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Transmission Corporation

COLUMBIA GAS SYSTEM

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Characterization Report Bangs Operating Center Bangs, Ohio

June 1996

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CHARACTERIZATION REPORT
BANGS OPERATING CENTER
BANGS, OHIO

Prepared for

COLUMBIA GAS TRANSMISSION CORPORATION
Charleston, West Virginia

June 1996

Prepared by

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SECTION 4

CHARACTERIZATION RESULTS

4.1 LITHOLOGIC AND FIELD MONITORING INFORMATION

The lithologic descriptions completed during the characterization investigation are provided in Appendix A. The descriptions include the lithology, structure, moisture status, and OVM readings for each soil boring and surface soil sampling location.

The lithology was consistent throughout the former Compressor Station and Pipeyard areas. From the surface to depths ranging from 8 to 10 ft bgs, the soil in these areas consisted of a brown-to-gray, fine silty sand with some gravel and/or layers of clay. Below 8 or 10 ft bgs to a depth of 12 ft bgs, the lithology ranged from a gray, firm sandy elastic silt to a firm clay. A wet or saturated zone 1 to 2 ft thick was observed perched above the sandy elastic silt and clay layer in the former Compressor Station and Pipeyard areas. This wet or saturated zone typically consisted of loose, gravelly, silty sand.

The lithology encountered in the background soil borings located around the Bangs OC complex, which is north of the former Compressor Station and Pipeyard areas (Figure 4), consisted of an orange-brown, silty sand that has increasing gravel content with depth. Each of these borings was completed to a depth of 8 ft bgs.

An odor was noted and OVM readings ranging from 2.6 to 511 units above background were recorded in soil borings BAN-SB001 through BAN-SB004, BAN-SB011, BAN-SS010, BAN-SB012, and BAN-SB013. In addition, a product layer with a sheen was noted in the saturated zone in soil borings BAN-SB001 and BAN-SB003. No OVM readings were recorded above background in the surface soil samples collected during the characterization investigation.

4.2 DATA EVALUATION SUMMARY

RECRA Environmental, Inc., Amherst Laboratory, analyzed the Bangs OC samples collected November 6 through 9, 1995. WESTON chemists evaluated the analytical data in accordance with the EPA April 1990 document entitled *Quality Assurance/Quality Control Guidance for Removal Activities, Sampling QA/QC Plan, and Data Validation Procedures* for a quality assurance Level 2 data quality objective. The data were evaluated for blank contamination, holding times, surrogate recoveries, MS/MSD recoveries, laboratory control samples/laboratory control sample duplicate recoveries, and blank spike/blank spike duplicate recoveries. The QC parameters that caused qualification of the data were blank contamination and MS/MSD duplicate recoveries.

Table 2 contains a summary of the changes made in the data based on the evaluation by the WESTON chemist. The EPA code letters for evaluated data are summarized as follows: The "U" code indicates that the analyte was not detected above the quantitation limit; the "UJ" code means the analyte was analyzed for but was not detected and the sample quantitation limit is an estimated quantity; the "J" code indicates the associated numerical value is an estimated quantity; the "J-" code means the associated numerical estimated value is biased low; and the "R" code is used to denote rejected levels of nondetection.

EPA guidance recommends that undiluted sample concentrations of less than five times the concentrations found in associated laboratory or field blanks be qualified as not detected. In instances where this occurred, a "U" code was added to the value reported as detected in the laboratory report. Equipment blank sample BAN-SB015-42001 had detected concentrations of chromium and lead that impacted data in laboratory batch No. A95-6041. The affected data are shown in Table 2.

Some metal MS/MSD recoveries were outside of the established criteria and caused requalification of data. Chromium and antimony in laboratory batch No. A95-6027 had out-of-criteria MS/MSD recoveries that required the "J" code be added to the chromium detections, the

"J-" code be added to the antimony detections, and the "R" code be added to the antimony nondetections. Lead, silver, and antimony in laboratory batch No. A95-6041 had out-of-criteria MS/MSD recoveries that required the "J-" code be added to the lead detections, the "R" code be added to the lead nondetections, the "J-" code be added to the antimony detections, the "UJ" code be added to the antimony nondetections, and the "R" code be added to the silver nondetections.

4.3 ANALYTICAL RESULTS

A summary of the analytical results for soil and water samples is presented in Table 3. The analytical results for the PCB wipe test samples are presented in Table 4. The chain-of-custody forms and laboratory analytical reports are presented in Appendices B and C, respectively. The following subsections present the results for the surface soil, subsurface soil, water, and wipe test samples that were collected during characterization activities at the Bangs OC. Surface and subsurface soil samples were compared to background soil samples collected from soil borings BAN-SB015 through BAN-SB017 at a depth of 0.5 to 2 ft bgs (surface soil samples) and 4.5 to 7 ft bgs (subsurface soil samples).

4.3.1 Surface Soil Sample Results

Background surface soil samples had no detected concentrations of organic compounds of concern. Characterization surface soil samples had detected minor concentrations of acetone, tetrachloroethene, and TPH. Acetone was detected in sample BAN-SS014 at 0.14 parts per million (ppm). Tetrachloroethene was detected in sample BAN-SS015 at 0.005 ppm. TPH were detected in six samples, ranging in concentration from 0.064 to 1.38 ppm.

Background surface soil samples had detected concentrations of arsenic (ranging from 12.2 to 24.2 ppm), barium (ranging from 61.8 to 139 ppm), and chromium (ranging from 9.7 to 89.5 ppm). Antimony, which was not detected in background surface soil samples, was detected in sample BAN-SS017 at 11.4 ppm. Arsenic was detected above background in samples BAN-SS007 and BAN-SS016 at 31.6 and 33.2 ppm, respectively. Barium was detected above

background in samples BAN-SS016 and BAN-SS017 at 220 and 146 ppm, respectively. Lead, which was not detected in background surface soil samples, was detected in samples BAN-SS001, BAN-SS002, BAN-SS004, BAN-SS007, BAN-SS008, and BAN-SS015 through BAN-SS017 at concentrations ranging from 20.3 to 211 ppm. Mercury, which was not detected in background surface soil samples, was detected in samples BAN-SS006, BAN-SS007, and BAN-SS014 at concentrations ranging from 0.2 to 1 ppm. Nickel, which was not detected in background surface soil samples, was detected in samples BAN-SS001 through BAN-SS008 and BAN-SS014 through BAN-SS017 at concentrations ranging from 12.6 to 30.3 ppm. Chromium detected in each surface soil sample did not exceed background concentrations.

4.3.2 Soil Boring Sampling Results

Background soil boring samples had no detected concentrations of organic compounds. Characterization soil boring samples had detected concentrations of xylenes and TPH. Xylenes were detected in samples BAN-SB002 at 0.007 ppm and duplicate sample BAN-SB004 at 0.005 ppm. TPH were detected in samples from soil borings BAN-SB001 through BAN-SB004, BAN-SB008, BAN-SB011, and BAN-SB012 at concentrations ranging from 0.060 to 33.1 ppm.

Background soil boring samples had detected concentrations of arsenic (ranging from 24.8 to 51.7 ppm), barium (ranging from 44.2 to 78.3 ppm), chromium (at 10.1 and 11.5 ppm), and lead (ranging from 24.5J- to 93J- ppm). Arsenic was detected above background in a sample from soil boring BAN-SS010 at 107 ppm. Barium was detected above background in a sample from soil boring BAN-SB011 at 101 ppm. Cadmium, which was not detected in background soil boring samples, was detected in a sample from soil boring BAN-SS010 at 1.5 ppm. Nickel, which was not detected in background subsurface soil samples, was detected in samples BAN-SS010, BAN-SB011, and BAN-SB012 at concentrations ranging from 13 to 34.5 ppm. Chromium and lead concentrations detected in soil boring samples did not exceed background concentrations.

4.3.3 Water Sample Results

Water sample BAN-SB001-50001, collected from a depth of 10 to 12 ft bgs in soil boring BAN-SB001, had detected concentrations of xylenes at 0.013 milligrams per liter (mg/L) and TPH at 1,380 mg/L.

4.3.4 Wipe Test Sample Results

All seven of the PCB wipe test samples collected in the boiler room had detected concentrations of Aroclor 1254. Figure 7 shows the distribution of the PCBs detected in the wipe test samples. Samples BAN-WP001, BAN-WP002, and BAN-WP003, which were collected within the stained area, had detected PCB concentrations ranging from 33 to 2,800 μg/100 cm^2. Sample BAN-WP004, which was collected at the floor drain closest to the stained area, had a PCB concentration of 68 μg/100 cm^2. Samples BAN-WP005 and BAN-WP006, which were collected downgradient from the stained area, and sample BAN-WP007, which was collected at the floor drain farthest downgradient, had detected concentrations of PCBs ranging from 1.5 to 26 μg/100 cm^2.

Two of the four PCB wipe test samples collected in the vehicle maintenance area had detected concentrations of Aroclor 1260. Figure 8 shows the distribution of the PCBs detected in the wipe test samples. Samples BAN-WP009 and BAN-WP010, which were collected near the ART, had detected concentrations of PCBs at 52 and 59 μg/100 cm^2, respectively.

4.3.5 Quality Assurance/Quality Control Sample Results

Three duplicate samples were collected: a subsurface soil sample (BAN-SB004-41001), a surface soil sample (BAN-SS008-41001), and a background surface soil sample (BAN-SB017-41001). The analytical results for these samples are presented in Subsections 4.3.1 and 4.3.2.

Equipment blank sample BAN-SB015-42001 had detected concentrations of chloroform (6 μg/L), chromium (11 μg/L), lead (6.9 μg/L), and nickel (158 μg/L). The remaining two

equipment blanks (BAN-SB001-42001 and BAN-SS001-42001) had no detected concentrations of organics or inorganics.

The three trip blanks (BAN-SB001-43001, BAN-SS001-43001, and BAN-SB015-43001) and the ambient blank (BAN-WP005-94001) had no detected concentrations of organics or inorganics.

4.4 DYE TEST RESULTS

The dye testing conducted at the vehicle maintenance area floor drain, the welding school floor drain, and the floor drain located between the paint spray booth and the welding school confirmed that these floor drains discharge to the WWTP.

SECTION 5

SIGNIFICANCE OF RESULTS

Analytical results for organic analytes from 23 soil samples were above background but below OEPA's Bureau of Underground Storage Tank Regulations (BUSTR) Site Feature Scoring System (SFSS) guidelines. The highest detected concentration of xylenes was 0.007 parts per million (ppm); the most conservative SFSS action level (Category 1) is 28 ppm. The highest detected concentration of TPH was 33.1 ppm; the most conservative SFSS action level is 380 ppm. Acetone (0.14 ppm) and tetrachloroethene (0.005 ppm) were also detected, but the state has no action levels for these compounds.

The following metals were detected at concentrations above background: antimony (in one surface soil sample at 11.4 ppm); arsenic (in 2 surface soil samples at 31.6 and 33.2 ppm and in 1 subsurface soil sample at 107 ppm); barium (in 2 surface soil samples at 220 and 146 ppm and in 1 subsurface soil sample at 101 ppm); cadmium (in 1 subsurface soil sample at 1.5 ppm); lead (in 8 surface soil samples ranging from 20.3 to 211 ppm); mercury (in 3 surface soil samples ranging from 0.2 to 1 ppm); and nickel (in 12 surface soil samples ranging from 12.6 to 30.3 ppm and 3 subsurface soil samples ranging from 13 to 34.5 ppm). State action levels are not available for metals at this time.

The water sample collected from soil boring BAN-SB001 had a detected concentration of xylenes that was below the maximum contaminant level (MCL). The detected concentration of TPH was high (1,380 mg/L), but there is no MCL established for TPH. The presence of water in this soil boring likely represents a localized perched condition, as indicated by the absence of water in other facility soil borings at this depth. In addition, BTEX were not detected, and the detected concentration of TPH was below the most conservative SFSS action levels in the soil sample collected from the same depth interval as the water sample in soil boring BAN-SB001.

The PCB wipe test samples had detected concentrations that exceeded Toxic Substances Control Act (TSCA) PCB action levels, i.e., the high-contact action level ($\leq 10\ \mu g/100\ cm^2$) and the low-

contact action level ($\leq$ 100 $\mu g/100\ cm^2$). In the boiler room, six of the seven samples exceeded the high-contact action level, and two samples exceeded the low-contact action level. At the vehicle maintenance area, two of the four samples exceeded the high-contact action level. None of the vehicle maintenance area samples exceeded the low-contact action level.

SECTION 6

CONCLUSIONS AND RECOMMENDATIONS

The following is a summary of the conclusions and recommendations for each area investigated during characterization activities at the Bangs OC:

Bangs OC Complex

- The discharge points for the floor drains within the Bangs OC building were investigated during the characterization activities. The drains were found to either be plugged or discharge to the on-site WWTP as determined by a dye testing of the open floor drains. Because the WWTP operates under an NPDES permit, the floor drains were not sampled.

- The 11 PCB wipe test samples collected in the boiler room and vehicle maintenance areas had detected concentrations of PCBs above TSCA guidelines. The boiler room had detected concentrations that exceeded action levels for both high-contact and low-contact areas, while the vehicle maintenance area had detected concentrations that exceeded the action level for high-contact areas. Based on the analytical results, the floors in the boiler room and vehicle maintenance area should be remediated.

Former Compressor Station Area

- Ten soil borings were completed around the basement/subflooring associated with the former Compressor Station and one of the support buildings. An odor, product, and sheen were noted in soil borings BAN-SB001 and BAN-SB003, and OVM readings were detected above background in soil borings BAN-SB002 and BAN-SB004; however, none of the soil analytical samples exceeded the most conservative BUSTR SFSS action levels. No additional characterization or remediation is recommended in this area.

- A water sample was collected from soil boring BAN-SB001 and had a detected concentration of xylenes below the MCL and an elevated concentration of TPH, which does not have an established MCL. The presence of water in this soil boring likely represents a localized perched condition, and therefore does not warrant any further investigation or remedial action.

- Two surface soil samples were collected from stained areas observed around the pipe rack area. None of the detected organics exceeded the most conservative BUSTR SFSS action levels. Antimony, arsenic, barium, lead, and nickel exceeded background concentrations. No remedial action is recommended because action levels have not been established for these metals.

- Two surface soil samples were collected from stained areas observed at the waste drum storage area. Minor concentrations of acetone and tetrachloroethene were detected. None of the detected organics exceeded action levels. Lead, mercury, and nickel exceeded background concentrations. No remedial action is recommended because action levels have not been established for lead.

Pipeyard Area

- Six surface soil samples were collected from stained areas throughout the Pipeyard and two surface soil samples were collected from around the perimeter of the fire training area. None of the detected organics exceeded action levels. Arsenic, lead, mercury, and nickel were detected above background concentrations. No remedial action is recommended because action levels have not been established for these metals.

- Three soil borings were advanced to delineate the elevated OVM readings detected in soil boring SB011. Elevated OVM readings were also detected in these three soil borings. No organic analytes were detected above action levels in soil samples collected from these three borings. Arsenic, barium, cadmium, and nickel were detected above background concentrations. No remedial action is recommended because action levels have not been established for these metals.

SECTION 7

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Woischke, D. 1995. Personal Communications with Administrator of Ohio Division of Natural Areas and Preserves, Department of Natural Resources.

FIGURES

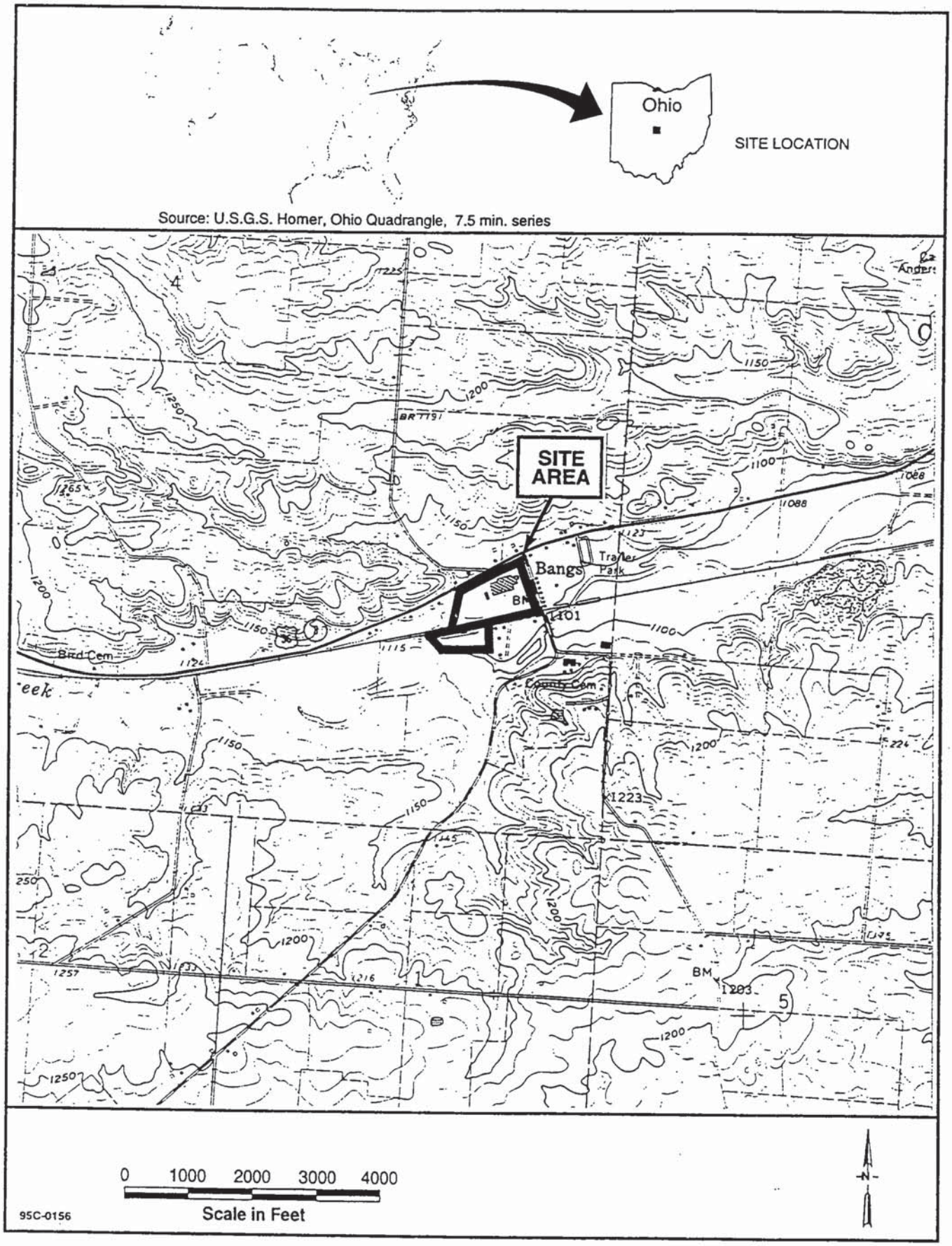
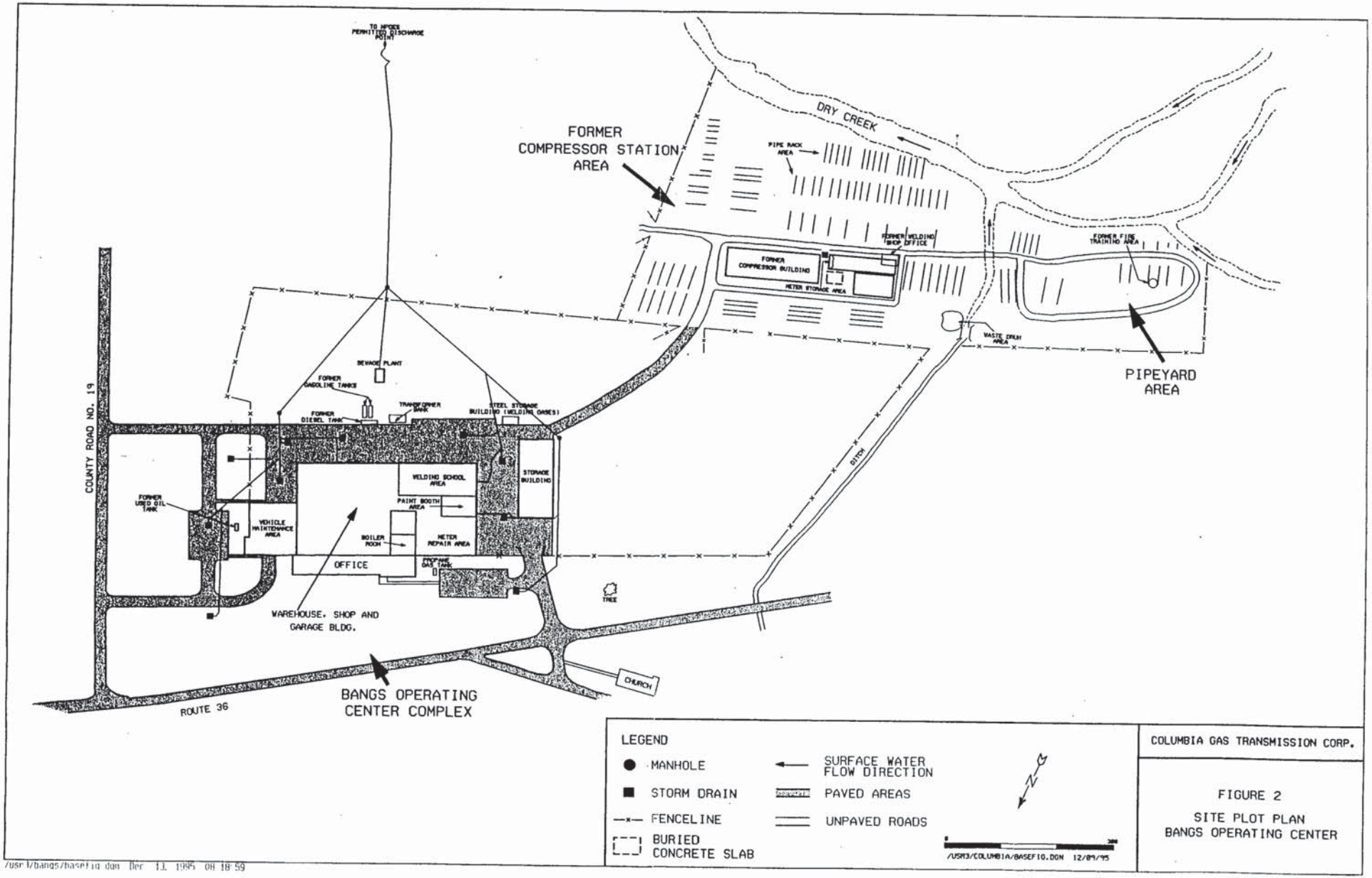
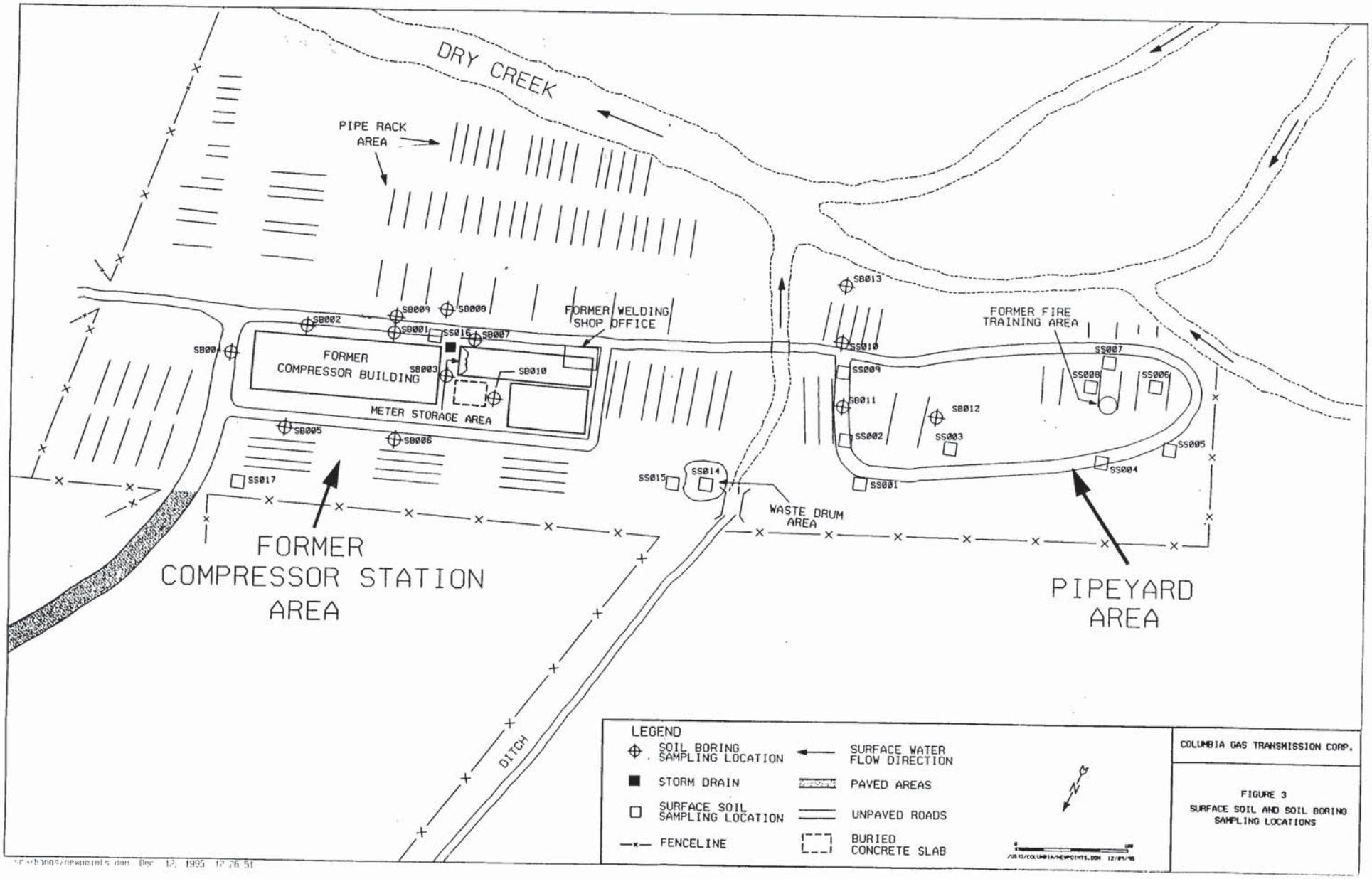
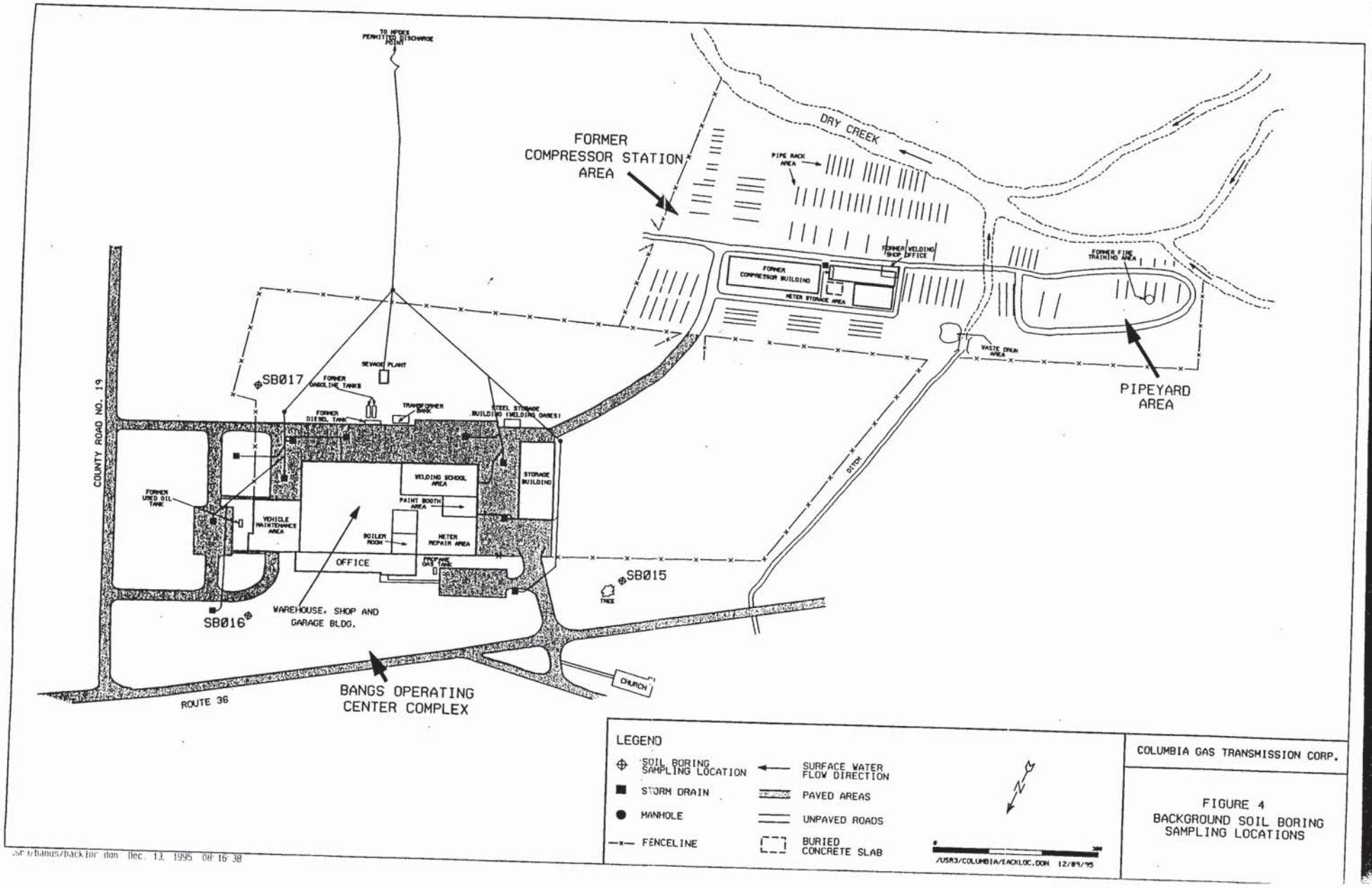


