) - Practical Quantitation Limit ND - Not detected.
CI - Coeluting interference.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9605F42-02

Thompson Professional Grp,Inc
6110 Clarkson Lane
Houston, TX 77055
ATTN: L.J. Wieting

DATE: 06/18/96

PROJECT: USACE
SITE: Former Gary AFB
SAMPLED BY: H.Platt Thompson Engineering
SAMPLE ID: MW-1-7472

PROJECT NO: 867.09.01
MATRIX: WATER
DATE SAMPLED: 05/30/96 13:15:00
DATE RECEIVED: 05/31/96

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
BENZENE	1100	5 P	µg/L
TOLUENE	7	5 P	µg/L
ETHYLBENZENE	110	5 P	µg/L
TOTAL XYLENE	< 5	5 P	µg/L
TOTAL BTEX	1217		µg/L

Surrogate	% Recovery
1,4-Difluorobenzene	CI
4-Bromofluorobenzene	104

METHOD 5030/8020 ***
Analyzed by: LJ
Date: 06/07/96

(P) - Practical Quantitation Limit ND - Not detected.
CI - Coeluting interference.

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9605F42-03

Thompson Professional Grp,Inc
6110 Clarkson Lane
Houston, TX 77055
ATTN: L.J. Wieting

06/18/96

PROJECT: USACE
SITE: Former Gary AFB
SAMPLED BY: H.Platt Thompson Engineering
SAMPLE ID: MW-1-7473

PROJECT NO: 867.09.01
MATRIX: WATER
DATE SAMPLED: 05/30/96 13:18:00
DATE RECEIVED: 05/31/96

ANALYTICAL DATA

PARAMETER	RESULTS	PQL*	UNITS
Naphthalene	170	18.00	µg/L
Acenaphthylene	< 10.00	10.00	µg/L
Acenaphthene	< 20.0	20.0	µg/L
Fluorene	< 40.0	40.0	µg/L
Phenanthrene	< 40.0	40.0	µg/L
Anthracene	< 20.0	20.0	µg/L
Fluoranthene	< 20.0	20.0	µg/L
Pyrene	< 20.0	20.0	µg/L
Chrysene	< 16.00	16.00	µg/L
Benzo (a) anthracene	< 16.00	16.00	µg/L
Benzo (b) fluoranthene	< 12.00	12.00	µg/L
Benzo (k) fluoranthene	< 14.00	14.00	µg/L
Benzo (a) pyrene	< 6.00	6.00	µg/L
Dibenzo (a,h) anthracene	< 14.00	14.00	µg/L
Benzo (g,h,i) perylene	< 20.0	20.0	µg/L
Indeno (1,2,3-cd) pyrene	< 16.00	16.00	µg/L

SURROGATES	AMOUNT SPIKED	% RECOVERY	LOWER LIMIT	UPPER LIMIT
Biphenyl	µg/L	D	50	150
Coronene	µg/L	D	50	150

ANALYZED BY: JZL DATE/TIME: 06/05/96 23:24:16
EXTRACTED BY: VM DATE/TIME: 06/03/96 09:00:00
METHOD: 8310 Polynuclear Aromatic Hydrocarbons
NOTES: * - Practical Quantitation Limit ND - Not Detected
NA - Not Analyzed
D - Diluted, control limits not applicable.

COMMENTS:

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

QUALITY CONTROL

DOCUMENTATION

** SPL BATCH QUALITY CONTROL REPORT **
METHOD 8020***

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Matrix: Aqueous
Units: µg/L

Batch Id: HP_U960606051300

LABORATORY CONTROL SAMPLE

SPIKE COMPOUNDS	Method Blank Result <2>	Spike Added <3>	Blank Spike Result <1>	Blank Spike Recovery %	QC Limits(**) (Mandatory) % Recovery Range
Benzene	ND	50	47	94.0	62 - 121
Toluene	ND	50	45	90.0	66 - 136
EthylBenzene	ND	50	46	92.0	70 - 136
O Xylene	ND	50	46	92.0	74 - 134
M & P Xylene	ND	100	92	92.0	77 - 140

MATRIX SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike Result <1>	Matrix Spike Recovery <4>	Matrix Spike Duplicate Result <1>	Matrix Spike Duplicate Recovery <5>	MS/MSD Relative % Difference	QC Limits(***) (Advisory) RPD Max.	QC Limits(***) (Advisory) Recovery Range
BENZENE	ND	20	50	100	24	120	18.2	25	39 - 150
TOLUENE	ND	20	44	88.0	22	110	22.2	26	56 - 134
ETHYLBENZENE	ND	20	48	96.0	22	110	13.6	38	61 - 128
O XYLENE	ND	20	48	96.0	22	110	13.6	29	40 - 130
M & P XYLENE	ND	40	95	190	45	112	51.7 *	20	43 - 152

Analyst: LJ
Sequence Date: 06/07/96
SPL ID of sample spiked: 9605D07-01A
Sample File ID: U___978.TX0
Method Blank File ID:
Blank Spike File ID: U___985.TX0
Matrix Spike File ID: U___987.TX0
Matrix Spike Duplicate File ID: U___989.TX0

* = Values Outside QC Range
NC = Not Calculated (Sample exceeds spike by factor of 4 or more)
ND = Not Detected/Below Detection Limit
% Recovery = [(<1> - <2>) / <3>] x 100
LCS % Recovery = (<1> / <3>) x 100
Relative Percent Difference = |(<4> - <5> | / [(<4> + <5>) x 0.5] x 100
(**) = Source: SPL-Houston Historical Data (3rd Q '95)
(***) = Source: SPL-Houston Historical Data (4th Q '94)

SAMPLES IN BATCH(SPL ID):

9606113-07B	9605E87-01A	9605E87-02A	9605D07-02A
9605E88-01A	9605E88-02A	9606172-02A	9606049-01A
9606049-02A	9606141-01A	9606185-01A	9606185-02A
9606172-01A	9605F42-01A	9605F42-02A	STD_50
9605D07-05A	9605E87-03A	9605D07-03A	9605D07-04A
9605D07-01A			

QC Officer

** SPL BATCH QUALITY CONTROL REPORT ** PAGE

METHOD EPA 8310

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Matrix: Aqueous

Units: µg/L

Batch Id: 1960605033900

BLANK SPIKES

SPIKE COMPOUNDS	Sample Results <2>	Spike Added <3>	Matrix Spike Result <1>	Matrix Spike Recovery <4>	Matrix Spike Duplicate Result <1>	Matrix Spike Duplicate Recovery <5>	MS/MSD Relative % Difference	QC Limits(**) (Advisory) RPD Max.	QC Limits(**) (Advisory) Recovery Range
NAPHTHALENE	ND	0.5	0.320	64.0	0.308	61.6	3.82	30	1 - 122
ACENAPHTHYLENE	ND	0.5	0.304	60.8	0.294	58.8	3.34	30	1 - 124
ACENAPHTHENE	ND	0.5	0.271	54.2	0.253	50.6	6.87	30	1 - 124
FLUORENE	ND	0.5	0.321	64.2	0.298	59.6	7.43	30	1 - 142
PHENANTHRENE	ND	0.5	0.292	58.4	0.293	58.6	0.342	30	1 - 155
ANTHRACENE	ND	0.5	0.290	58.0	0.288	57.6	0.692	30	1 - 126
FLUORANTHENE	ND	0.5	0.325	65.0	0.348	69.6	6.84	30	14 - 123
PYRENE	ND	0.5	0.319	63.8	0.342	68.4	6.96	30	1 - 140
CHRYSENE	ND	0.5	0.314	62.8	0.326	65.2	3.75	30	1 - 199
BENZO (A) ANTHRACENE	ND	0.5	0.402	80.4	0.417	83.4	3.66	30	12 - 135
BENZO (B) FLUORANTHENE	ND	0.5	0.431	86.2	0.444	88.8	2.97	30	6 - 150
BENZO (K) FLUORANTHENE	ND	0.5	0.437	87.4	0.446	89.2	2.04	30	1 - 159
BENZO (A) PYRENE	ND	0.5	0.343	68.6	0.350	70.0	2.02	30	1 - 128
DIBENZO (A,H) ANTHRACENE	ND	0.5	0.405	81.0	0.414	82.8	2.20	30	1 - 110
BENZO (G,H,I) PERYLENE	ND	0.5	0.427	85.4	0.438	87.6	2.54	30	1 - 116
INDENO (1,2,3-CD) PYRENE	ND	0.5	0.497	99.4	0.511	102	2.58	30	1 - 116

Analyst: JZL

Sequence Date: 06/05/96

Method Blank File ID:

Sample File ID:

Blank Spike File ID: 960604A\020-0501

Matrix Spike File ID:

Matrix Spike Duplicate File ID:

* = Values Outside QC Range

NC = Not Calculated (Sample exceeds spike by factor of 4 or more)

ND = Not Detected/Below Detection Limit

% Recovery = [(<1> - <2>) / <3>] x 100

Relative Percent Difference = |(<4> - <5> | / [(<4> + <5>) x 0.5] x 100

(**) = Source: SPL Temporary Limits

SAMPLES IN BATCH(SPL ID): 9605F25-03C 9605F25-02C 9605F42-03A

QC Officer

CHAIN OF CUSTODY

AND

SAMPLE RECEIPT CHECKLIST

9605F42 SS 6/1

THOMPSON PROFESSIONAL GROUP, INC.
6110 Clarkson Lane
Houston, Texas 77055
(713) 956-4100

Analysis Request and Chain of Custody Record

Project No.	Client/Project Name	Project Location
867.09.01	USACE	Former Gary AFB

FIELD SAMPLE NO./ IDENTIFICATION	DATE AND TIME	GRAB	COMP	SAMPLE CONTAINER (SIZE/MAT'L)	SAMPLE TYPE (LIQUID, SLUDGE, ETC.)	PRESER-VATIVE	ANALYSIS REQUESTED	LABORATORY REMARKS
MW-1-7471	5/30-1313			40 mL	GW	HCL	BTEX (EPA 8020	
MW-1-7472	5/30-1315			40 mL	GW	HCL	BTEX (EPA 8020	
MW-1-7473	5/30-1318			1L amber	GW	None	PAH (EPA 8310)	

Samplers: (Signature)	Relinquished by: (Signature)	Date: 5/31/96 Time: 11:09AM	Received by: (Signature)	Date: 5/31/96 Time: 1109	Intact
Affiliation	Relinquished by: (Signature)	Date: Time:	Received by: (Signature)	Date: Time:	Intact
SAMPLER REMARKS:			Received for laboratory: (Signature)	Date: Time:	Laboratory No.
Seal #			Data Results to:		

ROI Chilled to 4°C in lab Intact

SPL Houston Environmental Laboratory

Sample Login Checklist

Date: 5/31/96	Time: 1109

SPL Sample ID: 9605F42

			Yes	No
1	Chain-of-Custody (COC) form is present.		✓	
2	COC is properly completed.		✓	
3	If no, Non-Conformance Worksheet has been completed.			
4	Custody seals are present on the shipping container.		✓	
5	If yes, custody seals are intact.		✓	
6	All samples are tagged or labeled.		✓	
7	If no, Non-Conformance Worksheet has been completed.			
8	Sample containers arrived intact		✓	
9	Temperature of samples upon arrival:		Chilled to 4°C in lab C	
10	Method of sample delivery to SPL:	SPL Delivery		
		Client Delivery	✓	
		FedEx Delivery (airbill #)		
		Other:		
11	Method of sample disposal:	SPL Disposal	✓	
		HOLD		
		Return to Client		

Name: Alfredo Salas	Date: 5/31/96

JUL 3 0 1996

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Southern Petroleum Laboratories, Inc.

Certificate of Analysis Number: 96-07-861

Approved for Release by:

Siok Hong Chen, Project Manager Date: 7/29/96

Greg Grandits
Laboratory Director

Idelis Williams
Quality Assurance Officer

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II. APPENDICES

Appendix I - Summary of Results
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INTRODUCTION

SPL is pleased to present the following report to Thompson Engineering for the Corps of Engineer project LPST #108133 for Soil Boring/Ground Water Monitoring Well No. 1 received on July 18, 1996. The scope of work included two (2) water samples for Total Dissolved Solids. The samples were received at a temperature of 6 degrees Celsius.

GENERAL

The method employed for this project is listed in the laboratory method section.

LABORATORY METHODS

The method employed in this project was Total Dissolved Solids by method 160.1.

DISCUSSION AND RECOMMENDATIONS

All recoveries for the Analysis were within QC acceptable limits.

APPENDIX I

SUMMARY TABLE OF RESULTS for Total Dissolved Solids

SAMPLE ID	DATE SAMPLED	SPL ID	MATRIX	RESULT
MW1-7480	7/17/96	9607861-01	WATER	< 1 mg/L
MW1-7481	7/18/96	9607861-02	WATER	530 mg/L

APPENDIX II

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9607861-01

Thompson Professional Grp,Inc
6110 Clarkson Lane
Houston, TX 77055
ATTN: John Laser

DATE: 07/24/96

PROJECT: Soil Boring/Grnd Water Mon.#1
SITE: Caldwell County, TX
SAMPLED BY: Gary Air Force Base
SAMPLE ID: MW1-7480

PROJECT NO: LPST #108133
MATRIX: WATER
DATE SAMPLED: 07/17/96 14:30:00
DATE RECEIVED: 07/18/96

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Total Dissolved Solids METHOD 160.1 * Analyzed by: JS Date: 07/20/96	< 1	1	mg/L

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

SPL, Inc., - Project Manager

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

Certificate of Analysis No. H9-9607861-02

Thompson Professional Grp,Inc
6110 Clarkson Lane
Houston, TX 77055
ATTN: John Laser

DATE: 07/24/96

PROJECT: Soil Boring/Grnd Water Mon.#1
SITE: Caldwell County, TX
SAMPLED BY: Gary Air Force Base
SAMPLE ID: MW1-7481

PROJECT NO: LPST #108133
MATRIX: WATER
DATE SAMPLED: 07/17/96 15:00:00
DATE RECEIVED: 07/18/96

ANALYTICAL DATA

PARAMETER	RESULTS	DETECTION LIMIT	UNITS
Total Dissolved Solids METHOD 160.1 * Analyzed by: JS Date: 07/20/96	530	2	mg/L

Notes: *Ref: Methods for Chemical Analysis of Water and Wastes, 1983, EPA
**Ref: Standard Methods for Examination of Water & Wastewater, 18th ed.
***Ref: Test Methods for Evaluating Solid Waste, EPA SW846, 3rd Ed.

QUALITY ASSURANCE: These analyses are performed in accordance with EPA guidelines for quality assurance.

SPL, Inc., - Project Manager

QUALITY CONTROL

DOCUMENTATION

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

** SPL QUALITY CONTROL REPORT **

Matrix: Aqueous

Reported on: 07/22/96
Analyzed on: 07/20/96
Analyst: JS

This sample was randomly selected for use in the SPL quality control program. The results are as follows:

Total Dissolved Solids
METHOD 160.1 *

-- DUPLICATE ANALYSIS --

SPL Sample ID	Original Sample Concentration mg/L	Duplicate Sample mg/L	RPD	RPD Max.
9607861-01A	ND	ND	0	20

-9607653

Samples in batch:

9607846-06B 9607861-01A 9607861-02A

COMMENTS:

SPL, Incorporated

QC Officer

HOUSTON LABORATORY
8880 INTERCHANGE DRIVE
HOUSTON, TEXAS 77054
PHONE (713) 660-0901

** SPL QUALITY CONTROL REPORT **

Matrix: Aqueous

Reported on: 07/22/96
Analyzed on: 07/20/96
Analyst: JS

This sample was randomly selected for use in the SPL quality control program. Samples chosen are fortified with a known concentration in duplicate. The results are as follows:

Total Dissolved Solids
METHOD 160.1 *

SPL Sample ID Number	Blank Value mg/L	LCS Concentration mg/L	Measured Concentration mg/L	% Recovery	QC Limits Recovery
LCS	ND	386.9	383.0	99.0	90 - 110

-9607654

amples in batch:

9607846-06B 9607861-01A 9607861-02A

COMMENTS:

LCS = SPL ID#: 9553544-17

SPL, Incorporated

QC Officer

CHAIN OF CUSTODY

AND

SAMPLE RECEIPT CHECKLIST

9607861

ANALYSIS REQUEST AND CHAIN OF CUSTODY RECORD

Former Gary Air Force Base LPST # 108133	Soil Boring /Ground Water Monitoring Well No. 1	Caldwell County, Texas

Field Sample No./ Identification	Date and Time	Filtered Yes	Filtered No	Sample Container (SIZE/MAT'L)	Sample Type (Liquid, Sludge, Etc.)	Preservative	ANALYSIS REQUESTED	LABORATORY REMARKS
MW1-7480	7/17-230		✓	1LTR Plastic	Ground water	ICE	EPA 160.1 TDS	
MW1-7481	7/17-300		✓	1LTR Plastic	Ground water	ICE	EPA 160.1 TDS	

Samplers: (Signature)	Relinquished by: (Signature)	Date: 7-18-96 Time: 10:43	Received by: (Signature)	Date: 7-18-96 Time: 1043	Intact 6°C
Affiliation	Relinquished by: (Signature)	Date: Time:	Received by: (Signature)	Date: Time:	Intact
	Relinquished by: (Signature)	Date: Time:	Received by: (Signature)	Date: Time:	Intact

SAMPLER REMARKS:	Received for laboratory: (SIGNATURE)	Date: Time:	Laboratory No.
Seal #	Data Results to:		

SPL Houston Environmental Laboratory

Sample Login Checklist

Date:	Time:
7/18/96	1043

SPL Sample ID:
9607861

			Yes	No
1	Chain-of-Custody (COC) form is present.		✓	
2	COC is properly completed.		✓	
3	If no, Non-Conformance Worksheet has been completed.			
4	Custody seals are present on the shipping container.		✓	
5	If yes, custody seals are intact.		✓	
6	All samples are tagged or labeled.		✓	
7	If no, Non-Conformance Worksheet has been completed.			
8	Sample containers arrived intact		✓	
9	Temperature of samples upon arrival:		6° C	
10	Method of sample delivery to SPL:	SPL Delivery		
		Client Delivery	✓	
		FedEx Delivery (airbill #)		
		Other:		
11	Method of sample disposal:	SPL Disposal	✓	
		HOLD		
		Return to Client		

Name:	Date:
S. West	7/18/96

MAXIM
TECHNOLOGIES INC

2575 Lone Star Drive P.O. Box 224227 * Dallas, Texas 75222 * 214-631-2700

Client Ken Haag
Maxim Technologies, Inc.
2575 Lone Star DR.
Dallas, TX 75212

Client No. 0000000
Report No. D6-06-057
Report Date 06/18/96 09:13

Project Thompson Profes'l Grp., Inc.

Phone:

Fax:

Date Sampled 06/07/96

Sampled By Kumar Marupudi

Sample Type Solid

Transported by Kumar Marupudi

P.O. #

Date Received 06/07/96

Lab No.	Sample Identification
D6-06-057-01	B-2 (22.5 - 23.5')
D6-06-057-02	B-6 (23.0 - 24.0')

Our letters and reports are for the exclusive use of the client to whom they are addressed and shall not be reproduced except in full without the approval of the testing laboratory. The use of our name must receive our prior written approval.

MAXIM

Reviewed by

William J. Gase, Supervisor

MAXIM

Order # D6-06-057

06/18/96 09:13

Client: Maxim Technologies, Inc.

TEST RESULTS BY SAMPLE

Sample: 01A B-2 (22.5 - 23.5') Collected: 06/07/96 Category: S

Test Name	Method	Result	Units	Detection Limit	Date Analyzed	Analyst
Fraction Carbon	Walkley-Blk	0.07	%	0.02	06/12/96	JE

Sample: 02A B-6 (23.0 - 24.0') Collected: 06/07/96 Category: S

Test Name	Method	Result	Units	Detection Limit	Date Analyzed	Analyst
Fraction Carbon	Walkley-Blk	0.14	%	0.02	06/12/96	JE

FLEXIBLE WALL PERMEABILITY TEST – ASTM D 5084–90

Project			Location	San Marcos, Texas	
Client	Thompson Professional Group, Inc.				
Job Number	0901-60-3642	Boring Number	B-2	Depth	22.5 to 23.5 feet
Sample Description	Yellow and olive gray shaly clay			Board Station No.	#2

Sample Physical Data	Initial	Final
Diameter (in)	2.70	2.75
Height (in)	3.53	3.53
Porosity (%)	42.8	44.4
Bulk Density (pcf)	123.9	122.5
Dry Density (pcf)	96.5	93.0
Moisture Content (%)	27.7	31.6
Degree of Saturation (%)	98.0	100.0

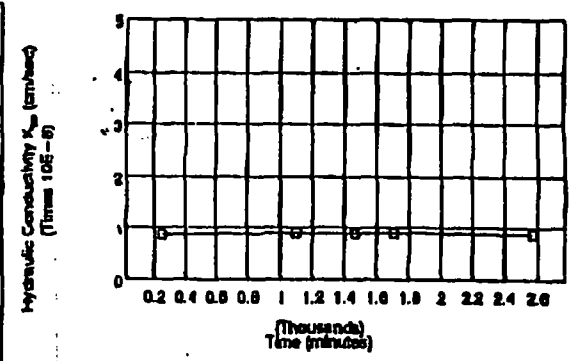
Cell Pressure (psi)	70.0
Back Pressure (psi)	65.0
Tail Water Pressure(psi)	60.0
Specific Gravity	2.68

Initial Differential Head Data	
Elevation of Tail Water Level (cm)	0.0
Elevation of Headwater Level (cm)	0.0
Differential Head (cm)	351.7
Hydraulic Gradient	39.2

Average Calculated Hydraulic Conductivity at 20 °C: k_{20} = 8.68E-09 cm/sec

Average Intrinsic Permeability: K = 9.06E-14 cm²

Interval Time (min)	Temp °C	Burette Reading (cc) Cell	Bottom	Top	Flow, Q (cc) In	Out	k_{20} (cm/sec)
0.00	21.8	5.0	1.6	18.7	0.0	0.0	N/A
250.00	21.8	5.0	1.8	18.5	0.2	0.2	8.68E-09
850.00	21.8	5.0	2.5	17.8	0.7	0.7	8.93E-09
365.00	21.8	5.0	2.8	17.5	0.3	0.3	8.91E-09
240.00	21.8	5.0	3.0	17.3	0.2	0.2	9.04E-09
860.00	21.8	5.0	3.7	16.6	0.7	0.7	8.83E-09



Notes:

1) Test performed between 6/6/96 and 6/12/96.
2) Hydraulic Conductivity calculated by Constant Head Method.
3) Specific Gravity assumed: G_s = 2.68

Maxim Technologies, Inc.

FLEXIBLE WALL PERMEABILITY TEST – ASTM D 5084-90

Project			Location	San Marcos, Texas	
Client	Thompson Professional Group, Inc.				
Job Number	0901-60-3642	Boring Number	B-6	Depth	23 to 24 feet
Sample Description	Yellow and olive gray shaly clay			Board Station No.	#3

Sample Physical Data	Initial	Final
Diameter (in)	2.70	2.74
Height (in)	3.84	3.84
Porosity (%)	42.6	44.3
Bulk Density (pcf)	124.0	123.2
Dry Density (pcf)	96.0	93.2
Moisture Content (%)	29.2	32.1
Degree of Saturation (%)	98.0	100.0

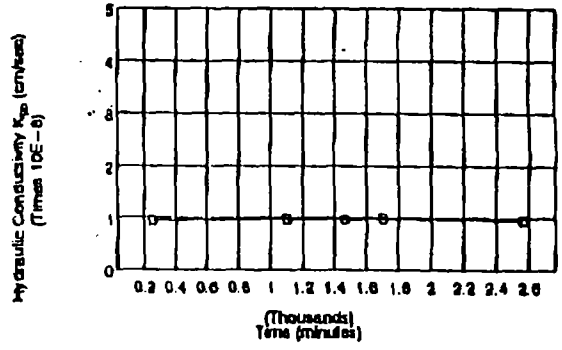
Cell Pressure (psi)	70.0
Back Pressure (psi)	65.0
Tail Water Pressure(psi)	60.0
Specific Gravity	2.68

Initial Differential Head Data	
Elevation of Tail Water Level (cm)	0.0
Elevation of Headwater Level (cm)	0.0
Differential Head (cm)	351.7
Hydraulic Gradient	36.1

Average Calculated Hydraulic Conductivity at 20 °C: k_{20} = 9.68E-09 cm/sec

Average Intrinsic Permeability: K = 9.89E-14 cm²

Interval Time (min)	Temp °C	Burette Reading (cc) Cell	Bottom	Top	Flow, Q (cc) In	Out	k_{20} (cm/sec)
0.00	21.8	4.0	0.6	19.0	0.0	0.0	N/A
250.00	21.8	4.0	0.8	18.8	0.2	0.2	9.47E-09
850.00	21.8	4.0	1.5	18.1	0.7	0.7	9.75E-09
365.00	21.8	4.0	1.8	17.8	0.3	0.3	9.73E-09
240.00	21.8	4.0	2.0	17.6	0.2	0.2	9.87E-09
860.00	21.8	4.0	2.7	16.9	0.7	0.7	9.64E-09



Notes:
1) Test performed between 6/6/96 and 6/12/96.
2) Hydraulic Conductivity calculated by Constant Head Method.
3) Specific Gravity assumed: G_s = 2.68

Maxim Technologies, Inc.