FIGURE 1 LOCATION OF THE BANGS OPERATING CENTER



/usr1/bangs/basefig.dgn Dec 13, 1995 08:18:59

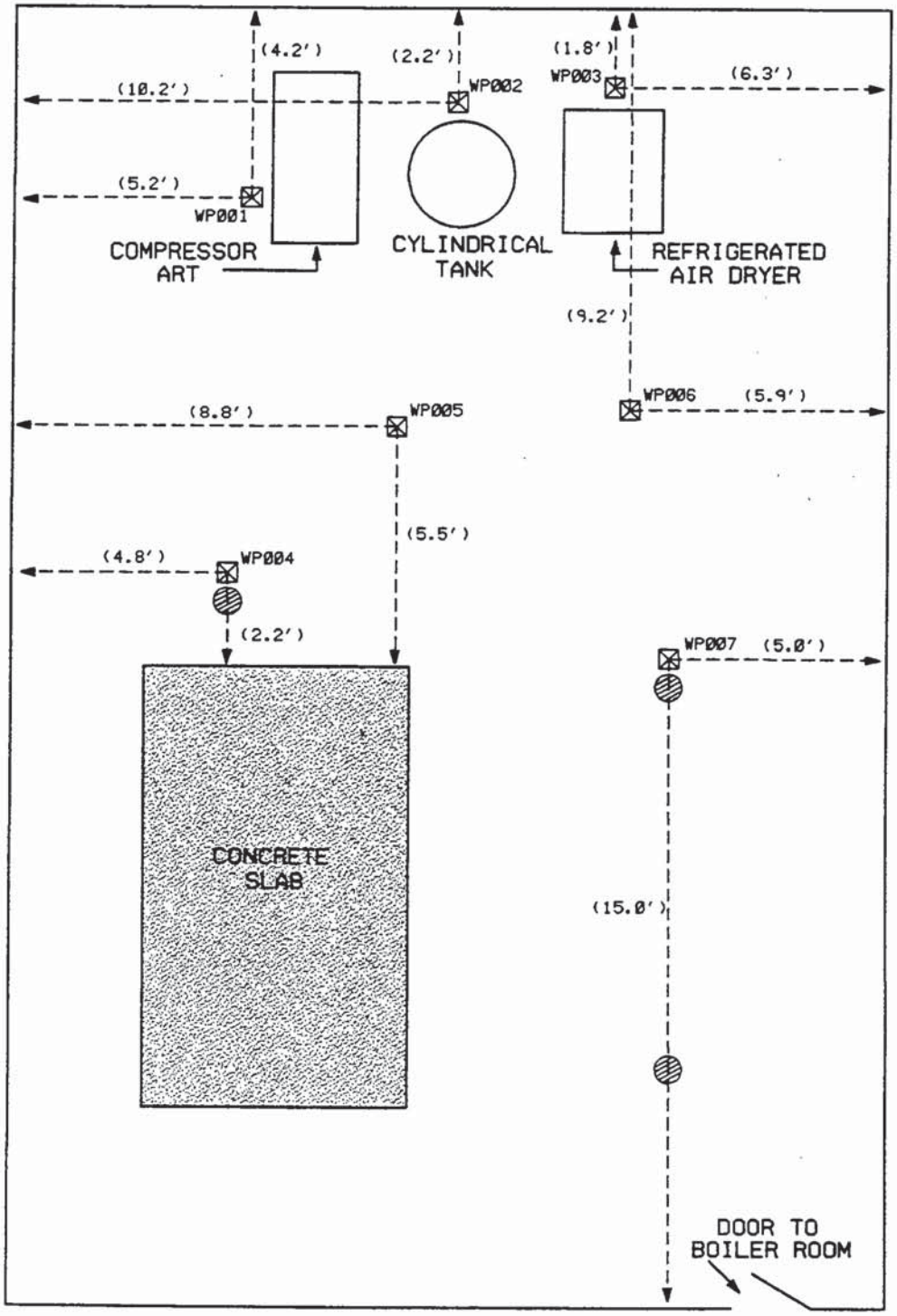

DRY CREEK
PIPE RACK AREA
FORMER WELDING SHOP OFFICE
FORMER COMPRESSOR BUILDING
METER STORAGE AREA
FORMER COMPRESSOR STATION AREA
WASTE DRUM AREA
DITCH
FORMER FIRE TRAINING AREA
PIPEYARD AREA
SB000
SB001
SB002
SB003
SB005
SB006
SB007
SB008
SB009
SB010
SB011
SB012
SB013
SS016
SS017
SS015
SS014
SS001
SS002
SS003
SS004
SS005
SS006
SS007
SS008
SS009
SS010
LEGEND
SOIL BORING SAMPLING LOCATION
STORM DRAIN
SURFACE SOIL SAMPLING LOCATION
FENCELINE
SURFACE WATER FLOW DIRECTION
PAVED AREAS
UNPAVED ROADS
BURIED CONCRETE SLAB
N
COLUMBIA GAS TRANSMISSION CORP.
FIGURE 3
SURFACE SOIL AND SOIL BORING SAMPLING LOCATIONS



COLUMBIA GAS TRANSMISSION CORP.

FIGURE 4
BACKGROUND SOIL BORING SAMPLING LOCATIONS

sr3/bangs/backloc.dgn Dec. 13, 1995 08:16:38



LEGEND

FLOOR DRAIN

WIPE TEST
SAMPLE LOCATION

(1.7') DISTANCE MEASURED(FT.) TO
LOCATE SAMPLING POINT

0 4

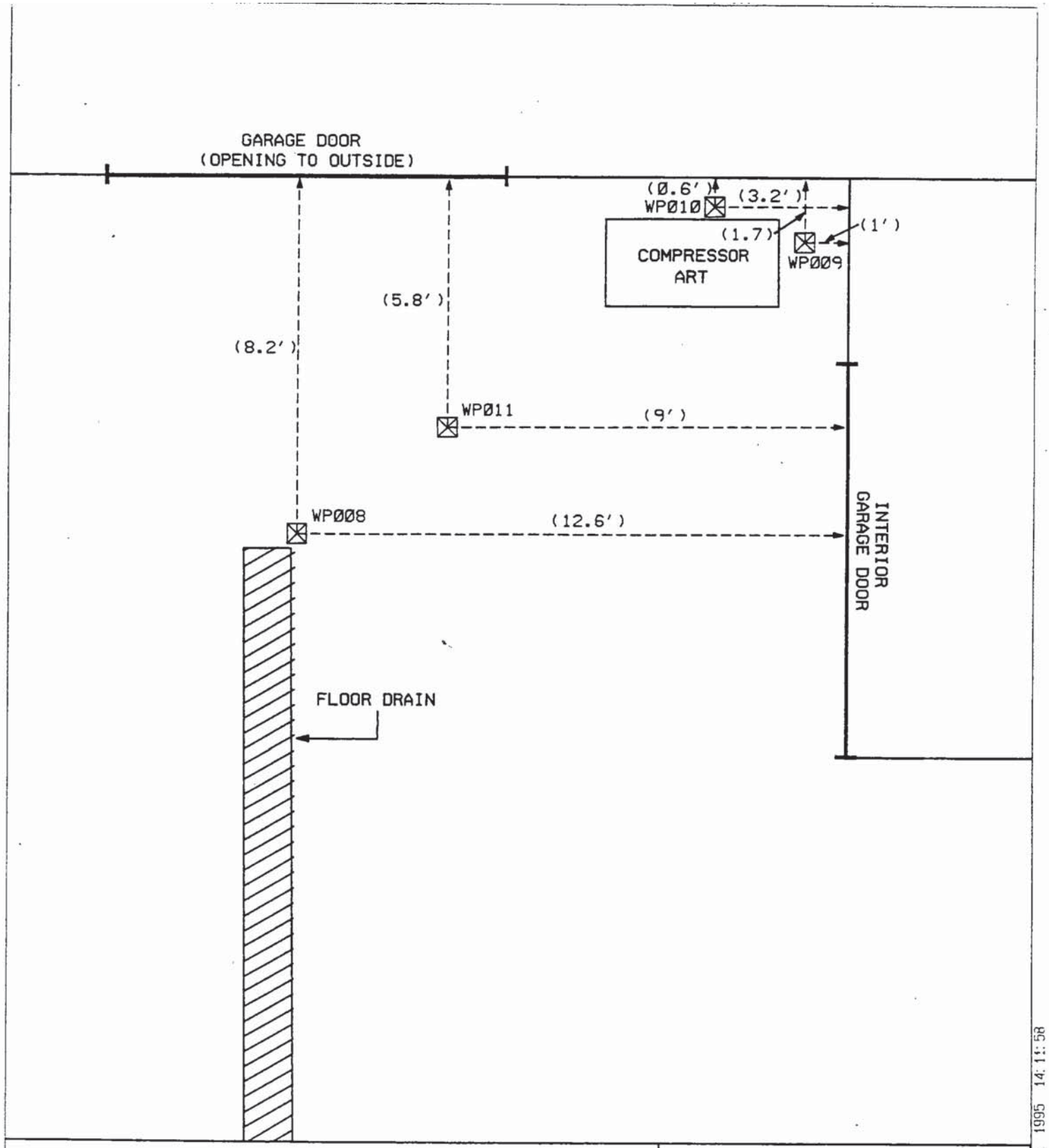
COLUMBIA GAS TRANSMISSION CORP.

FIGURE 5

BOILER ROOM PCB
WIPE TEST SAMPLE LOCATIONS

/USR3/COLUMBIA/BOILER.DGN 12/07/95

usr3/bangs/boiler.dgn Dec. 21, 1995 14:20:41



LEGEND

WIPE TEST SAMPLE LOCATION

(1.7') DISTANCE MEASURED (FT.) TO LOCATE SAMPLING POINT

N

0 3

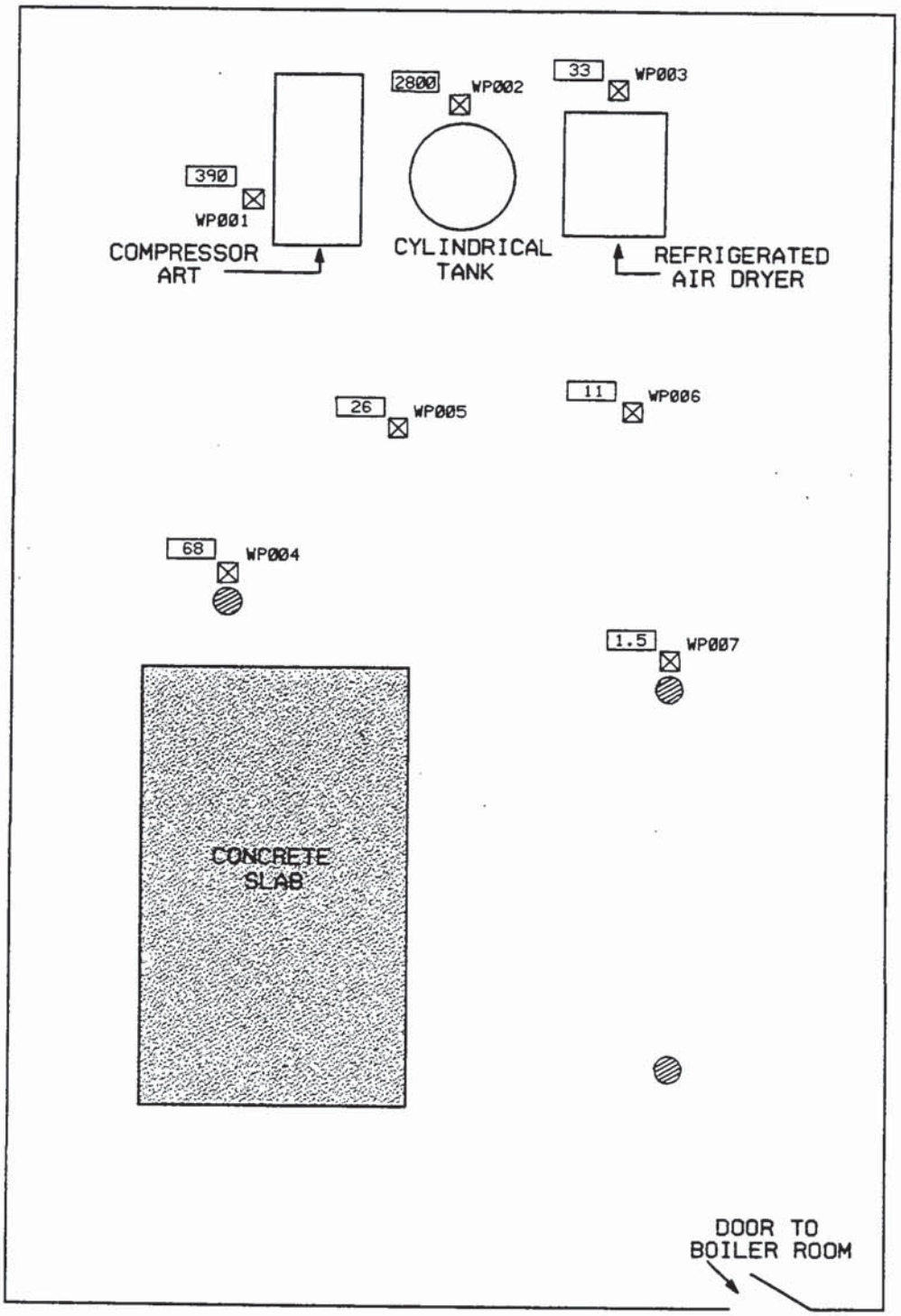
COLUMBIA GAS TRANSMISSION CORP.

FIGURE 6

VEHICLE MAINTENANCE AREA PCB WIPE TEST SAMPLE LOCATIONS

/USR3/COLUMBIA/GARAGE.DGN 12/07/95

/usr3/bangs/garage.dgn Dec. 20, 1995 14:11:58



LEGEND

2800 . PCB (AROCLOR 1254) ANALYTICAL RESULT (UG/100CM^2)

FLOOR DRAIN

WIPE TEST SAMPLE LOCATION

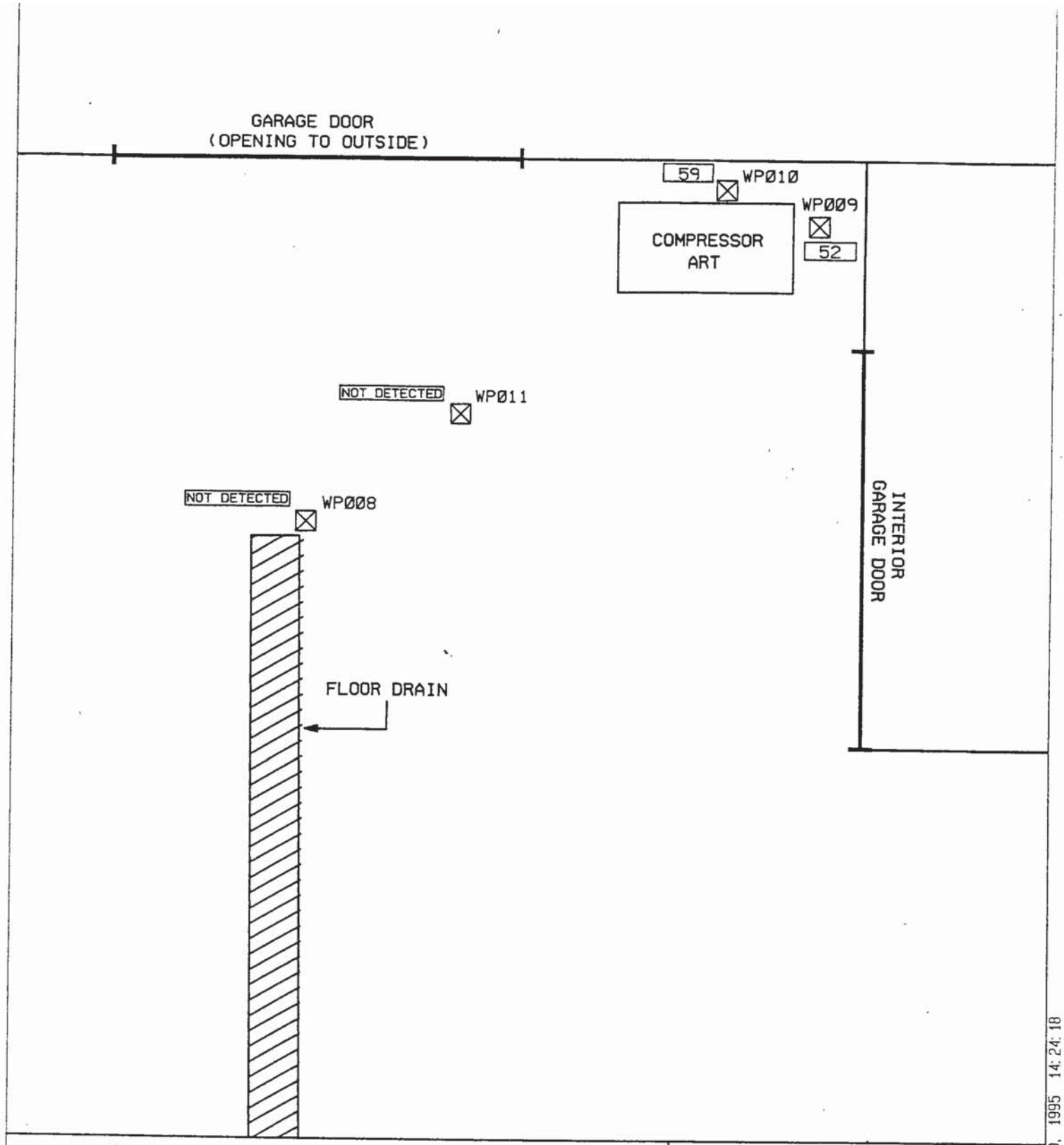
COLUMBIA GAS TRANSMISSION CORP.

FIGURE 7

DISTRIBUTION OF PCBs ON THE BOILER ROOM FLOOR

/USR3/COLUMBIA/BOILDATA.DGN 12/09/95

usr3/bangs/boildata.dgn Dec. 19, 1995 09:36:56



LEGEND

52 - PCB (AROCLOR 1260) ANALYTICAL RESULT (UG/100CM²)

WIPE TEST SAMPLE LOCATION

COLUMBIA GAS TRANSMISSION CORP.

FIGURE 8

DISTRIBUTION OF PCBs ON THE VEHICLE MAINTENANCE AREA FLOOR

/USR3/COLUMBIA/GARDATA.DGN 12/09/95

/usr3/bangs/gardata.dgn Dec. 20, 1995 14:24:18

TABLES

Table 1
Summary of Sample Locations and Types, Identification Codes, Analytes, and Analytical Methods
Bangs Operating Center
Bangs, Ohio

Sample ID	Parameters: VOCs	BTEX	SVOCs	TPH*	PCBs	Metals
BANGS OC COMPLEX						
Boiler Room ART - Wipe Samples						
BAN-WP001-90001					X	
BAN-WP002-90001					X	
BAN-WP003-90001					X	
BAN-WP004-90001					X	
BAN-WP005-90001					X	
BAN-WP006-90001					X	
BAN-WP007-90001					X	
Vehicle Maintenance ART - Wipe Samples						
BAN-WP008-90001					X	
BAN-WP009-90001					X	
BAN-WP010-90001					X	
BAN-WP011-90001					X	
FORMER COMPRESSOR STATION						
Subsurface Soil Samples						
BAN-SB001-40001		X		X		
BAN-SB001-50001		X		X		
BAN-SB002-40001		X		X		
BAN-SB002-40002		X		X		
BAN-SB002-40003		X		X		
BAN-SB003-40001		X		X		
BAN-SB003-40002		X		X		
BAN-SB003-40003		X		X		
BAN-SB004-40001		X		X		
BAN-SB004-40002		X		X		
BAN-SB004-41002 (Duplicate sample)		X		X		
BAN-SB004-40003		X		X		
BAN-SB005-40001		X		X		
BAN-SB006-40001		X		X		
BAN-SB006-40002		X		X		
BAN-SB006-40003		X		X		
BAN-SB007-40001		X		X		
BAN-SB007-40002		X		X		
BAN-SB008-40001		X		X		
BAN-SB008-40002		X		X		
BAN-SB009-40001		X		X		
BAN-SB009-40002		X		X		
BAN-SB010-40001		X		X		
BAN-SB010-40002		X		X		
Waste Drum Storage Area - Surface Soil Samples						
BAN-SS014-40001	X		X	X	X	X
BAN-SS015-40001	X		X	X	X	X
Pipe Rack Area - Surface Soil Samples						
BAN-SS016-40001	X		X	X	X	X
BAN-SS017-40001	X		X	X	X	X
PIPEYARD						
Surface Soil Samples						
BAN-SS001-40001	X		X	X	X	X
BAN-SS002-40001	X		X	X	X	X
BAN-SS003-40001	X		X	X	X	X
BAN-SS004-40001	X		X	X	X	X

Table 1
Summary of Sample Locations and Types, Identification Codes, Analytes, and Analytical Methods
Bangs Operating Center
Bangs, Ohio

Sample ID	Parameters: VOCs	BTEX	SVOCs	TPH*	PCBs	Metals
PIPEYARD						
Surface Soil Samples						
BAN-SS005-40001	X		X	X	X	X
BAN-SS006-40001	X		X	X	X	X
BAN-SS007-40001	X		X	X	X	X
BAN-SS008-40001	X		X	X	X	X
BAN-SS008-41001 (duplicate sample)	X		X	X	X	X
Subsurface Soil Samples						
BAN-SS010-40001	X		X	X	X	X
BAN-SB011-40001	X		X	X	X	X
BAN-SB011-40002	X		X	X	X	X
BAN-SB011-40003	X		X	X	X	X
BAN-SB012-40001	X		X	X	X	X
BAN-SB012-40002	X		X	X	X	X
BAN-SB013-40001	X		X	X	X	X
BACKGROUND SAMPLES						
Surface Soil Samples						
BAN-SB015-40001	X		X	X	X	X
BAN-SB016-40001	X		X	X	X	X
BAN-SB017-40001	X		X	X	X	X
BAN-SB017-41001 (duplicate sample)	X		X	X	X	X
Subsurface Soil Samples						
BAN-SB015-40002	X		X	X	X	X
BAN-SB016-40002	X		X	X	X	X
BAN-SB017-40002	X		X	X	X	X
QA/QC SAMPLES						
BAN-SS014-40001 (MS/MSD)	X		X	X	X	X
BAN-SS015-40001 (MS/MSD)	X		X	X	X	X
BAN-SB017-40001 (MS/MSD)	X		X	X	X	X
BAN-SB001-42001 (EB)		X		X		
BAN-SS001-42001 (EB)	X		X	X	X	X
BAN-SB015-42001 (EB)	X		X	X	X	X
BAN-SB001-43001 (TB)		X				
BAN-SS001-43001 (TB)	X					
BAN-SB015-43001 (TB)	X					
BAN-WP005-94001 (AB)					X	

Notes:

* = TPH analysis by EPA Method 418.1.
DUP = Duplicate sample.
MS/MSD = Matrix spike/matrix spike duplicate.
EB = Equipment blank.
TB = Trip blank.
AB = Ambient blank.

Table 2
Qualified Analytical Results
Bangs Operating Center
Bangs, Ohio

Sample ID	Laboratory Batch Number	Lab and evaluation results reported in mg/kg									
		Antimony		Chromium		Lead		Nickel		Silver	
		Lab Result	Evaluation Result	Lab Result	Evaluation Result	Lab Result	Evaluation Result	Lab Result	Evaluation Result	Lab Result	Evaluation Result
Surface Soil Samples											
BAN-SS001-40001	A95-6027	10 U	10 R	12.6	12.6 J	N/A	N/A	N/A	N/A	N/A	N/A
BAN-SS002-40001	A95-6027	10 U	10 R	7.8	7.8 J	N/A	N/A	N/A	N/A	N/A	N/A
BAN-SS003-40001	A95-6027	10 U	10 R	9.2	9.2 J	N/A	N/A	N/A	N/A	N/A	N/A
BAN-SS004-40001	A95-6027	10 U	10 R	12.9	12.9 J	N/A	N/A	N/A	N/A	N/A	N/A
BAN-SS005-40001	A95-6027	10 U	10 R	8.4	8.4 J	N/A	N/A	N/A	N/A	N/A	N/A
BAN-SS006-40001	A95-6027	10 U	10 R	7.6	7.6 J	N/A	N/A	N/A	N/A	N/A	N/A
BAN-SS007-40001	A95-6027	10 U	10 R	11.0	11.0 J	N/A	N/A	N/A	N/A	N/A	N/A
BAN-SS008-40001	A95-6027	10 U	10 R	9.0	9.0 J	N/A	N/A	N/A	N/A	N/A	N/A
BAN-SS008-41001	A95-6027	10 U	10 R	9.9	9.9 J	N/A	N/A	N/A	N/A	N/A	N/A
BAN-SS014-40001	A95-6027	10 U	10 R	12.1	12.1 J	N/A	N/A	N/A	N/A	N/A	N/A
BAN-SS015-40001	A95-6027	10 U	10 R	15.0	15.0 J	N/A	N/A	N/A	N/A	N/A	N/A
BAN-SS016-40001	A95-6027	10 U	10 R	29.1	29.1 J	N/A	N/A	N/A	N/A	N/A	N/A
BAN-SS017-40001	A95-6027	11.4	11.4 J-	6.4	6.4 J	N/A	N/A	N/A	N/A	N/A	N/A
Soil Boring Samples											
BAN-SS010-40001	A95-6027	10 U	10 R	4.4	4.4 J	N/A	N/A	N/A	N/A	N/A	N/A
BAN-SB011-40001	A95-6027	10 U	10 R	10.3	10.3 J	N/A	N/A	N/A	N/A	N/A	N/A
BAN-SB011-40002	A95-6027	10 U	10 R	7.3	7.3 J	N/A	N/A	N/A	N/A	N/A	N/A
BAN-SB011-40003	A95-6027	10 U	10 R	9.4	9.4 J	N/A	N/A	N/A	N/A	N/A	N/A
BAN-SB012-40001	A95-6027	10 U	10 R	7.8	7.8 J	N/A	N/A	N/A	N/A	N/A	N/A
BAN-SB012-40002	A95-6027	10 U	10 R	6.8	6.8 J	N/A	N/A	N/A	N/A	N/A	N/A
BAN-SB015-40001	A95-6041	10 U	10 UJ	8.0	8.0 U	20 U	20 R	14.3	14.3 U	2.0 U	2.0 R
BAN-SB015-40002	A95-6041	10 U	10 UJ	N/A	N/A	45.9	45.9 J-	33.8	33.8 U	2.0 U	2.0 R
BAN-SB016-40001	A95-6041	10 U	10 UJ	N/A	N/A	20 U	20 R	16.5	16.5 U	2.0 U	2.0 R
BAN-SB016-40002	A95-6041	10 U	10 UJ	6.8	6.8 U	24.5	24.5 J-	20.4	20.4 U	2.0 U	2.0 R
BAN-SB017-40001	A95-6041	10 U	10 UJ	N/A	N/A	20 U	20 R	17.1	17.1 U	2.0 U	2.0 R
BAN-SB017-41001	A95-6041	10 U	10 UJ	N/A	N/A	20 U	20 R	33.6	33.6 U	2.0 U	2.0 R
BAN-SB017-40002	A95-6041	10 U	10 UJ	N/A	N/A	93.0	93.0 J-	22.8	22.8 U	2.0 U	2.0 R

Notes:

N/A = Not applicable; no changes made to the data.
U = Detection limit.
UJ = Estimated detection limit.
J- = Estimated value, biased low.
R = Rejected level of nondetection.

Table 3
Soil and Water Sample Analytical Results
Bangs Operating Center
Bangs, Ohio

Compounds	Analytical Results (mg/kg, unless noted otherwise):Sample ID, Lab Batch #, Sample Date, and Sample Depth							
	Background Surface Soil Samples				Surface Soil Samples			
	BAN-SB015-40001	BAN-SB016-40001	BAN-SB017-40001	BAN-SB017-41001	BAN-SS001-40001	BAN-SS002-40001	BAN-SS003-40001	BAN-SS004-40001
	A95-6041	A95-6041	A95-6041	A95-6041	A95-6027	A95-6027	A95-6027	A95-6027
	11/09/95	11/09/95	11/09/95	11/09/95	11/08/95	11/08/95	11/08/95	11/08/95
	0.5' - 2'	0.5 - 2	0.5' - 2'	0.5' - 2'	0.5' - 1'	0.5' - 1.5'	0.5' - 1.5'	0.5' - 1.5'
VOCs								
Acetone	ND	ND	ND	ND	ND	ND	ND	ND
Chloroform	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	ND	ND	ND	ND	ND	ND	ND	ND
Xylene	ND	ND	ND	ND	ND	ND	ND	ND
TPH	ND	ND	ND	ND	ND	0.248	1.38	ND
Metals								
Antimony	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic	14.9	12.2	15.2	24.2	23.2	19	11.1	22.8
Barium	61.8	139	88.5	115	67.4	67.4	94.6	121
Cadmium	ND	ND	ND	ND	ND	ND	ND	ND
Chromium	ND	10.9	89.5	9.7	12.6 J+	7.8 J+	9.2 J+	12.9 J+
Lead	ND	ND	ND	ND	21.3	29.6	ND	23.9
Mercury	ND	ND	ND	ND	ND	ND	ND	ND
Nickel	ND	ND	ND	ND	18.8	15.8	15.8	30.3

Notes:

ND = Not detected.

NS = Not sampled.

J+ = Estimated value, biased high.

J- = Estimated value, biased low.

Table 3
Soil and Water Sample Analytical Results
Bangs Operating Center
Bangs, Ohio

Compounds	Analytical Results (mg/kg, unless noted otherwise):Sample ID, Lab Batch #, Sample Date, and Sample Depth							
	Surface Soil Samples							
	BAN-SS005-40001	BAN-SS006-40001	BAN-SS007-40001	BAN-SS008-40001	BAN-SS008-41001	BAN-SS014-40001	BAN-SS015-40001	BAN-SS016-40001
	A95-6027	A95-6027	A95-6027	A95-6027	A95-6027	A95-6027	A95-6027	A95-6027
	11/08/95	11/08/95	11/08/95	11/08/95	11/08/95	11/08/95	11/08/95	11/08/95
	0.5' - 1.5'	0.5' - 1.5'	0.5' - 1.5'	0.5' - 1.5'	0.5' - 1.5'	0.5' - 1.5'	0.5' - 1.5'	0.5' - 1.5'
VOCs								
Acetone	ND	ND	ND	ND	ND	0.14	ND	ND
Chloroform	ND	ND	ND	ND	ND	ND	ND	ND
Tetrachloroethene	ND	ND	ND	ND	ND	ND	0.005	ND
Xylene	ND	ND	ND	ND	ND	ND	ND	ND
TPH	ND	ND	ND	0.336	0.197	ND	ND	1.16
Metals								
Antimony	ND	ND	ND	ND	ND	ND	ND	ND
Arsenic	14.3	16	31.6	13.6	16.2	14.8	12.8	33.2
Barium	45.5	63.4	78.4	91	92.6	81.1	90.8	220
Cadmium	ND	ND	ND	ND	ND	ND	ND	1.1
Chromium	8.4 J+	7.6 J+	11 J+	9 J+	9.9 J+	12.1 J+	15 J+	29.1 J+
Lead	ND	ND	39.3	25.5	25.2	ND	20.3	211
Mercury	ND	1	0.35	ND	ND	0.2	ND	ND
Nickel	15.5	14.8	19.2	15.7	16.6	17.5	15.9	20.1

Notes:
ND = Not detected.
NS = Not sampled.
J+ = Estimated value, biased high.
J- = Estimated value, biased low.

Table 3
Soil and Water Sample Analytical Results
Bangs Operating Center
Bangs, Ohio

Compounds	Analytical Results (mg/kg, unless noted otherwise):Sample ID, Lab Batch #, Sample Date, and Sample Depth							
	Surface Soil Samples	Background Soil Boring Samples			Soil Boring Samples			
	BAN-SS017-40001	BAN-SB015-40002	BAN-SB016-40002	BAN-SB017-40002	BAN-SB001-40001	BAN-SB002-40001	BAN-SB002-40002	BAN-SB002-40003
	A95-6027	A95-6041	A95-6041	A95-6041	A95-5987	A95-5987	A95-5987	A95-5987
	11/08/95	11/09/95	11/09/95	11/09/95	11/07/95	11/07/95	11/07/95	11/07/95
	0.5' - 1.5'	5' - 7'	4.5' - 6.5'	4.5' - 6.5	6' - 7'	3' - 3.4'	6' - 6.4'	11' - 12'
VOCs								
Acetone	ND	ND	ND	ND	NS	NS	NS	NS
Chloroform	ND	ND	ND	ND	NS	NS	NS	NS
Tetrachloroethene	ND	ND	ND	ND	NS	NS	NS	NS
Xylene	ND	ND	ND	ND	ND	ND	0.0069	ND
TPH	0.0638	ND	ND	ND	18.7	7.85	15.2	0.307
Metals								
Antimony	11.4 J-	ND	ND	ND	NS	NS	NS	NS
Arsenic	13	51.7	24.8	28.7	NS	NS	NS	NS
Barium	146	78.3	44.2	64.2	NS	NS	NS	NS
Cadmium	ND	ND	ND	ND	NS	NS	NS	NS
Chromium	6.4 J+	10.1	ND	11.5	NS	NS	NS	NS
Lead	169	45.9 J-	24.5 J-	93 J-	NS	NS	NS	NS
Mercury	ND	ND	ND	ND	NS	NS	NS	NS
Nickel	12.6	ND	ND	ND	NS	NS	NS	NS

Notes:
ND = Not detected.
NS = Not sampled.
J+ = Estimated value, biased high.
J- = Estimated value, biased low.

Table 3
Soil and Water Sample Analytical Results
Bangs Operating Center
Bangs, Ohio

Compounds	Analytical Results (mg/kg, unless noted otherwise):Sample ID, Lab Batch #, Sample Date, and Sample Depth							
	Soil Boring Samples							
	BAN-SB003-40001	BAN-SB003-40002	BAN-SB003-40003	BAN-SB004-40001	BAN-SB004-40002	BAN-SB004-41002	BAN-SB004-40003	BAN-SB008-40001
	A95-5987	A95-5987	A95-5987	A95-5987	A95-5987	A95-5987	A95-5987	A95-5987
	11/07/95	11/07/95	11/07/95	11/07/95	11/07/95	11/07/95	11/07/95	11/07/95
	2.5' - 3'	6' - 7'	8.5' - 9'	5' - 6'	8' - 9'	8' - 9'	10.5' - 11'	2' - 2.8'
VOCs								
Acetone	NS	NS	NS	NS	NS	NS	NS	NS
Chloroform	NS	NS	NS	NS	NS	NS	NS	NS
Tetrachloroethene	NS	NS	NS	NS	NS	NS	NS	NS
Xylene	ND	ND	ND	ND	ND	0.0051	ND	ND
TPH	33.1	0.0913	0.27	0.444	0.916	0.429	0.0603	0.334
Metals								
Antimony	NS	NS	NS	NS	NS	NS	NS	NS
Arsenic	NS	NS	NS	NS	NS	NS	NS	NS
Barium	NS	NS	NS	NS	NS	NS	NS	NS
Cadmium	NS	NS	NS	NS	NS	NS	NS	NS
Chromium	NS	NS	NS	NS	NS	NS	NS	NS
Lead	NS	NS	NS	NS	NS	NS	NS	NS
Mercury	NS	NS	NS	NS	NS	NS	NS	NS
Nickel	NS	NS	NS	NS	NS	NS	NS	NS

Notes:
ND = Not detected.
NS = Not sampled.
J+ = Estimated value, biased high.
J- = Estimated value, biased low.

Table 3
Soil and Water Sample Analytical Results
Bangs Operating Center
Bangs, Ohio

Compounds	Analytical Results (mg/kg, unless noted otherwise):Sample ID, Lab Batch #, Sample Date, and Sample Depth							
	Soil Boring Samples						Water Sample	QA/QC Sample
	BAN-SS010-40001	BAN-SB011-40001	BAN-SB011-40002	BAN-SB011-40003	BAN-SB012-40001	BAN-SB012-40002	BAN-SB001-50001	BAN-SB015-42001
	A95-6027	A95-6027	A95-6027	A95-6027	A95-6027	A95-6027	A95-5987 & -6041	A95-6041
	11/08/95	11/08/95	11/08/95	11/08/95	11/08/95	11/08/95	11/7 - 9/95	11/09/95
	6' - 7'	3' - 4'	6' - 7'	9' - 10'	3' - 4'	5' - 6'	N/A	N/A
VOCs								
Acetone	ND	ND	ND	ND	ND	ND	NS	ND
Chloroform	ND	ND	ND	ND	ND	ND	NS	0.006 mg/L
Tetrachloroethene	ND	ND	ND	ND	ND	ND	NS	ND
Xylene	ND	ND	ND	ND	ND	ND	0.013 mg/L	ND
TPH	ND	0.817	ND	0.0664	ND	0.064	1,380 mg/L	ND
Metals								
Antimony		ND	ND	ND	ND	ND	NS	ND
Arsenic	107	13.2	8.9	14.2	10.2	8	NS	ND
Barium	58.8	101	22.5	25.8	62.7	42.7	NS	ND
Cadmium	1.5	ND	ND	ND	ND	ND	NS	ND
Chromium	4.4 J+	10.3 J+	7.3 J+	9.4 J+	7.8 J+	6.8 J+	NS	0.011 mg/L
Lead	88.3	24	ND	ND	ND	ND	NS	0.007 mg/L
Mercury	ND	ND	ND	ND	ND	ND	NS	ND
Nickel	34.5	18.4	15.2	21	13	13.2	NS	0.158 mg/L

Notes:
ND = Not detected.
NS = Not sampled.
J+ = Estimated value, biased high.
J- = Estimated value, biased low.

Table 4
PCB Wipe Test Sample Analytical Results
Bangs Operating Center
Bangs, Ohio

Compounds	Analytical Results (µg/100cm^2):Sample ID				
	BAN-WP001-90001	BAN-WP002-90001	BAN-WP003-90001	BAN-WP004-90001	BAN-WP005-90001
PCBs					
Aroclor 1254	390	2,800	33	68	26
Aroclor 1260	10 U	100 U	5 U	2 U	2 U

Compounds	Analytical Results (µg/100cm^2):Sample ID			
	BAN-WP006-90001	BAN-WP007-90001	BAN-WP009-90001	BAN-WP010-90001
PCBs				
Aroclor 1254	11	1.5	5 U	5 U
Aroclor 1260	1 U	1 U	52	59

Note:

U = Detection limit.

APPENDIX A

SOIL BORING LITHOLOGIC LOGS AND SURFACE SOIL SAMPLING FORMS

SOIL BORING LITHOLOGIC LOGS

GEOLIS™ LEGEND

BOREHOLE LOCATION DATA

Drilling Method: HSA — Hollow-stem auger.

BOREHOLE LOG AND LITHOLOGIC DATA

% Recovery: Percentage of soil recovered in a 2-ft by 2-inch-diameter split-spoon sampler.

Blow Counts: Each of the four numbers listed represents the number of blows from a 140-lb hammer needed to advance a split-spoon sampler 0.5 ft.

Field Instrument Reading: PID — Photoionization Detector (e.g., HNu).

Lithology Sample Method: SSS — Split-spoon sampler.

Moisture:

DRY — Dry:	No discernible moisture is present.
MST — Moist:	Moistens the hand; sample cools during exposure to air.
WET — Wet:	Visible water is present or can be squeezed from the sample.
SAT — Saturated:	Water drains easily from the sample.

Sorting: A field determination based on the percentages of various grain sizes present in a sample.

WEL — Well sorted (poorly graded — uniform grain size).
MOD — Medium sorted.
POR — Poorly sorted (well graded — mix of grain sizes).
Sand and Gravel Sizes: C = Coarse; M = Medium; and F = Fine.

Plasticity:

NON — None:	Soil cannot be threaded or the thread is 1/4 inch in diameter or larger and water quickly appears after shaking and striking (one or two blows).
LOW — Low:	Thread is larger than 1/16 inch and water appears after five or less blows.
MOD — Medium:	Thread is less than 1/16 inch and water only appears after five or more blows.

GEOLIS® LEGEND
(Continued)

HGH — High:	Thread is less than 1/64 inch and no water appears.
NA — Not Applicable:	Soil contains no silt and/or clay.

Soil Strength:

STF — Stiff:	Cannot be molded with fingers; can be indented by fingernail.
FRM — Firm:	Can only be molded with strong finger pressure when moist; can be crumbled with strong finger pressure when dry.
SFT — Soft:	Easily molded with fingers when moist; easily crumbles when dry.
LSE — Loose:	Dry sample crumbles under its own weight.

GEOLIS® LEGEND
(Continued)

Unified Soil Classification System

Coarse-Grained Soils (More than 50% retained on No. 200 sieve)			Fine-Grained Soils (More than 50% passes a No. 200 sieve)		
GRAVELS More than 50% of coarse fraction retained on No. 4 sieve	Clean Gravels (Little or no fines)		SILTS AND CLAYS Liquid limit 50% or less	ML	Inorganic silts and very fine sands, rock flour, silty or clayey fine sands, or clayey silts with slight plasticity
	GW	Well-graded gravels, gravel-sand mixtures, little or no fines			
	GP	Poorly graded gravels, gravel-sand mixtures, little or no fines		CL	Inorganic clays of low to medium plasticity, gravelly clays, sandy clays, silty clays, lean clays
	Gravels with Fines (Appreciable amount of fines)			OL	Organic silts and organic silty clays of low plasticity
	GM	Silty gravels, gravel-sand-silt mixtures			
	GC	Clayey gravels, gravel-sand-clay mixtures	SILTS AND CLAYS Liquid limit greater than 50%	MH	Inorganic silts, micaceous or diatomaceous fine sandy or silty soils, elastic silts
SANDS More than 50% of coarse fraction passes No. 4 sieve	Clean Sands (Little or no fines)			CH	Inorganic clays of high plasticity, fat clays
	SW	Well-graded sands, gravelly sands, little or no fines			
	SP	Poorly graded sands, gravelly sands, little or no fines		OH	Organic clays of medium to high plasticity, organic silts
	Sands with Fines (Appreciable amount of fines)		HIGHLY ORGANIC SOILS	PT	Peat and other highly organic soils
	SM	Silty sands, sand-silt mixtures			
	SC	Clayey sands, sand-clay mixtures			

BOREHOLE ID : BANSB001 PROJECT NAME: COLUMBIA GAS
BEGIN DATE : 11/07/95 END DATE : 11/07/95

LOGGER/COMPANY : (b) (4) [redacted]

BOREHOLE COMPLETED IN (<O>verburden <B>edrock) : O

TOTAL DEPTH : 12.00 DEPTH TO BEDROCK : 0.00

BOREHOLE DIAMETER #1: 2.00
INTERVAL: 0.00 ft. to 12.00 ft. BGS
METHOD : MACROSAMPLER FLUID : NONE
BOREHOLE DIAMETER #2:
INTERVAL:
METHOD : FLUID :
BOREHOLE DIAMETER #3:
INTERVAL:
METHOD : FLUID :

DRILLING COMPANY : PHILIP ENVIRONMENTAL
DRILLER : STEVE SNIDER
DRILL RIG TYPE : DIETRICH D-25 - DIRECT PUSH

	ESTIMATED	SURVEYED
SURFACE ELEVATION :	0.000	
N. COORDINATE :	0.0000	
E. COORDINATE :	0.0000	

WELL PERMIT.....(Y)es (N)o: N PERMIT # :

HOLE ABANDONED...(Y)es (N)o: Y
WELL INSTALLED...(Y)es (N)o: N
WELL CLUSTER.....(Y)es (N)o: N No. OF WELLS : 0
WELL NEST.....(Y)es (N)o: N No. OF WELLS : 0
PUMPS INSTALLED..(Y)es (N)o: N

	TYPE	DEPTH
PURGE :		0.00
SAMPLE :		0.00

BOREHOLE TESTING
BOREHOLE GEOPHYSICS.....(Y)es (N)o: N
SLUG TESTS.....(Y)es (N)o: N
PACKER TESTS.....(Y)es (N)o: N
PUMPING TESTS.....(Y)es (N)o: N

COMMENTS :
FORMER COMPRESSOR STATION AREA. BORING SAMPLED WITH 2" BY 4' GEOPROBE MACROSAMPLER. WATER @ 8'. COLLECTED WATER SAMP 10-12'. SOIL SAMPLED W/GEOPROBE 6-7'.