Analytical Report Data - Tank Removal Operations*

*From report titled Petroleum Storage Tank Site Assessment and Remedial Activities, *Former Gary Air Force Base, Site No. 10-350 (Tanks 8-11), San Marcos (Caldwell County), Texas.* Prepared by Perry Williams Inc. for the U.S. Army Corps of engineers, dated March 17, 1995

CHEMRON
INCORPORATED

10526 Gulfdale • San Antonio, Texas 78216-3601 • (210) 340-8121

Client: Perry Williams, Inc.
P. O. Box 30206
Amarillo, TX 79120

Client's Job #: D.O.0008/10-
COC #: 1743
Report Date: 02/28/94
Chemron's Job #: 3875

Date & Time Received:
02/24/94, 08:15

Date Sampled:
02/23/94

CHEMICAL ANALYSIS REPORT

Chemron #	Sample Description	Sample Matrix	Date Analyzed	TRPH (PPM)
24224	GAFB-10-350-08-TC	Water	02/25/94	53.
225	GAFB-10-350-11-TC	Water	02/25/94	10.

Approved By: _____

Analytical Methods: TPH in Soil - 9071/418.1 and TPH in Water - 418.1

CHEM RON
INCORPORATED

10526 Gulfdale • San Antonio, Texas 78216-3601 • (210) 340-8121

Client: Perry Williams, Inc.
P. O. Box 30206
Amarillo, TX 79120

Client's Job #: D.O.0008/10-
COC #: 1739
Report Date: 02/28/94
Chemron's Job #: 3876

Date & Time Received:
02/24/94, 08:15

Date Sampled:
02/23/94

CHEMICAL ANALYSIS REPORT

Chemron #	Sample Description	Sample Matrix	Date Analyzed	TRPH (PPM)
4226	GAFB-10-350-09-TC	Water	02/25/94	590.
227	GAFB-10-350-10-TC	Water	02/25/94	140.

Approved By: _____

Analytical Methods: TPH in Soil - 9071/418.1 and TPH in Water - 418.1

CHEM RON
INCORPORATED

10526 Gulfdale • San Antonio, Texas 78216-3601 • (210) 340-8121

Client: Perry Williams, Inc.
P. O. Box 30206
Amarillo, TX 79120

Client's Job #: D.O.0008/10-
COC #: 1743
Date Sampled: 02/23/94
Date Received: 02/24/94
Sample Matrix: Water
Chemron ID #: 34224
Report Date: 03/02/94
Chemron's Job #: 3875

Sample Description:
GAFB-10-350-08-TC

CHEMICAL ANALYSIS REPORT

Parameter	Value	Units	Date Analyzed	Analytical Method
tal Arsenic	<.042	MG/L	03/01/94	3005/6010
Total Barium	.25	MG/L	03/01/94	3005/6010
Total Cadmium	<.002	MG/L	03/01/94	3005/6010
Total Chromium	<.003	MG/L	03/01/94	3005/6010
Total Lead	<.021	MG/L	03/01/94	3005/6010
Total Mercury	<.001	MG/L	02/28/94	3005/7470
Total Selenium	<.061	MG/L	03/01/94	3005/6010
Total Silver	<.003	MG/L	03/01/94	3005/6010

Approved By: _____

CHEMRON
INCORPORATED

10526 Gulfdale • San Antonio, Texas 78216-3601 • (210) 340-8121

Client: Perry Williams, Inc.
P. O. Box 30206
Amarillo, TX 79120

Client's Job #: D.O.0008/10-
COC #: 1739
Date Sampled: 02/23/94
Date Received: 02/24/94
Sample Matrix: Water
Chemron ID #: 34226
Report Date: 03/02/94
Chemron's Job #: 3876

Sample Description:
GAFB-10-350-09-TC

CHEMICAL ANALYSIS REPORT

Parameter	Value	Units	Date Analyzed	Analytical Method
tal Arsenic	<.042	MG/L	03/01/94	3005/6010
Total Barium	.25	MG/L	03/01/94	3005/6010
Total Cadmium	.006	MG/L	03/01/94	3005/6010
Total Chromium	.008	MG/L	03/01/94	3005/6010
Total Lead	1.8	MG/L	03/01/94	3005/6010
Total Mercury	<.001	MG/L	02/28/94	3005/7470
Total Selenium	<.061	MG/L	03/01/94	3005/6010
Total Silver	<.003	MG/L	03/01/94	3005/6010

Approved By: _____

CHEMRON
INCORPORATED

10526 Gulfdale • San Antonio, Texas 78216-3601 • (210) 340-8121

Client: Perry Williams, Inc.
P. O. Box 30206
Amarillo, TX 79120

Client's Job #: D.O.0008/10-
COC #: 1739
Date Sampled: 02/23/94
Date Received: 02/24/94
Sample Matrix: Water
Chemron ID #: 34227
Report Date: 03/02/94
Chemron's Job #: 3876

Sample Description:
GAFB-10-350-10-TC

CHEMICAL ANALYSIS REPORT

Parameter	Value	Units	Date Analyzed	Analytical Method
cal Arsenic	<.042	MG/L	03/01/94	3005/6010
Total Barium	.53	MG/L	03/01/94	3005/6010
Total Cadmium	.015	MG/L	03/01/94	3005/6010
Total Chromium	<.003	MG/L	03/01/94	3005/6010
Total Lead	.50	MG/L	03/01/94	3005/6010
Total Mercury	<.001	MG/L	02/28/94	3005/7470
Total Selenium	<.061	MG/L	03/01/94	3005/6010
Total Silver	<.003	MG/L	03/01/94	3005/6010

Approved By: _____

CHEMRON
INCORPORATED

10526 Gulfdale • San Antonio, Texas 78216-3601 • (210) 340-8121

Client: Perry Williams, Inc.
P. O. Box 30206
Amarillo, TX 79120

Client's Job #: D.O.0008/10-
COC #: 1743
Date Sampled: 02/23/94
Date Received: 02/24/94
Sample Matrix: Water
Chemron ID #: 34225
Report Date: 03/04/94
Chemron's Job #: 3875

Sample Description:
GAFB-10-350-11-TC

CHEMICAL ANALYSIS REPORT

Parameter	Value	Units	Date Analyzed	Analytical Method
Total Arsenic	<.042	MG/L	03/01/94	3005/6010
Total Barium	.17	MG/L	03/01/94	3005/6010
Total Cadmium	.006	MG/L	03/01/94	3005/6010
Total Chromium	<.003	MG/L	03/01/94	3005/6010
Total Lead	1.6	MG/L	03/01/94	3005/6010
Total Mercury	<.001	MG/L	02/28/94	3005/7470
Total Selenium	<.061	MG/L	03/01/94	3005/6010
Total Silver	<.003	MG/L	03/01/94	3005/6010

Approved By: R. Oldham

CHEMRON
INCORPORATED

10526 Gulfdale • San Antonio, Texas 78216-3601 • (210) 340-8121

Client: Perry Williams, Inc.
2700 S. Wilson
Amarillo, Texas 79103

Report Date: 03/04/94
Chemron Sample #: 34224
Sample Matrix: Water

Sample Description:
Project No. D.O. #0008
Project Name/Location: Gary AFB/San Marcos Bldg 10-350
Client Sample ID #: GAFB.10.350.08.TC

POLYCHLORINATED BIPHENYLS ANALYSIS RESULTS

ANALYTE	MDL	Units	RESULTS	Date Analyzed	Test Method
Aroclor 1016	5.0	UG/L	ND	02/25/94	8080
Aroclor 1221	5.0	UG/L	ND	02/25/94	8080
Aroclor 1232	5.0	UG/L	ND	02/25/94	8080
Aroclor 1242	5.0	UG/L	ND	02/25/94	8080
Aroclor 1248	5.0	UG/L	ND	02/25/94	8080
Aroclor 1254	5.0	UG/L	ND	02/25/94	8080
Aroclor 1260	5.0	UG/L	ND	02/25/94	8080

ND - Not Detected

Approved By: _____

All test method numbers are references to US Environmental Protection Agency methods unless otherwise noted. MDLs shown represent the minimum detection limit for the analytical procedure used based on the amount of sample analyzed.

CHEMRON
INCORPORATED

10526 Gulfdale • San Antonio, Texas 78216-3601 • (210) 340-8121

Client: Perry Williams, Inc.
2700 S. Wilson
Amarillo, Texas 79103

Report Date: 03/04/94
Chemron Sample #: 34226
Sample Matrix: Water

Sample Description:
Project No. D.O. #0008
Project Name/Location: Gary AFB/San Marcos Bldg 10-350
Client Sample ID #: GAFB.10.350.09.TC

POLYCHLORINATED BIPHENYLS ANALYSIS RESULTS

ANALYTE	MDL	Units	RESULTS	Date Analyzed	Test Method
Aroclor 1016	5.0	UG/L	ND	02/26/94	8080
Aroclor 1221	5.0	UG/L	ND	02/26/94	8080
Aroclor 1232	5.0	UG/L	ND	02/26/94	8080
Aroclor 1242	5.0	UG/L	ND	02/26/94	8080
Aroclor 1248	5.0	UG/L	ND	02/26/94	8080
Aroclor 1254	5.0	UG/L	ND	02/26/94	8080
Aroclor 1260	5.0	UG/L	ND	02/26/94	8080

ND - Not Detected

Approved By: _____

All test method numbers are references to US Environmental Protection Agency methods unless otherwise noted. MDLs shown represent the minimum detection limit for the analytical procedure used based on the amount of sample analyzed.

CHEMRON
INCORPORATED

10526 Gulfdale • San Antonio, Texas 78216-3601 • (210) 340-8121

Client: Perry Williams, Inc.
2700 S. Wilson
Amarillo, Texas 79103

Report Date: 03/04/94
Chemron Sample #: 34227
Sample Matrix: Water

Sample Description:
Project No. D.O. #0008
Project Name/Location: Gary AFB/San Marcos Bldg 10-350
Client Sample ID #: GAFB.10.350.10.TC

POLYCHLORINATED BIPHENYLS ANALYSIS RESULTS

ANALYTE	MDL	Units	RESULTS	Date Analyzed	Test Method
Aroclor 1016	5.0	UG/L	ND	03/04/94	8080
Aroclor 1221	5.0	UG/L	ND	03/04/94	8080
Aroclor 1232	5.0	UG/L	ND	03/04/94	8080
Aroclor 1242	5.0	UG/L	ND	03/04/94	8080
Aroclor 1248	5.0	UG/L	ND	03/04/94	8080
Aroclor 1254	5.0	UG/L	ND	03/04/94	8080
Aroclor 1260	5.0	UG/L	ND	03/04/94	8080

ND - Not Detected

Approved By: _____

All test method numbers are references to US Environmental Protection Agency methods unless otherwise noted. MDLs shown represent the minimum detection limit for the analytical procedure used based on the amount of sample analyzed.

CHEMRON
INCORPORATED

10526 Gulfdale • San Antonio, Texas 78216-3601 • (210) 340-8121

Client: Perry Williams, Inc.
2700 S. Wilson
Amarillo, Texas 79103

Report Date: 03/04/94
Chemron Sample #: 34225
Sample Matrix: Water

Sample Description:
Project No. D.O. #0008
Project Name/Location: Gary AFB/San Marcos Bldg 10-350
Client Sample ID #: GAFB.10.350.11.TC

POLYCHLORINATED BIPHENYLS ANALYSIS RESULTS

ANALYTE	MDL	Units	RESULTS	Date Analyzed	Test Method
Aroclor 1016	5.0	UG/L	ND	02/26/94	8080
Aroclor 1221	5.0	UG/L	ND	02/26/94	8080
Aroclor 1232	5.0	UG/L	ND	02/26/94	8080
Aroclor 1242	5.0	UG/L	ND	02/26/94	8080
Aroclor 1248	5.0	UG/L	ND	02/26/94	8080
Aroclor 1254	5.0	UG/L	ND	02/26/94	8080
Aroclor 1260	5.0	UG/L	ND	02/26/94	8080

ND - Not Detected

Approved By: _____

All test method numbers are references to US Environmental Protection Agency methods unless otherwise noted. MDLs shown represent the minimum detection limit for the analytical procedure used based on the amount of sample analyzed.

CHEMRON
INCORPORATED

10526 Gulfdale • San Antonio, Texas 78216-3601 • (210) 340-8121

Client:
Perry Williams, Inc.
P. O. Box 30206
Amarillo, TX 79120

Report Date: 3/3/94
Chemron Sample #: 34224
Sample Matrix: Water
Client's Job #: D.O.0008/10-350
COC #: 1743
Date Sampled: 2/23/94

Sample Description:
GAFB-10-350-08-TC

Date & Time Received:
2/24/94 08:15

CHEMICAL ANALYSIS REPORT

Parameter	Results	Quant. Limit	Units	Date Analyzed	Method
Acetone	<0.010	0.010	mg/l	3/2/94	8260
Acrolein	<0.005	0.005	mg/l	3/2/94	8260
Acrylonitrile	<0.004	0.004	mg/l	3/2/94	8260
Allyl chloride	<0.003	0.003	mg/l	3/2/94	8260
Benzene	<0.003	0.003	mg/l	3/2/94	8260
Bromodichloromethane	<0.003	0.003	mg/l	3/2/94	8260
Bromoform	<0.002	0.002	mg/l	3/2/94	8260
Bromomethane	<0.006	0.006	mg/l	3/2/94	8260
2-Butanone (MEK)	<0.010	0.010	mg/l	3/2/94	8260
Carbon tetrachloride	<0.003	0.003	mg/l	3/2/94	8260
Chlorobenzene	<0.004	0.004	mg/l	3/2/94	8260
Chloroethane	<0.002	0.002	mg/l	3/2/94	8260
2-Chloroethyl vinyl ether	<0.010	0.010	mg/l	3/2/94	8260
Chloroform	<0.003	0.003	mg/l	3/2/94	8260
Chloromethane	<0.005	0.005	mg/l	3/2/94	8260
Dibromochloromethane	<0.003	0.003	mg/l	3/2/94	8260
1,2-Dibromo-3-chloropropane	<0.006	0.006	mg/l	3/2/94	8260
1,2-Dibromoethane	<0.003	0.003	mg/l	3/2/94	8260
Dibromomethane	<0.002	0.002	mg/l	3/2/94	8260
1,2-Dichlorobenzene	<0.005	0.005	mg/l	3/2/94	8260
1,3-Dichlorobenzene	<0.005	0.005	mg/l	3/2/94	8260
1,4-Dichlorobenzene	<0.006	0.006	mg/l	3/2/94	8260
trans-1,4-Dichloro-2-butene	<0.004	0.004	mg/l	3/2/94	8260
Dichlorodifluoromethane	<0.003	0.003	mg/l	3/2/94	8260
1,1-Dichloroethane	<0.003	0.003	mg/l	3/2/94	8260
1,2-Dichloroethane	<0.003	0.003	mg/l	3/2/94	8260
1,1-Dichloroethene	<0.005	0.005	mg/l	3/2/94	8260
cis-1,2-Dichloroethene	<0.004	0.004	mg/l	3/2/94	8260
trans-1,2-Dichloroethene	<0.004	0.004	mg/l	3/2/94	8260
1,2-Dichloropropane	<0.002	0.002	mg/l	3/2/94	8260
cis-1,3-Dichloropropene	<0.002	0.002	mg/l	3/2/94	8260
trans-1,3-Dichloropropene	<0.003	0.003	mg/l	3/2/94	8260
Diethyl ether	<0.005	0.005	mg/l	3/2/94	8260
Ethylbenzene	<0.005	0.005	mg/l	3/2/94	8260
Ethylmethacrylate	<0.005	0.005	mg/l	3/2/94	8260
2-Hexanone	<0.006	0.006	mg/l	3/2/94	8260
Iodomethane	<0.005	0.005	mg/l	3/2/94	8260
Methacrylonitrile	<0.005	0.005	mg/l	3/2/94	8260
Methylene chloride	<0.004	0.004	mg/l	3/2/94	8260
Methylmethacrylate	<0.004	0.004	mg/l	3/2/94	8260
4-Methyl-2-pentanone (MIBK)	<0.010	0.010	mg/l	3/2/94	8260
Propionitrile	<0.010	0.010	mg/l	3/2/94	8260
Styrene	<0.004	0.004	mg/l	3/2/94	8260
1,1,1,2-Tetrachloroethane	<0.005	0.005	mg/l	3/2/94	8260

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10526 Gulfdale • San Antonio, Texas 78216-3601 • (210) 340-8121

Client:
Perry Williams, Inc.
P. O. Box 30206
Amarillo, TX 79120

Report Date: 3/3/94
Chemron Sample #: 34224
Sample Matrix: Water
Client's Job #: D.O.0008/10-350
COC #: 1743
Date Sampled: 2/23/94

Sample Description:
GAFB-10-350-08-TC

Date & Time Received:
2/24/94 08:15

CHEMICAL ANALYSIS REPORT

Parameter	Results	Quant. Limit	Units	Date Analyzed	Method
1,1,2,2-Tetrachloroethane	<0.003	0.003	mg/l	3/2/94	8260
Tetrachloroethene	<0.005	0.005	mg/l	3/2/94	8260
Toluene	<0.003	0.003	mg/l	3/2/94	8260
1,1,1-Trichloroethane	<0.005	0.005	mg/l	3/2/94	8260
1,1,2-Trichloroethane	<0.003	0.003	mg/l	3/2/94	8260
Trichloroethene	<0.002	0.002	mg/l	3/2/94	8260
Trichlorofluoromethane	<0.005	0.005	mg/l	3/2/94	8260
1,2,3-Trichloropropane	<0.003	0.003	mg/l	3/2/94	8260
m,p-Xylene	0.010	0.005	mg/l	3/2/94	8260
o-Xylene	0.008	0.004	mg/l	3/2/94	8260
Vinyl Chloride	<0.002	0.002	mg/l	3/2/94	8260

Approved by:

All test method numbers are references to U.S. Environmental Protection Agency methods unless otherwise noted. If an analytical value is shown with the less than sign ("<"), this indicates that the parameter was not detected. The corresponding number then represents the nominal practical quantitation limit for the analytical procedure employed.

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Client:
Perry Williams, Inc.
P. O. Box 30206
Amarillo, TX 79120

Report Date: 3/4/94
Chemron Sample #: 34227
Sample Matrix: Water
Client's Job #: D.O.0008/10-350
COC #: 1739
Date Sampled: 2/23/94

Sample Description:
GAFB-10-350-10-TC

Date & Time Received:
2/24/94 08:15

CHEMICAL ANALYSIS REPORT

Parameter	Results	Quant. Limit	Units	Date Analyzed	Method
Acetone	<0.010	0.010	mg/l	3/3/94	8260
Acrolein	<0.005	0.005	mg/l	3/3/94	8260
Acrylonitrile	<0.004	0.004	mg/l	3/3/94	8260
Allyl chloride	<0.003	0.003	mg/l	3/3/94	8260
Benzene	<0.003	0.003	mg/l	3/3/94	8260
Bromodichloromethane	<0.003	0.003	mg/l	3/3/94	8260
Bromoform	<0.002	0.002	mg/l	3/3/94	8260
Bromomethane	<0.006	0.006	mg/l	3/3/94	8260
2-Butanone (MEK)	<0.010	0.010	mg/l	3/3/94	8260
Carbon tetrachloride	<0.003	0.003	mg/l	3/3/94	8260
Chlorobenzene	<0.004	0.004	mg/l	3/3/94	8260
Chloroethane	<0.002	0.002	mg/l	3/3/94	8260
2-Chloroethyl vinyl ether	<0.010	0.010	mg/l	3/3/94	8260
Chloroform	<0.003	0.003	mg/l	3/3/94	8260
Chloromethane	<0.005	0.005	mg/l	3/3/94	8260
Dibromochloromethane	<0.003	0.003	mg/l	3/3/94	8260
1,2-Dibromo-3-chloropropane	<0.006	0.006	mg/l	3/3/94	8260
1,2-Dibromoethane	<0.003	0.003	mg/l	3/3/94	8260
Dibromomethane	<0.002	0.002	mg/l	3/3/94	8260
1,2-Dichlorobenzene	<0.005	0.005	mg/l	3/3/94	8260
1,3-Dichlorobenzene	<0.005	0.005	mg/l	3/3/94	8260
1,4-Dichlorobenzene	<0.006	0.006	mg/l	3/3/94	8260
trans-1,4-Dichloro-2-butene	<0.004	0.004	mg/l	3/3/94	8260
Dichlorodifluoromethane	<0.003	0.003	mg/l	3/3/94	8260
1,1-Dichloroethane	<0.003	0.003	mg/l	3/3/94	8260
1,2-Dichloroethane	<0.003	0.003	mg/l	3/3/94	8260
1,1-Dichloroethene	<0.005	0.005	mg/l	3/3/94	8260
cis-1,2-Dichloroethene	<0.004	0.004	mg/l	3/3/94	8260
trans-1,2-Dichloroethene	<0.004	0.004	mg/l	3/3/94	8260
1,2-Dichloropropane	<0.002	0.002	mg/l	3/3/94	8260
cis-1,3-Dichloropropene	<0.002	0.002	mg/l	3/3/94	8260
trans-1,3-Dichloropropene	<0.003	0.003	mg/l	3/3/94	8260
Diethyl ether	<0.005	0.005	mg/l	3/3/94	8260
Ethylbenzene	0.010	0.005	mg/l	3/3/94	8260
Ethylmethacrylate	<0.005	0.005	mg/l	3/3/94	8260
2-Hexanone	<0.006	0.006	mg/l	3/3/94	8260
Iodomethane	<0.005	0.005	mg/l	3/3/94	8260
Methacrylonitrile	<0.005	0.005	mg/l	3/3/94	8260
Methylene chloride	<0.004	0.004	mg/l	3/3/94	8260
Methylmethacrylate	<0.004	0.004	mg/l	3/3/94	8260
4-Methyl-2-pentanone (MIBK)	<0.010	0.010	mg/l	3/3/94	8260
Propionitrile	<0.010	0.010	mg/l	3/3/94	8260
Styrene	<0.004	0.004	mg/l	3/3/94	8260
1,1,1,2-Tetrachloroethane	<0.005	0.005	mg/l	3/3/94	8260

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Client:
Perry Williams, Inc.
P. O. Box 30206
Amarillo, TX 79120

Report Date: 3/4/94
Chemron Sample #: 34227
Sample Matrix: Water
Client's Job #: D.O.0008/10-350
COC #: 1739
Date Sampled: 2/23/94

Sample Description:
GAFB-10-350-10-TC

Date & Time Received:
2/24/94 08:15

CHEMICAL ANALYSIS REPORT

Parameter	Results	Quant. Limit	Units	Date Analyzed	Method
1,1,2,2-Tetrachloroethane	<0.003	0.003	mg/l	3/3/94	8260
Tetrachloroethene	<0.005	0.005	mg/l	3/3/94	8260
Toluene	0.011	0.003	mg/l	3/3/94	8260
1,1,1-Trichloroethane	<0.005	0.005	mg/l	3/3/94	8260
1,1,2-Trichloroethane	<0.003	0.003	mg/l	3/3/94	8260
Trichloroethene	<0.002	0.002	mg/l	3/3/94	8260
Trichlorofluoromethane	<0.005	0.005	mg/l	3/3/94	8260
1,2,3-Trichloropropane	<0.003	0.003	mg/l	3/3/94	8260
m,p-Xylene	0.039	0.005	mg/l	3/3/94	8260
o-Xylene	0.026	0.004	mg/l	3/3/94	8260
Vinyl Chloride	<0.002	0.002	mg/l	3/3/94	8260

Approved by:

All test method numbers are references to U.S. Environmental Protection Agency methods unless otherwise noted. If an analytical value is shown with the less than sign ("<"), this indicates that the parameter was not detected. The corresponding number then represents the nominal practical quantitation limit for the analytical procedure employed.

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Client:
Perry Williams, Inc.
P. O. Box 30206
Amarillo, TX 79120

Report Date: 3/4/94
Chemron Sample #: 34225
Sample Matrix: Water
Client's Job #: D.O.0008/10-350
COC #: 1743
Date Sampled: 2/23/94

Sample Description:
GAFB-10-350-11-TC

Date & Time Received:
2/24/94 08:15

CHEMICAL ANALYSIS REPORT

Parameter	Results	Quant. Limit	Units	Date Analyzed	Method
Acetone	<0.010	0.010	mg/l	3/3/94	8260
Acrolein	<0.005	0.005	mg/l	3/3/94	8260
Acrylonitrile	<0.004	0.004	mg/l	3/3/94	8260
Allyl chloride	<0.003	0.003	mg/l	3/3/94	8260
Benzene	<0.003	0.003	mg/l	3/3/94	8260
Bromodichloromethane	<0.003	0.003	mg/l	3/3/94	8260
Bromoform	<0.002	0.002	mg/l	3/3/94	8260
Bromomethane	<0.006	0.006	mg/l	3/3/94	8260
2-Butanone (MEK)	<0.010	0.010	mg/l	3/3/94	8260
Carbon tetrachloride	<0.003	0.003	mg/l	3/3/94	8260
Chlorobenzene	<0.004	0.004	mg/l	3/3/94	8260
Chloroethane	<0.002	0.002	mg/l	3/3/94	8260
2-Chloroethyl vinyl ether	<0.010	0.010	mg/l	3/3/94	8260
Chloroform	<0.003	0.003	mg/l	3/3/94	8260
Chloromethane	<0.005	0.005	mg/l	3/3/94	8260
Dibromochloromethane	<0.003	0.003	mg/l	3/3/94	8260
1,2-Dibromo-3-chloropropane	<0.006	0.006	mg/l	3/3/94	8260
1,2-Dibromoethane	<0.003	0.003	mg/l	3/3/94	8260
Dibromomethane	<0.002	0.002	mg/l	3/3/94	8260
1,2-Dichlorobenzene	<0.005	0.005	mg/l	3/3/94	8260
1,3-Dichlorobenzene	<0.005	0.005	mg/l	3/3/94	8260
1,4-Dichlorobenzene	<0.006	0.006	mg/l	3/3/94	8260
trans-1,4-Dichloro-2-butene	<0.004	0.004	mg/l	3/3/94	8260
Dichlorodifluoromethane	<0.003	0.003	mg/l	3/3/94	8260
1,1-Dichloroethane	<0.003	0.003	mg/l	3/3/94	8260
1,2-Dichloroethane	<0.003	0.003	mg/l	3/3/94	8260
1,1-Dichloroethene	<0.005	0.005	mg/l	3/3/94	8260
cis-1,2-Dichloroethene	<0.004	0.004	mg/l	3/3/94	8260
trans-1,2-Dichloroethene	<0.004	0.004	mg/l	3/3/94	8260
1,2-Dichloropropane	<0.002	0.002	mg/l	3/3/94	8260
cis-1,3-Dichloropropene	<0.002	0.002	mg/l	3/3/94	8260
trans-1,3-Dichloropropene	<0.003	0.003	mg/l	3/3/94	8260
Diethyl ether	<0.005	0.005	mg/l	3/3/94	8260
Ethylbenzene	<0.005	0.005	mg/l	3/3/94	8260
Ethylmethacrylate	<0.005	0.005	mg/l	3/3/94	8260
2-Hexanone	<0.006	0.006	mg/l	3/3/94	8260
Iodomethane	<0.005	0.005	mg/l	3/3/94	8260
Methacrylonitrile	<0.005	0.005	mg/l	3/3/94	8260
Methylene chloride	<0.004	0.004	mg/l	3/3/94	8260
Methylmethacrylate	<0.004	0.004	mg/l	3/3/94	8260
4-Methyl-2-pentanone (MIBK)	<0.010	0.010	mg/l	3/3/94	8260
Propionitrile	<0.010	0.010	mg/l	3/3/94	8260
Styrene	<0.004	0.004	mg/l	3/3/94	8260
1,1,1,2-Tetrachloroethane	<0.005	0.005	mg/l	3/3/94	8260

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10526 Gulfdale • San Antonio, Texas 78216-3601 • (210) 340-8121

Client:
Perry Williams, Inc.
P. O. Box 30206
Amarillo, TX 79120

Report Date: 3/4/94
Chemron Sample #: 34225
Sample Matrix: Water
Client's Job #: D.O.0008/10-350
COC #: 1743
Date Sampled: 2/23/94

Sample Description:
GAFB-10-350-11-TC

Date & Time Received:
2/24/94 08:15

CHEMICAL ANALYSIS REPORT

Parameter	Results	Quant. Limit	Units	Date Analyzed	Method
1,1,2,2-Tetrachloroethane	<0.003	0.003	mg/l	3/3/94	8260
Tetrachloroethene	<0.005	0.005	mg/l	3/3/94	8260
Toluene	<0.003	0.003	mg/l	3/3/94	8260
1,1,1-Trichloroethane	<0.005	0.005	mg/l	3/3/94	8260
1,1,2-Trichloroethane	<0.003	0.003	mg/l	3/3/94	8260
Trichloroethene	<0.002	0.002	mg/l	3/3/94	8260
Trichlorofluoromethane	<0.005	0.005	mg/l	3/3/94	8260
1,2,3-Trichloropropane	<0.003	0.003	mg/l	3/3/94	8260
m,p-Xylene	<0.005	0.005	mg/l	3/3/94	8260
o-Xylene	<0.004	0.004	mg/l	3/3/94	8260
Vinyl Chloride	<0.002	0.002	mg/l	3/3/94	8260

Approved by: _____

All test method numbers are references to U.S. Environmental Protection Agency methods unless otherwise noted. If an analytical value is shown with the less than sign ("<"), this indicates that the parameter was not detected. The corresponding number then represents the nominal practical quantitation limit for the analytical procedure employed.

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10526 Gulfdale • San Antonio, Texas 78216-3601 • (210) 340-8121

Client:
Perry Williams, Inc.
P. O. Box 30206
Amarillo, TX 79120

Report Date: 3/3/94
Chemron Sample #: 34226
Sample Matrix: Water
Client's Job #: D.O.0008/10-350
COC #: 1739
Date Sampled: 2/23/94

Sample Description:
GAFB-10-350-09-TC

Date & Time Received:
2/24/94 08:15

CHEMICAL ANALYSIS REPORT

Parameter	Results	Quant. Limit	Units	Date Analyzed	Method
Acetone	<0.50	0.50	mg/l	3/2/94	8260
Acrolein	<0.25	0.25	mg/l	3/2/94	8260
Acrylonitrile	<0.20	0.20	mg/l	3/2/94	8260
Allyl chloride	<0.15	0.15	mg/l	3/2/94	8260
Benzene	2.8	0.15	mg/l	3/2/94	8260
Bromodichloromethane	<0.15	0.15	mg/l	3/2/94	8260
Bromoform	<0.10	0.10	mg/l	3/2/94	8260
Bromomethane	<0.30	0.30	mg/l	3/2/94	8260
2-Butanone (MEK)	<0.50	0.50	mg/l	3/2/94	8260
Carbon tetrachloride	<0.15	0.15	mg/l	3/2/94	8260
Chlorobenzene	<0.20	0.20	mg/l	3/2/94	8260
Chloroethane	<0.10	0.10	mg/l	3/2/94	8260
2-Chloroethyl vinyl ether	<0.50	0.50	mg/l	3/2/94	8260
Chloroform	<0.15	0.15	mg/l	3/2/94	8260
Chloromethane	<0.25	0.25	mg/l	3/2/94	8260
Dibromochloromethane	<0.15	0.15	mg/l	3/2/94	8260
1,2-Dibromo-3-chloropropane	<0.30	0.30	mg/l	3/2/94	8260
1,2-Dibromoethane	<0.15	0.15	mg/l	3/2/94	8260
Dibromomethane	<0.10	0.10	mg/l	3/2/94	8260
1,2-Dichlorobenzene	<0.25	0.25	mg/l	3/2/94	8260
1,3-Dichlorobenzene	<0.25	0.25	mg/l	3/2/94	8260
1,4-Dichlorobenzene	<0.30	0.30	mg/l	3/2/94	8260
trans-1,4-Dichloro-2-butene	<0.20	0.20	mg/l	3/2/94	8260
Dichlorodifluoromethane	<0.15	0.15	mg/l	3/2/94	8260
1,1-Dichloroethane	<0.15	0.15	mg/l	3/2/94	8260
1,2-Dichloroethane	0.91	0.15	mg/l	3/2/94	8260
1,1-Dichloroethene	<0.25	0.25	mg/l	3/2/94	8260
cis-1,2-Dichloroethene	<0.20	0.20	mg/l	3/2/94	8260
trans-1,2-Dichloroethene	<0.20	0.20	mg/l	3/2/94	8260
1,2-Dichloropropane	<0.10	0.10	mg/l	3/2/94	8260
cis-1,3-Dichloropropene	<0.10	0.10	mg/l	3/2/94	8260
trans-1,3-Dichloropropene	<0.15	0.15	mg/l	3/2/94	8260
Diethyl ether	<0.25	0.25	mg/l	3/2/94	8260
Ethylbenzene	1.7	0.25	mg/l	3/2/94	8260
Ethylmethacrylate	<0.25	0.25	mg/l	3/2/94	8260
2-Hexanone	<0.30	0.30	mg/l	3/2/94	8260
Iodomethane	<0.25	0.25	mg/l	3/2/94	8260
Methacrylonitrile	<0.25	0.25	mg/l	3/2/94	8260
Methylene chloride	<0.20	0.20	mg/l	3/2/94	8260
Methylmethacrylate	<0.20	0.20	mg/l	3/2/94	8260
4-Methyl-2-pentanone (MIBK)	<0.50	0.50	mg/l	3/2/94	8260
Propionitrile	<0.50	0.50	mg/l	3/2/94	8260
Styrene	<0.20	0.20	mg/l	3/2/94	8260
1,1,1,2-Tetrachloroethane	<0.25	0.25	mg/l	3/2/94	8260

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10526 Gulfdale • San Antonio, Texas 78216-3601 • (210) 340-8121

Client:
Perry Williams, Inc.
P. O. Box 30206
Amarillo, TX 79120

Report Date: 3/3/94
Chemron Sample #: 34226
Sample Matrix: Water
Client's Job #: D.O.0008/10-350
COC #: 1739
Date Sampled: 2/23/94

Sample Description:
GAFB-10-350-09-TC

Date & Time Received:
2/24/94 08:15

CHEMICAL ANALYSIS REPORT

Parameter	Results	Quant. Limit	Units	Date Analyzed	Method
1,1,2,2-Tetrachloroethane	<0.15	0.15	mg/l	3/2/94	8260
Tetrachloroethene	<0.25	0.25	mg/l	3/2/94	8260
Toluene	9.9	0.15	mg/l	3/2/94	8260
1,1,1-Trichloroethane	<0.25	0.25	mg/l	3/2/94	8260
1,1,2-Trichloroethane	<0.15	0.15	mg/l	3/2/94	8260
Trichloroethene	<0.10	0.10	mg/l	3/2/94	8260
Trichlorofluoromethane	<0.25	0.25	mg/l	3/2/94	8260
1,2,3-Trichloropropane	<0.15	0.15	mg/l	3/2/94	8260
m,p-Xylene	11	0.25	mg/l	3/2/94	8260
o-Xylene	6.3	0.20	mg/l	3/2/94	8260
Vinyl Chloride	<0.10	0.10	mg/l	3/2/94	8260

Approved by:

All test method numbers are references to U.S. Environmental Protection Agency methods unless otherwise noted. If an analytical value is shown with the less than sign ("<"), this indicates that the parameter was not detected. The corresponding number then represents the nominal practical quantitation limit for the analytical procedure employed.

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10526 Gulfdale • San Antonio, Texas 78216-3601 • (210) 340-8121

Client: Perry Williams, Inc.
2700 S. Wilson
Amarillo, Texas 79103

Report Date: 03/04/94
Chemron Sample #: 34224
Sample Matrix: Water

Sample Description:
Project No. D.O. #0008
Project Name/Location: Gary AFB/San Marcos Bldg 10-350
Client Sample ID #: GAFB.10.350.08.TC

SEMI-VOLATILES ANALYSIS REPORT

ANALYTE	MDL	Units	RESULTS	Date Analyzed	Test Method
Acenaphthene	10	UG/L	ND	03/02/94	8270
Acenaphthylene	10	UG/L	ND	03/02/94	8270
Acetophenone	10	UG/L	ND	03/02/94	8270
Aniline	10	UG/L	ND	03/02/94	8270
Anthracene	10	UG/L	ND	03/02/94	8270
4-Aminobiphenyl	10	UG/L	ND	03/02/94	8270
Benzidine	50	UG/L	ND	03/02/94	8270
Benzo(a)anthracene	10	UG/L	ND	03/02/94	8270
Benzo(b)fluoranthene	10	UG/L	ND	03/02/94	8270
Benzo(k)fluoranthene	10	UG/L	ND	03/02/94	8270
Benzo(g,h,i)perylene	10	UG/L	ND	03/02/94	8270
Benzo(a)pyrene	10	UG/L	ND	03/02/94	8270
Benzoic Acid	50	UG/L	ND	03/02/94	8270
Benzyl alcohol	20	UG/L	ND	03/02/94	8270
Bis(2-chloroethoxy)methane	10	UG/L	ND	03/02/94	8270
Bis(2-chloroethyl)ether	10	UG/L	ND	03/02/94	8270
Bis(2-chloroisopropyl)ether	10	UG/L	ND	03/02/94	8270
Bis(2-ethylhexyl)phthalate	10	UG/L	ND	03/02/94	8270
4-Bromophenylphenyl ether	10	UG/L	ND	03/02/94	8270
Butylbenzyl phthalate	10	UG/L	ND	03/02/94	8270
4-Chloroaniline	20	UG/L	ND	03/02/94	8270
1-Chloronaphthalene	10	UG/L	ND	03/02/94	8270
2-Chloronaphthalene	10	UG/L	ND	03/02/94	8270
4-Chloro-3-methylphenol	20	UG/L	ND	03/02/94	8270
2-Chloropenol	10	UG/L	ND	03/02/94	8270
4-Chlorophenylphenyl ether	10	UG/L	ND	03/02/94	8270
Chrysene	10	UG/L	ND	03/02/94	8270
Dibenz(a,h)anthracene	10	UG/L	ND	03/02/94	8270
Dibenzofuran	10	UG/L	ND	03/02/94	8270

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Chemron Sample #: 34224

SEMI-VOLATILES ANALYSIS REPORT

ANALYTE	MDL	Units	RESULTS	Date Analyzed	Test Method
1,3-Dichlorobenzene	10	UG/L	ND	03/02/94	8270
1,4-Dichlorobenzene	10	UG/L	ND	03/02/94	8270
1,2-Dichlorobenzene	10	UG/L	ND	03/02/94	8270
3,3'-Dichlorobenzidine	20	UG/L	ND	03/02/94	8270
2,4-Dichlorophenol	10	UG/L	ND	03/02/94	8270
2-6-Dichlorophenol	10	UG/L	ND	03/02/94	8270
Diethylphthalate	10	UG/L	ND	03/02/94	8270
a,a-Dimethylphenethylamine	10	UG/L	ND	03/02/94	8270
2,4-Dimethylphenol	10	UG/L	ND	03/02/94	8270
Dimethylphthalate	10	UG/L	ND	03/02/94	8270
Di-n-butylphthalate	10	UG/L	ND	03/02/94	8270
4,6-Dinitro-2-methylphenol	50	UG/L	ND	03/02/94	8270
2,4-Dinitrophenol	50	UG/L	ND	03/02/94	8270
2,4-Dinitrotoluene	10	UG/L	ND	03/02/94	8270
2,6-Dinitrotoluene	10	UG/L	ND	03/02/94	8270
Di-n-octylphthalate	10	UG/L	ND	03/02/94	8270
1,2-Diphenylhydrazine	50	UG/L	ND	03/02/94	8270
Fluoranthene	10	UG/L	ND	03/02/94	8270
Fluorene	10	UG/L	ND	03/02/94	8270
Hexachlorobenzene	10	UG/L	ND	03/02/94	8270
Hexachlorobutadiene	10	UG/L	ND	03/02/94	8270
Hexachlorocyclopentadiene	10	UG/L	ND	03/02/94	8270
Hexachloroethane	10	UG/L	ND	03/02/94	8270
Indeno(1,2,3-cd)pyrene	10	UG/L	ND	03/02/94	8270
Isophorone	10	UG/L	ND	03/02/94	8270
3-Methylcholanthrene	10	UG/L	ND	03/02/94	8270
2-Methylnaphthalene	10	UG/L	32	03/02/94	8270
2-Methylphenol	10	UG/L	ND	03/02/94	8270
4-Methylphenol *	10	UG/L	ND	03/02/94	8270
Naphthalene	10	UG/L	ND	03/02/94	8270
1-Naphthylamine	10	UG/L	ND	03/02/94	8270
2-Naphthylamine	10	UG/L	ND	03/02/94	8270
2-Nitroaniline	10	UG/L	ND	03/02/94	8270
3-Nitroaniline	10	UG/L	ND	03/02/94	8270
4-Nitroaniline	10	UG/L	ND	03/02/94	8270
Nitrobenzene	10	UG/L	ND	03/02/94	8270
2-Nitrophenol	10	UG/L	ND	03/02/94	8270
4-Nitrophenol	50	UG/L	ND	03/02/94	8270

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Chemron Sample #: 34224

SEMI-VOLATILES ANALYSIS REPORT

ANALYTE	MDL	Units	RESULTS	Date Analyzed	Test Method
N-Nitroso-di-n-butylamine	10	UG/L	ND	03/02/94	8270
N-Nitrosodimethylamine	10	UG/L	ND	03/02/94	8270
N-Nitrosodi-n-phenylamine **	10	UG/L	ND	03/02/94	8270
N-Nitroso-di-n-propylamine	10	UG/L	ND	03/02/94	8270
Pentachlorobenzene	10	UG/L	ND	03/02/94	8270
Pentachloronitrobenzene	10	UG/L	ND	03/02/94	8270
Pentachlorophenol	50	UG/L	ND	03/02/94	8270
Phenacetin	10	UG/L	ND	03/02/94	8270
Phenanthrene	10	UG/L	ND	03/02/94	8270
Phenol	10	UG/L	ND	03/02/94	8270
Pyrene	10	UG/L	ND	03/02/94	8270
Pyridine	10	UG/L	ND	03/02/94	8270
1,2,4,5-Tetrachlorobenzene	10	UG/L	ND	03/02/94	8270
2,3,4,6-Tetrachlorophenol	10	UG/L	ND	03/02/94	8270
1,2,4-Trichlorobenzene	10	UG/L	ND	03/02/94	8270
2,4,5-Trichlorophenol	10	UG/L	ND	03/02/94	8270
2,4,6-Trichlorophenol	10	UG/L	ND	03/02/94	8270

ND - not detected
* Co-elutes with 3-Methylphenol
** Inseparable from Diphenylamine

Approved By: _____

All test method numbers are references to US Environmental Protection Agency methods unless otherwise noted. MDLs shown represent the minimum detection limit for the analytical procedure used based on the amount of sample analyzed.

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Client: Perry Williams, Inc.
2700 S. Wilson
Amarillo, Texas 79103

Report Date: 03/04/94
Chemron Sample #: 34225
Sample Matrix: Water

Sample Description:
Project No. D.O. #0008
Project Name/Location: Gary AFB/San Marcos Bldg 10-350
Client Sample ID #: GAFB.10.350.11.TC

SEMI-VOLATILES ANALYSIS REPORT

ANALYTE	MDL	Units	RESULTS	Date Analyzed	Test Method
Acenaphthene	10	UG/L	ND	03/02/94	8270
Acenaphthylene	10	UG/L	ND	03/02/94	8270
Acetophenone	10	UG/L	ND	03/02/94	8270
Aniline	10	UG/L	ND	03/02/94	8270
Anthracene	10	UG/L	ND	03/02/94	8270
4-Aminobiphenyl	10	UG/L	ND	03/02/94	8270
Benzidine	50	UG/L	ND	03/02/94	8270
Benzo(a)anthracene	10	UG/L	ND	03/02/94	8270
Benzo(b)fluoranthene	10	UG/L	ND	03/02/94	8270
Benzo(k)fluoranthene	10	UG/L	ND	03/02/94	8270
Benzo(g,h,i)perylene	10	UG/L	ND	03/02/94	8270
Benzo(a)pyrene	10	UG/L	ND	03/02/94	8270
Benzoic Acid	50	UG/L	ND	03/02/94	8270
Benzyl alcohol	20	UG/L	ND	03/02/94	8270
Bis(2-chloroethoxy)methane	10	UG/L	ND	03/02/94	8270
Bis(2-chloroethyl)ether	10	UG/L	ND	03/02/94	8270
Bis(2-chloroisopropyl)ether	10	UG/L	ND	03/02/94	8270
Bis(2-ethylhexyl)phthalate	10	UG/L	ND	03/02/94	8270
4-Bromophenylphenyl ether	10	UG/L	ND	03/02/94	8270
Butylbenzyl phthalate	10	UG/L	ND	03/02/94	8270
4-Chloroaniline	20	UG/L	ND	03/02/94	8270
1-Chloronaphthalene	10	UG/L	ND	03/02/94	8270
2-Chloronaphthalene	10	UG/L	ND	03/02/94	8270
4-Chloro-3-methylphenol	20	UG/L	ND	03/02/94	8270
2-Chloropenol	10	UG/L	ND	03/02/94	8270
4-Chlorophenylphenyl ether	10	UG/L	ND	03/02/94	8270
Chrysene	10	UG/L	ND	03/02/94	8270
Dibenz(a,h)anthracene	10	UG/L	ND	03/02/94	8270
Dibenzofuran	10	UG/L	ND	03/02/94	8270

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Chemron Sample #: 34225

SEMI-VOLATILES ANALYSIS REPORT

ANALYTE	MDL	Units	RESULTS	Date Analyzed	Test Method
1,3-Dichlorobenzene	10	UG/L	ND	03/02/94	8270
1,4-Dichlorobenzene	10	UG/L	ND	03/02/94	8270
1,2-Dichlorobenzene	10	UG/L	ND	03/02/94	8270
3,3'-Dichlorobenzidine	20	UG/L	ND	03/02/94	8270
2,4-Dichlorophenol	10	UG/L	ND	03/02/94	8270
2-6-Dichlorophenol	10	UG/L	ND	03/02/94	8270
Diethylphthalate	10	UG/L	ND	03/02/94	8270
a,a-Dimethylphenethylamine	10	UG/L	ND	03/02/94	8270
2,4-Dimethylphenol	10	UG/L	ND	03/02/94	8270
Dimethylphthalate	10	UG/L	ND	03/02/94	8270
Di-n-butylphthalate	10	UG/L	ND	03/02/94	8270
4,6-Dinitro-2-methylphenol	50	UG/L	ND	03/02/94	8270
2,4-Dinitrophenol	50	UG/L	ND	03/02/94	8270
2,4-Dinitrotoluene	10	UG/L	ND	03/02/94	8270
2,6-Dinitrotoluene	10	UG/L	ND	03/02/94	8270
Di-n-octylphthalate	10	UG/L	ND	03/02/94	8270
1,2-Diphenylhydrazine	50	UG/L	ND	03/02/94	8270
Fluoranthene	10	UG/L	ND	03/02/94	8270
Fluorene	10	UG/L	ND	03/02/94	8270
Hexachlorobenzene	10	UG/L	ND	03/02/94	8270
Hexachlorobutadiene	10	UG/L	ND	03/02/94	8270
Hexachlorocyclopentadiene	10	UG/L	ND	03/02/94	8270
Hexachloroethane	10	UG/L	ND	03/02/94	8270
Indeno(1,2,3-cd)pyrene	10	UG/L	ND	03/02/94	8270
Isophorone	10	UG/L	ND	03/02/94	8270
3-Methylcholanthrene	10	UG/L	ND	03/02/94	8270
2-Methylnaphthalene	10	UG/L	ND	03/02/94	8270
2-Methylphenol	10	UG/L	ND	03/02/94	8270
4-Methylphenol *	10	UG/L	ND	03/02/94	8270
Naphthalene	10	UG/L	ND	03/02/94	8270
1-Naphthylamine	10	UG/L	ND	03/02/94	8270
2-Naphthylamine	10	UG/L	ND	03/02/94	8270
2-Nitroaniline	10	UG/L	ND	03/02/94	8270
3-Nitroaniline	10	UG/L	ND	03/02/94	8270
4-Nitroaniline	10	UG/L	ND	03/02/94	8270
Nitrobenzene	10	UG/L	ND	03/02/94	8270
2-Nitrophenol	10	UG/L	ND	03/02/94	8270
4-Nitrophenol	50	UG/L	ND	03/02/94	8270

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Chemron Sample #: 34225

SEMI-VOLATILES ANALYSIS REPORT

ANALYTE	MDL	Units	RESULTS	Date Analyzed	Test Method
N-Nitroso-di-n-butylamine	10	UG/L	ND	03/02/94	8270
N-Nitrosodimethylamine	10	UG/L	ND	03/02/94	8270
N-Nitrosodi-n-phenylamine **	10	UG/L	ND	03/02/94	8270
N-Nitroso-di-n-propylamine	10	UG/L	ND	03/02/94	8270
Pentachlorobenzene	10	UG/L	ND	03/02/94	8270
Pentachloronitrobenzene	10	UG/L	ND	03/02/94	8270
Pentachlorophenol	50	UG/L	ND	03/02/94	8270
Phenacetin	10	UG/L	ND	03/02/94	8270
Phenanthrene	10	UG/L	ND	03/02/94	8270
Phenol	10	UG/L	ND	03/02/94	8270
Pyrene	10	UG/L	ND	03/02/94	8270
Pyridine	10	UG/L	ND	03/02/94	8270
1,2,4,5-Tetrachlorobenzene	10	UG/L	ND	03/02/94	8270
2,3,4,6-Tetrachlorophenol	10	UG/L	ND	03/02/94	8270
1,2,4-Trichlorobenzene	10	UG/L	ND	03/02/94	8270
2,4,5-Trichlorophenol	10	UG/L	ND	03/02/94	8270
2,4,6-Trichlorophenol	10	UG/L	ND	03/02/94	8270

ND - not detected
* Co-elutes with 3-Methylphenol
** Inseparable from Diphenylamine

Approved By: _____

All test method numbers are references to US Environmental Protection Agency methods unless otherwise noted. MDLs shown represent the minimum detection limit for the analytical procedure used based on the amount of sample analyzed.