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DATE: 12/08/95 **** Roy F. WESTON, Inc. LITHOLOGICAL DATA FOR - CLIENT ID: BAN *** PAGE: 1

BOREHOLE /WELL ID	SMP NUM	LTH NUM	LITHOLOGY INT. (FT BGS)		SAMPLING METHOD	SIZE GRAVEL	GRAVEL PCT.	SIZE SAND	SAND PCT	SILT PCT	CLAY PCT	ORGANIC PCT	ROCK TYPE	PLAST	SORT	STRENGTH	MOISTURE	STRAT UNIT
BANSB001	1	1	0.00	1.00	DPT		0	F	50	30	10	0		NON	MOD	LSE	DRY	
BANSB001	1	2	1.00	2.90	DPT		0		20	20	60	0		HGH	MOD	FRM	MST	
BANSB001	1	3	2.90	4.00	DPT		0		0	0	0	0						
BANSB001	2	1	4.00	6.40	DPT		0		20	20	60	0		HGH	MOD	FRM	MST	
BANSB001	2	2	6.40	8.00	DPT		10		60	30	0	0		LOW	POR	LSE	WET	
BANSB001	3	1	8.00	10.00	DPT		40		50	10	0	0		NON	POR	LSE	SAT	
BANSB001	3	2	10.00	12.00	DPT		0		0	40	60	0		HGH	WEL	FRM	MST	

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Borehole Log

Roy F. WESTON, Inc.

PROJECT	: COLUMBIA GAS	TOTAL DEPTH	: 12.00
SITE NAME	: BANGS OPERATING CENTER	LOGGER	: (b) (4) [redacted]
BORING ID	: BANSB001	DRILLING COMPANY	: PHILIP ENVIRONMENTAL
NORTHING	: 0.0000 estimated	DRILLING RIG	: DIETRICH D-25 - DIRECT PUSH
EASTING	: 0.0000 estimated	DATE STARTED	: 11/07/95
ELEVATION	: 0.000 estimated	DATE COMPLETED	: 11/07/95

ELEVATION	DEPTH	MATERIAL	% RECOVERY	CLASSIFICATION	COLOR	STRENGTH	MOISTURE	BLOW COUNT	FIELD INSTRUMENT READING	COMMENTS
			72	Silty sand, SM	DK BROWN	LSE	DRY		OVM 0.0	SAMPLED WITH 2" BY 4' GEOPROBE MACROSAMPLER.
-1	1									
				Fat clay with sand, CH	ORG BROWN	FRM	MST		OVM 0.0	
-2	2									
-3	3			No Sample Recovered						
-4	4		75	Fat clay with sand, CH	ORG BROWN	FRM	MST		OVM 0.0	SOIL ANALYTICAL SAMPLE COLLECTED AT 6 TO 7 FT BGS.
-5	5									
-6	6									
				Silty sand, SM	BLACK	LSE	WET		OVM 6.2	BOTTOM OF INTERVAL STAINED.
-7	7									
-8	8		100	Well graded sand with silt and gravel, SW-SM	GRAY/BLACK	LSE	SAT			VISIBLE PRODUCT W/SHEEN AND ODOR 8-10'. SATURATED AT TOP. PERCHED ABOVE CLAY LAYER.
-9	9									
-10	10			Fat clay, CH	GRAY	FRM	MST			SOIL LITH SAMPLE APPEARED CLEAN (NO STN OR ODOR). GEOPROBE MICROSAMPLER USED TO COLLECT GW 10-12'
-11	11									
-12	12									
-13	13									
-14	14									
-15	15									
-16	16									
-17	17									
-18	18									
-19	19									
-20	20									

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Borehole Location Data

Roy F. WESTON, Inc.

BOREHOLE ID : BANSB002 PROJECT NAME: COLUMBIA GAS
BEGIN DATE : 11/07/95 END DATE : 11/07/95

LOGGER/COMPANY : (b) (4) [redacted]

BOREHOLE COMPLETED IN (<O>verburden <B>edrock) : O

TOTAL DEPTH : 12.00 DEPTH TO BEDROCK : 0.00

BOREHOLE DIAMETER #1: 2.00
INTERVAL: 0.00 ft. to 12.00 ft. BGS
METHOD : MACROSAMPLER FLUID : NONE
BOREHOLE DIAMETER #2:
INTERVAL:
METHOD : FLUID :
BOREHOLE DIAMETER #3:
INTERVAL:
METHOD : FLUID :

DRILLING COMPANY : PHILIP ENVIRONMENTAL
DRILLER (b) (4) [redacted]
DRILL RIG TYPE : DIETRICH D-25 - DIRECT PUSH

	ESTIMATED	SURVEYED
SURFACE ELEVATION :	0.000	
N. COORDINATE :	0.0000	
E. COORDINATE :	0.0000	

WELL PERMIT.....(Y)es (N)o: N PERMIT # :

HOLE ABANDONED...(Y)es (N)o: Y
WELL INSTALLED...(Y)es (N)o: N
WELL CLUSTER.....(Y)es (N)o: N No. OF WELLS : 0
WELL NEST.....(Y)es (N)o: N No. OF WELLS : 0
PUMPS INSTALLED..(Y)es (N)o: N

	TYPE	DEPTH
PURGE :		0.00
SAMPLE :		0.00

BOREHOLE TESTING
BOREHOLE GEOPHYSICS.....(Y)es (N)o: N
SLUG TESTS.....(Y)es (N)o: N
PACKER TESTS.....(Y)es (N)o: N
PUMPING TESTS.....(Y)es (N)o: N

COMMENTS :
FORMER COMPRESSOR STATION AREA. BORING SAMPLED WITH A 2" BY 4' GEOPROBE MACROSAMPLER. SOIL ANALYTICAL SAMPLES COLLECTED AT 3-3.4', 6-6.4', AND 11-12' BGS.

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DATE: 12/08/95 **** Roy F. WESTON, Inc. LITHOLOGICAL DATA FOR - CLIENT ID: BAN *** PAGE: 2

BOREHOLE /WELL ID	SMP NUM	LTH NUM	LITHOLOGY INT. (FT BGS)		SAMPLING METHOD	SIZE GRAVEL	GRAVEL PCT.	SIZE SAND	SAND PCT	SILT PCT	CLAY PCT	ORGANIC PCT	ROCK TYPE	PLAST	SORT	STRENGTH	MOISTURE	STRAT UNIT
BANSB002	1	1	0.00	1.40	DPT	M	10	MF	50	20	20	0		LOW	MOD	LSE	MST	
BANSB002	1	2	1.40	4.00	DPT		0	F	30	20	50	0		MOD	WEL	FRM	MST	
BANSB002	2	1	4.00	5.20	DPT		10		25	15	50	0		HGH	POR	FRM	MST	
BANSB002	2	2	5.20	6.40	DPT		10		10	25	55	0		MOD	POR	FRM	WET	
BANSB002	2	3	6.40	8.00	DPT		0		0	0	0	0						
BANSB002	3	1	8.00	9.00	DPT		40		50	10	0	0		NON	POR	LSE	SAT	
BANSB002	3	2	9.00	12.00	DPT		0	F	25	20	55	0		MOD	MOD	FRM	WET	

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Borehole Log

Roy F. WESTON, Inc.

PROJECT	: COLUMBIA GAS	TOTAL DEPTH	: 12.00
SITE NAME	: BANGS OPERATING CENTER	LOGGER	(b) (4) [redacted]
BORING ID	: BANSB002	DRILLING COMPANY	: PHILIP ENVIRONMENTAL
NORTHING	: 0.0000 estimated	DRILLING RIG	: DIETRICH D-25 - DIRECT PUSH
EASTING	: 0.0000 estimated	DATE STARTED	: 11/07/95
ELEVATION	: 0.000 estimated	DATE COMPLETED	: 11/07/95

ELEVATION	DEPTH	MATERIAL	% RECOVERY	CLASSIFICATION	COLOR	STRENGTH	MOISTURE	BLOW COUNT	FIELD INSTRUMENT READING	COMMENTS
			85	Silty sand, SM	ORG BROWN	LSE	MST		OVM 0.0	
-1	1									
				Sandy lean clay, CL	GRAY	FRM	MST		OVM 4.2	SLIGHT ODOR; SOIL ANALYTICAL SAMPLE COLLECTED AT 3-3.4' BGS.
-2	2									
-3	3									
-4	4		60	Sandy fat clay, CH	ORG BROWN	FRM	MST			
-5	5									
				Lean clay with sand, CL	GRAY/BLACK	FRM	WET		OVM 160.0	SOIL ANALYTICAL SAMPLE COLLECTED AT 6-6.4' BGS.
-6	6									
				No Sample Recovered						
-7	7									
-8	8		100	Well graded sand with silt and gravel, SW-SM	ORG BRN	LSE	SAT		OVM 140.0	
-9	9									
				Lean clay with sand, CL	GRAY	FRM	WET		OVM 140.0	SOIL ANALYTICAL SAMPLE COLLECTED BELOW SATURATED ZONE AT 11-12' BGS.
-10	10									
-11	11									
-12	12									
-13	13									
-14	14									
-15	15									
-16	16									
-17	17									
-18	18									
-19	19									
-20	20									

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BOREHOLE ID : BANSB003 PROJECT NAME: COLUMBIA GAS
BEGIN DATE : 11/07/95 END DATE : 11/07/95

LOGGER/COMPANY : (b) (4) [redacted]

BOREHOLE COMPLETED IN (<O>verburden <B>edrock) : O

TOTAL DEPTH : 12.00 DEPTH TO BEDROCK : 0.00

BOREHOLE DIAMETER #1: 2.00
INTERVAL: 0.00 ft. to 12.00 ft. BGS
METHOD : MACROSAMPLER FLUID : NONE
BOREHOLE DIAMETER #2:
INTERVAL:
METHOD : FLUID :
BOREHOLE DIAMETER #3:
INTERVAL:
METHOD : FLUID :

DRILLING COMPANY : PHILIP ENVIRONMENTAL
DRILLER : (b) (4) [redacted]
DRILL RIG TYPE : DIETRICH D-25 - DIRECT PUSH

	ESTIMATED	SURVEYED
SURFACE ELEVATION :	0.000	
N. COORDINATE :	0.0000	
E. COORDINATE :	0.0000	

WELL PERMIT.....(Y)es (N)o: N PERMIT # :

HOLE ABANDONED...(Y)es (N)o: Y
WELL INSTALLED...(Y)es (N)o: N
WELL CLUSTER.....(Y)es (N)o: N No. OF WELLS : 0
WELL NEST.....(Y)es (N)o: N No. OF WELLS : 0
PUMPS INSTALLED..(Y)es (N)o: N

	TYPE	DEPTH
PURGE :		0.00
SAMPLE :		0.00

BOREHOLE TESTING
BOREHOLE GEOPHYSICS.....(Y)es (N)o: N
SLUG TESTS.....(Y)es (N)o: N
PACKER TESTS.....(Y)es (N)o: N
PUMPING TESTS.....(Y)es (N)o: N

COMMENTS :
FORMER COMPRESSOR STATION AREA. BORING SAMPLED WITH 2" BY 4' GEOPROBE MACROSAMPLER. SOIL ANALYTICAL SAMPLES COLLECTED AT 2.5-3', 6-7', AND 8.5-9' BGS.

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BOREHOLE /WELL ID	SMP NUM	LTH NUM	LITHOLOGY INT. (FT BGS)		SAMPLING METHOD	SIZE GRAVEL	GRAVEL PCT.	SIZE SAND	SAND PCT	SILT PCT	CLAY PCT	ORGANIC PCT	ROCK TYPE	PLAST	SORT	STRENGTH	MOISTURE	STRAT UNIT
BANSB003	1	1	0.00	4.00	DPT		0	F	50	30	20	0		HGH	MOD	LSE	WET	
BANSB003	2	1	4.00	8.00	DPT	M	15	MF	50	20	10	0		LOW	POR	LSE	WET	
BANSB003	3	1	8.00	9.00	DPT		0	F	15	25	60	0		HGH	WEL	FRM	SAT	
BANSB003	3	2	9.00	12.00	DPT		0		0	0	0	0						

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Borehole Log

Roy F. WESTON, Inc.

PROJECT	: COLUMBIA GAS	TOTAL DEPTH	: 12.00
SITE NAME	: BANGS OPERATING CENTER	LOGGER	: (b) (4) [redacted]
BORING ID	: BANSB003	DRILLING COMPANY	: PHILIP ENVIRONMENTAL
NORTHING	: 0.0000 estimated	DRILLING RIG	: DIETRICH D-25 - DIRECT PUSH
EASTING	: 0.0000 estimated	DATE STARTED	: 11/07/95
ELEVATION	: 0.000 estimated	DATE COMPLETED	: 11/07/95

ELEVATION	DEPTH	MATERIAL	% RECOVERY	CLASSIFICATION	COLOR	STRENGTH	MOISTURE	BLOW COUNT	FIELD INSTRUMENT READING	COMMENTS
			75	Silty sand, SM	BROWN/GRAY	LSE	WET		OVM 18.0	SOIL ANALYTICAL SAMPLE COLLECTED AT 2.5-3' BGS.
-1	1									
-2	2									
-3	3									
-4	4		75	Silty sand with gravel, SM	GRAY/BLACK	LSE	WET		OVM 9.0	SOIL ANALYTICAL SAMPLE COLLECTED AT 6-7' BGS.
-5	5									
-6	6									
-7	7									
-8	8		25	Fat clay with sand, CH		FRM	SAT		OVM 14.7	STANDING WATER W/SHEEN IN ACETATE LINER. SOIL ANALYTICAL SAMPLE COLLECTED AT 8.5-9' BGS.
-9	9			No Sample Recovered						
-10	10									
-11	11									
-12	12									
-13	13									
-14	14									
-15	15									
-16	16									
-17	17									
-18	18									
-19	19									
-20	20									

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BOREHOLE ID : BANSB004 PROJECT NAME: COLUMBIA GAS
BEGIN DATE : 11/07/95 END DATE : 11/07/95

LOGGER/COMPANY : (b) (4) [redacted]

BOREHOLE COMPLETED IN (<O>verburden <B>edrock) : O

TOTAL DEPTH : 12.00 DEPTH TO BEDROCK : 0.00

BOREHOLE DIAMETER #1: 2.00
INTERVAL: 0.00 ft. to 12.00 ft. BGS
METHOD : MACROSAMPLER FLUID : NONE
BOREHOLE DIAMETER #2:
INTERVAL:
METHOD : FLUID :
BOREHOLE DIAMETER #3:
INTERVAL:
METHOD : FLUID :

DRILLING COMPANY : PHILIP ENVIRONMENTAL
DRILLER (b) (4) [redacted]
DRILL RIG TYPE : DIETRICH D25 - DIRECT PUSH

	ESTIMATED	SURVEYED
SURFACE ELEVATION :	0.000	
N. COORDINATE :	0.0000	
E. COORDINATE :	0.0000	

WELL PERMIT.....(Y)es (N)o: N PERMIT # :

HOLE ABANDONED...(Y)es (N)o: Y
WELL INSTALLED...(Y)es (N)o: N
WELL CLUSTER.....(Y)es (N)o: N No. OF WELLS : 0
WELL NEST.....(Y)es (N)o: N No. OF WELLS : 0
PUMPS INSTALLED..(Y)es (N)o: N

	TYPE	DEPTH
PURGE :		0.00
SAMPLE :		0.00

BOREHOLE TESTING
BOREHOLE GEOPHYSICS.....(Y)es (N)o: N
SLUG TESTS.....(Y)es (N)o: N
PACKER TESTS.....(Y)es (N)o: N
PUMPING TESTS.....(Y)es (N)o: N

COMMENTS :
FORMER COMPRESSOR STATION AREA. BORING SAMPLED WITH 2" BY 4' GEOPROBE MACROSAMPLER. SOIL ANALYTICAL SAMPLES COLLECTED AT 5-6', 8-9' AND 10.5-11' BGS.

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DATE: 12/08/95 **** Roy F. WESTON, Inc. LITHOLOGICAL DATA FOR - CLIENT ID: BAN *** PAGE: 4

BOREHOLE /WELL ID	SMP NUM	LTH NUM	LITHOLOGY INT. (FT BGS)		SAMPLING METHOD	SIZE GRAVEL	GRAVEL PCT.	SIZE SAND	SAND PCT	SILT PCT	CLAY PCT	ORGANIC PCT	ROCK TYPE	PLAST	SORT	STRENGTH	MOISTURE	STRAT UNIT
BANSB004	1	1	0.00	2.40	DPT		15		70	10	5	0		LOW	POR	LSE	MST	
BANSB004	1	2	2.40	4.00	DPT		0		0	0	0	0						
BANSB004	2	1	4.00	6.00	DPT		15		70	10	5	0		LOW	POR	LSE	MST	
BANSB004	2	2	6.00	6.50	DPT	F	5	MF	20	30	45	0		HGH	POR	SFT	WET	
BANSB004	2	3	6.50	8.00	DPT		0		0	0	0	0						
BANSB004	3	2	8.00	12.00	DPT	F	5	MF	40	20	35	0		MOD	POR	FRM	WET	

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Borehole Log

Roy F. WESTON, Inc.

PROJECT	: COLUMBIA GAS	TOTAL DEPTH	: 12.00
SITE NAME	: BANGS OPERATING CENTER	LOGGER	(b) (4) [redacted]
BORING ID	: BANSB004	DRILLING COMPANY	: PHILIP ENVIRONMENTAL
NORTHING	: 0.0000 estimated	DRILLING RIG	: DIETRICH D25 - DIRECT PUSH
EASTING	: 0.0000 estimated	DATE STARTED	: 11/07/95
ELEVATION	: 0.000 estimated	DATE COMPLETED	: 11/07/95

ELEVATION	DEPTH	MATERIAL	% RECOVERY	CLASSIFICATION	COLOR	STRENGTH	MOISTURE	BLOW COUNT	FIELD INSTRUMENT READING	COMMENTS
			60	Silty sand with gravel, SM	BROWN	LSE	MST		OVM 0.0	REFUSAL AT 1'-OFFSET 5' EAST.
-1	1									
-2	2									
				No Sample Recovered						
-3	3									
-4	4		62	Silty sand with gravel, SM	BROWN	LSE	MST			SOIL ANALYTICAL SAMPLE COLLECTED AT 5-6' BGS.
-5	5									
-6	6			Fat clay with sand, CH		SFT	WET		OVM 2.6	SLIGHT ODOR.
				No Sample Recovered						
-7	7									
-8	8		75	Sandy lean clay, CL	BLACK GRAY	FRM	WET			SOIL ANALYTICAL SAMPLES COLLECTED AT 8-9' BGS AND 10.5-11' BGS.
-9	9									
-10	10									
-11	11									
-12	12									
-13	13									
-14	14									
-15	15									
-16	16									
-17	17									
-18	18									
-19	19									
-20	20									

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BOREHOLE ID : BANSB005 PROJECT NAME: COLUMBIA GAS
BEGIN DATE : 11/07/95 END DATE : 11/07/95

LOGGER/COMPANY : (b) (4) [redacted]

BOREHOLE COMPLETED IN (<O>verburden <B>edrock) : O

TOTAL DEPTH : 12.00 DEPTH TO BEDROCK : 0.00

BOREHOLE DIAMETER #1: 2.00
INTERVAL: 0.00 ft. to 12.00 ft. BGS
METHOD : MACROSAMPLER FLUID : NONE
BOREHOLE DIAMETER #2:
INTERVAL:
METHOD : FLUID :
BOREHOLE DIAMETER #3:
INTERVAL:
METHOD : FLUID :

DRILLING COMPANY : PHILIP ENVIRONMENTAL
DRILLER : (b) (4) [redacted]
DRILL RIG TYPE : DIETRICH D-25 - DIRECT PUSH

	ESTIMATED	SURVEYED
SURFACE ELEVATION :	0.000	
N. COORDINATE :	0.0000	
E. COORDINATE :	0.0000	

WELL PERMIT.....(Y)es (N)o: N PERMIT # :

HOLE ABANDONED...(Y)es (N)o: Y
WELL INSTALLED...(Y)es (N)o: N
WELL CLUSTER.....(Y)es (N)o: N No. OF WELLS : 0
WELL NEST.....(Y)es (N)o: N No. OF WELLS : 0
PUMPS INSTALLED..(Y)es (N)o: N

	TYPE	DEPTH
PURGE :		0.00
SAMPLE :		0.00

BOREHOLE TESTING
BOREHOLE GEOPHYSICS.....(Y)es (N)o: N
SLUG TESTS.....(Y)es (N)o: N
PACKER TESTS.....(Y)es (N)o: N
PUMPING TESTS.....(Y)es (N)o: N

COMMENTS :
FORMER COMPRESSOR STATION AREA. BORING SAMPLED WITH 2" BY 4' GEOPROBE MACROSAMPLER. SOIL ANALYTICAL SAMPLE COLLECTED AT 4-5' BGS.

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BOREHOLE /WELL ID	SMP NUM	LTH NUM	LITHOLOGY INT. (FT BGS)		SAMPLING METHOD	SIZE GRAVEL	GRAVEL PCT.	SIZE SAND	SAND PCT	SILT PCT	CLAY PCT	ORGANIC PCT	ROCK TYPE	PLAST	SORT	STRENGTH	MOISTURE	STRAT UNIT
BANSB005	1	1	0.00	1.90	DPT		0	F	35	15	50	0		MOD	MOD	FRM	MST	
BANSB005	1	2	1.90	4.00	DPT		0	F	60	30	10	0		LOW	MOD	LSE	MST	
BANSB005	2	1	4.00	6.20	DPT	CM	15	MF	65	20	0	0		NON	POR	LSE	SAT	
BANSB005	2	2	6.20	8.00	DPT		0		0	0	0	0						
BANSB005	3	1	8.00	12.00	DPT		0		0	0	0	0						

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Borehole Log

Roy F. WESTON, Inc.

PROJECT	: COLUMBIA GAS	TOTAL DEPTH	: 12.00
SITE NAME	: BANGS OPERATING CENTER	LOGGER	(b) (4) [redacted]
BORING ID	: BANSB005	DRILLING COMPANY	: PHILIP ENVIRONMENTAL
NORTHING	: 0.0000 estimated	DRILLING RIG	: DIETRICH D-25 - DIRECT PUSH
EASTING	: 0.0000 estimated	DATE STARTED	: 11/07/95
ELEVATION	: 0.000 estimated	DATE COMPLETED	: 11/07/95

ELEVATION	DEPTH	MATERIAL	% RECOVERY	CLASSIFICATION	COLOR	STRENGTH	MOISTURE	BLOW COUNT	FIELD INSTRUMENT READING	COMMENTS
			100	Sandy lean clay, CL	ORG BROWN	FRM	MST		OVM 0.0	
-1	1									
-2	2			Silty sand, SM	DK BROWN	LSE	MST		OVM 0.0	
-3	3									
-4	4		55	Silty sand with gravel, SM	ORG BROWN	LSE	SAT		OVM 0.0	SOIL ANALYTICAL SAMPLE COLLECTED AT 4-5' BGS.
-5	5									
-6	6			No Sample Recovered						
-7	7									
-8	8			No Sample Recovered						ACETATE LINER FILLED WITH WATER; NO ODOR.
-9	9									
-10	10									
-11	11									
-12	12									
-13	13									
-14	14									
-15	15									
-16	16									
-17	17									
-18	18									
-19	19									
-20	20									

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Borehole Location Data

Roy F. WESTON, Inc.

BOREHOLE ID : BANSB006 PROJECT NAME: COLUMBIA GAS
BEGIN DATE : 11/07/95 END DATE : 11/07/95

LOGGER/COMPANY : (b) (4) [redacted]

BOREHOLE COMPLETED IN (<O>verburden <B>edrock) : O

TOTAL DEPTH : 12.00 DEPTH TO BEDROCK : 0.00

BOREHOLE DIAMETER #1: 2.00
INTERVAL: 0.00 ft. to 12.00 ft. BGS
METHOD : MACROSAMPLER FLUID : NONE
BOREHOLE DIAMETER #2:
INTERVAL:
METHOD : FLUID :
BOREHOLE DIAMETER #3:
INTERVAL:
METHOD : FLUID :

DRILLING COMPANY : PHILLIP ENVIRONMENTAL
DRILLER (b) (4) [redacted]
DRILL RIG TYPE : DIETRICH D-25 - DIRECT PUSH

	ESTIMATED	SURVEYED
SURFACE ELEVATION :	0.000	
N. COORDINATE :	0.0000	
E. COORDINATE :	0.0000	

WELL PERMIT.....(Y)es (N)o: N PERMIT # :

HOLE ABANDONED...(Y)es (N)o: Y
WELL INSTALLED...(Y)es (N)o: N
WELL CLUSTER.....(Y)es (N)o: N No. OF WELLS : 0
WELL NEST.....(Y)es (N)o: N No. OF WELLS : 0
PUMPS INSTALLED..(Y)es (N)o: N

	TYPE	DEPTH
PURGE :		0.00
SAMPLE :		0.00

BOREHOLE TESTING
BOREHOLE GEOPHYSICS.....(Y)es (N)o: N
SLUG TESTS.....(Y)es (N)o: N
PACKER TESTS.....(Y)es (N)o: N
PUMPING TESTS.....(Y)es (N)o: N

COMMENTS :
FORMER COMPRESSOR STATION AREA. BORING SAMPLED WITH 2" BY 4' GEOPROBE MACROSAMPLER. SOIL ANALYTICAL SAMPLES COLLECTED AT 3.5-4', 6-6.5', AND 10.5-11' BGS.