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10526 Gulfdale • San Antonio, Texas 78216-3601 • (210) 340-8121

Client: Perry Williams, Inc.
2700 S. Wilson
Amarillo, Texas 79103

Report Date: 03/04/94
Chemron Sample #: 34226
Sample Matrix: Water

Sample Description:
Project No. D.O. #0008
Project Name/Location: Gary AFB/San Marcos Bldg 10-350
Client Sample ID #: GAFB.10.350.09.TC

SEMI-VOLATILES ANALYSIS REPORT

ANALYTE	MDL	Units	RESULTS	Date Analyzed	Test Method
Acenaphthene	100	UG/L	ND	03/03/94	8270
Acenaphthylene	100	UG/L	ND	03/03/94	8270
Acetophenone	100	UG/L	ND	03/03/94	8270
Aniline	100	UG/L	ND	03/03/94	8270
Anthracene	100	UG/L	ND	03/03/94	8270
4-Aminobiphenyl	100	UG/L	ND	03/03/94	8270
Benzidine	500	UG/L	ND	03/03/94	8270
Benzo(a)anthracene	100	UG/L	ND	03/03/94	8270
Benzo(b)fluoranthene	100	UG/L	ND	03/03/94	8270
Benzo(k)fluoranthene	100	UG/L	ND	03/03/94	8270
Benzo(g,h,i)perylene	100	UG/L	ND	03/03/94	8270
Benzo(a)pyrene	100	UG/L	ND	03/03/94	8270
Benzoic Acid	500	UG/L	ND	03/03/94	8270
Benzyl alcohol	200	UG/L	ND	03/03/94	8270
Bis(2-chloroethoxy)methane	100	UG/L	ND	03/03/94	8270
Bis(2-chloroethyl)ether	100	UG/L	ND	03/03/94	8270
Bis(2-chloroisopropyl)ether	100	UG/L	ND	03/03/94	8270
Bis(2-ethylhexyl)phthalate	100	UG/L	770	03/03/94	8270
4-Bromophenylphenyl ether	100	UG/L	ND	03/03/94	8270
Butylbenzyl phthalate	100	UG/L	ND	03/03/94	8270
4-Chloroaniline	200	UG/L	ND	03/03/94	8270
1-Chloronaphthalene	100	UG/L	ND	03/03/94	8270
2-Chloronaphthalene	100	UG/L	ND	03/03/94	8270
4-Chloro-3-methylphenol	200	UG/L	ND	03/03/94	8270
2-Chloropenol	100	UG/L	ND	03/03/94	8270
4-Chlorophenylphenyl ether	100	UG/L	ND	03/03/94	8270
Chrysene	100	UG/L	ND	03/03/94	8270
Dibenz(a,h)anthracene	100	UG/L	ND	03/03/94	8270
Dibenzofuran	100	UG/L	ND	03/03/94	8270

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Chemron Sample #: 34226

SEMI-VOLATILES ANALYSIS REPORT

ANALYTE	MDL	Units	RESULTS	Date Analyzed	Test Method
1,3-Dichlorobenzene	100	UG/L	ND	03/03/94	8270
1,4-Dichlorobenzene	100	UG/L	ND	03/03/94	8270
1,2-Dichlorobenzene	100	UG/L	ND	03/03/94	8270
3,3'-Dichlorobenzidine	200	UG/L	ND	03/03/94	8270
2,4-Dichlorophenol	100	UG/L	ND	03/03/94	8270
2-6-Dichlorophenol	100	UG/L	ND	03/03/94	8270
Diethylphthalate	100	UG/L	ND	03/03/94	8270
a,a-Dimethylphenethylamine	100	UG/L	ND	03/03/94	8270
2,4-Dimethylphenol	100	UG/L	470	03/03/94	8270
Dimethylphthalate	100	UG/L	ND	03/03/94	8270
Di-n-butylphthalate	100	UG/L	ND	03/03/94	8270
4,6-Dinitro-2-methylphenol	500	UG/L	ND	03/03/94	8270
2,4-Dinitrophenol	500	UG/L	ND	03/03/94	8270
2,4-Dinitrotoluene	100	UG/L	ND	03/03/94	8270
2,6-Dinitrotoluene	100	UG/L	ND	03/03/94	8270
Di-n-octylphthalate	100	UG/L	ND	03/03/94	8270
1,2-Diphenylhydrazine	500	UG/L	ND	03/03/94	8270
Fluoranthene	100	UG/L	ND	03/03/94	8270
Fluorene	100	UG/L	ND	03/03/94	8270
Hexachlorobenzene	100	UG/L	ND	03/03/94	8270
Hexachlorobutadiene	100	UG/L	ND	03/03/94	8270
Hexachlorocyclopentadiene	100	UG/L	ND	03/03/94	8270
Hexachloroethane	100	UG/L	ND	03/03/94	8270
Indeno(1,2,3-cd)pyrene	100	UG/L	ND	03/03/94	8270
Isophorone	100	UG/L	ND	03/03/94	8270
3-Methylcholanthrene	100	UG/L	ND	03/03/94	8270
2-Methylnaphthalene	100	UG/L	1700	03/03/94	8270
2-Methylphenol	100	UG/L	150	03/03/94	8270
4-Methylphenol *	100	UG/L	110	03/03/94	8270
Naphthalene	100	UG/L	1400	03/03/94	8270
1-Naphthylamine	100	UG/L	ND	03/03/94	8270
2-Naphthylamine	100	UG/L	ND	03/03/94	8270
2-Nitroaniline	100	UG/L	ND	03/03/94	8270
3-Nitroaniline	100	UG/L	ND	03/03/94	8270
4-Nitroaniline	100	UG/L	ND	03/03/94	8270
Nitrobenzene	100	UG/L	ND	03/03/94	8270
2-Nitrophenol	100	UG/L	ND	03/03/94	8270
4-Nitrophenol	500	UG/L	ND	03/03/94	8270

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Chemron Sample #: 34226

SEMI-VOLATILES ANALYSIS REPORT

ANALYTE	MDL	Units	RESULTS	Date Analyzed	Test Method
N-Nitroso-di-n-butylamine	100	UG/L	ND	03/03/94	8270
N-Nitrosodimethylamine	100	UG/L	ND	03/03/94	8270
N-Nitrosodi-n-phenylamine **	100	UG/L	ND	03/03/94	8270
N-Nitroso-di-n-propylamine	100	UG/L	ND	03/03/94	8270
Pentachlorobenzene	100	UG/L	ND	03/03/94	8270
Pentachloronitrobenzene	100	UG/L	ND	03/03/94	8270
Pentachlorophenol	500	UG/L	ND	03/03/94	8270
Phenacetin	100	UG/L	ND	03/03/94	8270
Phenanthrene	100	UG/L	ND	03/03/94	8270
Phenol	100	UG/L	ND	03/03/94	8270
Pyrene	100	UG/L	ND	03/03/94	8270
Pyridine	100	UG/L	ND	03/03/94	8270
1,2,4,5-Tetrachlorobenzene	100	UG/L	ND	03/03/94	8270
2,3,4,6-Tetrachlorophenol	100	UG/L	ND	03/03/94	8270
1,2,4-Trichlorobenzene	100	UG/L	ND	03/03/94	8270
2,4,5-Trichlorophenol	100	UG/L	ND	03/03/94	8270
2,4,6-Trichlorophenol	100	UG/L	ND	03/03/94	8270

ND - not detected
* Co-elutes with 3-Methylphenol
** Inseparable from Diphenylamine

Approved By: _____

All test method numbers are references to US Environmental Protection Agency methods unless otherwise noted. MDLs shown represent the minimum detection limit for the analytical procedure used based on the amount of sample analyzed.

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10526 Gulfdale • San Antonio, Texas 78216-3601 • (210) 340-8121

Client: Perry Williams, Inc.
2700 S. Wilson
Amarillo, Texas 79103

Report Date: 03/04/94
Chemron Sample #: 34227
Sample Matrix: Water

Sample Description:
Project No. D.O. #0008
Project Name/Location: Gary AFB/San Marcos Bldg 10-350
Client Sample ID #: GAFB.10.350.10.TC

SEMI-VOLATILES ANALYSIS REPORT

ANALYTE	MDL	Units	RESULTS	Date Analyzed	Test Method
Acenaphthene	100	UG/L	ND	03/03/94	8270
Acenaphthylene	100	UG/L	ND	03/03/94	8270
Acetophenone	100	UG/L	ND	03/03/94	8270
Aniline	100	UG/L	ND	03/03/94	8270
Anthracene	100	UG/L	ND	03/03/94	8270
4-Aminobiphenyl	100	UG/L	ND	03/03/94	8270
Benzidine	500	UG/L	ND	03/03/94	8270
Benzo(a)anthracene	100	UG/L	ND	03/03/94	8270
Benzo(b)fluoranthene	100	UG/L	ND	03/03/94	8270
Benzo(k)fluoranthene	100	UG/L	ND	03/03/94	8270
Benzo(g,h,i)perylene	100	UG/L	ND	03/03/94	8270
Benzo(a)pyrene	100	UG/L	ND	03/03/94	8270
Benzoic Acid	500	UG/L	ND	03/03/94	8270
Benzyl alcohol	200	UG/L	ND	03/03/94	8270
Bis(2-chloroethoxy)methane	100	UG/L	ND	03/03/94	8270
Bis(2-chloroethyl)ether	100	UG/L	ND	03/03/94	8270
Bis(2-chloroisopropyl)ether	100	UG/L	ND	03/03/94	8270
Bis(2-ethylhexyl)phthalate	100	UG/L	1000	03/03/94	8270
4-Bromophenylphenyl ether	100	UG/L	ND	03/03/94	8270
Butylbenzyl phthalate	100	UG/L	ND	03/03/94	8270
4-Chloroaniline	200	UG/L	ND	03/03/94	8270
1-Chloronaphthalene	100	UG/L	ND	03/03/94	8270
2-Chloronaphthalene	100	UG/L	ND	03/03/94	8270
4-Chloro-3-methylphenol	200	UG/L	ND	03/03/94	8270
2-Chloropenol	100	UG/L	ND	03/03/94	8270
4-Chlorophenylphenyl ether	100	UG/L	ND	03/03/94	8270
Chrysene	100	UG/L	ND	03/03/94	8270
Dibenz(a,h)anthracene	100	UG/L	ND	03/03/94	8270
Dibenzofuran	100	UG/L	ND	03/03/94	8270

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Chemron Sample #: 34227

SEMI-VOLATILES ANALYSIS REPORT

ANALYTE	MDL	Units	RESULTS	Date Analyzed	Test Method
1,3-Dichlorobenzene	100	UG/L	ND	03/03/94	8270
1,4-Dichlorobenzene	100	UG/L	ND	03/03/94	8270
1,2-Dichlorobenzene	100	UG/L	ND	03/03/94	8270
3,3'-Dichlorobenzidine	200	UG/L	ND	03/03/94	8270
2,4-Dichlorophenol	100	UG/L	ND	03/03/94	8270
2-6-Dichlorophenol	100	UG/L	ND	03/03/94	8270
Diethylphthalate	100	UG/L	ND	03/03/94	8270
a,a-Dimethylphenethylamine	100	UG/L	ND	03/03/94	8270
2,4-Dimethylphenol	100	UG/L	ND	03/03/94	8270
Dimethylphthalate	100	UG/L	ND	03/03/94	8270
Di-n-butylphthalate	100	UG/L	ND	03/03/94	8270
4,6-Dinitro-2-methylphenol	500	UG/L	ND	03/03/94	8270
2,4-Dinitrophenol	500	UG/L	ND	03/03/94	8270
2,4-Dinitrotoluene	100	UG/L	ND	03/03/94	8270
2,6-Dinitrotoluene	100	UG/L	ND	03/03/94	8270
Di-n-octylphthalate	100	UG/L	ND	03/03/94	8270
1,2-Diphenylhydrazine	500	UG/L	ND	03/03/94	8270
Fluoranthene	100	UG/L	ND	03/03/94	8270
Fluorene	100	UG/L	ND	03/03/94	8270
Hexachlorobenzene	100	UG/L	ND	03/03/94	8270
Hexachlorobutadiene	100	UG/L	ND	03/03/94	8270
Hexachlorocyclopentadiene	100	UG/L	ND	03/03/94	8270
Hexachloroethane	100	UG/L	ND	03/03/94	8270
Indeno(1,2,3-cd)pyrene	100	UG/L	ND	03/03/94	8270
Isophorone	100	UG/L	ND	03/03/94	8270
3-Methylcholanthrene	100	UG/L	ND	03/03/94	8270
2-Methylnaphthalene	100	UG/L	ND	03/03/94	8270
2-Methylphenol	100	UG/L	ND	03/03/94	8270
4-Methylphenol *	100	UG/L	ND	03/03/94	8270
Naphthalene	100	UG/L	ND	03/03/94	8270
1-Naphthylamine	100	UG/L	ND	03/03/94	8270
2-Naphthylamine	100	UG/L	ND	03/03/94	8270
2-Nitroaniline	100	UG/L	ND	03/03/94	8270
3-Nitroaniline	100	UG/L	ND	03/03/94	8270
4-Nitroaniline	100	UG/L	ND	03/03/94	8270
Nitrobenzene	100	UG/L	ND	03/03/94	8270
2-Nitrophenol	100	UG/L	ND	03/03/94	8270
4-Nitrophenol	500	UG/L	ND	03/03/94	8270

CHEMRON
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10526 Gulfdale • San Antonio, Texas 78216-3601 • (210) 340-8121

Chemron Sample #: 34227

SEMI-VOLATILES ANALYSIS REPORT

ANALYTE	MDL	Units	RESULTS	Date Analyzed	Test Method
N-Nitroso-di-n-butylamine	100	UG/L	ND	03/03/94	8270
N-Nitrosodimethylamine	100	UG/L	ND	03/03/94	8270
N-Nitrosodi-n-phenylamine **	100	UG/L	ND	03/03/94	8270
N-Nitroso-di-n-propylamine	100	UG/L	ND	03/03/94	8270
Pentachlorobenzene	100	UG/L	ND	03/03/94	8270
Pentachloronitrobenzene	100	UG/L	ND	03/03/94	8270
Pentachlorophenol	500	UG/L	ND	03/03/94	8270
Phenacetin	100	UG/L	ND	03/03/94	8270
Phenanthrene	100	UG/L	ND	03/03/94	8270
Phenol	100	UG/L	ND	03/03/94	8270
Pyrene	100	UG/L	ND	03/03/94	8270
Pyridine	100	UG/L	ND	03/03/94	8270
1,2,4,5-Tetrachlorobenzene	100	UG/L	ND	03/03/94	8270
2,3,4,6-Tetrachlorophenol	100	UG/L	ND	03/03/94	8270
1,2,4-Trichlorobenzene	100	UG/L	ND	03/03/94	8270
2,4,5-Trichlorophenol	100	UG/L	ND	03/03/94	8270
2,4,6-Trichlorophenol	100	UG/L	ND	03/03/94	8270

ND - not detected
* Co-elutes with 3-Methylphenol
** Inseparable from Diphenylamine

Approved By: _____

All test method numbers are references to US Environmental Protection Agency methods unless otherwise noted. MDLs shown represent the minimum detection limit for the analytical procedure used based on the amount of sample analyzed.

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Client: Perry Williams, Inc.
P. O. Box 30206
Amarillo, TX 79120

Client's Job #: D.O.0008/10-350
Chain of Custody #:+1739
Report Date: 03/07/94

QUALITY ASSURANCE REPORT

Description / Parameter	Matrix	Analysis Date	Spike Concentration	Analyzed Value	Background Value	% Recovery	Control Limits Lower	Control Limits Upper	Relative % Difference	Control Limit
S - TRPH	Water	02/25/94	5.2	5.2	< .5	100%	75%	125%		
SD - TRPH	Water	02/25/94				98%			2%	< 30%
S - TRPH	Water	02/25/94	5.2	5.2	< .5	98%	75%	125%		
SD - TRPH	Water	02/25/94				95%			3%	< 30%
KS - Aroclor 1232	Water	02/26/94	1000	938	< .5	94%	10%	215%		
SD - Aroclor 1232	Water	02/26/94				93%			1%	< 18%
S - Arsenic	Water	03/01/94	2	1.919	<.042	96%	75%	125%		
SD - Arsenic	Water	03/01/94				93%			3%	< 30%
S - Arsenic	Water	03/01/94	2	1.960	<.042	98%	75%	125%		
SD - Arsenic	Water	03/01/94				94%			4%	< 30%
S - Cadmium	Water	03/01/94	2	1.876	<.002	94%	75%	125%		
SD - Cadmium	Water	03/01/94				94%			1%	< 30%
S - Cadmium	Water	03/01/94	2	1.961	.009	98%	75%	125%		
SD - Cadmium	Water	03/01/94				95%			2%	< 30%
S - Chromium	Water	03/01/94	2	1.879	<.003	94%	75%	125%		
SD - Chromium	Water	03/01/94				94%			0%	< 30%
S - Chromium	Water	03/01/94	2	1.937	<.003	96%	75%	125%		
SD - Chromium	Water	03/01/94				92%			4%	< 30%

Concentration Units: Soil / Sediments - mg/kg and Water - ug/L

CHEMRON
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10526 Gulfdale • San Antonio, Texas 78216-3601 • (210) 340-8121

Client: Perry Williams, Inc.
P. O. Box 30206
Amarillo, TX 79120

Client's Job #: D.O.0008/10-350
Chain of Custody #:+1739
Report Date: 03/07/94

QUALITY ASSURANCE REPORT

Description / Parameter	Matrix	Analysis Date	Spike Concentration	Analyzed Value	Background Value	% Recovery	Control Limits Lower	Control Limits Upper	Relative % Difference	Control Limit
MS - Lead	Water	03/01/94	2	3.630	1.647	99%	75%	125%		
MSD - Lead	Water	03/01/94				91%			9%	< 30%
MS - Lead	Water	03/01/94	2	1.986	<.021	99%	75%	125%		
MSD - Lead	Water	03/01/94				96%			4%	< 30%
MS - Selenium	Water	03/01/94	2	1.931	<.061	97%	75%	125%		
MSD - Selenium	Water	03/01/94				95%			2%	< 30%
MS - Selenium	Water	03/01/94	2	1.826	<.061	91%	75%	125%		
MSD - Selenium	Water	03/01/94				969%			5%	< 30%
MS - Silver	Water	03/01/94	2	1.964	<.003	987%	75%	125%		
MSD - Silver	Water	03/01/94				97%			1%	< 30%
MS - Silver	Water	03/01/94	1	1.666	<.003	117%	75%	125%		
MSD - Silver	Water	03/01/94				125%			7%	< 30%
MSD - Barium	Water	03/01/94				93%			1%	< 30%
MSD - Barium	Water	03/01/94				93%			3%	< 30%

Concentration Units: Soil / Sediments - mg/kg and Water - ug/L

COC #: 1/39

3876 1 of 1

CHEMRON INCORPORATED

10526 Gulfdale • San Antonio, Texas 78216
(210) 340-8121 (800) 572-6955

Project Manager: Perry Williams Inc	Phone #: 806-373-5820
Address: 2700 S. Wilson Amo. TX	FAX #: 806-371-0340
Project Number: CONTRACT#DACA63-92-D-0047 DO 0008	Project Name: GARY AFB SAN MARCOS
Project Location: Bldg 10.350	Sampler Signature: Walter L. Carlock

CHAIN OF CUSTODY RECORD

ID # LAB USE ONLY	Sampling Date	Sampling Time	Matrix [s,w,f]	Composite	Grab	Boring	FIELD ID #	FIELD DESCRIPTION	No. of Containers	BTEX	TRPH	VOA	SVOA	PCB	8RCRA metals	REMARKS (Preservation, Size/Amount, Etc.)	
34226	2-23-94	1550	W	✓				GAFB·10·350·09·TC	2			✓				HCl	40ml VOA's
								GAFB·10·350·09·TC	1		✓					HCl	1 Liter Amber
								GAFB·10·350·09·TC	1				✓				1 Liter Amber
								GAFB·10·350·09·TC	1					✓			1 Liter Amber
								GAFB·10·350·09·TC	1						✓	HNO_3	250ml Plast.
34227		1445						GAFB·10·350·10·TC	2			✓				HCl	40ml VOA's
								GAFB·10·350·10·TC	1		✓					HCl	1 Liter Amber
								GAFB·10·350·10·TC	1				✓				1 Liter Amber
								GAFB·10·350·10·TC	1					✓			1 Liter Amber
								GAFB·10·350·10·TC	1						✓	HNO_3	250ml Plast.

Relinquished by: [Signature]	Date	Time	Received by: [Signature]
Walter L. Carlock			
Relinquished by: [Signature]	Date	Time	Received by: [Signature]
Relinquished by: [Signature]	Date	Time	Received by: [Signature]
Relinquished by: [Signature]	Date	Time	Received by: [Signature]
Relinquished by: [Signature]	Date 2/24/94	Time 8:15	Received for Laboratory by: Signature 2/24/94 8:15

Remarks:

	Yes	No
Headspace		✓
Properly Sealed	✓	
Chilled to 40°F	✓	

If Yes, Amt. _____
If No, Explain _____
If No, Temp. _____

Type of Container _____

Additional comments:

CHEMRON
INCORPORATED

10526 Gulfdale • San Antonio, Texas 78216-3601 • (210) 340-8121

Client: Perry Williams, Inc.
P. O. Box 30206
Amarillo, TX 79120

Client's Job #: D.O.0008/10-350
Chain of Custody #:+1743
Report Date: 03/07/94

QUALITY ASSURANCE REPORT

Description / Parameter	Matrix	Analysis Date	Spike Concentration	Analyzed Value	Background Value	% Recovery	Control Limits Lower	Control Limits Upper	Relative % Difference	Control Limit
S - TRPH	Water	02/25/94	5.2	5.2	< .5	100%	75%	125%		
SD - TRPH	Water	02/25/94				98%			2%	< 30%
S - TRPH	Water	02/25/94	5.2	5.2	< .5	98%	75%	125%		
SD - TRPH	Water	02/25/94				95%			3%	< 30%
S - Aroclor 1232	Water	02/25/94	1000	938	< .5	94%	10%	215%		
SD - Aroclor 1232	Water	02/25/94				93%			1%	< 18%
S - Arsenic	Water	03/01/94	2	1.919	<.042	96%	75%	125%		
SD - Arsenic	Water	03/01/94				93%			3%	< 30%
S - Arsenic	Water	03/01/94	2	1.960	<.042	98%	75%	125%		
SD - Arsenic	Water	03/01/94				94%			4%	< 30%
SD - Barium	Water	03/01/94				93%			1%	< 30%
SD - Barium	Water	03/01/94				93%			3%	< 30%
S - Cadmium	Water	03/01/94	2	1.876	<.002	94%	75%	125%		
SD - Cadmium	Water	03/01/94				94%			1%	< 30%
S - Cadmium	Water	03/01/94	2	1.961	.009	98%	75%	125%		
SD - Cadmium	Water	03/01/94				95%			2%	< 30%

Concentration Units: Soil / Sediments - mg/kg and Water - ug/L

CHEMRON
INCORPORATED

10526 Gulfdale • San Antonio, Texas 78216-3601 • (210) 340-8121

Client: Perry Williams, Inc.
P. O. Box 30206
Amarillo, TX 79120

Client's Job #: D.O.0008/10-350
Chain of Custody #:+1743
Report Date: 03/07/94

QUALITY ASSURANCE REPORT

Description / Parameter	Matrix	Analysis Date	Spike Concentration	Analyzed Value	Background Value	% Recovery	Control Limits Lower	Control Limits Upper	Relative % Difference	Control Limit
MS - Lead	Water	03/01/94	2	3.630	1.647	99%	75%	125%		
MSD - Lead	Water	03/01/94				91%			9%	< 30%
MS - Lead	Water	03/01/94	2	1.986	<.021	99%	75%	125%		
MSD - Lead	Water	03/01/94				96%			4%	< 30%
MS - Selenium	Water	03/01/94	2	1.931	<.061	97%	75%	125%		
MSD - Selenium	Water	03/01/94				95%			2%	< 30%
MS - Selenium	Water	03/01/94	2	1.826	<.061	91%	75%	125%		
MSD - Selenium	Water	03/01/94				969%			5%	< 30%
MS - Silver	Water	03/01/94	2	1.964	<.003	987%	75%	125%		
MSD - Silver	Water	03/01/94				97%			1%	< 30%
MS - Silver	Water	03/01/94	1	1.666	<.003	117%	75%	125%		
MSD - Silver	Water	03/01/94				125%			7%	< 30%
MSD - Barium	Water	03/01/94				93%			1%	< 30%
MSD - Barium	Water	03/01/94				93%			3%	< 30%

Concentration Units: Soil / Sediments - mg/kg and Water - ug/L

COC #: 1743

3875

CHEMRON INCORPORATED

10526 Gulfdale • San Antonio, Texas 78216
(210) 340-8121 (800) 572-6955

Project Manager: Perry Williams Inc.	Phone #: 806-373-5820
Address: 2700 S Wilson Amarillo TX	FAX #: 806-371-0340
Project Number: Contract #DACA63-92-D-0047 D.O.#0008	Project Name: GARY AFB San Marcos
Project Location: Bldg 10-350	Sampler Signature: Walter Cacleck

CHAIN OF CUSTODY RECORD

ID # LAB USE ONLY	Sampling Date	Sampling Time	Matrix (s,w,f)	Composite	Grab	Boring	FIELD ID #	FIELD DESCRIPTION	No. of Containers	BTEX	TRPH	VOA	SVOA	PCB	8 RCRA metals	REMARKS (Preservation, Size/Amount, Etc.)	
34224	2-23-94	1610	W	✓				GAFB-10-350-08-TC	2			✓				HCl	40 mil VOA's
								GAFB-10-350-08-TC	1		✓		✓			HCl	1 Liter Amber
								GAFB-10-350-08-TC	1					✓			1 Liter Amber
								GAFB-10-350-08-TC	1						✓		1 Liter Amber
		✓						GAFB-10-350-08-TC	1							HNO_3	250 mil Plastic
34225		1730						GAFB-10-350-11-TC	2			✓				HCl	40 mil VOA's
								GAFB-10-350-11-TC	1		✓					HCl	1 Liter Amber
								GAFB-10-350-11-TC	1				✓				1 Liter Amber
								GAFB-10-350-11-TC	1					✓			1 Liter Amber
								GAFB-10-350-11-TC	1						✓	HNO_3	250 mil Plastic

Relinquished by: (Signature)	Date	Time	Received by: (Signature)
Walter L. Cacleck			
Relinquished by: (Signature)	Date	Time	Received by: (Signature)
Relinquished by: (Signature)	Date	Time	Received by: (Signature)
Relinquished by: (Signature)	Date	Time	Received by: (Signature)
Relinquished by: (Signature)	Date 2/24/94	Time 8:15	Received for Laboratory by: Signature [illegible] 2/24/94 8:15