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BOREHOLE /WELL ID	SMP NUM	LTH NUM	LITHOLOGY INT. (FT BGS)		SAMPLING METHOD	SIZE GRAVEL	GRAVEL PCT.	SIZE SAND	SAND PCT	SILT PCT	CLAY PCT	ORGANIC PCT	ROCK TYPE	PLAST	SORT	STRENGTH	MOISTURE	STRAT UNIT
BANSB006	1	1	0.00	4.00	DPT	F	5	MF	50	35	10	0		NON	POR	LSE	MST	
BANSB006	2	1	4.00	5.60	DPT		0	MF	60	30	10	0		NON	WEL	SFT	WET	
BANSB006	2	2	5.60	6.50	DPT		0	F	40	10	50	0		MOD	WEL	FRM	MST	
BANSB006	2	3	6.50	8.00	DPT		0		0	0	0	0						
BANSB006	3	1	8.00	12.00	DPT		10		20	30	40	0		HGH	POR	SFT	WET	

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Borehole Log

Roy F. WESTON, Inc.

PROJECT	: COLUMBIA GAS	TOTAL DEPTH	: 12.00
SITE NAME	: BANGS OPERATING CENTER	LOGGER	(b) (4) [redacted]
BORING ID	: BANSB006	DRILLING COMPANY	: PHILIP ENVIRONMENTAL
NORTHING	: 0.0000 estimated	DRILLING RIG	: DIETRICH D-25 - DIRECT PUSH
EASTING	: 0.0000 estimated	DATE STARTED	: 11/07/95
ELEVATION	: 0.000 estimated	DATE COMPLETED	: 11/07/95

ELEVATION	DEPTH	MATERIAL	% RECOVERY	CLASSIFICATION	COLOR	STRENGTH	MOISTURE	BLOW COUNT	FIELD INSTRUMENT READING	COMMENTS
			100	Silty sand, SM	DK BROWN	LSE	MST		OVM 0.0	SOIL ANALYTICAL SAMPLE COLLECTED AT 3.5-4' BGS.
-1	1									
-2	2									
-3	3									
-4	4		62	Silty sand, SM	RED/BROWN	SFT	WET		OVM 0.0	
-5	5									
-6	6			Sandy lean clay, CL	GRAY	FRM	MST		OVM 0.0	SOIL ANALYTICAL SAMPLE COLLECTED AT 6-6.5' BGS.
-7	7			No Sample Recovered						
-8	8		75	Sandy fat clay, CH	GRAY	SFT	WET		OVM 0.0	SOIL ANALYTICAL SAMPLE COLLECTED AT 10.5-11' BGS.
-9	9									
-10	10									
-11	11									
-12	12									
-13	13									
-14	14									
-15	15									
-16	16									
-17	17									
-18	18									
-19	19									
-20	20									

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BOREHOLE ID : BANSB007 PROJECT NAME: COLUMBIA GAS
BEGIN DATE : 11/07/95 END DATE : 11/07/95

LOGGER/COMPANY : (b) (4) [redacted]

BOREHOLE COMPLETED IN (<O>verburden <B>edrock) : O

TOTAL DEPTH : 12.00 DEPTH TO BEDROCK : 0.00

BOREHOLE DIAMETER #1: 2.00
INTERVAL: 0.00 ft. to 12.00 ft. BGS
METHOD : MACROSAMPLER FLUID : NONE
BOREHOLE DIAMETER #2:
INTERVAL:
METHOD : FLUID :
BOREHOLE DIAMETER #3:
INTERVAL:
METHOD : FLUID :

DRILLING COMPANY : PHILIP ENVIRONMENTAL
DRILLER (b) (4) [redacted]
DRILL RIG TYPE : DIETICH D-25 - DIRECT PUSH

	ESTIMATED	SURVEYED
SURFACE ELEVATION :	0.000	
N. COORDINATE :	0.0000	
E. COORDINATE :	0.0000	

WELL PERMIT.....(Y)es (N)o: N PERMIT # :

HOLE ABANDONED...(Y)es (N)o: Y
WELL INSTALLED...(Y)es (N)o: N
WELL CLUSTER.....(Y)es (N)o: N No. OF WELLS : 0
WELL NEST.....(Y)es (N)o: N No. OF WELLS : 0
PUMPS INSTALLED..(Y)es (N)o: N

	TYPE	DEPTH
PURGE :		0.00
SAMPLE :		0.00

BOREHOLE TESTING
BOREHOLE GEOPHYSICS.....(Y)es (N)o: N
SLUG TESTS.....(Y)es (N)o: N
PACKER TESTS.....(Y)es (N)o: N
PUMPING TESTS.....(Y)es (N)o: N

COMMENTS :
FORMER COMPRESSOR STATION AREA. BORING SAMPLED WITH 2" BY 4' GEOPROBE MACROSAMPLER. SOIL ANALYTICAL SAMPLES COLLECTED AT 2-3' AND 8-9' BGS.

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BOREHOLE /WELL ID	SMP NUM	LTH NUM	LITHOLOGY INT. (FT BGS)		SAMPLING METHOD	SIZE GRAVEL	GRAVEL PCT.	SIZE SAND	SAND PCT	SILT PCT	CLAY PCT	ORGANIC PCT	ROCK TYPE	PLAST	SORT	STRENGTH	MOISTURE	STRAT UNIT
BANSB007	1	1	0.00	2.00	DPT	CM	30	MF	60	10	0	0		NON	POR	LSE	DRY	
BANSB007	1	2	2.00	4.00	DPT		0	F	20	50	30	0		LOW	MOD	SFT	MST	
BANSB007	2	1	4.00	6.50	DPT	CF	30	CF	55	10	5	0		NON	POR	LSE	SAT	
BANSB007	2	2	6.50	8.00	DPT		0		0	0	0	0						
BANSB007	3	1	8.00	12.00	DPT	F	5		0	20	75	0		HGH	WEL	STF	MST	

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Borehole Log

Roy F. WESTON, Inc.

PROJECT	: COLUMBIA GAS	TOTAL DEPTH	: 12.00
SITE NAME	: BANGS OPERATING CENTER	LOGGER	(b) (4) [redacted]
BORING ID	: BANSB007	DRILLING COMPANY	: PHILIP ENVIRONMENTAL
NORTHING	: 0.0000 estimated	DRILLING RIG	: DIETICH D-25 - DIRECT PUSH
EASTING	: 0.0000 estimated	DATE STARTED	: 11/07/95
ELEVATION	: 0.000 estimated	DATE COMPLETED	: 11/07/95

ELEVATION	DEPTH	MATERIAL	% RECOVERY	CLASSIFICATION	COLOR	STRENGTH	MOISTURE	BLOW COUNT	FIELD INSTRUMENT READING	COMMENTS
			75	Well graded sand with silt and gravel,SW-SM	ORG BROWN	LSE	DRY		OVM 0.0	
-1	1									
-2	2			Silt with sand, ML	DK BROWN/BLACK	SFT	MST		OVM 0.0	SOIL ANALYTICAL SAMPLE COLLECTED AT 2-3' BGS.
-3	3									
-4	4		62	Silty sand with gravel, SM	ORG BROWN	LSE	SAT		OVM 0.0	
-5	5									
-6	6									
-7	7			No Sample Recovered						
-8	8		100	Fat clay, CH	GRAY	STF	MST		OVM 0.0	0.2' OF PREV INTERVAL. SAMPLING CLAY BELOW SAT GRAVELLY SANDY INTERVAL. SOIL ANALYTICAL SAMP 8-9'
-9	9									
-10	10									
-11	11									
-12	12									
-13	13									
-14	14									
-15	15									
-16	16									
-17	17									
-18	18									
-19	19									
-20	20									

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Borehole Location Data

Roy F. WESTON, Inc.

BOREHOLE ID : BANSB008 PROJECT NAME: COLUMBIA GAS
BEGIN DATE : 11/07/95 END DATE : 11/07/95

LOGGER/COMPANY : (b) (4) [redacted]

BOREHOLE COMPLETED IN (<O>verburden <B>edrock) : O

TOTAL DEPTH : 12.00 DEPTH TO BEDROCK : 0.00

BOREHOLE DIAMETER #1: 2.00
INTERVAL: 0.00 ft. to 12.00 ft. BGS
METHOD : MACROSAMPLER FLUID : NONE
BOREHOLE DIAMETER #2:
INTERVAL:
METHOD : FLUID :
BOREHOLE DIAMETER #3:
INTERVAL:
METHOD : FLUID :

DRILLING COMPANY : PHILLIP ENVIRONMENTAL
DRILLER : (b) (4) [redacted]
DRILL RIG TYPE : DIETRICH D-25 - DIRECT PUSH

	ESTIMATED	SURVEYED
SURFACE ELEVATION :	0.000	
N. COORDINATE :	0.0000	
E. COORDINATE :	0.0000	

WELL PERMIT.....(Y)es (N)o: N PERMIT # :

HOLE ABANDONED...(Y)es (N)o: Y
WELL INSTALLED...(Y)es (N)o: N
WELL CLUSTER.....(Y)es (N)o: N No. OF WELLS : 0
WELL NEST.....(Y)es (N)o: N No. OF WELLS : 0
PUMPS INSTALLED..(Y)es (N)o: N

	TYPE	DEPTH
PURGE :		0.00
SAMPLE :		0.00

BOREHOLE TESTING
BOREHOLE GEOPHYSICS.....(Y)es (N)o: N
SLUG TESTS.....(Y)es (N)o: N
PACKER TESTS.....(Y)es (N)o: N
PUMPING TESTS.....(Y)es (N)o: N

COMMENTS :
FORMER COMPRESSOR STATION AREA. BORING MOVED 15' N AFTER SHALLOW REFUSAL. BORING SAMPLED W/2" BY 4' GEOPROBE MACRO-SAMPLER. SOIL ANALYTICAL SAMP COLLECTED @ 2-2.8' & 6.5-7'BGS

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BOREHOLE /WELL ID	SMP NUM	LTH NUM	LITHOLOGY INT. (FT BGS)		SAMPLING METHOD	SIZE GRAVEL	GRAVEL PCT.	SIZE SAND	SAND PCT	SILT PCT	CLAY PCT	ORGANIC PCT	ROCK TYPE	PLAST	SORT	STRENGTH	MOISTURE	STRAT UNIT
BANSB008	1	1	0.00	2.80	DPT		0	F	10	50	40	0		LWO	MOD	SFT	WET	
BANSB008	1	2	2.80	4.00	DPT		0		0	0	0	0						
BANSB008	2	1	4.00	8.00	DPT		0	F	70	20	10	0		LOW	WEL	SFT	WET	
BANSB008	3	1	8.00	12.00	DPT		10		10	40	40	0		MOD	POR	STF	WET	

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Borehole Log

Roy F. WESTON, Inc.

PROJECT	: COLUMBIA GAS	TOTAL DEPTH	: 12.00
SITE NAME	: BANGS OPERATING CENTER	LOGGER	(b) (4) [redacted]
BORING ID	: BANSB008	DRILLING COMPANY	: PHILIP ENVIRONMENTAL
NORTHING	: 0.0000 estimated	DRILLING RIG	: DIETRICH D-25 - DIRECT PUSH
EASTING	: 0.0000 estimated	DATE STARTED	: 11/07/95
ELEVATION	: 0.000 estimated	DATE COMPLETED	: 11/07/95

ELEVATION	DEPTH	MATERIAL	% RECOVERY	CLASSIFICATION	COLOR	STRENGTH	MOISTURE	BLOW COUNT	FIELD INSTRUMENT READING	COMMENTS
			70	Silt, ML	DK BROWN	SFT	WET		OVM 0.0	TOP SECTION IS DRY TO 1.5 FT. SOIL ANALYTICAL SAMPLE COLLECTED AT 2-2.8' BGS.
-1	1									
-2	2									
-3	3			No Sample Recovered						
-4	4		87	Silty sand, SM	DK GRAY/GREEN	SFT	WET		OVM 0.0	SOIL ANALYTICAL SAMPLE COLLECTED AT 6.5-7' BGS.
-5	5									
-6	6									
-7	7									
-8	8		85	Elastic silt with sand, MH	GRAY	STF	WET		OVM 0.0	SATURATED UPPER PORTION OF INTERVAL.
-9	9									
-10	10									
-11	11									
-12	12									
-13	13									
-14	14									
-15	15									
-16	16									
-17	17									
-18	18									
-19	19									
-20	20									

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BOREHOLE ID : BANSB009 PROJECT NAME: COLUMBIA GAS
BEGIN DATE : 11/07/95 END DATE : 11/07/95

LOGGER/COMPANY : (b) (4) [redacted]

BOREHOLE COMPLETED IN (<O>verburden <B>edrock) : O

TOTAL DEPTH : 12.00 DEPTH TO BEDROCK : 0.00

BOREHOLE DIAMETER #1: 2.00
INTERVAL: 0.00 ft. to 12.00 ft. BGS
METHOD : MACROSAMPLER FLUID : NONE
BOREHOLE DIAMETER #2:
INTERVAL:
METHOD : FLUID :
BOREHOLE DIAMETER #3:
INTERVAL:
METHOD : FLUID :

DRILLING COMPANY : PHILIP ENVIRONMENTAL
DRILLER (b) (4) [redacted]
DRILL RIG TYPE : DIETRICH D-25 - DIRECT PUSH

	ESTIMATED	SURVEYED
SURFACE ELEVATION :	0.000	
N. COORDINATE :	0.0000	
E. COORDINATE :	0.0000	

WELL PERMIT.....(Y)es (N)o: N PERMIT # :

HOLE ABANDONED...(Y)es (N)o: Y
WELL INSTALLED...(Y)es (N)o: N
WELL CLUSTER.....(Y)es (N)o: N No. OF WELLS : 0
WELL NEST.....(Y)es (N)o: N No. OF WELLS : 0
PUMPS INSTALLED..(Y)es (N)o: N

	TYPE	DEPTH
PURGE :		0.00
SAMPLE :		0.00

BOREHOLE TESTING
BOREHOLE GEOPHYSICS.....(Y)es (N)o: N
SLUG TESTS.....(Y)es (N)o: N
PACKER TESTS.....(Y)es (N)o: N
PUMPING TESTS.....(Y)es (N)o: N

COMMENTS :
FORMER COMPRESSOR STATION AREA. 20' S OF SB001. BORING SAMPLED W/2" BY 4' GEOPROBE MACROSAMPLER. SOIL ANALYTICAL SAMPLES COLLECTED AT 3.5-4' AND 9-10' BGS.

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BOREHOLE /WELL ID	SMP NUM	LTH NUM	LITHOLOGY INT. (FT BGS)		SAMPLING METHOD	SIZE GRAVEL	GRAVEL PCT.	SIZE SAND	SAND PCT	SILT PCT	CLAY PCT	ORGANIC PCT	ROCK TYPE	PLAST	SORT	STRENGTH	MOISTURE	STRAT UNIT
BANSB009	1	1	0.00	1.00	DPT		15		60	25	0	0		NON	POR	LSE	DRY	
BANSB009	1	2	1.00	4.00	DPT		0	F	10	30	60	0		HGH	MOD	FRM	MST	
BANSB009	2	1	4.00	8.00	DPT		0	F	50	35	15	0		LOW	MOD	SFT	MST	
BANSB009	3	1	8.00	12.00	DPT		10		20	40	30	0		MOD	MOD	FRM	MST	

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Borehole Log

Roy F. WESTON, Inc.

PROJECT	: COLUMBIA GAS	TOTAL DEPTH	: 12.00
SITE NAME	: BANGS OPERATING CENTER	LOGGER	(b) (4) [redacted]
BORING ID	: BANSB009	DRILLING COMPANY	: PHILIP ENVIRONMENTAL
NORTHING	: 0.0000 estimated	DRILLING RIG	: DIETRICH D-25 - DIRECT PUSH
EASTING	: 0.0000 estimated	DATE STARTED	: 11/07/95
ELEVATION	: 0.000 estimated	DATE COMPLETED	: 11/07/95

ELEVATION	DEPTH	MATERIAL	% RECOVERY	CLASSIFICATION	COLOR	STRENGTH	MOISTURE	BLOW COUNT	FIELD INSTRUMENT READING	COMMENTS
			100	Silty sand with gravel, SM	ORG BROWN	LSE	DRY		OVM 0.0	
-1	1			Fat clay, CH	GRAY	FRM	MST		OVM 0.0	SOIL ANALYTICAL SAMPLE COLLECTED AT 3.5-4' BGS.
-2	2									
-3	3									
-4	4		75	Silty sand, SM	DK BROWN	SFT	MST		OVM 0.0	SATURATED AT BASE OF INTERVAL.
-5	5									
-6	6									
-7	7									
-8	8		87	Sandy elastic silt, MH	GRAY	FRM	MST		OVM 0.0	SAMPLED JUST BELOW SAT INTERVAL; SATURATED TOP 1 FT; SOIL ANALYTICAL COLLECTED 9-10' BGS.
-9	9									
-10	10									
-11	11									
-12	12									
-13	13									
-14	14									
-15	15									
-16	16									
-17	17									
-18	18									
-19	19									
-20	20									

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Borehole Location Data

Roy F. WESTON, Inc.

BOREHOLE ID : BANSB010
BEGIN DATE : 11/07/95

PROJECT NAME: COLUMBIA GAS
END DATE : 11/07/95

LOGGER/COMPANY : (b) (4) [redacted]

BOREHOLE COMPLETED IN (<O>verburden <B>edrock) : O

TOTAL DEPTH : 12.00

DEPTH TO BEDROCK : 0.00

BOREHOLE DIAMETER #1: 2.00
INTERVAL: 0.00 ft. to 12.00 ft. BGS
METHOD : MACROSAMPLER
FLUID : NONE

BOREHOLE DIAMETER #2:
INTERVAL:
METHOD :
FLUID :

BOREHOLE DIAMETER #3:
INTERVAL:
METHOD :
FLUID :

DRILLING COMPANY : PHILIP ENVIRONMENTAL
DRILLER (b) (4) [redacted]
DRILL RIG TYPE : DIETRICH D-25 - DIRECT PUSH

	ESTIMATED	SURVEYED
SURFACE ELEVATION :	0.000	
N. COORDINATE :	0.0000	
E. COORDINATE :	0.0000	

WELL PERMIT.....(Y)es (N)o: N PERMIT # :

HOLE ABANDONED...(Y)es (N)o: Y
WELL INSTALLED...(Y)es (N)o: N
WELL CLUSTER.....(Y)es (N)o: N No. OF WELLS : 0
WELL NEST.....(Y)es (N)o: N No. OF WELLS : 0
PUMPS INSTALLED..(Y)es (N)o: N

	TYPE	DEPTH
PURGE :		0.00
SAMPLE :		0.00

BOREHOLE TESTING
BOREHOLE GEOPHYSICS.....(Y)es (N)o: N
SLUG TESTS.....(Y)es (N)o: N
PACKER TESTS.....(Y)es (N)o: N
PUMPING TESTS.....(Y)es (N)o: N

COMMENTS :
FORMER COMPRESSOR STATION AREA. BORING SAMPLED WITH 2" BY 4' GEOPROBE MACROSAMPLER. SOIL ANALYTICAL SAMPLES COLLECTED AT 2-2.6' AND 10-10.8' BGS.

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BOREHOLE /WELL ID	SMP NUM	LTH NUM	LITHOLOGY INT. (FT BGS)		SAMPLING METHOD	SIZE GRAVEL	GRAVEL PCT.	SIZE SAND	SAND PCT	SILT PCT	CLAY PCT	ORGANIC PCT	ROCK TYPE	PLAST	SORT	STRENGTH	MOISTURE	STRAT UNIT
BANSB010	1	1	0.00	0.50	DPT	CM	30	CF	50	20	0	0		NON	POR	LSE	MST	
BANSB010	1	2	0.50	2.60	DPT		0		10	35	55	0		MOD	MOD	SFT	MST	
BANSB010	1	3	2.60	4.00	DPT		0		0	0	0	0						
BANSB010	2	1	4.00	5.00	DPT		0		10	35	55	0		MOD	MOD	SFT	MST	
BANSB010	2	2	5.00	6.50	DPT		30		65	5	0	0		NON	POR	LSE	SAT	
BANSB010	2	3	6.50	8.00	DPT		0		0	0	0	0						
BANSB010	3	1	8.00	9.00	DPT		30		65	5	0	0		NON	POR	LSE	SAT	
BANSB010	3	2	9.00	10.80	DPT		0	F	15	35	50	0		MOD	MOD	FRM	MST	
BANSB010	3	3	10.80	12.00	DPT		0		0	0	0	0						

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Borehole Log

Roy F. WESTON, Inc.

PROJECT	: COLUMBIA GAS	TOTAL DEPTH	: 12.00
SITE NAME	: BANGS OPERATING CENTER	LOGGER	(b) (4) [redacted]
BORING ID	: BANSB010	DRILLING COMPANY	: PHILIP ENVIRONMENTAL
NORTHING	: 0.0000 estimated	DRILLING RIG	: DIETRICH D-25 - DIRECT PUSH
EASTING	: 0.0000 estimated	DATE STARTED	: 11/07/95
ELEVATION	: 0.000 estimated	DATE COMPLETED	: 11/07/95

ELEVATION	DEPTH	MATERIAL	% RECOVERY	CLASSIFICATION	COLOR	STRENGTH	MOISTURE	BLOW COUNT	FIELD INSTRUMENT READING	COMMENTS
			65	Silty sand with gravel, SM		LSE	MST		OVM 0.0	
-1	1			Lean clay, CL	GRAY/RED-BRN	SFT	MST		OVM 0.0	SOIL ANALYTICAL SAMPLE COLLECTED AT 2-2.6' BGS.
-2	2									
-3	3			No Sample Recovered						
-4	4		62	Lean clay, CL	GRAY/RED-BRN	SFT	MST		OVM 0.0	
-5	5			Well-graded sand with gravel, SW	ORG/BROWN	LSE	SAT		OVM 0.0	
-6	6									
-7	7			No Sample Recovered						
-8	8		70	Well-graded sand with gravel, SW	ORG/BROWN	LSE	SAT		OVM 0.0	
-9	9			Lean clay with sand, CL	GRAY	FRM	MST			SOIL ANALYTICAL SAMPLE COLLECTED AT 10-10.8' BGS.
-10	10									
-11	11			No Sample Recovered						
-12	12									
-13	13									
-14	14									
-15	15									
-16	16									
-17	17									
-18	18									
-19	19									
-20	20									

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BOREHOLE ID : BANSS010 PROJECT NAME: COLUMBIA GAS
BEGIN DATE : 11/08/95 END DATE : 11/08/95

LOGGER/COMPANY : (b) (4) [redacted]

BOREHOLE COMPLETED IN (<O>verburden <B>edrock) : O

TOTAL DEPTH : 8.00 DEPTH TO BEDROCK : 0.00

BOREHOLE DIAMETER #1: 2.00
INTERVAL: 0.00 ft. to 8.00 ft. BGS
METHOD : MACROSAMPLER FLUID : NONE
BOREHOLE DIAMETER #2:
INTERVAL:
METHOD : FLUID :
BOREHOLE DIAMETER #3:
INTERVAL:
METHOD : FLUID :

DRILLING COMPANY : PHILIP ENVIRMENTAL
DRILLER (b) (4) [redacted]
DRILL RIG TYPE : DIETRICH D-25 - DIRECT PUSH

	ESTIMATED	SURVEYED
SURFACE ELEVATION :	0.000	
N. COORDINATE :	0.0000	
E. COORDINATE :	0.0000	

WELL PERMIT.....(Y)es (N)o: N PERMIT # :

HOLE ABANDONED...(Y)es (N)o: Y
WELL INSTALLED...(Y)es (N)o: N
WELL CLUSTER.....(Y)es (N)o: N No. OF WELLS : 0
WELL NEST.....(Y)es (N)o: N No. OF WELLS : 0
PUMPS INSTALLED..(Y)es (N)o: N

	TYPE	DEPTH
PURGE :		0.00
SAMPLE :		0.00

BOREHOLE TESTING
BOREHOLE GEOPHYSICS.....(Y)es (N)o: N
SLUG TESTS.....(Y)es (N)o: N
PACKER TESTS.....(Y)es (N)o: N
PUMPING TESTS.....(Y)es (N)o: N

COMMENTS :
PIPEYARD AREA. BORING ORIGINALLY LOGGED AS SURF SOIL SAMP & CONVERTED TO SOIL BORING. BORING SAMP W/2" X 4' GEOPROBE MACROSAMPLER. SOIL ANALYTICAL SAMPLE COLLECTED @ 6-7'.

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BOREHOLE /WELL ID	SMP NUM	LTH NUM	LITHOLOGY INT. (FT BGS)		SAMPLING METHOD	SIZE GRAVEL	GRAVEL PCT.	SIZE SAND	SAND PCT	SILT PCT	CLAY PCT	ORGANIC PCT	ROCK TYPE	PLAST	SORT	STRENGTH	MOISTURE	STRAT UNIT
BANSS010	1	1	0.00	4.00	NS		0		0	0	0	0						
BANSS010	2	1	4.00	6.00	DPT	M	30	CF	40	20	10	0		NON	POR	LSE	SAT	
BANSS010	2	2	6.00	8.00	DPT		0		0	0	0	0						

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Borehole Log

Roy F. WESTON, Inc.