Remarks:

	Yes	No	
Headspace		✓	If Yes, Amt. _____
Properly Sealed	✓		If No, Explain _____
Chilled to 40°F	✓		If No, Temp. _____

Type of Container _____

Additional comments:

CHEMRON
INCORPORATED

10526 Gulfdale • San Antonio, Texas 78216-3601 • (210) 340-8121

Client: Perry Williams, Inc.
P. O. Box 30206
Amarillo, TX 79120

Date Received: 04/21/94
Time Received: 10:00
Date Sampled: 04/20/94

Client's Job #: D.O.0008/GAFB
Chain of Custody #: 1850-1853
Report Date: 04/27/94
Chemron's Job #: 4124

CHEMICAL ANALYSIS REPORT

Chemron #	Sample Description	Sample Matrix	BTEX Analysis Date	Benzene (PPM)	Toluene (PPM)	Ethylbenzene (PPM)	Xylenes (PPM)	Total BTEX (PPM)
35503	Trip Blank	Water	04/26/94	<.005	<.005	<.005	<.015	<.03

Approved By: _____

Analytical Methods: BTEX in Soil or Water - 8020

CHEMRON
INCORPORATED

10526 Gulfdale • San Antonio, Texas 78216-3601 • (210) 340-8121

Client: Perry Williams, Inc.
P. O. Box 30206
Amarillo, TX 79120

Date Received: 04/21/94
Time Received: 10:00
Date Sampled: 04/20/94

Client's Job #: D.O.0008/GAFB
Chain of Custody #: 1850-1853
Report Date: 04/27/94

CHEMICAL ANALYSIS REPORT

hemron #	Sample Description	Sample Matrix	BTEX Analysis Date	Benzene (PPM)	Toluene (PPM)	Ethylbenzene (PPM)	Xylenes (PPM)	Total BTEX (PPM)	TRPH Analysis Date	TRPH (PPM)
5504	GAFB-10-350-SPA/RB	Water	04/26/94	<.005	<.005	<.005	<.015	<0.03	04/27/94	< .5

Approved By: _____

Analytical Methods: BTEX in Soil or Water - 8020; TRPH in Water - 418.1; TRPH in Soil - 9071/418.1

CHEMRON
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10526 Gulfdale • San Antonio, Texas 78216-3601 • (210) 340-8121

Client: Perry Williams, Inc.
P. O. Box 30206
Amarillo, TX 79120

Date Received: 04/21/94
Time Received: 10:00
Date Sampled: 04/20/94

Client's Job #: D.O.0008/GAFB
Chain of Custody #: 1850-1853
Report Date: 04/27/94

CHEMICAL ANALYSIS REPORT

Chemron #	Sample Description	Sample Matrix	BTEX Analysis Date	Benzene (PPM)	Toluene (PPM)	Ethylbenzene (PPM)	Xylenes (PPM)	Total BTEX (PPM)	TRPH Analysis Date	TRPH (PPM)
35505	6851 GAFB-10-350-SPA	Soil	04/26/94	< .4	< .4	< .4	< 1.2	<2.4	04/26/94	< 10.
35506	6850 GAFB-10-350-SPA/QC	Soil	04/26/94	< .4	< .4	< .4	< 1.2	<2.4	04/26/94	< 10.
35507	6863 GAFB-10-350-SPB	Soil	04/26/94	< .4	< .4	< .4	< 1.2	<2.4	04/26/94	130.
35508	6848 GAFB-10-350-SPC	Soil	04/26/94	< .4	< .4	< .4	< 1.2	<2.4	04/26/94	130.
35509	6862 GAFB-10-350-SPD	Soil	04/26/94	< .4	< .4	< .4	< 1.2	<2.4	04/26/94	< 10.
35510	6847 GAFB-10-350-SPE	Soil	04/26/94	< .4	< .4	< .4	< 1.2	<2.4	04/26/94	96.
35511	6757 GAFB-10-350-SPF	Soil	04/26/94	< .4	< .4	< .4	< 1.2	<2.4	04/26/94	360.
35512	6849 GAFB-10-350-SPG	Soil	04/26/94	< .4	< .4	< .4	< 1.2	<2.4	04/26/94	79.

Approved By: _____

Analytical Methods: BTEX in Soil or Water - 8020; TRPH in Water - 418.1; TRPH in Soil - 9071/418.1

CHEMRON
INCORPORATED

10526 Gulfdale • San Antonio, Texas 78216-3601 • (210) 340-8121

Client: Perry Williams, Inc.
P. O. Box 30206
Amarillo, TX 79120

Client's Job #: D.O.0008/GAF
COC #: 1850-1853
Report Date: 04/27/94
Chemron's Job #: 4124

Date & Time Received:
04/21/94, 10:00

Date Sampled:
04/20/94

CHEMICAL ANALYSIS REPORT

Chemron #	Sample Description	Sample Matrix	Date Analyzed	Total Lead (PPM)
5504	GAFB-10-350-SPA/RB	Water	04/27/94	< .03

Approved By: _____

Analytical Methods: 7420/6010

CHEMRON
INCORPORATED

10526 Gulfdale • San Antonio, Texas 78216-3601 • (210) 340-8121

Client: Perry Williams, Inc.
P. O. Box 30206
Amarillo, TX 79120

Date Received: 04/21/94
Time Received: 10:00
Date Sampled: 04/20/94

Client's Job #: D.O.0008/GAFB
Chain of Custody #: 1850-1853
Report Date: 04/27/94

CHEMICAL ANALYSIS REPORT

Chemron #	Sample Description	Sample Matrix	BTEX Analysis Date	Benzene (PPM)	Toluene (PPM)	Ethylbenzene (PPM)	Xylenes (PPM)	Total BTEX (PPM)	TRPH Analysis Date	TRPH (PPM)
35513	6853 GAFB-10-350-SPH	Soil	04/26/94	< .4	< .4	< .4	< 1.2	<2.4	04/26/94	140.
35514	6854 GAFB-10-350-SPI	Soil	04/26/94	< .4	< .4	< .4	< 1.2	<2.4	04/26/94	29.
35515	6740 GAFB-10-350-SPJ	Soil	04/26/94	< .4	< .4	< .4	< 1.2	<2.4	04/26/94	480.
35516	6852 GAFB-10-350-SPK	Soil	04/26/94	< .4	< .4	< .4	< 1.2	<2.4	04/26/94	210.
35517	6856 GAFB-10-350-SPL	Soil	04/26/94	< .4	< .4	< .4	< 1.2	<2.4	04/26/94	38.
35518	6894 GAFB-10-350-08-BH	Soil	04/26/94	2.5	21.	6.0	33.	62.5	04/26/94	< 10.
35519	6745 GAFB-10-350-08-BH/QC	Soil	04/26/94	1.5	11.	3.0	18.	33.5	04/26/94	< 10.
35520	6911 GAFB-10-350-09-BH	Soil	04/26/94	< .4	< .4	< .4	< 1.2	<2.4	04/26/94	86.
35521	6905 GAFB-10-350-10-BH	Soil	04/25/94	< .4	< .4	< .4	< 1.2	<2.4	04/26/94	3800.
35522	6901 GAFB-10-350-11-BH	Soil	04/25/94	< .4	< .4	< .4	2.0	2.0	04/26/94	6500.

Approved By: _____

Analytical Methods: BTEX in Soil or Water - 8020; TRPH in Water - 418.1; TRPH in Soil - 9071/418.1

CHEMRON
INCORPORATED

10526 Gulfdale • San Antonio, Texas 78216-3601 • (210) 340-8121

Client: Perry Williams, Inc.
P. O. Box 30206
Amarillo, TX 79120

Client's Job #: D.O.0008/GA
COC #: 1850-1853
Report Date: 04/29/94
Chemron's Job #: 4124

Date & Time Received:
04/21/94, 10:00

Date Sampled:
04/20/94

CHEMICAL ANALYSIS REPORT

Chemron #	Sample Description	Sample Matrix	Date Analyzed	Total Lead (PPM)
35505	6851 GAFB-10-350-SPA	Soil	04/27/94	11.
35506	6850 GAFB-10-350-SPA/QC	Soil	04/27/94	8.9
35507	6863 GAFB-10-350-SPB	Soil	04/27/94	27.
35508	6848 GAFB-10-350-SPC	Soil	04/27/94	31.
35509	6862 GAFB-10-350-SPD	Soil	04/27/94	31.
35510	6847 GAFB-10-350-SPE	Soil	04/27/94	29.
35511	6757 GAFB-10-350-SPF	Soil	04/27/94	18.
35512	6849 GAFB-10-350-SPG	Soil	04/27/94	26.

Approved By: R. Williams

Analytical Methods: 7420/6010

CHEMRON
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10526 Gulfdale • San Antonio, Texas 78216-3601 • (210) 340-8121

Client: Perry Williams, Inc.
P. O. Box 30206
Amarillo, TX 79120

Client's Job #: D.O.0008/GAF
COC #: 1850-1853
Report Date: 04/29/94
Chemron's Job #: 4124

Date & Time Received:
04/21/94, 10:00

Date Sampled:
04/20/94

CHEMICAL ANALYSIS REPORT

Chemron #	Sample Description	Sample Matrix	Date Analyzed	Total Lead (PPM)
35513	6853 GAFB-10-350-SPH	Soil	04/27/94	32.
35514	6854 GAFB-10-350-SPI	Soil	04/27/94	17.
35515	6740 GAFB-10-350-SPJ	Soil	04/27/94	19.
35516	6852 GAFB-10-350-SPK	Soil	04/27/94	20.
35517	6856 GAFB-10-350-SPL	Soil	04/27/94	27.
35518	6894 GAFB-10-350-08-BH	Soil	04/27/94	5.9
35519	6745 GAFB-10-350-08-BH/QC	Soil	04/27/94	5.5
35520	6911 GAFB-10-350-09-BH	Soil	04/27/94	15.
35521	6905 GAFB-10-350-10-BH	Soil	04/27/94	8.9
35522	6901 GAFB-10-350-11-BH	Soil	04/27/94	10.

Approved By: R. Eidman

Analytical Methods: 7420/6010

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Client: Perry Williams, Inc.
P. O. Box 30206
Amarillo, TX 79120

Date Received: 04/21/94
Time Received: 10:00
Date Sampled: 04/20/94

Client's Job #: D.O.0008/GAFB
Chain of Custody #: 1850-1853
Report Date: 04/27/94

CHEMICAL ANALYSIS REPORT

Chemron #	Sample Description	Sample Matrix	BTEX Analysis Date	Benzene (PPM)	Toluene (PPM)	Ethylbenzene (PPM)	Xylenes (PPM)	Total BTEX (PPM)	TRPH Analysis Date	TRPH (PPM)
35523	6898 GAFB-10-350-08-NWW	Soil	04/25/94	< .4	< .4	< .4	< 1.2	<2.4	04/26/94	70.
35524	6747 GAFB-10-350-08-NEW	Soil	04/25/94	< .4	< .4	< .4	< 1.2	<2.4	04/26/94	29.
35525	6897 GAFB-10-350-11-SWW	Soil	04/25/94	< .4	< .4	< .4	< 1.2	<2.4	04/26/94	16.
35526	6896 GAFB-10-350-11-SEW	Soil	04/25/94	< .4	< .4	< .4	< 1.2	<2.4	04/26/94	101.
35527	6890 GAFB-10-350-08-EW	Soil	04/25/94	< .4	< .4	< .4	< 1.2	<2.4	04/26/94	74.
35528	6765 GAFB-10-350-09-EW	Soil	04/25/94	< .4	< .4	< .4	< 1.2	<2.4	04/26/94	< 10.
35529	6741 GAFB-10-350-10-EW	Soil	04/25/94	< .4	< .4	< .4	< 1.2	<2.4	04/26/94	< 10.
35530	6841 GAFB-10-350-11-EW	Soil	04/25/94	< .4	< .4	< .4	< 1.2	<2.4	04/26/94	< 10.
35531	6893 GAFB-10-350-08-WW	Soil	04/25/94	< .4	< .4	< .4	< 1.2	<2.4	04/26/94	< 10.
35532	6908 GAFB-10-350-09-WW	Soil	04/25/94	< .4	< .4	< .4	< 1.2	<2.4	04/26/94	< 10.

Approved By: _____

Analytical Methods: BTEX in Soil or Water - 8020; TRPH in Water - 418.1; TRPH in Soil - 9071/418.1

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Client: Perry Williams, Inc.
P. O. Box 30206
Amarillo, TX 79120

Client's Job #: D.O.0008/GAF
COC #: 1850-1853
Report Date: 04/29/94
Chemron's Job #: 4124

Date & Time Received:
04/21/94, 10:00

Date Sampled:
04/20/94

CHEMICAL ANALYSIS REPORT

Chemron #	Sample Description	Sample Matrix	Date Analyzed	Total Lead (PPM)
35523	6898 GAFB-10-350-08-NWW	Soil	04/27/94	38.
35524	6747 GAFB-10-350-08-NEW	Soil	04/27/94	28.
35525	6897 GAFB-10-350-11-SWW	Soil	04/27/94	6.9
35526	6896 GAFB-10-350-11-SEW	Soil	04/27/94	8.5
35527	6890 GAFB-10-350-08-EW	Soil	04/27/94	56.
35528	6765 GAFB-10-350-09-EW	Soil	04/27/94	6.5
35529	6741 GAFB-10-350-10-EW	Soil	04/27/94	14.
35530	6841 GAFB-10-350-11-EW	Soil	04/27/94	6.4
35531	6893 GAFB-10-350-08-WW	Soil	04/27/94	9.7
35532	6908 GAFB-10-350-09-WW	Soil	04/27/94	5.7

Approved By: R. Richman

Analytical Methods: 7420/6010

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Client: Perry Williams, Inc.
P. O. Box 30206
Amarillo, TX 79120

Date Received: 04/21/94
Time Received: 10:00
Date Sampled: 04/20/94

Client's Job #: D.O.0008/GAFB
Chain of Custody #: 1850-1853
Report Date: 04/27/94

CHEMICAL ANALYSIS REPORT

Chemron #	Sample Description	Sample Matrix	BTEX Analysis Date	Benzene (PPM)	Toluene (PPM)	Ethylbenzene (PPM)	Xylenes (PPM)	Total BTEX (PPM)	TRPH Analysis Date	TRPH (PPM)
35533	6891 GAFB-10-350-10-WW	Soil	04/25/94	< .4	< .4	< .4	< 1.2	<2.4	04/26/94	780.
35534	6888 GAFB-10-350-11-WW	Soil	04/25/94	< .4	< .4	< .4	< 1.2	<2.4	04/26/94	< 10.

Approved By: _____

Analytical Methods: BTEX in Soil or Water - 8020; TRPH in Water - 418.1; TRPH in Soil - 9071/418.1

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Client: Perry Williams, Inc.
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Amarillo, TX 79120

Client's Job #: D.O.0008/GAF
COC #: 1850-1853
Report Date: 04/29/94
Chemron's Job #: 4124

Date & Time Received:
04/21/94, 10:00

Date Sampled:
04/20/94

CHEMICAL ANALYSIS REPORT

Chemron #	Sample Description	Sample Matrix	Date Analyzed	Total Lead (PPM)
35533	6891 GAFB-10-350-10-WW	Soil	04/27/94	6.4
534	6888 GAFB-10-350-11-WW	Soil	04/27/94	6.1

Approved By: R. Elman

Analytical Methods: 7420/6010

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Client: Perry Williams, Inc.
P. O. Box 30206
Amarillo, TX 79120

Client's Job #: D.O.0008/GAFB
Chain of Custody #: 1850-1853
Report Date: 05/02/94

QUALITY ASSURANCE REPORT

Description / Parameter	Matrix	Analysis Date	Spike Concentration	Analyzed Value	Background Value	% Recovery	Control Limits Lower	Control Limits Upper	Relative % Difference	Control Limit
MS - TPH	Soil	04/26/94	535	432	16	78%	75%	125%	2%	<30%
MSD - TPH	Soil	04/26/94	535	445	16	80%	75%	125%	2%	<30%
MS - TPH	Soil	04/26/94	599	548	<120	91%	75%	125%	2%	<30%
MSD - TPH	Soil	04/26/94	599	532	<10	89%	75%	125%	2%	<30%
MS - TPH	Soil	04/26/94	516	433	<10	84%	75%	125%	6%	<30%
MSD - TPH	Soil	04/26/94	516	466	<10	90%	75%	125%	6%	<30%
MS - TPH	Soil	04/26/94	535	635	29	113%	75%	125%	10%	<30%
MSD - TPH	Soil	04/26/94	535	578	29	103%	75%	125%	10%	<30%
MS - TPH	Soil	04/26/94	535	573	44	99%	75%	125%	5%	<30%
MSD - TPH	Soil	04/26/94	535	601	44	104%	75%	125%	5%	<30%
MS - Lead	Soil	04/27/94	100	115.3	27.8	87.5	75%	125%	4.4%	<30%
MSD - Lead	Soil	04/27/94	100	119.2	27.8	91.4	75%	125%	4.4%	<30%
MS - Lead	Soil	04/27/94	100	95.6	<1.5	95.6	75%	125%	.31%	<30%
MSD - Lead	Soil	04/27/94	100	95.3	<1.5	95.3	75%	125%	.31%	<30%
MS - Lead	Soil	04/27/94	100	98.8	<1.5	98.8	75%	125%	3.2%	<30%
MSD - Lead	Soil	04/27/94	100	95.7	<1.5	95.7	75%	125%	3.2%	<30%
MS - Lead	Soil	04/27/94	100	115.3	27.8	87.5	75%	125%	4.4%	<30%
MSD - Lead	Soil	04/27/94	100	119.2	27.8	91.4	75%	125%	4.4%	<30%
MS - Lead	Soil	04/27/94	100	95.6	<1.5	95.6	75%	125%	.31%	<30%
MSD - Lead	Soil	04/27/94	100	95.3	<1.5	95.3	75%	125%	.31%	<30%
MS - Lead	Soil	04/27/94	100	98.8	<1.5	98.8	75%	125%	3.2%	<30%
MSD - Lead	Soil	04/27/94	100	95.7	<1.5	95.7	75%	125%	3.2%	<30%
MS - Lead	Soil	04/27/94	100	97.1	<1.5	97.1	75%	125%	0%	<30%
MSD - Lead	Soil	04/27/94	100	97.1	<1.5	97.1	775%	125%	0%	<30%
MSD - Lead	Soil	04/27/94	100	83.1	6.0	77.1	75%	125%	.4%	<30%
MSD - Lead	Soil	04/27/94	100	83.4	6.0	77.4	75%	125%	.4%	<30%

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Client: Perry Williams, Inc.
P. O. Box 30206
Amarillo, TX 79120

Client's Job #: D.O.0008/GAFB
Chain of Custody #: 1850-1853
Report Date: 05/02/94

QUALITY ASSURANCE REPORT

Description / Parameter	Matrix	Analysis Date	Spike Concentration	Analyzed Value	Background Value	% Recovery	Control Limits Lower	Control Limits Upper	Relative % Difference	Control Limit
MS - Benzene	Water	04/26/94	50	45.6	<5	91%	75%	125%	2%	<30%
MS - Toluene	Water	04/26/94	50	49.2	<5	98%	75%	125%	4%	<30%
MS - Ethylbenzene	Water	04/26/94	50	45.6	<5	91%	75%	125%	8%	<30%
MS - Xylenes	Water	04/26/94	150	140.63	<15	94%	75%	125%	5%	<30%
MSD - Benzene	Water	04/26/94	50	50.4	<5	101%	75%	125%	2%	<30%
MSD - Toluene	Water	04/26/94	50	51.6	<5	103%	75%	125%	4%	<30%
MSD - Ethylbenzene	Water	04/26/94	50	48	<5	96%	75%	125%	8%	<30%
MSD - Xylenes	Water	04/26/94	150	148.36	<15	99%	75%	125%	5%	<30%
RGT - Blk Benzene	Water	04/26/94		<5						
RGT - Blk Toluene	Water	04/26/94		<5						
RGT - Blk Ethylbenze	Water	04/26/94		<5						
RGT - Blk Xylenes	Water	04/26/94		<5						
MS - TPH	Water	04/27/94	6.155	5.6	<.05	91%	75%	125%	2%	<30%
MSD - TPH	Water	04/27/94	6.155	5.5	<.05	89%	75%	125%	2%	<30%
Blk - TPH	Water	04/27/94		<.05						
MS - LEAD	Water	04/27/94	2	2.151	<.03	107.	75%	125%	.2%	<30%
MSD - LEAD	Water	04/27/94	2	2.148	<.03	107.	75%	125%	.2%	<30%
MS - Lead	Water	04/27/94	2	2.151	<.03	107.	75%	125%	.2%	<30%
MSD - Lead	Water	04/27/94	2	2.148	<.03	107.	75%	125%	.2%	<30%
MS - Lead	Water	04/27/94	2	2.151	<.03	107.	75%	125%	.2%	<30%
MSD - Lead	Water	04/27/94	2	2.148	<.03	107.	75%	125%	.2%	<30%

Concentration Units: Soil / Sediments - mg/kg and Water - ug/L

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Client: Perry Williams, Inc.
P. O. Box 30206
Amarillo, TX 79120

Client's Job #: D.O.0008/GAFB
Chain of Custody #: 1850-1853
Report Date: 05/02/94

QUALITY ASSURANCE REPORT

Description / Parameter	Matrix	Analysis Date	Spike Concentration	Analyzed Value	Background Value	% Recovery	Control Limits Lower	Control Limits Upper	Relative % Difference	Control Limit
MS - BENZENE	Soil	04/25/94	4.16	4.0	<.4	96%	75%	125%	5%	<30%
MS - TOLUENE	Soil	04/25/94	4.16	4.0	<.4	96%	75%	125%	5%	<30%
MS - ETHYLBENZENE	Soil	04/25/94	4.16	3.9	<.4	94%	75%	125%	4%	<30%
MS - XYLENE	Soil	04/25/94	12.5	12.04	<1.2	96%	75%	125%	6%	<30%
MSD - BENZENE	Soil	04/25/94	4.16	4.2	<.4	101%	75%	125%	5%	<30%
MSD - TOLUENE	Soil	04/25/94	4.16	4.2	<.4	101%	75%	125%	5%	<30%
MSD - ETHYLBENZENE	Soil	04/25/94	4.16	4.1	<.4	98%	75%	125%	4%	<30%
MSD - XYLENE	Soil	04/25/94	12.5	12.71	<1.2	102%	75%	125%	6%	<30%
RGT - BLANK BENZENE	Soil	04/25/94		<.4						
RGT - BLK TOLUENE	Soil	04/25/94		<.4						
RGT - BLK ETHYLBENZ	Soil	04/25/94		<.4						
RGT - BLK XYLENE	Soil	04/25/94		<.4						

Concentration Units: Soil / Sediments - mg/kg and Water - ug/L

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Chain of Custody #: 1850-1853
Report Date: 05/02/94

QUALITY ASSURANCE REPORT

Description / Parameter	Matrix	Analysis Date	Spike Concentration	Analyzed Value	Background Value	% Recovery	Control Limits Lower	Control Limits Upper	Relative % Difference	Control Limit
MS - BENZENE	Soil	04/26/94	4.16	3.9	<.4	94%	75%	125%	2%	<30%
MS - TOLUENE	Soil	04/26/94	4.16	3.9	<.4	94%	75%	125%	4%	<30%
MS - ETHYLBENZENE	Soil	04/26/94	4.16	3.7	<.4	89%	75%	125%	8%	<30%
MS - XYLENE	Soil	04/26/94	12.5	11.48	<1.2	92%	75%	125%	5%	<30%
MSD - BENZENE	Soil	04/26/94	4.16	4	<.4	96%	75%	125%	2%	<30%
MSD - TOLUENE	Soil	04/26/94	4.16	4.1	<.4	98%	75%	125%	4%	<30%
MSD - ETHYLBENZENE	Soil	04/26/94	4.16	4	<.4	96%	75%	125%	8%	<30%
MSD - XYLENE	Soil	04/26/94	12.5	12.13	<1.2	97%	75%	125%	5%	<30%
RGT - BLANK BENZENE	Soil	04/26/94		<.4						
RGT - BLK TOLUENE	Soil	04/26/94		<.4						
RGT - BLK ETHYLBENZ	Soil	04/26/94		<.4						
RGT - BLK XYLENE	Soil	04/26/94		<.4						
MS - Benzene	Soil	04/26/94	4.16	3.4	<.4	82%	75%	125%	10%	<30%
MS - Toluene	Soil	04/26/94	4.16	3.5	<.4	84%	75%	125%	11%	<30%
MS - Ethylbenzene	Soil	04/26/94	4.16	3.3	<.4	79%	75%	125%	11%	<30%
MS - Xylene	Soil	04/26/94	12.5	10.29	<1.2	82%	75%	125%	10%	<30%
MSD - Benzene	Soil	04/26/94	4.16	3.8	<.4	91%	75%	125%	10%	<30%
MSD - Toluene	Soil	04/26/94	4.16	3.9	<.4	94%	75%	125%	11%	<30%
MSD - Ethylbenzene	Soil	04/26/94	4.16	3.7	<.4	89%	75%	125%	11%	<30%
MSD - Xylene	Soil	04/26/94	12.5	11.39	<1.2	91%	75%	125%	10%	<30%
RGT - Blk Benzene	Soil	04/26/94		<.4						
RGT - Blk Toluene	Soil	04/26/94		<.4						
RGT - Blk Ethylbenze	Soil	04/26/94		<.4						
RGT - Blk Xylenes	Soil	04/26/94		<.4						