PROJECT	: COLUMBIA GAS	TOTAL DEPTH	: 8.00
SITE NAME	: BANGS OPERATING CENTER	LOGGER	(b) (4) [redacted]
BORING ID	: BANSS010	DRILLING COMPANY	: PHILIP ENVIRMENTAL
NORTHING	: 0.0000 estimated	DRILLING RIG	: DIETRICH D-25 - DIRECT PUSH
EASTING	: 0.0000 estimated	DATE STARTED	: 11/08/95
ELEVATION	: 0.000 estimated	DATE COMPLETED	: 11/08/95

ELEVATION	DEPTH	MATERIAL	% RECOVERY	CLASSIFICATION	COLOR	STRENGTH	MOISTURE	BLOW COUNT	FIELD INSTRUMENT READING	COMMENTS
				Interval Not Sampled						
-1	1									
-2	2									
-3	3									
-4	4		50	Silty sand with gravel, SM	RD/BRN	LSE	SAT		OVM 339.0	PETROLEUM ODOR; SOIL ANALYTICAL SAMPLE COLLECTED AT 6-7' BGS.
-5	5									
-6	6			No Sample Recovered						
-7	7									
-8	8									
-9	9									
-10	10									

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BOREHOLE ID : BANSB010 PROJECT NAME: COLUMBIA GAS
BEGIN DATE : 11/07/95 END DATE : 11/07/95

LOGGER/COMPANY : (b) (4) [redacted]

BOREHOLE COMPLETED IN (<O>verburden <B>edrock) : O

TOTAL DEPTH : 12.00 DEPTH TO BEDROCK : 0.00

BOREHOLE DIAMETER #1: 2.00
INTERVAL: 0.00 ft. to 12.00 ft. BGS
METHOD : MACROSAMPLER FLUID : NONE
BOREHOLE DIAMETER #2:
INTERVAL:
METHOD : FLUID :
BOREHOLE DIAMETER #3:
INTERVAL:
METHOD : FLUID :

DRILLING COMPANY : PHILIP ENVIRONMENTAL
DRILLER (b) (4) [redacted]
DRILL RIG TYPE : DIETRICH D-25 - DIRECT PUSH

	ESTIMATED	SURVEYED
SURFACE ELEVATION :	0.000	
N. COORDINATE :	0.0000	
E. COORDINATE :	0.0000	

WELL PERMIT.....(Y)es (N)o: N PERMIT # :

HOLE ABANDONED...(Y)es (N)o: Y
WELL INSTALLED...(Y)es (N)o: N
WELL CLUSTER.....(Y)es (N)o: N No. OF WELLS : 0
WELL NEST.....(Y)es (N)o: N No. OF WELLS : 0
PUMPS INSTALLED..(Y)es (N)o: N

	TYPE	DEPTH
PURGE :		0.00
SAMPLE :		0.00

BOREHOLE TESTING
BOREHOLE GEOPHYSICS.....(Y)es (N)o: N
SLUG TESTS.....(Y)es (N)o: N
PACKER TESTS.....(Y)es (N)o: N
PUMPING TESTS.....(Y)es (N)o: N

COMMENTS :
FORMER COMPRESSOR STATION AREA. BORING SAMPLED WITH 2" BY 4' GEOPROBE MACROSAMPLER. SOIL ANALYTICAL SAMPLES COLLECTED AT 2-2.6' AND 10-10.8' BGS.

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Borehole Log

Roy F. WESTON, Inc.

PROJECT	: COLUMBIA GAS	TOTAL DEPTH	: 8.00
SITE NAME	: BANGS OPERATING CENTER	LOGGER	(b) (4) [redacted]
BORING ID	: BANSS010	DRILLING COMPANY	: PHILIP ENVIRMENTAL
NORTHING	: 0.0000 estimated	DRILLING RIG	: DIETRICH D-25 - DIRECT PUSH
EASTING	: 0.0000 estimated	DATE STARTED	: 11/08/95
ELEVATION	: 0.000 estimated	DATE COMPLETED	: 11/08/95

ELEVATION	DEPTH	MATERIAL	% RECOVERY	CLASSIFICATION	COLOR	STRENGTH	MOISTURE	BLOW COUNT	FIELD INSTRUMENT READING	COMMENTS
				Interval Not Sampled						
-1	1									
-2	2									
-3	3									
-4	4		50	Silty sand with gravel, SM	RD/BRN	LSE	SAT		OVM 339.0	PETROLEUM ODOR; SOIL ANALYTICAL SAMPLE COLLECTED AT 6-7' BGS.
-5	5									
-6	6			No Sample Recovered						
-7	7									
-8	8									
-9	9									
-10	10									

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Borehole Location Data

Roy F. WESTON, Inc.

BOREHOLE ID : BANSB011 PROJECT NAME: COLUMBIA GAS
BEGIN DATE : 11/08/95 END DATE : 11/08/95

LOGGER/COMPANY : (b) (4) [redacted]

BOREHOLE COMPLETED IN (<O>verburden <B>edrock) : O

TOTAL DEPTH : 12.00 DEPTH TO BEDROCK : 0.00

BOREHOLE DIAMETER #1: 2.00
INTERVAL: 0.00 ft. to 12.00 ft. BGS
METHOD : MACROSAMPLER FLUID :
BOREHOLE DIAMETER #2:
INTERVAL:
METHOD : FLUID :
BOREHOLE DIAMETER #3:
INTERVAL:
METHOD : FLUID :

DRILLING COMPANY : PHILIP ENVIRONMENTAL
DRILLER : (b) (4) [redacted]
DRILL RIG TYPE : DIETRICH D-25 - DIRECT PUSH

	ESTIMATED	SURVEYED
SURFACE ELEVATION :	0.000	
N. COORDINATE :	0.0000	
E. COORDINATE :	0.0000	

WELL PERMIT.....(Y)es (N)o: N PERMIT # :

HOLE ABANDONED...(Y)es (N)o: Y
WELL INSTALLED...(Y)es (N)o: N
WELL CLUSTER.....(Y)es (N)o: N No. OF WELLS : 0
WELL NEST.....(Y)es (N)o: N No. OF WELLS : 0
PUMPS INSTALLED..(Y)es (N)o: N

	TYPE	DEPTH
PURGE :		0.00
SAMPLE :		0.00

BOREHOLE TESTING
BOREHOLE GEOPHYSICS.....(Y)es (N)o: N
SLUG TESTS.....(Y)es (N)o: N
PACKER TESTS.....(Y)es (N)o: N
PUMPING TESTS.....(Y)es (N)o: N

COMMENTS :
PIPEYARD AREA. BORING SAMPLED WITH 2" BY 4' GEOPROBE MACRO-SAMPLER. SOIL ANALYTICAL SAMPLES COLLECTED AT 3-4', 6-7', AND 9-10' BGS.

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BOREHOLE /WELL ID	SMP NUM	LTH NUM	LITHOLOGY INT. (FT BGS)		SAMPLING METHOD	SIZE GRAVEL	GRAVEL PCT.	SIZE SAND	SAND PCT	SILT PCT	CLAY PCT	ORGANIC PCT	ROCK TYPE	PLAST	SORT	STRENGTH	MOISTURE	STRAT UNIT
BANSB011	1	1	0.00	4.00	DPT		0	F	15	75	10	0		LOW	MOD	LSE	MST	
BANSB011	2	1	4.00	8.00	DPT		0	F	50	30	20	0		MOD	MOD	FRM	MST	
BANSB011	3	1	8.00	12.00	DPT		0	F	20	30	50	0		LOW	WEL	STF	MST	

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Borehole Log

Roy F. WESTON, Inc.

PROJECT	: COLUMBIA GAS	TOTAL DEPTH	: 12.00
SITE NAME	: BANGS OPERATING CENTER	LOGGER	(b) (4) [redacted]
BORING ID	: BANSB011	DRILLING COMPANY	: PHILIP ENVIRONMENTAL
NORTHING	: 0.0000 estimated	DRILLING RIG	: DIETRICH D-25 - DIRECT PUSH
EASTING	: 0.0000 estimated	DATE STARTED	: 11/08/95
ELEVATION	: 0.000 estimated	DATE COMPLETED	: 11/08/95

ELEVATION	DEPTH	MATERIAL	% RECOVERY	CLASSIFICATION	COLOR	STRENGTH	MOISTURE	BLOW COUNT	FIELD INSTRUMENT READING	COMMENTS
			100	Silt with sand, ML		LSE	MST		OVM 0.0	SOIL ANALYTICAL SAMPLE COLLECTED AT 3-4' BGS; ODOR DETECTED AT BASE OF INTERVAL.
-1	1									
-2	2									
-3	3									
-4	4		75	Silty sand, SM	GRAY GREEN	FRM	MST		OVM 5.4	PETROLEUM ODOR; SOIL ANALYTICAL SAMPLE COLLECTED AT 6-7' BGS.
-5	5									
-6	6									
-7	7									
-8	8		100	Lean clay with sand, CL		STF	MST		OVM 0.0	SLIGHT ODOR; SOIL ANALYTICAL SAMPLE COLLECTED AT 9-10' BGS.
-9	9									
-10	10									
-11	11									
-12	12									
-13	13									
-14	14									
-15	15									
-16	16									
-17	17									
-18	18									
-19	19									
-20	20									

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Borehole Location Data

Roy F. WESTON, Inc.

BOREHOLE ID : BANSB012 PROJECT NAME: COLUMBIA GAS
BEGIN DATE : 11/08/95 END DATE : 11/08/95

LOGGER/COMPANY : (b) (4) [redacted]

BOREHOLE COMPLETED IN (<O>verburden <B>edrock) : O

TOTAL DEPTH : 8.00 DEPTH TO BEDROCK : 0.00

BOREHOLE DIAMETER #1: 2.00
INTERVAL: 0.00 ft. to 8.00 ft. BGS
METHOD : MACROSAMPLER FLUID : NONE
BOREHOLE DIAMETER #2:
INTERVAL:
METHOD : FLUID :
BOREHOLE DIAMETER #3:
INTERVAL:
METHOD : FLUID :

DRILLING COMPANY : PHILLIP ENVIRONMENTAL
DRILLER : (b) (4) [redacted]
DRILL RIG TYPE : DIETRICH D-25 - DIRECT PUSH

	ESTIMATED	SURVEYED
SURFACE ELEVATION :	0.000	
N. COORDINATE :	0.0000	
E. COORDINATE :	0.0000	

WELL PERMIT.....(Y)es (N)o: N PERMIT # :

HOLE ABANDONED...(Y)es (N)o: Y
WELL INSTALLED...(Y)es (N)o: N
WELL CLUSTER.....(Y)es (N)o: N No. OF WELLS : 0
WELL NEST.....(Y)es (N)o: N No. OF WELLS : 0
PUMPS INSTALLED..(Y)es (N)o: N

	TYPE	DEPTH
PURGE :		0.00
SAMPLE :		0.00

BOREHOLE TESTING
BOREHOLE GEOPHYSICS.....(Y)es (N)o: N
SLUG TESTS.....(Y)es (N)o: N
PACKER TESTS.....(Y)es (N)o: N
PUMPING TESTS.....(Y)es (N)o: N

COMMENTS :
PIPEYARD AREA. BORING SAMPLED WITH 2" BY 4' GEOPROBE MACRO-SAMPLER. SOIL ANALYTICAL SAMPLES COLLECTED AT 3-4' AND 5-6' BGS.

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BOREHOLE /WELL ID	SMP NUM	LTH NUM	LITHOLOGY INT. (FT BGS)		SAMPLING METHOD	SIZE GRAVEL	GRAVEL PCT.	SIZE SAND	SAND PCT	SILT PCT	CLAY PCT	ORGANIC PCT	ROCK TYPE	PLAST	SORT	STRENGTH	MOISTURE	STRAT UNIT
BANSB012	1	1	0.00	4.00	DPT		0	F	10	30	60	0		MOD	WEL	SFT	MST	
BANSB012	2	1	4.00	8.00	DPT	MF	5	F	60	30	5	0		NON	WEL	SFT	WET	

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Borehole Log

Roy F. WESTON, Inc.

PROJECT	: COLUMBIA GAS	TOTAL DEPTH	: 8.00
SITE NAME	: BANGS OPERATING CENTER	LOGGER	(b) (4) [redacted]
BORING ID	: BANSB012	DRILLING COMPANY	: PHILIP ENVIRONMENTAL
NORTHING	: 0.0000 estimated	DRILLING RIG	: DIETRICH D-25 - DIRECT PUSH
EASTING	: 0.0000 estimated	DATE STARTED	: 11/08/95
ELEVATION	: 0.000 estimated	DATE COMPLETED	: 11/08/95

ELEVATION	DEPTH	MATERIAL	% RECOVERY	CLASSIFICATION	COLOR	STRENGTH	MOISTURE	BLOW COUNT	FIELD INSTRUMENT READING	COMMENTS
			100	Lean clay, CL	GRAY-BROWN	SFT	MST		OVM 511.0	SOIL ANALYTICAL SAMPLE COLLECTED AT 3-4' BGS.
-1	1									
-2	2									
-3	3									
-4	4		100	Silty sand, SM	GRAY	SFT	WET			SAT UPPER 1 FT (4-5); GRAVEL LENS @ 6-6.5'; STN @ 5-6'; NO ODOR; SOIL ANALYTICAL COLLECTED 5-6'
-5	5									
-6	6									
-7	7									
-8	8									
-9	9									
-10	10									

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BOREHOLE ID : BANSB013 PROJECT NAME: COLUMBIA GAS
BEGIN DATE : 11/08/95 END DATE : 11/08/95

LOGGER/COMPANY : (b) (4) [redacted]

BOREHOLE COMPLETED IN (<O>verburden <B>edrock) : O

TOTAL DEPTH : 8.00 DEPTH TO BEDROCK : 0.00

BOREHOLE DIAMETER #1: 2.00
INTERVAL: 0.00 ft. to 8.00 ft. BGS
METHOD : MACROSAMPLER FLUID : NONE
BOREHOLE DIAMETER #2:
INTERVAL:
METHOD : FLUID :
BOREHOLE DIAMETER #3:
INTERVAL:
METHOD : FLUID :

DRILLING COMPANY : PHILIP ENVIRONMENTAL
DRILLER : (b) (4) [redacted]
DRILL RIG TYPE : DIETRICH D-25 - DIRECT PUSH

	ESTIMATED	SURVEYED
SURFACE ELEVATION :	0.000	
N. COORDINATE :	0.0000	
E. COORDINATE :	0.0000	

WELL PERMIT.....(Y)es (N)o: N PERMIT # :

HOLE ABANDONED...(Y)es (N)o: Y
WELL INSTALLED...(Y)es (N)o: N
WELL CLUSTER.....(Y)es (N)o: N No. OF WELLS : 0
WELL NEST.....(Y)es (N)o: N No. OF WELLS : 0
PUMPS INSTALLED..(Y)es (N)o: N

	TYPE	DEPTH
PURGE :		0.00
SAMPLE :		0.00

BOREHOLE TESTING
BOREHOLE GEOPHYSICS.....(Y)es (N)o: N
SLUG TESTS.....(Y)es (N)o: N
PACKER TESTS.....(Y)es (N)o: N
PUMPING TESTS.....(Y)es (N)o: N

COMMENTS :
PIPEYARD AREA. BORING SAMPLED WITH 2" BY 4' GEOPROBE MACRO-SAMPLER. SOIL ANALYTICAL SAMPLE COLLECTED AT 5.5-6' BGS.

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BOREHOLE /WELL ID	SMP NUM	LTH NUM	LITHOLOGY INT. (FT BGS)		SAMPLING METHOD	SIZE GRAVEL	GRAVEL PCT.	SIZE SAND	SAND PCT	SILT PCT	CLAY PCT	ORGANIC PCT	ROCK TYPE	PLAST	SORT	STRENGTH	MOISTURE	STRAT UNIT
BANSB013	1	1	0.00	4.00	NS		0		0	0	0	0						
BANSB013	2	1	4.00	6.00	DPT	M	.40	CF	50	10	0	0		NON	POR	LSE	SAT	
BANSB013	2	2	6.00	8.00	DPT		0		0	0	0	0						

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Borehole Log

Roy F. WESTON, Inc.

PROJECT	: COLUMBIA GAS	TOTAL DEPTH	: 8.00
SITE NAME	: BANGS OPERATING CENTER	LOGGER	(b) (4) [redacted]
BORING ID	: BANSB013	DRILLING COMPANY	: PHILIP ENVIRONMENTAL
NORTHING	: 0.0000 estimated	DRILLING RIG	: DIETRICH D-25 - DIRECT PUSH
EASTING	: 0.0000 estimated	DATE STARTED	: 11/08/95
ELEVATION	: 0.000 estimated	DATE COMPLETED	: 11/08/95

ELEVATION	DEPTH	MATERIAL	% RECOVERY	CLASSIFICATION	COLOR	STRENGTH	MOISTURE	BLOW COUNT	FIELD INSTRUMENT READING	COMMENTS
				Interval Not Sampled						
-1	1									
-2	2									
-3	3									
-4	4		50	Well graded sand with silt and gravel,SW-SM	BLACK/BROWN	LSE	SAT			SATURATED GRAVELLY INTERVAL; SOIL ANALYTICAL SAMP COLLECTED AT 5.5-6' BGS. ODOR DETECTED.
-5	5									
-6	6			No Sample Recovered						
-7	7									
-8	8									
-9	9									
-10	10									

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Borehole Location Data

Roy F. WESTON, Inc.

BOREHOLE ID : BANSB015 PROJECT NAME: COLUMBIA GAS
BEGIN DATE : 11/09/95 END DATE : 11/09/95

LOGGER/COMPANY : (b) (4) [redacted]

BOREHOLE COMPLETED IN (<O>verburden <B>edrock) : O

TOTAL DEPTH : 8.00 DEPTH TO BEDROCK : 0.00

BOREHOLE DIAMETER #1: 2.00
INTERVAL: 0.00 ft. to 8.00 ft. BGS
METHOD : FLUID : NONE
BOREHOLE DIAMETER #2:
INTERVAL:
METHOD : FLUID :
BOREHOLE DIAMETER #3:
INTERVAL:
METHOD : FLUID :

DRILLING COMPANY : PHILLIP ENVIRONMENTAL
DRILLER (b) (4) [redacted]
DRILL RIG TYPE : DIETRICH D-25 - DIRECT PUSH

	ESTIMATED	SURVEYED
SURFACE ELEVATION :	0.000	
N. COORDINATE :	0.0000	
E. COORDINATE :	0.0000	

WELL PERMIT.....(Y)es (N)o: N PERMIT # :

HOLE ABANDONED...(Y)es (N)o: Y
WELL INSTALLED...(Y)es (N)o: N
WELL CLUSTER.....(Y)es (N)o: N No. OF WELLS : 0
WELL NEST.....(Y)es (N)o: N No. OF WELLS : 0
PUMPS INSTALLED..(Y)es (N)o: N

	TYPE	DEPTH
PURGE :		0.00
SAMPLE :		0.00

BOREHOLE TESTING
BOREHOLE GEOPHYSICS.....(Y)es (N)o: N
SLUG TESTS.....(Y)es (N)o: N
PACKER TESTS.....(Y)es (N)o: N
PUMPING TESTS.....(Y)es (N)o: N

COMMENTS :
BACKGROUND SOIL BORING COMPLETED WITH 2" BY 4' GEOPROBE MACROSAMPLER. BACKGROUND SOIL ANALYTICAL SAMPLES COLLECTED AT 0.5-2' AND 5-7' BGS.

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BOREHOLE /WELL ID	SMP NUM	LTH NUM	LITHOLOGY INT. (FT BGS)		SAMPLING METHOD	SIZE GRAVEL	GRAVEL PCT.	SIZE SAND	SAND PCT	SILT PCT	CLAY PCT	ORGANIC PCT	ROCK TYPE	PLAST	SORT	STRENGTH	MOISTURE	STRAT UNIT
BANSB015	1	1	0.00	1.00	DPT		0		10	50	40	0		LOW	WEL	SFT	MST	
BANSB015	1	2	1.00	4.00	DPT		0	F	10	60	30	0		MOD	WEL	SFT	MST	
BANSB015	2	1	4.00	8.00	DPT		30	CF	50	10	10	0		LOW		LSE	WET	

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Borehole Log

Roy F. WESTON, Inc.

PROJECT	: COLUMBIA GAS	TOTAL DEPTH	: 8.00
SITE NAME	: BANGS OPERATING CENTER	LOGGER	(b) (4) [redacted]
BORING ID	: BANSB015	DRILLING COMPANY	: PHILIP ENVIRONMENTAL
NORTHING	: 0.0000 estimated	DRILLING RIG	: DIETRICH D-25 - DIRECT PUSH
EASTING	: 0.0000 estimated	DATE STARTED	: 11/09/95
ELEVATION	: 0.000 estimated	DATE COMPLETED	: 11/09/95

ELEVATION	DEPTH	MATERIAL	% RECOVERY	CLASSIFICATION	COLOR	STRENGTH	MOISTURE	BLOW COUNT	FIELD INSTRUMENT READING	COMMENTS
			100	Silt, ML	DK BROWN	SFT	MST		OVM 0.0	TOPSOIL.
-1	1			Elastic silt, MH	ORG BROWN	SFT	MST		OVM 0.0	BACKGROUND SOIL ANALYTICAL SAMPLE COLLECTED AT 0.5-2' BGS.
-2	2									
-3	3									
-4	4		75	Silty sand with gravel, SM	ORG BROWN	LSE	WET		OVM 0.0	WEATHERED IGNEOUS MINERALS; BACKGROUND SOIL ANALYTICAL SAMPLE COLLECTED AT 5-7' BGS.
-5	5									
-6	6									
-7	7									
-8	8									
-9	9									
-10	10									

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Borehole Location Data **Roy F. WESTON, Inc.**

BOREHOLE ID : BANSB016 PROJECT NAME: COLUMBIA GAS
BEGIN DATE : 11/09/95 END DATE : 11/09/95

LOGGER/COMPANY : (b) (4) [redacted]

BOREHOLE COMPLETED IN (<O>verburden <B>edrock) : O

TOTAL DEPTH : 8.00 DEPTH TO BEDROCK : 0.00

BOREHOLE DIAMETER #1: 2.00
INTERVAL: 0.00 ft. to 8.00 ft. BGS
METHOD : MACROSAMPLER FLUID : NONE
BOREHOLE DIAMETER #2:
INTERVAL:
METHOD : FLUID :
BOREHOLE DIAMETER #3:
INTERVAL:
METHOD : FLUID :

DRILLING COMPANY : PHILIP ENVIRONMENTAL
DRILLER (b) (4) [redacted]
DRILL RIG TYPE : DIETRICH D-25 - DIRECT PUSH

	ESTIMATED	SURVEYED
SURFACE ELEVATION :	0.000	
N. COORDINATE :	0.0000	
E. COORDINATE :	0.0000	

WELL PERMIT.....(Y)es (N)o: N PERMIT # :

HOLE ABANDONED...(Y)es (N)o: Y
WELL INSTALLED...(Y)es (N)o: N
WELL CLUSTER.....(Y)es (N)o: N No. OF WELLS : 0
WELL NEST.....(Y)es (N)o: N No. OF WELLS : 0
PUMPS INSTALLED..(Y)es (N)o: N

	TYPE	DEPTH
PURGE :		0.00
SAMPLE :		0.00

BOREHOLE TESTING
BOREHOLE GEOPHYSICS.....(Y)es (N)o: N
SLUG TESTS.....(Y)es (N)o: N
PACKER TESTS.....(Y)es (N)o: N
PUMPING TESTS.....(Y)es (N)o: N

COMMENTS :
BACKGROUND SOIL BORING COMPLETED WITH 2" BY 4' GEOPROBE MACROSAMPLER. BACKGROUND SOIL ANALYTICAL SAMPLES COLLECTED AT 0.5-2' AND 4.5-6.5' BGS.

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Borehole Log

Roy F. WESTON, Inc.

PROJECT	: COLUMBIA GAS	TOTAL DEPTH	: 8.00
SITE NAME	: BANGS OPERATING CENTER	LOGGER	(b) (4) [redacted]
BORING ID	: BANSB016	DRILLING COMPANY	: PHILIP ENVIRONMENTAL
NORTHING	: 0.0000 estimated	DRILLING RIG	: DIETRICH D-25 - DIRECT PUSH
EASTING	: 0.0000 estimated	DATE STARTED	: 11/09/95
ELEVATION	: 0.000 estimated	DATE COMPLETED	: 11/09/95

ELEVATION	DEPTH	MATERIAL	% RECOVERY	CLASSIFICATION	COLOR	STRENGTH	MOISTURE	BLOW COUNT	FIELD INSTRUMENT READING	COMMENTS
			100	Silt, ML	DK BROWN	SFT	MST		OVM 0.0	TOPSOIL: BACKGROUND SOIL ANALYTICAL SAMPLE COLLECTED AT 0.5-2' BGS.
-1	1									
				Silty sand with gravel, SM	ORG BROWN	LSE	DRY		OVM 0.0	
-2	2									
-3	3									
-4	4		62	Poorly graded sand with silt and gravel, SP-SM	ORG/BROWN	LSE	WET		OVM 0.0	BACKGROUND SOIL ANALYTICAL SAMPLE COLLECTED AT 4.5' TO 6.5' BGS.
-5	5									
-6	6									
				No Sample Recovered						
-7	7									
-8	8									
-9	9									
-10	10									

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BOREHOLE ID : BANSB017 PROJECT NAME: COLUMBIA GAS
BEGIN DATE : 11/09/95 END DATE : 11/09/95

LOGGER/COMPANY : (b) (4) [redacted]

BOREHOLE COMPLETED IN (<O>verburden <B>edrock) : O

TOTAL DEPTH : 8.00 DEPTH TO BEDROCK : 0.00

BOREHOLE DIAMETER #1: 2.00
INTERVAL: 0.00 ft. to 8.00 ft. BGS
METHOD : MACROSAMPLER FLUID : NONE
BOREHOLE DIAMETER #2:
INTERVAL:
METHOD : FLUID :
BOREHOLE DIAMETER #3:
INTERVAL:
METHOD : FLUID :

DRILLING COMPANY : PHILIP ENVIRONMENTAL
DRILLER (b) (4) [redacted]
DRILL RIG TYPE : DIETRICH D-25 - DIRECT PUSH

	ESTIMATED	SURVEYED
SURFACE ELEVATION :	0.000	
N. COORDINATE :	0.0000	
E. COORDINATE :	0.0000	

WELL PERMIT.....(Y)es (N)o: N PERMIT # :

HOLE ABANDONED...(Y)es (N)o: Y
WELL INSTALLED...(Y)es (N)o: N
WELL CLUSTER.....(Y)es (N)o: N No. OF WELLS : 0
WELL NEST.....(Y)es (N)o: N No. OF WELLS : 0
PUMPS INSTALLED..(Y)es (N)o: N

	TYPE	DEPTH
PURGE :		0.00
SAMPLE :		0.00

BOREHOLE TESTING
BOREHOLE GEOPHYSICS.....(Y)es (N)o: N
SLUG TESTS.....(Y)es (N)o: N
PACKER TESTS.....(Y)es (N)o: N
PUMPING TESTS.....(Y)es (N)o: N

COMMENTS :
BACKGROUND SOIL BORING COMPLETED WITH 2" BY 4' GEOPROBE MACROSAMPLER. BACKGROUND SOIL ANALYTICAL SAMPLES COLLECTED AT 0.5-2' AND 4.5-6.5' BGS.

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BOREHOLE /WELL ID	SMP NUM	LTH NUM	LITHOLOGY INT. (FT BGS)		SAMPLING METHOD	SIZE GRAVEL	GRAVEL PCT.	SIZE SAND	SAND PCT	SILT PCT	CLAY PCT	ORGANIC PCT	ROCK TYPE	PLAST	SORT	STRENGTH	MOISTURE	STRAT UNIT
BANSB017	1	1	0.00	1.00	DPT		0		10	50	40	0		LOW	WEL	SFT	MST	
BANSB017	1	2	1.00	3.00	DPT		0	MF	20	50	30	0		LOW	MOD	SFT	MST	
BANSB017	1	3	3.00	4.00	DPT		0		0	0	0	0						
BANSB017	2	1	4.00	6.50	DPT		5	F	50	40	5	0		LOW	WEL	SFT	WET	
BANSB017	2	2	6.50	8.00	DPT		0		0	0	0	0						

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Borehole Log

Roy F. WESTON, Inc.

PROJECT	: COLUMBIA GAS	TOTAL DEPTH	: 8.00
SITE NAME	: BANGS OPERATING CENTER	LOGGER	(b) (4) [redacted]
BORING ID	: BANSB017	DRILLING COMPANY	: PHILIP ENVIRONMENTAL
NORTHING	: 0.0000 estimated	DRILLING RIG	: DIETRICH D-25 - DIRECT PUSH
EASTING	: 0.0000 estimated	DATE STARTED	: 11/09/95
ELEVATION	: 0.000 estimated	DATE COMPLETED	: 11/09/95

ELEVATION	DEPTH	MATERIAL	% RECOVERY	CLASSIFICATION	COLOR	STRENGTH	MOISTURE	BLOW COUNT	FIELD INSTRUMENT READING	COMMENTS
			75	Silt, ML	DK BROWN	SFT	MST		OVM 0.0	TOPSOIL; BACKGROUND SOIL ANALYTICAL SAMPLE COLLECTED AT 0.5-2' BGS.
-1	1			Silt with sand, ML	ORG BROWN	SFT	MST		OVM 0.0	
-2	2									
-3	3			No Sample Recovered						
-4	4		62	Silty sand, SM	ORG BROWN	SFT	WET			BACKGROUND SOIL ANALYTICAL SAMPLE COLLECTED AT 4.5-6.5' BGS.
-5	5									
-6	6									
				No Sample Recovered						
-7	7									
-8	8									
-9	9									
-10	10									

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SURFACE SOIL SAMPLING FORMS

GEOLIS® Soil/Sediment Sampling Form

COMPANY: Weston
PROJECT: Columbia Gas
PROPERTY: Bangs OC
SITE/AREA: Pipeyard /

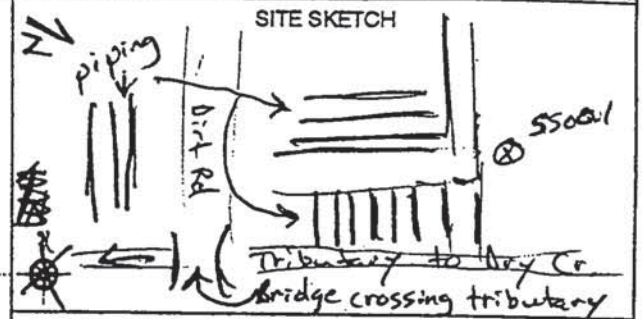
LOCATION ID: ~~SS001~~ RIC BAN-SS. 001
DATE: 11-8-95
SAMPLER: (b) (4) [redacted]
SIGNATURE:

	ESTIMATED / GPS	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		

LOCATION TYPE: SSS - SED - BOR - PIT - OTH:
GRID COORD.: / GRID ID: NA
GROUND SLOPE: FLT - SLI - MOD - STP - NA
WATER BODY/SOIL SERIES NAME:

WATER TYPE: LAK - PND - EST - RVR - STP - STI - LAG - PIP - CHN - WET
NA - OTH: FLOW: FLD - FLU - LOW - POO - DRY - NA
WATER DEPTH: FT-M BMP VELOCITY: NON - LOW - MOD - HGH

SITE SKETCH



SAMPLING INFORMATION

SAMPLE ID: BAN-SS001-40001
COLLECTION TIME (24:00): 08:45
SAMPLE DEPTH INTERVAL: .5 TO 1 FT-M BGS
SAMPLE TYPE: DISCRETE - COMPOSITE - OTH:
PURPOSE: BKG - RSK - GEO - EXP - CHR - REM - OTH:
ASSOCIATED WATER SAMPLE ID:
SAMPLING METHOD: TRL - SPT - BLP - DRG - BUC - SPS - CSS - STS
CUT - CTS - COR - OTH: Direct Push
SAMPLER DECONTAMINATION: DED - LAB - FLD - NON
(1)DET - (2)STM - (3)ACE - (4)HEX - (5)MET - (6)DIW - (7)POT - (8)NO3
(9)OTH: air dry SEQUENCE: 1 7 5 4 9 6
SAMPLING PROCEDURES USED: NON - SAP/QAPP - SOP - OTH
REFERENCE:
CHAIN-OF-CUSTODY FORM(S) FILLED OUT: YES - NO
QA SAMPLES: MS/MSD SAMPLE COLLECTED: YES - NO
DUPLICATE ID:
TRIP BLANK ID: BAN-SS001-43001
RINSE BLANK ID: BAN-SS001-42001

SAMPLE DESCRIPTION

MATERIAL: NAT - FIL - PRD - SDG - UNC - OTH:
ODOR: NOR - SEW - PET - CHM - ANB - NON - OTH:
SHEEN/STAIN (2): NON - SLI - MOD - HVY PET - IRN - BAC - OTH
INST. 1 TYPE: OVM READING: 2.7 UNITS: ppm
INST. 1 TYPE: READING: UNITS:
SURFACE LAYER: SOL - GRS - LVS - VEG - GVL - ASP - CMT - FIL
OTHER:
THICKNESS (IN/CM): REMOVED - SAMPLED

SECONDARY TYPE: NA - BED
OVERALL COLOR: MUN - GSA - NON WET - DRY
CODE: Brown
COLORATION: UNI - STN - MOT - VAR
TEXTURE: %C - M - F - VF

				SECONDARY
GRAVEL:		F	5 %	%
SAND:		F-VF	60 %	%
SILT:			25 %	%
CLAY:			10 %	%
ORGANIC:			%	%

ROUNDNESS:
GRAVEL: FAC - ANG - SBA - SBR - RND - NA
SAND: ANG - SBA - SBR - RND - NA
SORTING: BIM - WEL - MOD - POR - NA
PLASTICITY: NON - LOW - MOD - HGH - NA
MOISTURE: DRY - MST - WET - SAT
STRENGTH: NONCOHESIVE - LSF - FIR - DEN - VDN
COHESIVE: VSF - SFT - FRM - STF - VST - HRD

ANALYTICAL PARAMETERS

	LAB NAME
CHM: VOC - BNA - PES - PCB - HRB - PHE - TOC - TPH - MET - OTH:	RECRA
CHM: VOC - BNA - PES - PCB - HRB - PHE - TOC - TPH - MET - OTH:	
TCLP: VOC - BNA - PES - HRB - MET - OTH:	
RAD/OTH: GAL - GBT - GGM - SAL - TRT - ASB - OTH:	
GEOTECH: GRA - SPG - ATL - POR - PRM - CON - CMP - SHR - OTH:	

SPLIT SAMPLES: NON - CLI - OWN - OVR - OTH:
SPLIT SAMPLE ID NO.:
ORGANIZATION NAME:
PARAMETERS: SAME - OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: NON - DUP - RNS - TRP - MSD

COMMENTS: Used 2" by 4' geoprobe macrosampler to collect sample. lithologic description is of sampled interval only.

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GEOLIS® Soil/Sediment Sampling Form

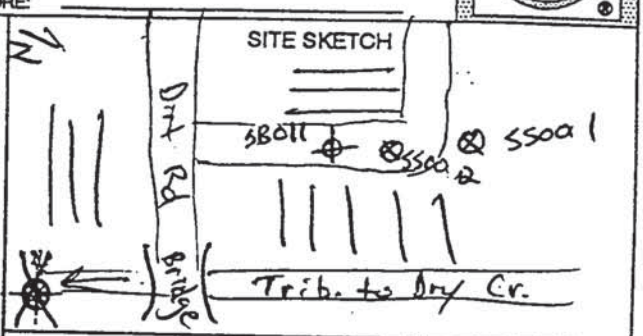
COMPANY: Weston
PROJECT: Columbia Gas
PROPERTY: Bangs OC
SITE/AREA: Pipeyard 1

LOCATION ID: BAN-SS002
DATE: 11/8/92
SAMPLER: (b) (4) [redacted]
SIGNATURE:

SURFACE ELEVATION: ESTIMATED / GPS _____ SURVEYED _____
N. COORDINATE:
E. COORDINATE:
LOCATION TYPE: SSS - SED - BOR - PIT - OTH:
GRID COORD.: ____ / ____ GRID ID: _____ NA
GROUND SLOPE: FLT - SLI - MOD - STP - NA
WATER BODY/SOIL SERIES NAME:

WATER TYPE: LAK - PND - EST - RVR - STP - STI - LAG - PIP - CHN - WET
NA - OTH: FLOW: FLD - FLU - LOW - POO - DRY - NA
WATER DEPTH: FT-M BMP VELOCITY: NON - LOW - MOD - HGH

SITE SKETCH



SAMPLING INFORMATION

SAMPLE ID: BAN-SS002-40001
COLLECTION TIME (24:00): 09:35
SAMPLE DEPTH INTERVAL: .5 TO 1.5 FT-M BGS
SAMPLE TYPE: DISCRETE - COMPOSITE - OTH:
PURPOSE: BKG - RSK - GEO - EXP - CHR - REM - OTH:
ASSOCIATED WATER SAMPLE ID:
SAMPLING METHOD: TRL - SPT - BLP - DRG - BUC - SPS - CSS - STS
CUT - CTS - COR - OTH: Direct Push
SAMPLER DECONTAMINATION: DED - LAB - FLD - NON
(1) DET (2) STM - (3) ACE - (4) HEX - (5) MET - (6) DIW - (7) ROT - (8) NO3
(9) OTH: Air dry SEQUENCE: 1 7 5 4 9 6
SAMPLING PROCEDURES USED: NON - SAP - QAPP - SOP - OTH
REFERENCE:
CHAIN-OF-CUSTODY FORM(S) FILLED OUT: YES - NO
QA SAMPLES: MS/MSD SAMPLE COLLECTED: YES - NO
DUPLICATE ID:
TRIP BLANK ID:
RINSE BLANK ID:

SAMPLE DESCRIPTION

MATERIAL: NAT - FIL - PRD - SDG - UNC - OTH:
ODOR: NOR - SEW - PET - CHM - ANB - NON - OTH:
SHEEN/STAIN (2): NON - SLI - MOD - HVY PET - IRN - BAC - OTH
INST. 1 TYPE: OVM READING: 0 UNITS: PPM
INST. 1 TYPE: READING: UNITS:
SURFACE LAYER: SOL - GRS - LVS - VEG - GVL - ASP - CMT - FIL
OTHER:
THICKNESS (IN/CM): REMOVED - SAMPLED

SECONDARY TYPE: NA - BED
OVERALL COLOR: MUN - GSA - NON WET - DRY
CODE: Red/Brown
COLORATION: UNI - STN - MOT - VAR
TEXTURE: %C - M - F - VF

				SECONDARY
GRAVEL:		E	5 %	%
SAND:		E	30 %	%
SILT:			45 %	%
CLAY:			20 %	%
ORGANIC:			%	%

ROUNDNESS:
GRAVEL: FAC - ANG - SBA - SBR - RND - NA
SAND: ANG - SBA - SBR - RND - NA
SORTING: BIM - WEL - MOD - POR - NA
PLASTICITY: NON - LOW - MOD - HGH - NA
MOISTURE: DRY - MST - WET - SAT
STRENGTH: NONCOHESIVE: LSE - FIR - DEN - VDN
COHESIVE: VSF - SFT - FRM - STF - VST - HRD

ANALYTICAL PARAMETERS

LAB NAME

CHM: VOC - BNA - PES - PCB - HRB - PHE - TOC - TPH - MET - OTH: RERCA
CHM: VOC - BNA - PES - PCB - HRB - PHE - TOC - TPH - MET - OTH:
TCLP: VOC - BNA - PES - HRB - MET - OTH:
RAD/OTH: GAL - GBT - GGM - SAL - TRT - ASB - OTH:
GEOTECH: GRA - SPG - ATL - POR - PRM - CON - CMP - SHR - OTH:

SPLIT SAMPLES: NON - CLI - OWN - OVR - OTH:
SPLIT SAMPLE ID NO.:
ORGANIZATION NAME:
PARAMETERS: SAME - OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: NON - DUP - RNS - TRP - MSD

COMMENTS: Sample collected with 2" by 4' Geoprobe Macrosampler. Lithologic description is of sampled interval only.

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GEOLIS® Soil/Sediment Sampling Form

COMPANY: Weston
PROJECT: Columbia Gas
PROPERTY: Bangs OC
SITE/AREA: Pipeyard /

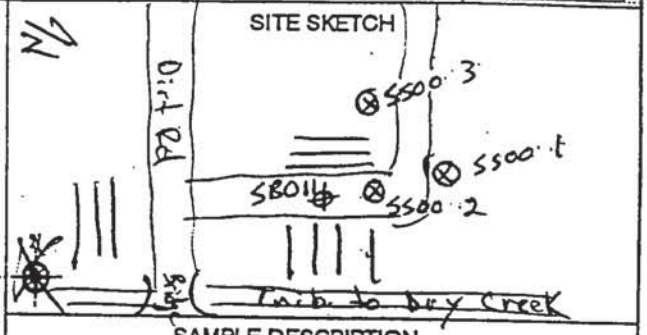
LOCATION ID: KJC ~~SS003~~ BAN-SS 003
DATE: 11/8/95
SAMPLER: (b) (4) [redacted]
SIGNATURE:

	ESTIMATED / GPS	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		

LOCATION TYPE: SSS - SED - BOR - PIT - OTH:
GRID COORD.: / GRID ID: NA
GROUND SLOPE: FLT - SLI - MOD - STP - NA
WATER BODY/SOIL SERIES NAME:

WATER TYPE: LAK - PND - EST - RVR - STP - STI - LAG - PIP - CHN - WET
NA - OTH: FLOW: FLD - FLU - LOW - POO - DRY - NA
WATER DEPTH: FT-M BMP VELOCITY: NON - LOW - MOD - HGH

SITE SKETCH



SAMPLING INFORMATION

SAMPLE ID: BAN-SS003-40001
COLLECTION TIME (24:00): 09:40
SAMPLE DEPTH INTERVAL: .5 TO 1.5 FT-M BGS
SAMPLE TYPE: DISCRETE - COMPOSITE - OTH:
PURPOSE: BKG - RSK - GEO - EXP - CHR - REM - OTH:
ASSOCIATED WATER SAMPLE ID:
SAMPLING METHOD: TRL - SPT - BLP - DRG - BUC - SPS - CSS - STS
CUT - CTS - COR - OTH: Direct Push
SAMPLER DECONTAMINATION: DED - LAB - FLD - NON
(1)DET - (2)STM - (3)ACE - (4)HEX - (5)MET - (6)DIW - (7)POT - (8)NO3
(9)OTH: Air Dry SEQUENCE: 1 7 5 4 9 6
SAMPLING PROCEDURES USED: NON - SAP/QAPP - SOP - OTH
REFERENCE:
CHAIN-OF-CUSTODY FORM(S) FILLED OUT: YES - NO
QA SAMPLES: MS/MSD SAMPLE COLLECTED: YES - NO
DUPLICATE ID:
TRIP BLANK ID:
RINSE BLANK ID:

SAMPLE DESCRIPTION

MATERIAL: NAT - FIL - PRD - SDG - UNC - OTH:
ODOR: NOR - SEW - PET - CHM - ANB - NON - OTH:
SHEEN/STAIN (2): NON - SLI - MOD - HVY PET - IRN - BAC - OTH
INST. 1 TYPE: OVM READING: 0 UNITS: PPM
INST. 1 TYPE: READING: UNITS:
SURFACE LAYER: SOI - GRS - LVS - VEG - GVL - ASP - CMT - FIL
OTHER:
THICKNESS (IN/CM): REMOVED - SAMPLED

SECONDARY TYPE: NA - BED
OVERALL COLOR: MUN - GSA - NON WET - DRY
CODE: Dark Brown
COLORATION: UNI - STN - MOT - VAR
TEXTURE: %C - M - F - VF

				SECONDARY
GRAVEL:		F	5 %	%
SAND:		F VF	60 %	%
SILT:			35 %	%
CLAY:			%	%
ORGANIC:			%	%

ROUNDNESS:
GRAVEL: FAC - ANG - SBA - SBR - RND - NA
SAND: ANG - SBA - SBR - RND - NA
SORTING: BIM - WEL - MOD - POR - NA
PLASTICITY: NON - LOW - MOD - HGH - NA
MOISTURE: DRY - MST - WET - SAT
STRENGTH: NONCOHESIVE: LSE - FIR - DEN - VDN
COHESIVE: VSF - SFT - FRM - STF - VST - HRD

ANALYTICAL PARAMETERS

	LAB NAME
CHM: VOC - BNA - PES - PCB - HRB - PHE - TOC - TPH - MET - OTH:	RECRA
CHM: VOC - BNA - PES - PCB - HRB - PHE - TOC - TPH - MET - OTH:	
TCLP: VOC - BNA - PES - HRB - MET - OTH:	
RAD/OTH: GAL - GBT - GGM - SAL - TRT - ASB - OTH:	
GEOTECH: GRA - SPG - ATL - POR - PRM - CON - CMP - SHR - OTH:	

SPLIT SAMPLES: NON - CLI - OWN - OVR - OTH:
ORGANIZATION NAME:
REPRESENTATIVES NAME:
SPLIT SAMPLE ID NO.:
PARAMETERS: SAME - OTHER:
QA/QC SAMPLES: NON - DUP - RNS - TRP - MSD

COMMENTS: Sample collected with 2" by 4' Geoprobe Macrosampler. Lithologic description is of sampled interval only.

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GEOLIS® Soil/Sediment Sampling Form

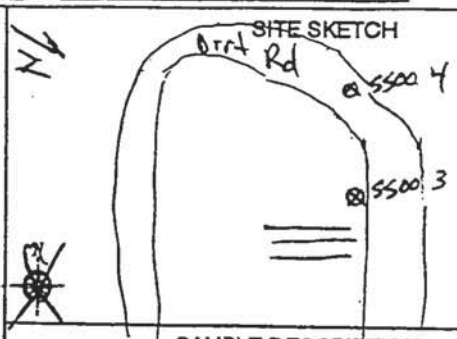
COMPANY: Weston
PROJECT: Columbia Gas
PROPERTY: Bangs OC
SITE/AREA: Pipeyard 1

LOCATION ID: BAN-SS004
DATE: 11/8/95
SAMPLER: (b) (4) [redacted]
SIGNATURE:

SURFACE ELEVATION: ESTIMATED / GPS _____ SURVEYED _____
N. COORDINATE:
E. COORDINATE:
LOCATION TYPE: SSS - SED - BOR - PIT - OTH:
GRID COORD.: / GRID ID: NA
GROUND SLOPE: FLT - SLI - MOD - STP - NA
WATER BODY/SOIL SERIES NAME:

WATER TYPE: LAK - PND - EST - RVR - STP - STI - LAG - PIP - CHN - WET
NA - OTH: FLOW: FLD - FLU - LOW - POO - DRY - NA
WATER DEPTH: FT-M BMP VELOCITY: NON - LOW - MOD - HGH

SITE SKETCH



SAMPLING INFORMATION

SAMPLE ID: BAN-SS004-40001
COLLECTION TIME (24:00): 09:45
SAMPLE DEPTH INTERVAL: .5 TO 1.5 FT-M BGS
SAMPLE TYPE: DISCRETE - COMPOSITE - OTH:
PURPOSE: BKG - RSK - GEO - EXP - CHR - REM - OTH:
ASSOCIATED WATER SAMPLE ID:
SAMPLING METHOD: TRL - SPT - BLP - DRG - BUC - SPS - CSS - STS
CUT - CTS - COR - OTH: Direct Push
SAMPLER DECONTAMINATION: DED - LAB - FLD - NON
(1) DET - (2) STM - (3) ACE - (4) HEX - (5) MET - (6) DIW - (7) POT - (8) NO3
(9) OTH: Air Dry SEQUENCE: 1 1 5 4 9 6
SAMPLING PROCEDURES USED: NON - SAP/QAPP - SOP - OTH
REFERENCE:
CHAIN-OF-CUSTODY FORM(S) FILLED OUT: YES - NO
QA SAMPLES: MS/MSD SAMPLE COLLECTED: YES - NO
DUPLICATE ID:
TRIP BLANK ID:
RINSE BLANK ID:

SAMPLE DESCRIPTION

MATERIAL: NAT - FIL - PRD - SDG - UNC - OTH:
ODOR: NON - SEW - PET - CHM - ANB - NON - OTH:
SHEEN/STAIN (2): NON - SLI - MOD - HVY PET - IRN - BAC - OTH
INST. 1 TYPE: OVM READING: 0 UNITS: ppm
INST. 1 TYPE: READING: UNITS:
SURFACE LAYER: SOIL - GRS - LVS - VEG - GVL - ASP - CMT - FIL
OTHER:
THICKNESS (IN/CM): REMOVED - SAMPLED

SECONDARY TYPE: NA - BED
OVERALL COLOR: MUN - GSA - NON WET - DRY
CODE: Drk brn
COLORATION: UNI - STN - MOT - VAR
TEXTURE: % C - M - F - VF

	C	M	F	VF	%	SECONDARY %
GRAVEL:			F		5	
SAND:			F	VF	60	
SILT:					35	
CLAY:						
ORGANIC:						

ROUNDNESS:
GRAVEL: FAC - ANG - SBA - SBR - RND - NA
SAND: ANG - SBA - SBR - RND - NA
SORTING: BIM - WEL - MOD - POR - NA
PLASTICITY: NON - LOW - MOD - HGH - NA
MOISTURE: DRY - MST - WET - SAT
STRENGTH: NONCOHESIVE: LSE - FIR - DEN - VDN
COHESIVE: VSF - SFT - FIM - STF - VST - HRD

ANALYTICAL PARAMETERS

LAB NAME

CHM: VOC - BNA - PES - PCB - HRB - PHE - TOC - TPH - MET - OTH: RECRA
CHM: VOC - BNA - PES - PCB - HRB - PHE - TOC - TPH - MET - OTH:
TCLP: VOC - BNA - PES - HRB - MET - OTH:
RAD/OTH: GAL - GBT - GGM - SAL - TRT - ASB - OTH:
GEOTECH: GRA - SPG - ATL - POR - PRM - CON - CMP - SHR - OTH:

SPLIT SAMPLES: NON - CLI - OWN - OVR - OTH:
SPLIT SAMPLE ID NO.:
ORGANIZATION NAME:
PARAMETERS: SAME - OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: NON - DUP - RNS - TRP - MSD

COMMENTS: Same as SS003; Sample collected with 2" by 4' Geoprobe macrosampler. Lithologic description is of sampled interval only.