Concentration Units: Soil / Sediments - mg/kg and Water - ug/L

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Chain of Custody #: 1850-1853
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QUALITY ASSURANCE REPORT

Description / Parameter	Matrix	Analysis Date	Spike Concentration	Analyzed Value	Background Value	% Recovery	Control Limits Lower	Control Limits Upper	Relative % Difference	Control Limit
MS - Benzene	Soil	04/26/94	4.16	3.4	<.4	82%	75%	125%	4%	<30%
MS - Toluene	Soil	04/26/94	4.16	3.4	<.4	82%	75%	125%	4%	<30%
MS - Ethylbenzene	Soil	04/26/94	4.16	3.3	<.4	79%	75%	125%	4%	<30%
MS - Xylene	Soil	04/26/94	12.5	10.3	<1.2	82%	75%	125%	2%	<30%
MSD - Benzene	Soil	04/26/94	4.16	3.3	<.4	79%	75%	125%	4%	<30%
MSD - Toluene	Soil	04/26/94	4.16	3.3	<.4	79%	75%	125%	4%	<30%
MSD - Ethylbenzene	Soil	04/26/94	4.16	3.4	<.4	82%	75%	125%	4%	<30%
MSD - Xylene	Soil	04/26/94	12.5	10.45	<1.2	84%	75%	125%	2%	<30%
RGT - Blk Benzene	Soil	04/26/94		<.4						
RGT - Blk Toluene	Soil	04/26/94		<.4						
RGT - Blk Ethylbenze	Soil	04/26/94		<.4						
RGT - Blk Xylenes	Soil	04/26/94		<.4						
MS - Benzene	Soil	04/26/94	4.16	3.8	<.4	91%	75%	125%	3%	<30%
MS - Toluene	Soil	04/26/94	4.16	3.9	<.4	94%	75%	125%	2%	<30%
MS - Ethylbenzene	Soil	04/26/94	4.16	3.8	<.4	91%	75%	125%	3%	<30%
MS - Xylene	Soil	04/26/94	12.5	11.79	<1.2	94%	75%	125%	3%	<30%
MSD - Benzene	Soil	04/26/94	4.16	3.9	<.4	94%	75%	125%	3%	<30%
MSD - Toluene	Soil	04/26/94	4.16	4.9	<.4	96%	75%	125%	2%	<30%
MSD - Ethylbenzene	Soil	04/26/94	4.16	3.9	<.4	94%	75%	125%	3%	<30%
MSD - Xylene	Soil	04/26/94	12.5	12.15	<1.2	97%	75%	125%	3%	<30%
RGT - Blk Benzene	Soil	04/26/94		<.4						
RGT - Blk Toluene	Soil	04/26/94		<.4						
RGT - Blk Ethylbenze	Soil	04/26/94		<.4						
RGT - Blk Xylenes	Soil	04/26/94		<.4						

Concentration Units: Soil / Sediments - mg/kg and Water - ug/L

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SAMPLE LOGIN CHECKLIST

DATE: 4/21/94 TIME: 2:00 INITIALS: MWS

CLIENT: PWI Project: _____

1. Is a Chain of Custody present? (Yes) No
2. Is the Chain of Custody properly completed? (Yes) No
3. Are custody seals present? Yes (No)
   If yes, are they intact? Yes No (N/A)
   If yes, are they on sample _____ or on Ice Chest _____
4. Are all samples tagged or labelled? (Yes) No
   Do the labels match the Chain of Custody? (Yes) No N/A
5. Do all shipping documents agree Yes No (N/A)
   (i.e. number of coolers arrived vs. on tickets, if not describe below)
6. Delivery Agent PWI
   Condition of shipping container: Intact
7. Condition and Temperature of Samples: Intact @ 4°C
8. Are samples preserved properly? (Yes) No
   If not, describe: _____
10. Are all samples within holding time on arrival? (Yes) No
11. Sample disposal: Return to Client ____ Chemron disposal ✓

Comments (reference checklist item number):

Client Contact for Resolution:

Name: _____ Phone ___ Fax ___ Date & Time _____

Retry for Contact:

Name: _____ Phone ___ Fax ___ Date & Time _____

COC #: 1850

4124
2014

CHEMRON INCORPORATED

10526 Gulfdale • San Antonio, Texas 78216
(210) 340-8121 (800) 572-6955

CHAIN OF CUSTODY RECORD

Project Manager: PWI	Phone # (800) 445-1249
Address: 2700 S. Wilson Amarillo, TX 79120	FAX #: (806) 371-0340
Project Number: DO#: 0008	Project Name: GAFB·10·350
Project Location: SAN MARCOS, TX	Sampler Signature: Michael Soto

ID # LAB USE ONLY	Sampling Date	Sampling Time	Matrix [s,w,f]	Composite	Grab	Boring	FIELD ID #	FIELD DESCRIPTION	No. of Containers	ANALYSIS BTEX	TRPH	LEAD					REMARKS (Preservation, Size/Amount, Etc.)
35503	20/APR/94	17:50	W		✓			TRIP BLANK	2	✓							40ml VOA
35504		17:55	W	✓				GAFB·10·350·SPA/RB	4	✓	✓	✓					SEE NOTE
35505		18:00	S	✓			6851	·SPA	1	✓	✓	✓					4 OZ SEALED
35506		18:00					6850	·SPA/QC									
35507		18:05					6863	·SPB									
35508		18:10					6848	·SPC									
35509		18:15					6862	·SPD									
35510		18:20					6847	·SPE									
35511		18:25					6757	·SPF									
35512		18:30					6849	·SPG									

Relinquished by: [Signature]	Date	Time	Received by: [Signature]
Michael Soto	21/APR/94	9:30	
Relinquished by: [Signature]	Date	Time	Received by: [Signature]
Relinquished by: [Signature]	Date	Time	Received by: [Signature]
Relinquished by: [Signature]	Date	Time	Received by: [Signature]
Relinquished by: [Signature]	Date 4/21/94	Time 1000	Received for Laboratory by: Signature

Remarks:

	Yes	No	
Headspace		✓	If Yes, Amt.
Properly Sealed	✓		If No, Explain
Chilled to 40°F	✓		If No, Temp.

Type of Container NOTE: 2; 40ml VOA w/HCl BTEX

Additional comments: 1; 1 lt Amber w/HCl TRPH

1; 250ml plastic w/HNO_3 LEAD

COC #: 1051

CHEMRON INCORPORATED

10526 Gulfdale • San Antonio, Texas 78216
(210) 340-8121 (800) 572-6955

4124
2 of 4

CHAIN OF CUSTODY RECORD

Project Manager: PWI	Phone #: (800) 445-1249
Address: 2700 S. Wilson	FAX #: (806) 371-0340
Project Number: DO#: 0008	Project Name: GAFB 10-350
Project Location: SAN MARCOS, TX	Sampler Signature: Michael Soto

ID # LAB USE ONLY	Sampling Date	Sampling Time	Matrix [s,w,f]	Composite	Grab	Boring	FIELD ID #	FIELD DESCRIPTION	No. of Containers	ANALYSIS BTEX	TRPH	LEAD			72 HRS		REMARKS (Preservation, Size/Amount, Etc.)
35513	20 Apr 94	18:35	S	✓			6853	GAFB-10-350-SPH	1	✓	✓	✓					4 OZ SEALED
35514		18:40					6854	-SPI									
35515		18:45					6740	-SPJ									
35516		18:50					6852	-SPK									
35517		18:55					6856	-SPL									
35518		19:05			✓		6894	GAFB-10-350-08-BH							✓		
35519		19:05					6745	-08-BH/QC									
35520		19:10					6911	-09-BH									
35521		19:15					6905	-10-BH									
35522		19:20					6901	-11-BH									

Relinquished by: [Signature]	Date	Time	Received by: [Signature]
Michael Soto	21 Apr 94	9:30	
Relinquished by: [Signature]	Date	Time	Received by: [Signature]
Relinquished by: [Signature]	Date	Time	Received by: [Signature]
Relinquished by: [Signature]	Date	Time	Received by: [Signature]
Relinquished by: [Signature]	Date	Time	Received for Laboratory by: Signature
	4/21/94	1000	[signature]

Remarks:

	Yes	No	
Headspace		✓	If Yes, Amt. ____
Properly Sealed	✓		If No, Explain ____
Chilled to 40°F	✓		If No, Temp. ____

Type of Container ____

Additional comments:

COC #: 1052

4124
3of4

CHEMRON INCORPORATED

10526 Gulfdale • San Antonio, Texas 78216
(210) 340-8121 (800) 572-6955

CHAIN OF CUSTODY RECORD

Project Manager: PWI	Phone #: (800) 445-1249
Address: 2700 S. Wilson	FAX #: (806) 371-0340
Project Number: DD#: 0008	Project Name: GAFB 10·350
Project Location: SAN MARCOS	Sampler Signature: Michael Soto

ID # LAB USE ONLY	Sampling Date	Sampling Time	Matrix [s,w,f]	Composite	Grab	Boring	FIELD ID #	FIELD DESCRIPTION	No. of Containers	ANALYSIS BTEX	TRPH	LEAD			72 HRS		REMARKS (Preservation, Size/Amount, Etc.)
35523	20 Apr	19:25	S		✓		6898	GAFB·10·350·08·NNW	1	✓	✓	✓			✓		4oz SEALED
35524		19:30					6747	·08·NEW									
35525		19:35					6897	·11·SWW									
35526		19:40					6896	·11·SEW									
35527		19:45					6890	·08·EW									
35528		19:50					6765	·09·EW									
35529		19:55					6741	·10·EW									
35530		20:00					6841	·11·EW									
35531		20:05					6893	·08·WW									
35532		20:10					6908	·09·WW									

Relinquished by: [Signature]	Date	Time	Received by: [Signature]
Michael Soto	21 Apr 94	9:30	
Relinquished by: [Signature]	Date	Time	Received by: [Signature]
Relinquished by: [Signature]	Date	Time	Received by: [Signature]
Relinquished by: [Signature]	Date	Time	Received by: [Signature]
Relinquished by: [Signature]	Date 4/21/94	Time 1000	Received for Laboratory by: Signature

Remarks:

	Yes	No	
Headspace		✓	If Yes, Amt.
Properly Sealed	✓		If No, Explain
Chilled to 40°F	✓		If No, Temp.

Type of Container

Additional comments:

COC #: 1853

4124
408

CHEMRON INCORPORATED

10526 Gulfdale • San Antonio, Texas 78216
(210) 340-8121 (800) 572-6955

CHAIN OF CUSTODY RECORD

Project Manager: PWI	Phone #: (800) 445-1249
Address: 2700 S. Wilson	FAX #: (806) 371-0340
Project Number: DO#:0008	Project Name: GAFB 10-350
Project Location: SAN MARCOS, TX	Sampler Signature: Michael Soto

ID # LAB USE ONLY	Sampling Date	Sampling Time	Matrix [s,w,f]	Composite	Grab	Boring	FIELD ID #	FIELD DESCRIPTION	No. of Containers	BTEX	TRPH	LEAD					REMARKS (Preservation, Size/Amount, Etc.)
35533	20 Apr 94	20:15	S		✓		6891	GAFB.10.350.10.WW	1	✓	✓	✓					4 OZ SEALED
35534		20:20	S		✓		6888	.11.WW	1	✓	✓	✓					

Relinquished by: [Signature]	Date	Time	Received by: [Signature]
Michael Soto	21 Apr 94	9:30	
Relinquished by: [Signature]	Date	Time	Received by: [Signature]
Relinquished by: [Signature]	Date	Time	Received by: [Signature]
Relinquished by: [Signature]	Date	Time	Received by: [Signature]
Relinquished by: [Signature]	Date 4/21/94	Time 1000	Received for Laboratory by: Signature

Remarks:

	Yes	No	
Headspace		✓	If Yes, Amt.
Properly Sealed	✓		If No, Explain
Chilled to 40°F	✓		If No, Temp.

Type of Container

Additional comments:

ENVIRON

Environmental Laboratories, Inc.
312 W. 9TH
Amarillo, Texas 79101
306-376-7004

Clie.... Perry Williams Inc.
P.O. Box 30206
Amarillo, TX 79120

Project Name: GAFB
Location: Site#: 4-351, 10-350
DO#: 0008
Date Sampled: 4/30/04
Date Received: 4/30/94
Sample Type: Soil
Sample Condition: Intact-Chilled
Sample Rec'd By: RB
C-O-C# NA

Lab ID#	Field Code Description	TCLP Lead Analysis Date	TCLP Lead mg/L
105045-4	GAFB-10-350-PI-1	6/4/94	<0.1
105045-5	GAFB-10-350-PI-2	6/4/94	<0.1
105045-6	GAFB-10-350-PI-3	6/4/94	<0.1
105045-8	GAFB-4-351-PI-2	6/4/94	<0.1

LEAD QC:		
	Standard Recovery(%)	113
	Spike Recovery(%)	110
	Duplicate(%Diff)	14
	Blank	<0.1

METHODS: TCLP LEAD-EPA SW 846-7421 with 1311

Rick Baker
Rick Baker Lab Director

6/4/94
Date

ENVIRON

Environmental Laboratories, Inc.
812 W. 9TH
Amarillo, Texas 79101
806-376-7004

ınt: Perry Williams Inc.
P.O. Box 30206
Amarillo, TX 79120

Project Name: GAFB
Location: Sit 51, 10-350
DO#. 008
Date Sampled: 4/30/94
Date Received: 4/30/94
Sample Type: Soil/Water*
Sample Condition: Intact-Chilled
Sample Rec'd By: RB
C-O-C# NA

Lab ID#	Field Code Description	TRPH Analysis Date	TRPH ppm	BTEX Analysis Date	Benzene ppm	Toluene ppm	Ethyl Benzene ppm	Xylenes ppm	TOTAL BTEX	Total Lead Analysis Date	Total L ppm
404045-1*	TRIP BLANK			5/6/94	<0.005	<0.005	<0.005	<0.015	<0.030		
404045-2*	GAFB-10-350-PI-1/RB	5/6/94	<0.200	5/6/94	<0.005	<0.005	<0.005	<0.015	<0.030	5/5/94	<0.1
404045-3	GAFB-10-350-PI-1/QC	5/6/94	14	5/6/94	<0.1	<0.1	<0.1	<0.3	<0.6	5/5/94	173.
404045-4	GAFB-10-350-PI-1	5/6/94	105	5/6/94	<0.1	<0.1	<0.1	<0.3	<0.6	5/5/94	148.
404045-5	GAFB-10-350-PI-2	5/6/94	<5	5/6/94	<0.1	<0.1	<0.1	<0.3	<0.6	5/5/94	106.
404045-6	GAFB-10-350-PI-3	5/6/94	20	5/6/94	<0.1	<0.1	<0.1	<0.3	<0.6	5/5/94	173.
404045-7	GAFB-4-351-PI-1	5/6/94	<5	5/6/94	<0.1	<0.1	<0.1	<0.3	<0.6	5/5/94	29.
404045-8	GAFB-4-351-PI-2	5/6/94	305	5/6/94	<0.1	<0.1	<0.1	<0.3	<0.6	5/5/94	162

TRPH QC:

Standard Recovery(%)	98
Spike Recovery(%)	113
Duplicate(%Diff)	0
Blank(Soil)	<5
Blank(Water)	<0.200

BTEX QC:

	Std Rec(%)	Spike Rec(%)
Benzene	103	108
Toluene	100	104
Ethyl Benzene	106	99
Xylenes	92	87

Duplicate(%Diff)	Blank
0	<0.005

LEAD QC:

Standard Recovery(%)	10
Spike Recovery(%)	10
Duplicate(%Diff)	1
Blank(Soil)	<5
Blank(Water)	<0

METHODS: BTEX-EPA SW 846-8020 with EPA Method 5030, TRPH-EPA SW 846-418.1 with EPA Method 9071, LEAD-EPA SW 846-7421 with 3020/3050

Rick Baker
Rick Baker Lab Director

5/14/94
Date

ENVIRON

ENVIRONMENTAL LABORATORIES, INC.
812 W. 9TH
Amarillo, Texas 79101
(806) 376-7004

CHAIN OF CUSTODY RECORD

Project Manager: PWI	Phone # (800) 445-1249
Address: 2700 S. Wilson Amarillo TX	FAX #: (806) 371-0340
Project Number: DO# 0008	Project Name: GAFB. 4.351 & GAFB-10.350
Project Location: SAN MARCOS, TX	Sampler Signature: Michael Soto

ID# Lab Use Only	Sampling Date	Sampling Time	Matrix (s,w,f)	Composite	Grab	Boring	Field ID #	Field Description	No. of Containers	Analysis: BTEX	Analysis: TRPH	Analysis: LEAD				72 HRS	Remarks (Preservation, Size/Amount, etc.)
404045-1	30Apr94	10:00	W		✓		N/A	TRIP BLANK	2	✓							40 ml VOA
-2		10:05	W	✓			N/A	GAFB.10.350.PI.1/RB	4	✓	✓	✓					SEE NOTE
-3		10:10	S	✓			5541	GAFB.10.350.PI.1/AC	1								4 OZ SEALED
-4		10:10					5536	GAFB.10.350.PI.1									
-5		10:15					5516	GAFB.10.350.PI.2									
-6		10:20					5540	GAFB.10.350.PI.3									
-7		11:00					5491	GAFB.4.351.PI.1									
-8		11:05					5463	GAFB.4.351.PI.2 RB									

Relinquished by: (Signature)	Date	Time	Received by: (Signature)
Michael Soto	30Apr94	12:00	
Relinquished by: (Signature)	Date	Time	Received by: (Signature)
Relinquished by: (Signature)	Date	Time	Received by: (Signature)
Relinquished by: (Signature)	Date	Time	Received by: (Signature)
Relinquished by: (Signature)	4/30/94	6:00P	Received for Laboratory by: Signature

Remarks:

	Yes	No
Headspace		✓
Properly Sealed	✓	
Chilled to 40°F	✓	

If Yes, Amt. _____
If No, Explain _____
If No, Temp _____

Type of Container NOTE: RINSATE BLANK

Additional comments:
2; 40 ml VOA w/Hcl — BTEX
1; 1 lit Amber w/Hcl — TRPH
1; 250 ml plastic w/ HNO_3 — LEAD

ENVIRON

Environmental Laboratories, Inc.
812 W. 9TH
Amarillo, Texas 79101
806-376-7004

Perry Williams Inc.
P.O. Box 30206
Amarillo, TX 79120

Project Name: Gary AF
Location: Site#: 10-
DO#: 0008
Date Sampled: 6/9/94
Date Received: 6/11/94
Sample Type: Soil/Water*
Sample Condition: Intact-Chilled
Sample Rec'd By: TD
C-O-C# 1571, 1572

Lab ID#	Field Code Description	TRPH Analysis Date	TRPH ppm	BTEX Analysis Date	Benzene ppm	Toluene ppm	Ethyl Benzene ppm	Xylenes ppm	TOTAL BTEX	Total Lead Analysis Date	Total Lead ppm
2601*	TRIP BLANK			6/11/94	<0.005	<0.005	<0.005	<0.015	<0.030		
2602*	GAFB-10-350-08-BH-OX/RB	6/16/94	<0.200	6/11/94	<0.005	<0.005	<0.005	<0.015	<0.030	6/14/94	<0.1
2603	GAFB-10-350-08-BH-OX	6/16/94	16705	6/11/94	4.35	7.96	13.38	57.35	83.04	6/14/94	<5
2604	GAFB-10-350-10-BH-OX	6/16/94	1400	6/11/94	<0.1	<0.1	0.55	0.42	<1.17	6/14/94	<5
2605	GAFB-10-350-10-BH-OX/QC	6/16/94	1195	6/11/94	<0.1	<0.1	0.34	0.33	<0.87	6/14/94	<5
2606	GAFB-10-350-10-WW-OX	6/16/94	<5	6/11/94	<0.1	<0.1	<0.1	<0.3	<0.6	6/14/94	7.5
2607	GAFB-10-350-11-BH-OX	6/16/94	10285	6/11/94	0.21	0.29	1.98	1.46	3.94	6/14/94	6.1
2608	GAFB-10-350-11-SEW-OX	6/16/94	<5	6/11/94	<0.1	<0.1	<0.1	<0.3	<0.6	6/14/94	<5
2609	GAFB-10-350-SPA-OX	6/16/94	6560	6/11/94	<0.1	0.34	0.55	2.32	<3.31	6/14/94	14.6
2610	GAFB-10-350-SPB-OX	6/16/94	870	6/11/94	<0.1	<0.1	<0.1	<0.3	<0.6	6/14/94	19.2

TRPH QC:

Standard Recovery(%)	94
Spike Recovery(%)	117
Duplicate(%Diff)	1
Blank(Soil)	<5
Blank(Water)	<0.200

BTEX QC:

	Std Rec(%)	Spike Rec(%)
Benzene	96	78
Toluene	93	75
Ethyl Benzene	94	77
Xylenes	95	76

Duplicate(%Diff)	Blank
0	<0.005

LEAD QC:

Standard Recovery(%)	112
Spike Recovery(%)	93
Duplicate(%Diff)	4
Blank(Soil)	<5
Blank(Water)	<0.1

METHODS: BTEX-EPA SW 846-8020 with EPA Method 5030, TRPH-EPA SW 846-418.1 with EPA Method 9071, LEAD-EPA SW 846-7421 with 3020/3050

Rick Baker

Rick Baker Lab Director

6/21/94
Date

ENVIRON

C

Porry Williams Inc.
P.O. Box 30206
Amarillo, TX 79120

Project Name: Gary AFF
Location: Site#: 10-
DO#: 0008
Date Sampled: 6/9/94
Date Received: 6/11/94
Sample Type: Soil/Water*
Sample Condition: Intact-Chilled
Sample Rec'd By: TD
C-O-C# 1571, 1572

Environmental Laboratories, Inc.
812 W. 9TH
Amarillo, Texas 79101
806-376-7004

Lab ID#	Field Code Description	TRPH Analysis Date	TRPH ppm	BTEX Analysis Date	Benzene ppm	Toluene ppm	Ethyl Benzene ppm	Xylenes ppm	TOTAL BTEX	Total Lead Analysis Date	Total Lead ppm
2611	GAFB-10-350-SPC-OX	6/16/94	2260	6/11/94	<0.1	<0.1	0.47	1.09	<1.76	6/14/94	12.9
2612	GAFB-10-350-SPD-OX	6/16/94	4230	6/11/94	<0.1	<0.1	0.45	<0.3	<0.95	6/14/94	9.4
2613	GAFB-10-350-SPE-OX	6/16/94	<5	6/11/94	<0.1	<0.1	<0.1	<0.3	<0.6	6/14/94	7.6
2614	GAFB-10-350-SPF-OX	6/16/94	<5	6/11/94	0.39	1.82	1.35	8.62	12.18	6/14/94	5.7

TRPH QC:

Standard Recovery(%)	97
Spike Recovery(%)	117
Duplicate(%Diff)	1
Blank(Soil)	<5

BTEX QC:

	Std Rec(%)	Spike Rec(%)
Benzene	96	78
Toluene	93	75
Ethyl Benzene	94	77
Xylenes	95	76

Duplicate(%Diff)	Blank
0	<0.005

LEAD QC:

Standard Recovery(%)	115
Spike Recovery(%)	108
Duplicate(%Diff)	4
Blank(Soil)	<5

METHODS: BTEX-EPA SW 846-8020 with EPA Method 5030, TRPH-EPA SW 846-418.1 with EPA Method 9071, LEAD-EPA SW 846-7421 with 3020/3050

Rick Baker
Rick Baker Lab Director

6/21/94
Date

CHEMRON
INCORPORATED
431 Isom Rd., Suite 135 San Antonio, TX 78216
(512) 340-8121 (800) 572-6955

ORIGINAL
CHAIN OF CUSTODY

CHAIN OF CUSTODY RECORD

Project Manager: Perry Williams, Inc. Phone #: (806) 373-5820
Address: 2700 S Wilson - Amar, Tx 79103 FAX #: (806) 371-0340
Project Number: DO# 000B Project Name: GARY AFB
Project Location: SITE 10:350 Sampler Signature: Michael Soto

ID # LAB USE ONLY	Sampling Date	Sampling Time	Matrix (s,w,f)	Composite	Grab	Boring	FIELD ID #	FIELD DESCRIPTION	No. of Containers	BTEX	TRPH	LEAD					REMARKS (Preservation, Size/Amount, Etc.)
2601	9 JUN 94	20:00	W		✓		N/A	TRIP BLANK	2	✓							40 ml VOA
2		20:05	W	✓			N/A	GAFB 10:350·08·BH·OX/RR	4	✓	✓	✓					SEE NOTE
3		20:10	S		✓		6290	GAFB·10:350·08·BH·OX	1	✓	✓	✓					4 oz SEALED
4		20:15	S	✓			6281	·10·BH·OX									
5		20:15	S	✓			6268	·10·BH·OX/QC									
6		20:20			✓		6276	·10·WW·OX									
7		20:25			✓		6273	·11·BH·OX									
8		20:30			✓		6282	·11·SEW·OX									
9		20:35		✓			6285	·SPA·OX									
10		20:40		✓			6291	·SPB·OX									

Relinquished by: (Signature)	Date	Time	Received by: (Signature)
Michael Soto	10 JUN 94	18:00	
Relinquished by: (Signature)	Date 6/11/94	Time 10:45 am	Received for Laboratory by: Signature

Remarks:

	Yes	No	
Headspace		✓	If Yes, Amt.
Properly Sealed	✓		If No, Explain
Chilled to 40°F	✓		If No, Temp.

Type of Container

Additional comments: NOTE: RINSE BLANK
Hold sample GAFB 10.350 10·BH-OX/QA

CHEMRON
INCORPORATED
431 Isom Rd., Suite 135 San Antonio, TX 78216
(512) 340-8121 (800) 572-6955

ORIGINAL
CHAIN OF CUSTODY

CHAIN OF CUSTODY RECORD

Project Manager: Perry Williams, Inc.	Phone #: (806) 373-5820
Address: 2700 S Wilson - Amn. TX 79103	FAX #: (806) 371-0340
Project Number: DO # 0008	Project Name: GARY AFB
Project Location: SITE 10:350	Sampler Signature: Michael Soto

ID # LAB USE ONLY	Sampling Date	Sampling Time	Matrix [s,w,f]	Composite	Grab	Boring	FIELD ID #	FIELD DESCRIPTION	No. of Containers	ANALYSIS BTEX	TRPH	LEAD					REMARKS (Preservation, Size/Amount, Etc.)
~~2600~~ 2611	9Jun94	20:45	S	✓			6280	GAFB·10·350·SPC·OX	1	✓	✓	✓					4 oz SEALED
2612		20:50					6287	·SPD·OX									
13		20:55					6274	·SPE·OX									
14		21:00					6270	·SPF·OX									

Relinquished by: [Signature]	Date	Time	Received by: [Signature]
Michael Soto	9Jun94	18:00	
Relinquished by: [Signature]	Date	Time	Received by: [Signature]
Relinquished by: [Signature]	Date	Time	Received by: [Signature]
Relinquished by: [Signature]	Date	Time	Received by: [Signature]
Relinquished by: [Signature]	Date 6/11/94	Time 10:45 am	Received for Laboratory by: Signature

Remarks:

	Yes	No
Headspace		✓
Properly Sealed	✓	
Chilled to 40°F	✓	

If Yes, Amt. _____
If No, Explain _____
If No, Temp. _____

Type of Container _____

Additional comments:

Environmental Laboratories, Inc.
812 W. 9TH
Amarillo, Texas 79101
806-376-7004

Client: Perry Williams Inc.
P.O. Box 30206
Amarillo, TX 79120

Project Name: [illegible]

Location: Site: 10-35[illegible]
DO#: 000[illegible]
Date Sampled: 6/23,24/94
Date Received: 6/27/94
Sample Type: Soil
Sample Condition: Intact-Ambient
Sample Rec'd By: TB
C-O-C# 267

Lab ID#	Field Code Description	TRPH Analysis Date	TRPH ppm	BTEX Analysis Date	Benzene ppm	Toluene ppm	Ethyl Benzene ppm	Xylenes ppm	TOTAL BTEX	Total Lead Analysis Date	Total Lead ppm
4001	GAFB-10-350-SPE-OX-RS	6/29/94	2945	6/29/94	<0.1	<0.1	<0.1	0.38	<0.68	6/27/94	18.2
4002	GAFB-10-350-SPF-OX-RS	6/29/94	2140	6/29/94	<0.1	<0.1	<0.1	<0.3	<0.6	6/27/94	17.8
4003	GAFB-10-350-PP-BH	6/29/94	900	6/29/94	<0.1	<0.1	<0.1	<0.3	<0.6	6/27/94	5.1
4004	GAFB-10-350-PP-SPA	6/29/94	785	6/29/94	<0.1	<0.1	0.14	2.35	<2.69	6/27/94	55.2
4005	GAFB-10-350-PP-SPB	6/29/94	565	6/29/94	<0.1	<0.1	<0.1	0.33	<0.66	6/27/94	22.1

TRPH QC:

Standard Recovery(%)	101
Spike Recovery(%)	93
Duplicate(%Diff)	3
Blank(Soil)	<5

BTEX QC:

	Std Rec(%)	Spike Rec(%)
Benzene	102	103
Toluene	99	101
Ethyl Benzene	99	102
Xylenes	93	93

Duplicate(%Diff)	Blank
0	<0.005

LEAD QC:

Standard Recovery(%)	103
Spike Recovery(%)	125
Duplicate(%Diff)	0
Blank(Soil)	<5

METHODS BTEX-EPA SW 846-8020 with EPA Method 5030, TRPH-EPA SW 846-418.1 with EPA Method 9071, LEAD-EPA SW 846-7421 with 3020/3050

Rick Baker
Rick Baker Lab Director

6/29/94
Date

ENVIRON
ENVIRONMENTAL LABORATORIES, INC.
812 W. 9TH
Amarillo, Texas 79101
(806) 376-7004

CHAIN OF CUSTODY RECORD

Project Manager: Perry Williams, Inc.	Phone # (806) 373-5820
Address: 2700 S. Wilson, Ama TX 79103	FAX #: (806) 371-0340
Project Number: D.O.# 0008 / 0006	Project Name: GARY AFB
Project Location: Site: GAFB·10-350	Sampler Signature: Michael Soto

ID# Lab Use Only	Sampling Date	Sampling Time	Matrix (s,w,f)	Composite	Grab	Boring	Field ID #	Field Description	No. of Containers	BTEX	TRPH	LEAD					Remarks (Preservation, Size/Amount, etc.)
4001	23 JUN 94	10:00	S	✓			6277	GAFB 10-350 · SPE · OX · RS	1	✓	✓	✓					4 oz SEALED
02		10:05					6269	· SPF · OX · RS									
3204		10:10					6279	· SP7 · C · OX									replacement for broken sample
03	24 JUN 94	10:40					6284	· PP · BH									
04		10:45					6278	· PP · SPA									
05		10:50					6272	· PP · SPB									

Relinquished by: (Signature)	Date	Time	Received by: (Signature)
Michael Soto	24 JUN 94	13:00	

Relinquished by: (Signature)	Date	Time	Received for Laboratory by: Signature
*	27 Jun 94	9:30	Travis Bunger

Remarks:

	Yes	No	
Headspace		✓	If Yes, Amt.
Properly Sealed	✓		If No, Explain
Chilled to 40°F		✓	If No, Temp ambient

Type of Container

Additional comments: RS = Re-SAMPLED
PP = pump pit
CUSTODY SEAL INTACT

DO# 0006
SP7 · C · OX

ENVIRON

Environmental Laboratories, Inc.
312 W. 9TH
Amarillo, Texas 79101
306-376-7004

Client: Perry Williams Inc.
P.O. Box 30206
Amarillo, TX 79120

Project Name: Gary AFB
Location: Site#: 10-350
DO#: 0008
Date Sampled: 6/23,24/94
Date Received: 6/27/94
Sample Type: Soil
Sample Condition: Intact-Ambient
Sample Rec'd By: TB
C-O-C# 267

Lab ID#	Field Code Description	TCLP Lead Analysis Date	TCLP Lead mg/L
4004	GAFB-10-350-PP-SPA	7/21/94	<0.1

LEAD QC:

Standard Recovery(%)	102
Spike Recovery(%)	102
Duplicate(%Diff)	8
Blank	<0.1

METHODS: TCLP LEAD-EPA SW 846-7421 with 1311

for Rick Baker
Rick Baker Lab Director

7/21/94
Date

EN RON

Environmental Laboratories, Inc.
812 W. 9TH
Amarillo, Texas 79101
806-376-7004

Client: Perry Williams Inc.
P.O. Box 30206
Amarillo, TX 79120

Project Name: Gary AFB
Location: Site: 10-3
DO#: 0008
Date Sampled: 7/26/94
Date Received: 7/28/94
Sample Type: Soil/Water*
Sample Condition: Intact-Chilled
Sample Rec'd By: RB
C-O-C#

Lab ID#	Field Code Description	TRPH Analysis Date	TRPH ppm	BTEX Analysis Date	Benzene ppm	Toluene ppm	Ethyl Benzene ppm	Xylenes ppm	TOTAL BTEX	Total Lead Analysis Date	Total Lead ppm
8401*	TRIP BLANK			7/30/94	<0.005	<0.005	<0.005	<0.015	<0.030		
8402*	GAFB-10-350-SPF-OX-RM/RB	8/2/94	<0.200	7/30/94	<0.005	<0.005	<0.005	<0.015	<0.030	7/30/94	<0.1
8403	GAFB-10-350-SPF-OX-RM/QC	8/2/94	260	7/30/94	<0.1	<0.1	<0.1	<0.3	<0.6	7/30/94	13.8
8404	GAFB-10-350-SPF-OX-RM	8/2/94	285	7/30/94	<0.1	<0.1	<0.1	<0.3	<0.6	7/30/94	13.9
8405	GAFB-10-350-SPE-OX-RM	8/2/94	55	7/30/94	<0.1	<0.1	<0.1	<0.3	<0.6	7/30/94	17.0
8406	GAFB-10-350-SPD-OX-RM	8/2/94	2165	7/30/94	<0.1	<0.1	<0.1	<0.3	<0.6	7/30/94	22.3
8407	GAFB-10-350-SPC-OX-RM	8/2/94	900	7/30/94	<0.1	<0.1	<0.1	<0.3	<0.6	7/30/94	17.2
8408	GAFB-10-350-SPA-OX-RM	8/2/94	<5	7/30/94	<0.1	<0.1	<0.1	<0.3	<0.6	7/30/94	18.0

TRPH QC:

Standard Recovery(%)	102
Spike Recovery(%)	123
Duplicate(%Diff)	4
Blank(Soil)	<5
Blank(Water)	<0.200

BTEX QC:

	Std Rec(%)	Spike Rec(%)
Benzene	87	80
Toluene	87	76
Ethyl Benzene	86	77
Xylenes	99	85

Duplicate(%Diff)	Blank
0	<0.005

LEAD QC:

Standard Recovery(%)	112
Spike Recovery(%)	102
Duplicate(%Diff)	1
Blank(Soil)	<5
Blank(Water)	<0.1

METHODS: BTEX-EPA SW 846-8020 with EPA Method 5030, TRPH-EPA SW 846-418.1 with EPA Method 9071, LEAD-EPA SW 846-7421 with 3020/3050

Rick Baker
Rick Baker Lab Director

8/3/94
Date

ENVIRON

ENVIRONMENTAL LABORATORIES, INC.
812 W. 9TH
Amarillo, Texas 79101
(806) 376-7004

CHAIN OF CUSTODY RECORD

Project Manager: PWI	Phone #
Address:	FAX #:
Project Number: DO # 0008	Project Name: GAFB 10-350
Project Location: SAN MARCOS, TX	Sampler Signature: Michael Soto

ID# Lab Use Only	Sampling Date	Sampling Time	Matrix (s,w,f)	Composite	Grab	Boring	Field ID #	Field Description	No. of Containers	Analysis BTEX	Analysis TRPH	Analysis LEAD				Remarks (Preservation, Size/Amount, etc.)
8401	7/26/94	18:30	W		✓			TRIP BLANK	2	✓						HCl VOA
02		18:35	W	✓				GAFB·10·350·SPF·OX·RM/RB	4	✓	✓	✓				SEE NOTE X
03		18:40	S				2980	·SPF·OX·RM/OX	2	✓	✓	✓				4 oz SEALED
04		18:40					2934	·SPF·OX·RM								
05		18:45					6124	·SPE·OX·RM								
06		18:50					2982	·SPD·OX·RM								
07		18:55					2978	·SPC·OX·RM								
08		19:15					2952	·SPA·OX·RM								

Relinquished by: (Signature)	Date	Time	Received by: (Signature)
Michael Soto	7/28	17:00	
Relinquished by: (Signature)	Date	Time	Received by: (Signature)
Relinquished by: (Signature)	Date	Time	Received by: (Signature)
Relinquished by: (Signature)	Date	Time	Received by: (Signature)
Relinquished by: (Signature)	Date 7/28/94	Time 5:00P	Received for Laboratory by: Signature Rick Baker

Remarks:

	Yes	No
Headspace		✓
Properly Sealed	✓	
Chilled to 40°F	✓	

If Yes, Amt. _____
If No, Explain _____
If No, Temp _____

Type of Container NOTE: RINSATE BLANK

Additional comments:

X 4 OZ SEALED GLASS
X 1 Liter Amber
X 40 mL VOA

Environmental Laboratories, Inc.
312 W. 9TH
Amarillo, Texas 79101
806-376-7004

Client: Perry Williams Inc.
.O. Box 30206
Amarillo, TX 79120

Project Name: Gary Job Corp er
Site: Bldg 10-35
DO#: 0008
Date Sampled: 8/31/94
Date Received: 9/3/94
Sample Type: Soil
Sample Condition: Intact-Chilled
Sample Rec'd By: CR
C-O-C# NA

Lab ID#	Field Code Description	TRPH Analysis Date	TRPH ppm	BTEX Analysis Date	Benzene ppm	Toluene ppm	Ethyl Benzene ppm	Xylenes ppm	TOTAL BTEX	Total Lead Analysis Date	Total Lead ppm
12401	GAFB-10-350-SPD-OX-RM-2	9/6/94	45								

RPH QC			BTEX QC:	Std Rec(%)	Spike Rec(%)	LEAD QC:	
	Standard Recovery(%)	106					Standard Recovery(%)
	Spike Recovery(%)	113	Benzene				Spike Recovery(%)
	Duplicate(%Diff)	0	Toluene				Duplicate(%Diff)
	Blank(Soil)	<5	Ethyl Benzene				Blank(Soil)
			Xylenes				
			Duplicate(%Diff)		Blank		

ETHOD: BTEX-EPA SW 846-8020 with EPA Method 5030, TRPH-EPA SW 846-418.1 with EPA Method 9071, LEAD-EPA SW 846-7421 with 3020/3050

Rick Baker

ck Bake Lab Director

9/6/94
Date

ENVIRONMENTAL LABORATORIES, INC.
812 W. 9TH
Amarillo, Texas 79101
(806) 376-7004

CHAIN OF CUSTODY RECORD

Project Manager: Terry Williams Inc.	Phone #: 806-373-5820
Address: 2700 Wilson Ama.	FAX #: 806-371-0340
Project Number: DO 0008	Project Name: Gary Job Corp Center
Project Location: Bldg 10-350	Sampler Signature: [signature]

ID# Lab Use Only	Sampling Date	Sampling Time	Matrix (s,w,f)	Composite	Grab	Boring	Field ID #	Field Description	No. of Containers	Analysis: BTEX	Analysis: TRPH						Remarks (Preservation, Size/Amount, etc.)
12401	8/31/94	21:15	S	✓			6148	GAFB-10-350-SPD-DX-RM-2	1		✓						4 oz Jar

Relinquished by: (Signature)	Date	Time	Received by: (Signature)
[signature]	8/31/94	22:00	
Relinquished by: (Signature)	Date	Time	Received by: (Signature)
Relinquished by: (Signature)	Date	Time	Received by: (Signature)
Relinquished by: (Signature)	Date	Time	Received by: (Signature)
Relinquished by: (Signature)	Date 9/3/94	Time 9:30 AM	Received for Laboratory by: Signature [signature]

Remarks:

	Yes	No	
Headspace		✓	If Yes, Amt.
Properly Sealed	✓		If No, Explain
Chilled to 40°F	✓		If No, Temp

Type of Container 4oz glass sealed

Additional comments: Hand Delivered

TRINITY ENGINEERING TESTING CORPORATION
AUSTIN, TEXAS

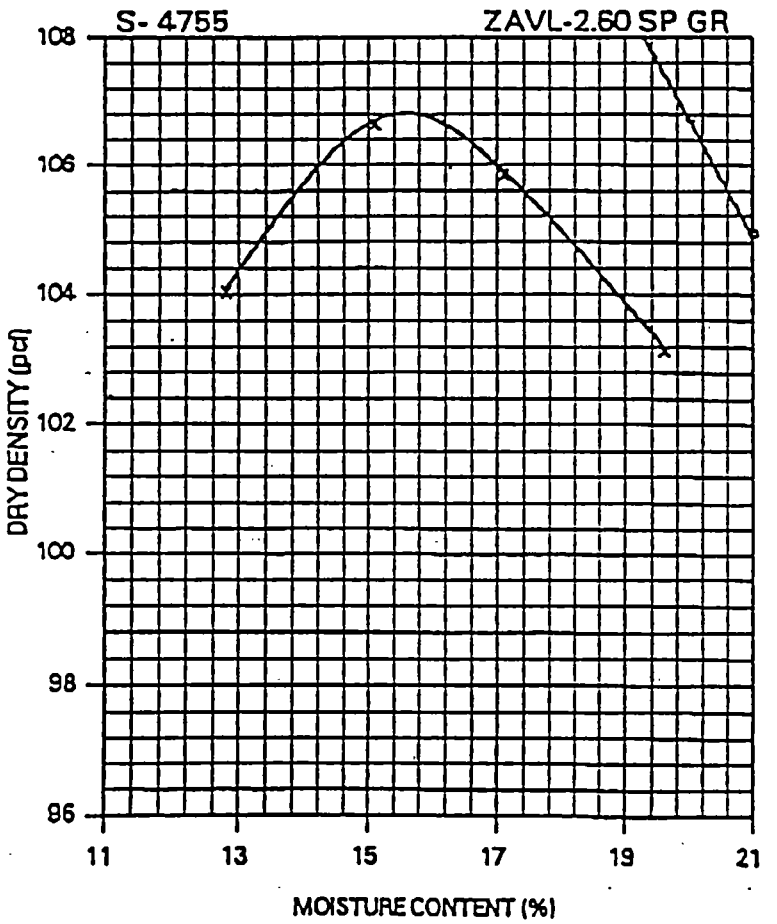
TETCO

TETCO PN: 4575

TO: PWI
P.O. Box 30206
Amarillo, Texas 79120

PROJECT: Gary Job Corporation
Sites 10-350; 4-351

DATE: 07-19-94
REPORT NO.: T-7337



TEST METHOD: ASTM D-1557-A-91
MATERIAL DESCRIPTION: Brown Fat Clay
LIQUID LIMIT: 52
PLASTIC LIMIT: 27
PLASTICITY INDEX: 25
(-)3": 100
(-)No. 4: 99.3
(-)No. 40: 97.4
(-)No. 200: 89.7
CLASSIFICATION: CH
COMPACTION METHOD: A
SIEVE TO DETERMINE OVERSIZE: #4
% BY WEIGHT OVERSIZE: 0.7
BULK SPECIFIC GRAVITY: N/A

LAB COMPACTED SAMPLES (FINER FRACTION)
Dry Unit Weight, pcf: 106.8
Moisture Content, %: 15.6

CORRECTED VALUE OF TOTAL SAMPLE:
Dry Unit Weight, pcf: N/A
Moisture Content, %: N/A

copies Above

REPORT REVIEWED BY: RBm

TRINITY ENGINEERING TESTING CORPORATION

The results shown on this report are for the exclusive use of the client for whom they were obtained and apply only to the samples tested and/or inspected. They are not intended to be indicative of the qualities of apparently identical products. The use of our name must receive our prior written approval.

TRINITY ENGINEERING TESTING CORPORATION
AUSTIN, TEXAS

TETCO

COMPACTION TESTS

TETCO PN: 4575

TO: PWI
P.O. Box 30206
Amarillo, Texas 79120

PROJECT: Gary Job Corp.
San Marcos
Sites: 10-350 and 4-351

TECHNICIAN: Barry Siler
GAUGE: #28

DATE: 07-13-94
REPORT NO: T-7375

TYPE OF SOIL	LOCATION	PERCENT MOISTURE	DRY DENSITY LBS/CU FT	PERCENT COMPACTION
Brown Fat Clay	08-11 Tank Hole			
	4th lift, center	18.0	96.6	90.4
	3rd lift, center	16.9	94.2	88.2
	2nd lift, center	15.2	99.6	93.3
	1st lift, center	16.1	101.2	94.8
S-4755	01-07 Tank Hole			
	4th lift, center	13.2	96.7	90.5
	3rd lift, center	14.9	98.5	92.2
	2nd lift, center	15.2	93.7	87.7
	1st lift, center	14.5	94.9	88.9
Ref.T-7337	4-351 Tank Hole			
	4th lift, center	18.8	109.0	102.1
	3rd lift, center	22.7	103.7	97.1
	2nd lift, center	22.4	104.4	97.8
	1st lift, center	21.0	102.3	95.8
85% Compaction Required				

MAXIMUM DENSITY DETERMINED IN ACCORDANCE WITH: ASTM D-1557-A-91

MAXIMUM DENSITY: 106.8 pcf OPTIMUM MOISTURE: 15.6%

COPIES TO: 1-Above

REPORT REVIEWED BY: RBM
TRINITY ENGINEERING TESTING CORPORATION

Phil Clark SET

The results shown on this report are for the exclusive use of the client for whom they were obtained and apply only to the samples tested and/or inspected.

Attachment 18

Attachment 18
Waste Manifest Documentation

RECEIVING TICKET

ALAMO PETROLEUM EXCHANGE
454 SOLEDAD, STE. 100
SAN ANTONIO, TX 78205
1-800-322-5085
(210) 225-0888
TXD 987991866 TWC 41654

ALAMO
PETROLEUM EXCHANGE

NO. R 39101

8-30 19 96

P.O. NUMBER

WORK ORDER # 24274

START TIME 8:00 AM/PM

STOP TIME AM/PM

TOTAL TIME

GAUGE

OPEN FT. IN.

CLOSE FT. IN.

TOTAL FT. IN.

FROM: TPG

ADDRESS: 1110 Clarkson Lane

CITY: Houston, TX 77055

BILL TO: Covel Gardens

LEASE NAME: LEASE#:

GROSS BBLS. - BS & W % QTY. = NET BBLS.

GROSS GALLONS - BS & W % QTY. = NET GAL.

TEMPERATURE GRAVITY FACTOR TANK NO.

PRODUCT	GROSS QTY.	NET QTY.	UNIT (G/B/D)	UNIT PRICE	TOTAL
19 Soil + 1 Drum water	20 Drums				20 Drums

THE ABOVE LISTED PRODUCT(S) HAS BEEN ACCURATELY DESCRIBED TO THE BEST OF MY KNOWLEDGE AND IS NON-HAZARDOUS ACCORDING TO 40 CFR 262.11 AND CONTAINS NO PCBs.

COMPANY REPRESENTATIVE

ALAMO REPRESENTATIVE

TRUCK NO. 68

ALL SALES SUBJECT TO CONDITIONS ON REVERSE SIDE

WHITE - OFFICE CANARY - BILLING PINK - FILE GOLD - CUSTOMER

Covel Gardens Landfill and Recycling Facility
8611 Covel Road
San Antonio, TX 78252
(210) 623-8800
(210) 623-8780 (Fax)

A Waste Management Company

NON-HAZARDOUS MANIFEST

019399

GENERATOR

Generator: Army Corps of Engineers I.D. #: N/A
Address: 10th Street & Kaiser
San Marcos, TX 78667
Phone:

Shipping Location: Site
Address:
Phone:

Description of Waste Materials	Profile Number	Total Quantity	Unit of Measure	Container Type
Contaminated Soil	51657	20	Drums	
Decon Water	51658	1	Drum	

I hereby certify that the above-described materials are not hazardous wastes as defined by 40 CPR, Part 261 or any applicable state law; have been fully and accurately described, classified and packaged, and are in proper condition for transportation according to applicable regulations.

Patrick D Hall — Generator Authorized Agent Name (Print)
Signature — 5-20-96 Delivery Date

TRANSPORTER

Transporter Name: Alamo Petroleum
Address: 454 Solid Rd
S.A. Tx.

I hereby acknowledge receipt of the above described materials for transport from the generator site listed above.

Driver Signature — Shipment Date

Driver Name: Domingo Maldonado
Truck Number: #60
Truck Type: Box Truck

I hereby acknowledge that the above described materials were received from the generator site were transported without incident to the destination listed below.

Driver Signature — Delivery Date

DESTINATION

Site Name: COVEL GARDENS LANDFILL Phone Number: (210) 623-8800
Address: 8611 COVEL ROAD, SAN ANTONIO, TX 78252

Disposal Location: North _____ East _____ Level _____

I hereby acknowledge receipt of the above described materials.

Name of Authorized Agent (Print) — Signature — Receipt Date

White - Original Canary - Disposer Retain Pink - Transporter Retain Goldenrod - Generator Retain

RECEIVING TICKET

AMO PETROLEUM EXCHANGE
4 SOLEDAD, STE. 100
N TONIO, TX 78205
-5085
10 -0888
D 987991866 TWC 41654

ALAMO
PETROLEUM EXCHANGE

NO. R 40704

11-26 19 96

P.O. NUMBER

WORK ORDER # 25573

START TIME 7:45 AM/PM

STOP TIME AM/PM

TOTAL TIME

GAUGE

OPEN FT. IN.

CLOSE FT. IN.

TOTAL FT. IN.

ROM: Gary Job Corps Ctr.

DDRESS: 10 ST & KANE

ITY: San Marcos

ILL TO: Covel

EASE NAME: LEASE#:

ROSS BBLS: - BS & W % QTY. = NET BBLS.

R GALLONS - BS & W % QTY. = NET GAL.

EMPERATURE GRAVITY FACTOR TANK NO.

PRODUCT	GROSS QTY.	NET QTY.	UNIT (G/B/D)	UNIT PRICE	TOTAL
[illegible] water		6	DM		

THE ABOVE LISTED PRODUCT(S) HAS BEEN ACCURATELY DESCRIBED TO THE BEST OF MY KNOWLEDGE AND IS NON-HAZARDOUS ACCORDING TO 40 CFR 262.11 AND CONTAINS NO PCBs.

COMPANY REPRESENTATIVE

ALAMO REPRESENTATIVE

TRUCK NO. 40

ALL SALES SUBJECT TO CONDITIONS ON REVERSE SIDE

WHITE - OFFICE CANARY - BILLING PINK - FILE GOLD - CUSTOMER

Covel Gardens Landfill and Recycling Facility
8611 Covel Road
San Antonio, TX 78252
(210) 623-8800
(210) 623-8780 (Fax)

A Waste Management Company

NON-HAZARDOUS MANIFEST 004920

GENERATOR

Generator Army Corps of Engineers
Address 10th Street & Kane
San Marcos, TX 78667
Phone

I.D. # N/A
Shipping Location Same
Address
Phone

Description of Waste Materials	Profile Number	Total Quantity	Unit of Measure	Container Type
Contaminated soil	51658	0	DM	~~55 gal~~
Decon Water	51658	6	DM	55 gal

I hereby certify that the above-described materials are not hazardous wastes as defined by 40 CPR, Part 261 or any applicable state law, have been fully and accurately described, classified and packaged, and are in proper condition for transportation according to applicable regulations.

[signature] [signature] 11-26-96

Generator Authorized Agent Name (Print) Signature Delivery Date

TRANSPORTER

Transporter Name ALAMO Petroleum Ex.
Address 454 Soledad
SAN ANTONIO, TX

Driver Name Domingo Maldonado
Truck Number 60
Truck Type Box Truck

I hereby acknowledge receipt of the above described materials for transport from the generator site listed above.

[signature] 11-26-96

Driver Signature Shipment Date

I hereby acknowledge that the above described materials were received from the generator site were transported without incident to the destination listed below.

Driver Signature Delivery Date

DESTINATION

Site Name COVEL GARDENS LANDFILL Phone Number (210) 623-8800

Address 8611 COVEL ROAD, SAN ANTONIO, TX 78252

Disposal Location: North _____ East _____ Level _____

I hereby acknowledge receipt of the above described materials.

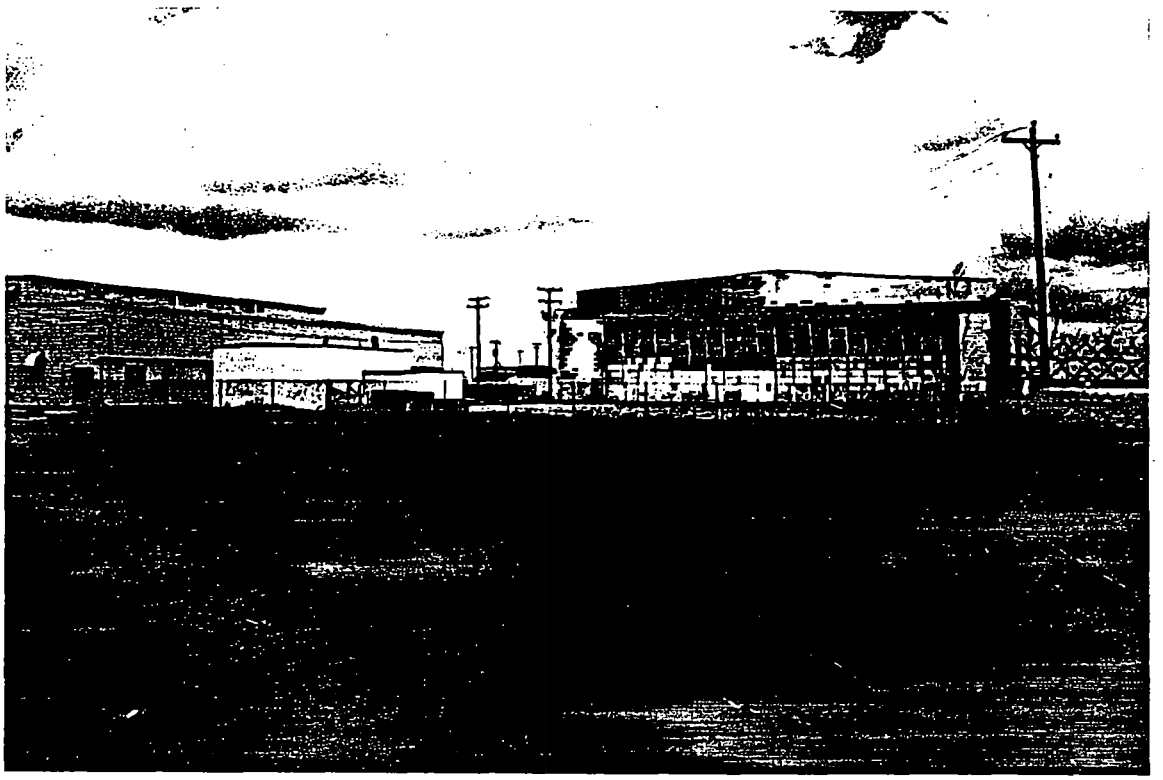
Name of Authorized Agent (Print) Signature Receipt Date

White - Original Canary - Disposer Retain Pink - Transporter Retain Goldenrod - Generator Retain

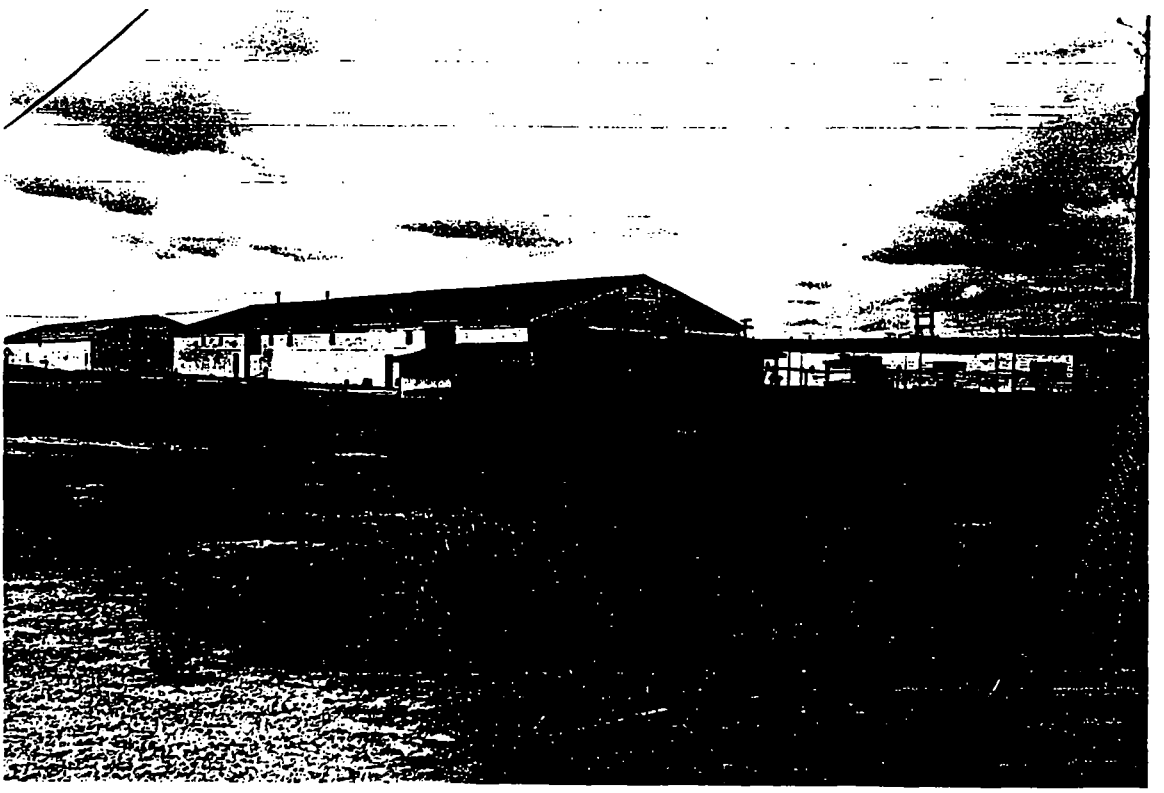
Attachment 19

Attachment 19
Photographic Documentation

Limited Site Assessment - LPST 108133



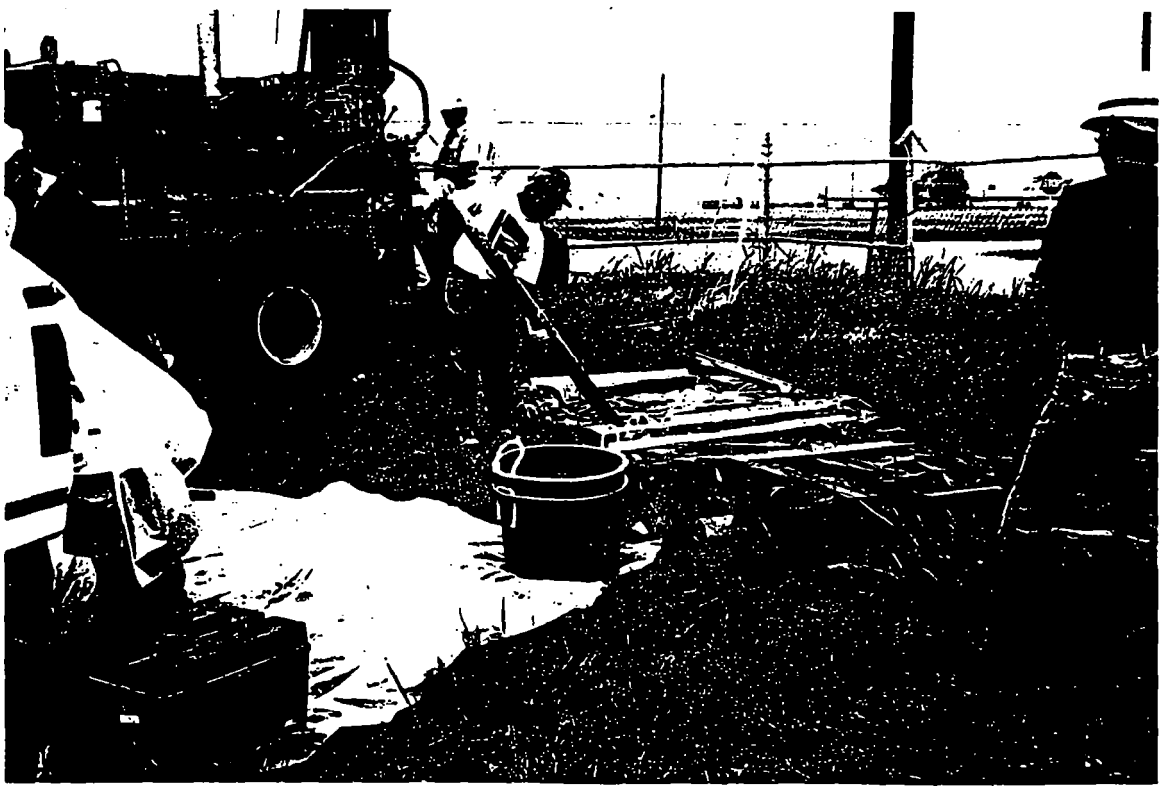
Overview of Area from Southeast



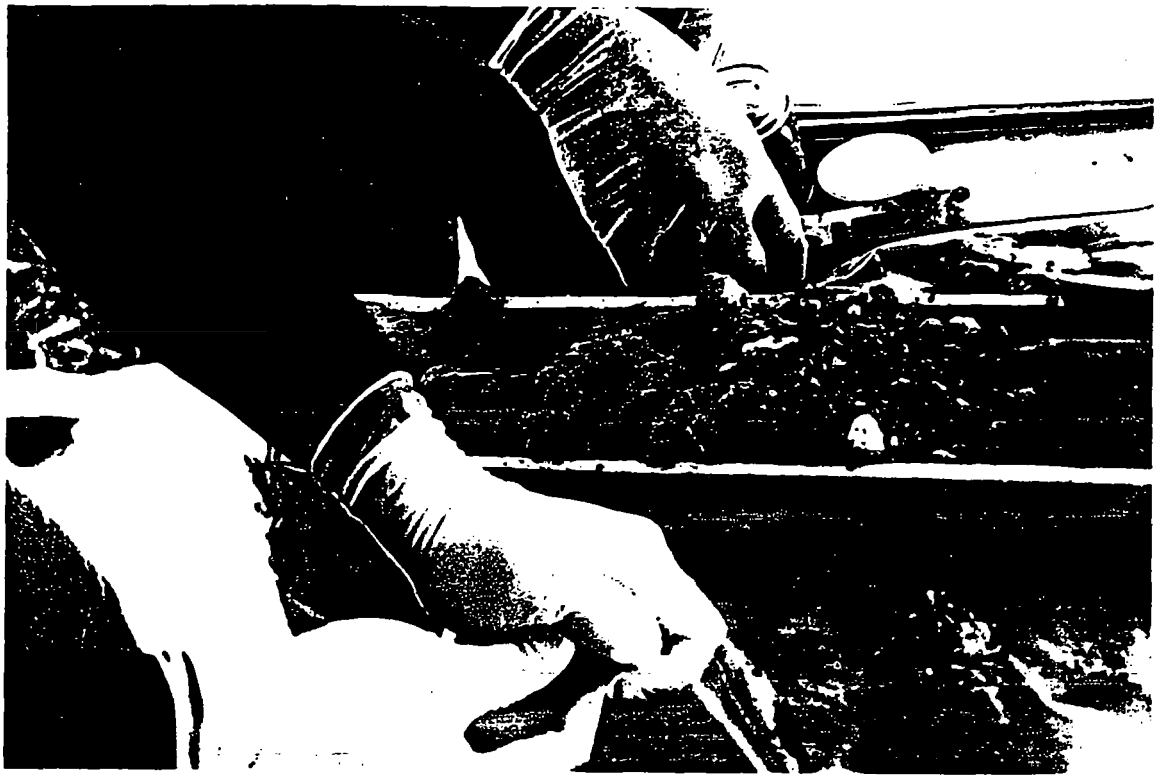
Overview of Area from North

Limited Site Assessment - LPST 108133

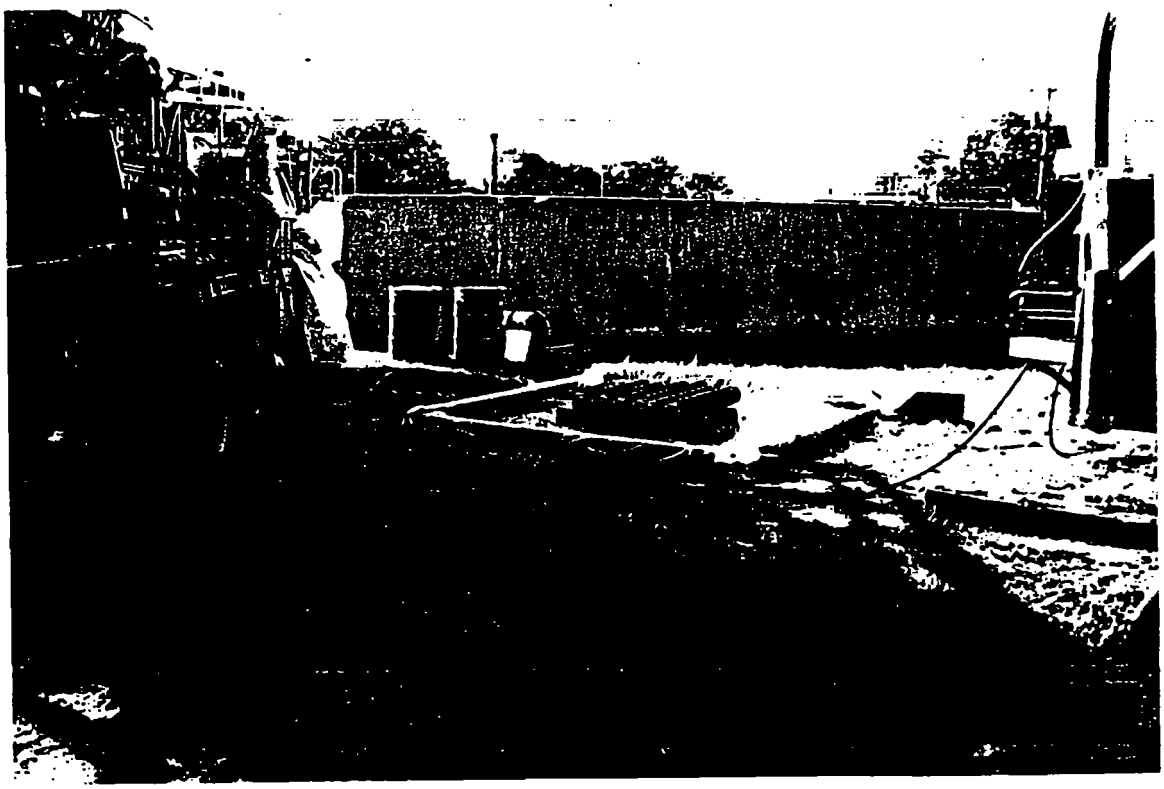
Drilling Crew and Sampling Team Starting a Boring



Extraction of Core Sample from Solid Barrel Sampler

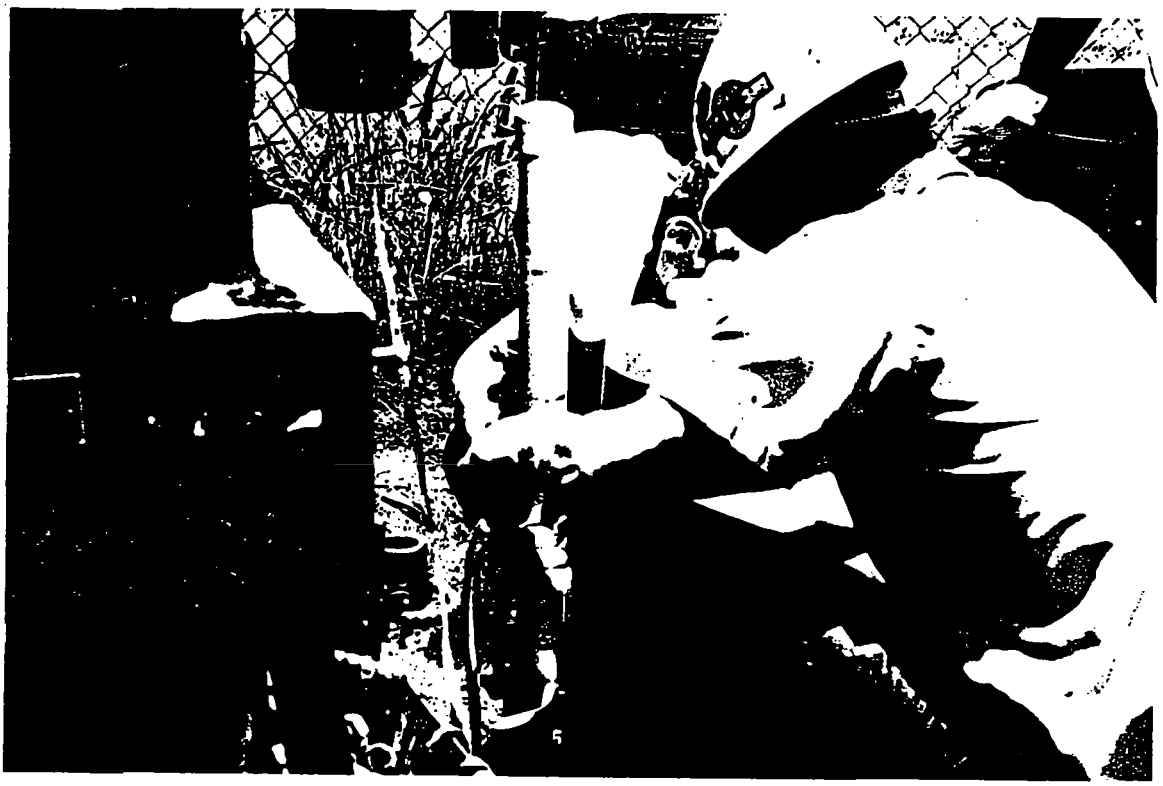


Core Sample Being Logged



Drilling Rig Being Decontaminated at Decon Station

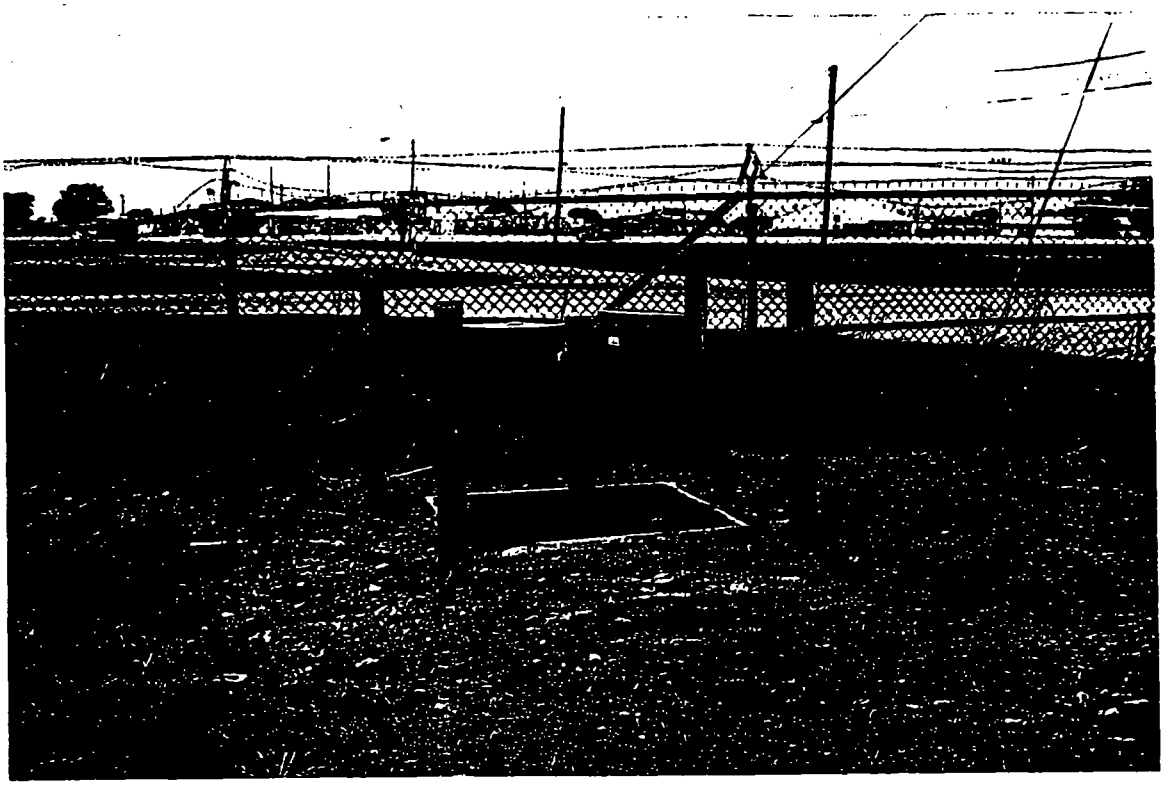
Limited Site Assessment - LPST 108133



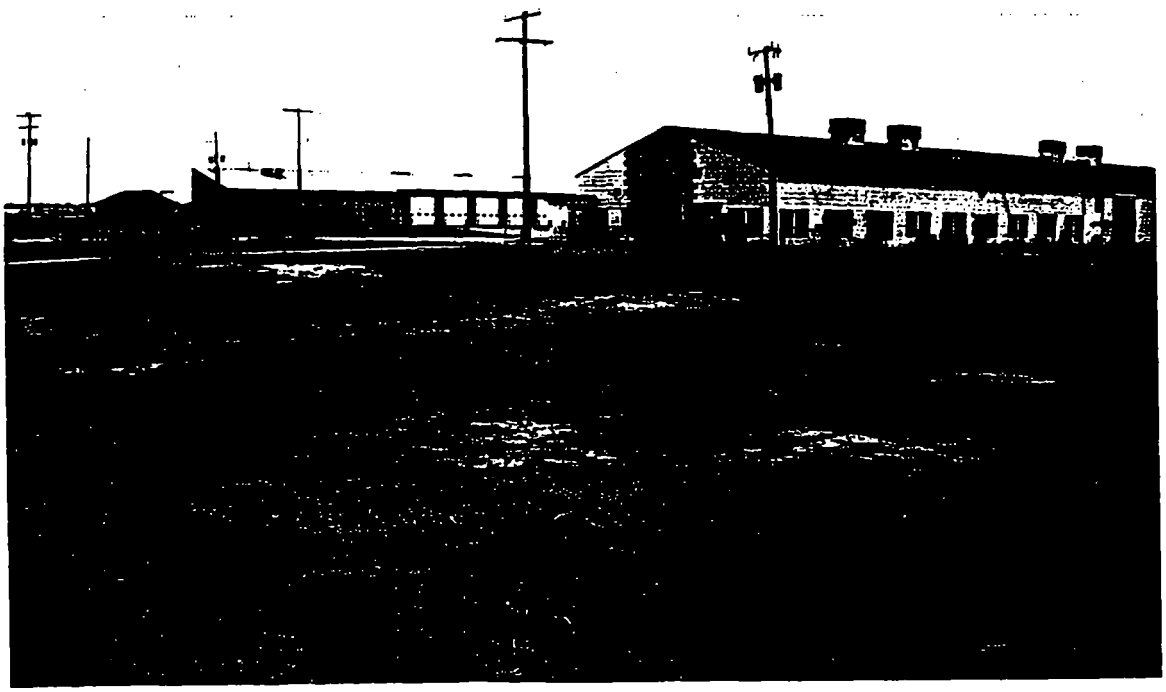
Converting Boring #1 to a Monitoring Well

Monitoring Well #1 Being Purged

Limited Site Assessment - LPST 108133



Finished Monitoring Well #1



Overview of Site after Work is Complete, Looking Northeast from Monitoing Well #1

Attachment 20

Attachment 20
Proposal for Next Action

Based on the results of the site assessment as detailed on Worksheet 12, this site has been assigned a priority of 4.1. Since groundwater contamination above Plan A Target Concentrations was detected at this site (see Worksheet 8.0), further investigative action is warranted.

A Plan B site assessment, including delineation of the groundwater contaminant plume, is recommended as the next phase of activity for this site.