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GEOLIS® Soil/Sediment Sampling Form

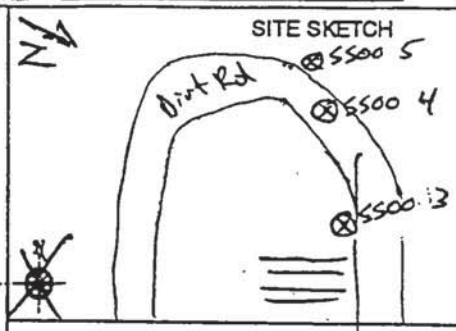
COMPANY: Weston
PROJECT: Columbia Gas
PROPERTY: Bangs, OC.
SITE/AREA: Pipe yard /

LOCATION ID: BAN-SS005
DATE: 11/8/95
SAMPLER: (b) (4) [redacted]
SIGNATURE:

	ESTIMATED / GPS	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		

LOCATION TYPE: SSS - SED - BOR - PIT - OTH:
GRID COORD.: / GRID ID: NA
GROUND SLOPE: FLT - SLI - MOD - STP - NA
WATER BODY/SOIL SERIES NAME:
WATER TYPE: LAK - PND - EST - RVR - STP - STI - LAG - PIP - CHN - WET
NA - OTH: FLOW: FLD - FLU - LOW - POO - DRY - NA
WATER DEPTH: FT-M BMP VELOCITY: NON - LOW - MOD - HGH

SITE SKETCH



SAMPLING INFORMATION

SAMPLE ID: BAN-SS005-40001
COLLECTION TIME (24:00): 09:50
SAMPLE DEPTH INTERVAL: .5 TO 1.5 FT-M BGS
SAMPLE TYPE: DISCRETE - COMPOSITE - OTH:
PURPOSE: BKG - RSK - GEO - EXP - CHR - REM - OTH:
ASSOCIATED WATER SAMPLE ID:
SAMPLING METHOD: TRL - SPT - BLP - DRG - BUC - SPS - CSS - STS
CUT - CTS - COR - OTH: Direct Push
SAMPLER DECONTAMINATION: DED - LAB - FLD - NON
(1) DET - (2) STM - (3) ACE - (4) HEX - (5) MET - (6) DIW - (7) POT - (8) NO3
(9) OTH: Air dry SEQUENCE: L75496
SAMPLING PROCEDURES USED: NON - SAP - QAPP - SOP - OTH
REFERENCE:
CHAIN-OF-CUSTODY FORM(S) FILLED OUT: YES - NO
QA SAMPLES: MS/MSD SAMPLE COLLECTED: YES - NO
DUPLICATE ID:
TRIP BLANK ID:
RINSE BLANK ID:

SAMPLE DESCRIPTION

MATERIAL: NAT - FIL - PRD - SDG - UNC - OTH:
ODOR: NOR - SEW - PET - CHM - ANB - NON - OTH:
SHEEN/STAIN (2): NON - SLI - MOD - HVY PET - IRN - BAC - OTH
INST. 1 TYPE: OVM READING: 0 UNITS: PPM
INST. 1 TYPE: READING: UNITS:
SURFACE LAYER: SOL - SRS - LVS - VEG - GVL - ASP - CMT - FIL
OTHER:
THICKNESS (IN/CM): REMOVED - SAMPLED

		SECONDARY
SECONDARY TYPE:	NA - BED	
OVERALL COLOR:	MUN - GSA - NON WET - DRY	
	CODE: Orange brn	
COLORATION:	UNI - STN - MOT - VAR	
TEXTURE:	%C - M - F - VF	
GRAVEL:	M-F 20 %	%
SAND:	C 60 %	%
SILT:	20 %	%
CLAY:	%	%
ORGANIC:	%	%
ROUNDNESS: GRAVEL:	FAC - ANG - SBA - SBR - RND - NA	
SAND:	ANG - SBA - SBR - RND - NA	
SORTING:	BIM - WEL - MOD - POR - NA	
PLASTICITY:	NON - LOW - MOD - HGH - NA	
MOISTURE:	DRY - MST - WET - SAT	
STRENGTH: NONCOHESIVE:	LSE - FIR - DEN - VDN	
COHESIVE:	VSP - SFT - FRM - STF - VST - HRD	

ANALYTICAL PARAMETERS

	LAB NAME
CHM: VOC - BNA - PES - PCB - HRB - PHE - TOC - TPH - MET - OTH:	RECRA
CHM: VOC - BNA - PES - PCB - HRB - PHE - TOC - TPH - MET - OTH:	
TCLP: VOC - BNA - PES - HRB - MET - OTH:	
RAD/OTH: GAL - GBT - GGM - SAL - TRT - ASB - OTH:	
GEOTECH: GRA - SPG - ATL - POR - PRM - CON - CMP - SHR - OTH:	

SPLIT SAMPLES: NON - CLI - OWN - OVR - OTH:
SPLIT SAMPLE ID NO.:
ORGANIZATION NAME:
PARAMETERS: SAME - OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: NON - DUP - RNS - TRP - MSD

COMMENTS: Sample collected with 2" by 4' Geoprobe macrosampler. Lithologic description is of sampled interval only.

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GEOLIS® Soil/Sediment Sampling Form

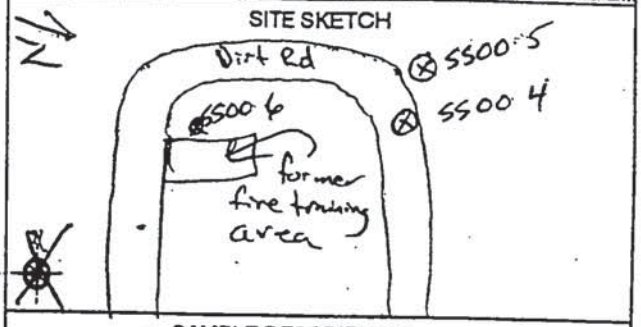
COMPANY: Weston
PROJECT: Columbia Gas
PROPERTY: Bangs OC
SITE/AREA: Pipeyard /

LOCATION ID: ~~SSOO6~~ BAN-SS 006
DATE: 11/8/95
SAMPLER: (b) (4) [redacted]
SIGNATURE:

	ESTIMATED / GPS	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		

LOCATION TYPE: SSS - SED - BOR - PIT - OTH:
GRID COORD.: / GRID ID: NA
GROUND SLOPE: FLT - SLI - MOD - STP - NA
WATER BODY/SOIL SERIES NAME:
WATER TYPE: LAK - PND - EST - RVR - STP - STI - LAG - PIP - CHN - WET
NA - OTH: FLOW: FLD - FLU - LOW - POO - DRY - NA
WATER DEPTH: FT-M BMP VELOCITY: NON - LOW - MOD - HGH

SITE SKETCH



SAMPLING INFORMATION

SAMPLE ID: BAN-SS006-40001
COLLECTION TIME (24:00): 10:15
SAMPLE DEPTH INTERVAL: .5 TO 1.5 FT-M BGS
SAMPLE TYPE: DISCRETE - COMPOSITE - OTH:
PURPOSE: BKG - RSK - GEO - EXP - CHR - REM - OTH:
ASSOCIATED WATER SAMPLE ID:
SAMPLING METHOD: TRL - SPT - BLP - DRG - BUC - SPS - CSS - STS
CUT - CTS - COR - OTH: Direct Push
SAMPLER DECONTAMINATION: DED - LAB - FLD - NON
(1) DET - (2) STM - (3) ACE - (4) HEX - (5) MET - (6) DIW - (7) POT - (8) NO3
(9) OTH: Air Dry SEQUENCE: L 75496
SAMPLING PROCEDURES USED: NON - SAP/QAPP - SOP - OTH
REFERENCE:
CHAIN-OF-CUSTODY FORM(S) FILLED OUT: YES - NO
QA SAMPLES: MS/MSD SAMPLE COLLECTED: YES - NO
DUPLICATE ID:
TRIP BLANK ID:
RINSE BLANK ID:

SAMPLE DESCRIPTION

MATERIAL: NAT - FIL - PRD - SDG - UNC - OTH:
ODOR: NOR - SEW - PET - CHM - ANB - NON - OTH:
SHEEN/STAIN (2): NON - SLI - MOD - HVY PET - IRN - BAC - OTH
INST. 1 TYPE: OVM READING: 0 UNITS: ppm
INST. 1 TYPE: READING: UNITS:
SURFACE LAYER: SOL - GRS - LVS - VEG - GVL - ASP - CMT - FIL
OTHER:
THICKNESS (IN/CM): REMOVED - SAMPLED

SECONDARY TYPE: NA - BED
OVERALL COLOR: MUN - GSA - NON WET - DRY
CODE: Brown
COLORATION: UNI - STN - MOT - VAR
TEXTURE: %C - M - F - VF

					SECONDARY
GRAVEL:				%	%
SAND:		F	VF	60 %	%
SILT:				30 %	%
CLAY:				10 %	%
ORGANIC:				%	%

ROUNDNESS:
GRAVEL: FAC - ANG - SBA - SBR - RND NA
SAND: ANG - SBA - SBR - RND - NA
SORTING: BIM - WEL - MOD - POR - NA
PLASTICITY: NON - LOW - MOD - HGH - NA
MOISTURE: DRY - MST - WET - SAT
STRENGTH: NONCOHESIVE: LSE - FIR - DEN - VDN
COHESIVE: VSF - SFT - FRM - STF - VST - HRD

ANALYTICAL PARAMETERS

	LAB NAME
CHM: VOC - BNA - PES - PCB - HRB - PHE - TOC - TPH - MET - OTH:	RECRA
CHM: VOC - BNA - PES - PCB - HRB - PHE - TOC - TPH - MET - OTH:	
TCLP: VOC - BNA - PES - HRB - MET - OTH:	
RAD/OTH: GAL - GBT - GGM - SAL - TRT - ASB - OTH:	
GEOTECH: GRA - SPG - ATL - POR - PRM - CON - CMP - SHR - OTH:	

SPLIT SAMPLES: NON - CLI - OWN - OVR - OTH:
SPLIT SAMPLE ID NO.:
ORGANIZATION NAME:
PARAMETERS: SAME - OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: NON - DUP - RNS - TRP - MSD

COMMENTS: Sample collected with 2" by 4' Geoprobe macrosampler. Lithologic description is of sampled interval only.

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GEOLIS® Soil/Sediment Sampling Form

COMPANY: Weston
PROJECT: Columbia Gas
PROPERTY: Bangs OC
SITE/AREA: Pipeyard 1

LOCATION ID: ~~SS007~~ BAN-SS.007
DATE: 11/8/95
SAMPLER: (b) (4) [redacted]
SIGNATURE:

	ESTIMATED / GPS	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		

LOCATION TYPE: SSS - SED - BOR - PIT - OTH:
GRID COORD.: / GRID ID: NA
GROUND SLOPE: FLT - SLI - MOD - STP - NA
WATER BODY/SOIL SERIES NAME:
WATER TYPE: LAK - PND - EST - RVR - STP - STI - LAG - PIP - CHN - WET NA - OTH:
FLOW: FLD - FLU - LOW - POO - DRY - NA
WATER DEPTH: FT-M BMP VELOCITY: NON - LOW - MOD - HGH

SITE SKETCH

SAMPLING INFORMATION

SAMPLE ID: BAN-SS007-40001
COLLECTION TIME (24:00): 10:20
SAMPLE DEPTH INTERVAL: .5 TO 1.5 FT-M BGS
SAMPLE TYPE: DISCRETE - COMPOSITE - OTH:
PURPOSE: BKG - RSK - GEO - EXP - CHR - REM - OTH:
ASSOCIATED WATER SAMPLE ID:
SAMPLING METHOD: TRL - SPT - BLP - DRG - BUC - SPS - CSS - STS CUT - CTS - COR - OTH: Direct Push
SAMPLER DECONTAMINATION: DED - LAB - KLD - NON
(1) DET - (2) STM - (3) ACE - (4) HEX - (5) MET - (6) DIW - (7) POT - (8) NO3 (9) OTH: Air Dry SEQUENCE: 1 7 5 4 9 6
SAMPLING PROCEDURES USED: NON - SAP/QAPP - SOP - OTH
REFERENCE:
CHAIN-OF-CUSTODY FORM(S) FILLED OUT: YES - NO
QA SAMPLES: MS/MSD SAMPLE COLLECTED: YES - NO
DUPLICATE ID:
TRIP BLANK ID:
RINSE BLANK ID:

SAMPLE DESCRIPTION

MATERIAL: NAT - FIL - PRD - SDG - UNC - OTH:
CDOR: NOR - SEW - PET - CHM - ANB - NON - OTH:
SHEEN/STAIN (2): NON - SLI - MOD - HVY PET - IRN - BAC - OTH
INST. 1 TYPE: OVM READING: 0 UNITS: ppm
INST. 1 TYPE: READING: UNITS:
SURFACE LAYER: SOIL - GRS - LVS - VEG - GVL - ASP - CMT - FIL
OTHER:
THICKNESS (IN/CM): REMOVED - SAMPLED

SECONDARY TYPE: NA - BED
OVERALL COLOR: MUN - GSA - NON WET - DRY
CODE: Brown
COLORATION: UNI - STN - MOT - VAR
TEXTURE: %C - M - F - VF

			SECONDARY
GRAVEL:	F	5 %	%
SAND:	M-F	70 %	%
SILT:		15 %	%
CLAY:		10 %	%
ORGANIC:		%	%

ROUNDNESS:
GRAVEL: FAC - ANG - SBA - SBR - RND - NA
SAND: ANG - SBA - SBR - RND - NA
SORTING: BIM - WEL - MOD - POR - NA
PLASTICITY: NON - LOW - MOD - HGH - NA
MOISTURE: DRY - MST - WET - SAT
STRENGTH: NONCOHESIVE - LSE - FIR - DEN - VDN
COHESIVE: VSF - SFT - FRM - STF - VST - HRD

ANALYTICAL PARAMETERS

LAB NAME

CHM: VOC - BNA - PES - PCB - HRB - PHE - TOC - TPH - MET - OTH: RECRA
CHM: VOC - BNA - PES - PCB - HRB - PHE - TOC - TPH - MET - OTH:
TCLP: VOC - BNA - PES - HRB - MET - OTH:
RAD/OTH: GAL - GBT - GGM - SAL - TRT - ASB - OTH:
GEOTECH: GRA - SPG - ATL - POR - PRM - CON - CMP - SHR - OTH:

SPLIT SAMPLES: NON - CLI - OWN - OVR - OTH:
SPLIT SAMPLE ID NO.:
ORGANIZATION NAME:
PARAMETERS: SAME - OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: NON - DUP - RNS - TRP - MSD

COMMENTS: Sample collected with 2" by 4' Geoprobe macrosampler. Lithologic description is of sampled interval only.

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GEOLIS® Soil/Sediment Sampling Form

COMPANY: Weston
PROJECT: Columbia Gas
PROPERTY: Bangs OC
SITE/AREA: Pipeyard /

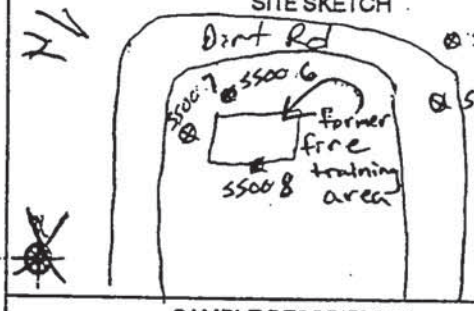
LOCATION ID: ~~SS008~~ BAN-SS 008
DATE: 11/8/95
SAMPLER: (b) (4) [redacted]
SIGNATURE:

	ESTIMATED / GPS	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		

LOCATION TYPE: SSS - SED - BOR - PIT - OTH:
GRID COORD.: / GRID ID: NA
GROUND SLOPE: FLT - SLI - MOD - STP - NA
WATER BODY/SOIL SERIES NAME:

WATER TYPE: LAK - PND - EST - RVR - STP - STI - LAG - PIP - CHN - WET
NA - OTH: FLOW: FLD - FLU - LOW - POO - DRY - NA
WATER DEPTH: FT-M BMP VELOCITY: NON - LOW - MOD - HGH

SITE SKETCH



SAMPLING INFORMATION

SAMPLE ID: BNA-SS008-40001
COLLECTION TIME (24:00): 10:25
SAMPLE DEPTH INTERVAL: .5 TO 1.5 FT-M BGS
SAMPLE TYPE: DISCRETE - COMPOSITE - OTH:
PURPOSE: BKG - RSK - GEO - EXP - CHR - REM - OTH:
ASSOCIATED WATER SAMPLE ID:
SAMPLING METHOD: TRL - SPT - BLP - DRG - BUC - SPS - CSS - STS
CUT - CTS - COR - OTH: Direct Push
SAMPLER DECONTAMINATION: DED - LAB - FLD - NON
(1) DET - (2) STM - (3) ACE - (4) HEX - (5) MET - (6) DIW - (7) POT - (8) NO3
(9) OTH: Air Dry SEQUENCE: 1 7 5 4 9 6
SAMPLING PROCEDURES USED: NON - SAP/QAPP - SOP - OTH
REFERENCE:
CHAIN-OF-CUSTODY FORM(S) FILLED OUT: YES - NO
QA SAMPLES: MS/MSD SAMPLE COLLECTED: YES - NO
DUPLICATE ID: BAN-SS008-41001
TRIP BLANK ID:
RINSE BLANK ID:

SAMPLE DESCRIPTION

MATERIAL: NAT - FIL - PRD - SDG - UNC - OTH:
ODOR: NOR - SEW - PET - CHM - ANB - NON - OTH:
SHEEN/STAIN (2): NON - SLI - MOD - HVY PET - IRN - BAC - OTH
INST. 1 TYPE: OVM READING: 0 UNITS: PPM
INST. 1 TYPE: READING: UNITS:
SURFACE LAYER: SOIL - GRS - LVS - VEG - GVL - ASP - CMT - FIL
OTHER:
THICKNESS (IN/CM): REMOVED - SAMPLED

SECONDARY TYPE: NA - BED
OVERALL COLOR: MUN - GSA - NON WET - DRY
CODE: DrkBrn
COLORATION: UNI - STN - MOT - VAR
TEXTURE: %C - M - F - VF

				SECONDARY
GRAVEL:	F	5	%	%
SAND:	M-F	70	%	%
SILT:		15	%	%
CLAY:		10	%	%
ORGANIC:			%	%

ROUNDNESS:
GRAVEL: FAC - ANG - SBA - SBR - RND - NA
SAND: ANG - SBA - SBR - RND - NA
SORTING: BIM - WEL - MOD - POR - NA
PLASTICITY: NON - LOW - MOD - HGH - NA
MOISTURE: DRY - MST - WET - SAT
STRENGTH: NONCOHESIVE: LSE - FIR - DEN - VDN
COHESIVE: VSF - SFT - FRM - STF - VST - HRD

ANALYTICAL PARAMETERS

	LAB NAME
CHM: VOC - BNA - PES - PCB - HRB - PHE - TOC - TPH - MET - OTH:	RECRA
CHM: VOC - BNA - PES - PCB - HRB - PHE - TOC - TPH - MET - OTH:	
TCLP: VOC - BNA - PES - HRB - MET - OTH:	
RAD/OTH: GAL - GBT - GGM - SAL - TRT - ASB - OTH:	
GEOTECH: GRA - SPG - ATL - POR - PRM - CON - CMP - SHR - OTH:	

SPLIT SAMPLES: NON - CLI - OWN - OVR - OTH:
SPLIT SAMPLE ID NO.:
ORGANIZATION NAME:
PARAMETERS: SAME - OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: NON - DUP - RNS - TRP - MSD

COMMENTS: Texture: Same as SS007; Sample collected with 2" by 4" Geoprobe macrosampler. Lithologic description is of sampled interval only.

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GEOLIS® Soil/Sediment Sampling Form

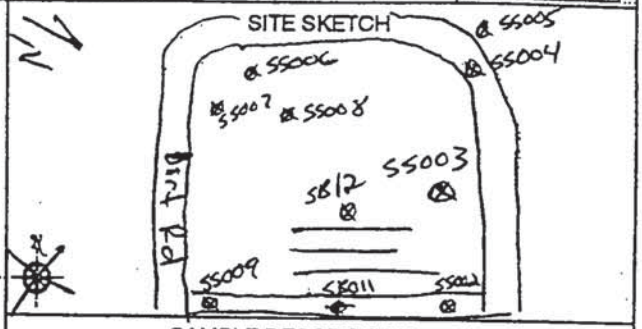
COMPANY: Weston
PROJECT: Columbia Gas
PROPERTY: Bangs OC
SITE/AREA: Pipeyard /

LOCATION ID: BAW-SS009
DATE: 11/8/95
SAMPLER: (b) (4) [redacted]
SIGNATURE:

	ESTIMATED / GPS	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		

LOCATION TYPE: SSS - SED - BOR - PIT - OTH:
GRID COORD.: / GRID ID: NA
GROUND SLOPE: FLT - SLI - MOD - STP - NA
WATER BODY/SOIL SERIES NAME:
WATER TYPE: LAK - PND - EST - RVR - STP - STI - LAG - PIP - CHN - WET
NA - OTH: FLOW: FLD - FLU - LOW - POO - DRY - NA
WATER DEPTH: FT-M BMP VELOCITY: NON - LOW - MOD - HGH

SITE SKETCH



SAMPLING INFORMATION

SAMPLE ID: Not taken
COLLECTION TIME (24:00): :
SAMPLE DEPTH INTERVAL: TO FT-M BGS
SAMPLE TYPE: DISCRETE - COMPOSITE - OTH:
PURPOSE: BKG - RSK - GEO - EXP - CHR - REM - OTH:
ASSOCIATED WATER SAMPLE ID:
SAMPLING METHOD: TRL - SPT - BLP - DRG - BUC - SPS - CSS - STS
CUT - CTS - COR - OTH:
SAMPLER DECONTAMINATION: DED - LAB - FLD - NON
(1) DET - (2) STM - (3) ACE - (4) HEX - (5) MET - (6) DIW - (7) POT - (8) NO3
(9) OTH: SEQUENCE:
SAMPLING PROCEDURES USED: NON - SAP/QAPP - SOP - OTH
REFERENCE:
CHAIN-OF-CUSTODY FORM(S) FILLED OUT: YES - NO
QA SAMPLES: MS/MSD SAMPLE COLLECTED: YES - NO
DUPLICATE ID:
TRIP BLANK ID:
RINSE BLANK ID:

SAMPLE DESCRIPTION

MATERIAL: NAT - FIL - PRD - SDG - UNC - OTH:
ODOR: NOR - SEW - PET - CHM - ANB - NON - OTH:
SHEEN/STAIN (2): NON - SLI - MOD - HVY PET - IRN - BAC - OTH
INST. 1 TYPE: OVM READING: 160 UNITS: ppm
INST. 1 TYPE: READING: UNITS:
SURFACE LAYER: SOIL - GRS - LVS - VEG - GVL - ASP - CMT - FIL
OTHER:
THICKNESS (IN/CM): REMOVED - SAMPLED

SECONDARY TYPE: NA - BED
OVERALL COLOR: MUN - GSA - NON WET - DRY
CODE: Brown/Gray
COLORATION: UNI - STN - MOT - VAR
TEXTURE: %C - M - F - VF

		SECONDARY
GRAVEL:	%	%
SAND: F	15 %	%
SILT:	75 %	%
CLAY:	10 %	%
ORGANIC:	%	%

ROUNDNESS:
GRAVEL: FAC - ANG - SBA - SBR - RND - NA
SAND: ANG - SBA - SBR - RND - NA
SORTING: BIM - WEL - MOD - POR - NA
PLASTICITY: NON - LOW - MOD - HGH - NA
MOISTURE: DRY - MST - WET - SAT
STRENGTH: NONCOHESIVE: LSE - FIR - DEN - VDN
COHESIVE: VSF - SFT - FRM - STF - VST - HRD

ANALYTICAL PARAMETERS

	LAB NAME
CHM: VOC - BNA - PES - PCB - HRB - PHE - TOC - TPH - MET - OTH:	
CHM: VOC - BNA - PES - PCB - HRB - PHE - TOC - TPH - MET - OTH:	
TCLP: VOC - BNA - PES - HRB - MET - OTH:	
RAD/OTH: GAL - GBT - GGM - SAL - TRT - ASB - OTH:	
GEOTECH: GRA - SPG - ATL - POR - PRM - CON - CMP - SHR - OTH:	

SPLIT SAMPLES: NON - CLI - OWN - OVR - OTH:
SPLIT SAMPLE ID NO.:
ORGANIZATION NAME:
PARAMETERS: SAME - OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: NON - DUP - RNS - TRP - MSD

COMMENTS: Soil sample not collected since similar material was encountered and sampled in soil boring SB011. Lithologic description is for 0-4 ft interval.

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GEOLIS® Soil/Sediment Sampling Form

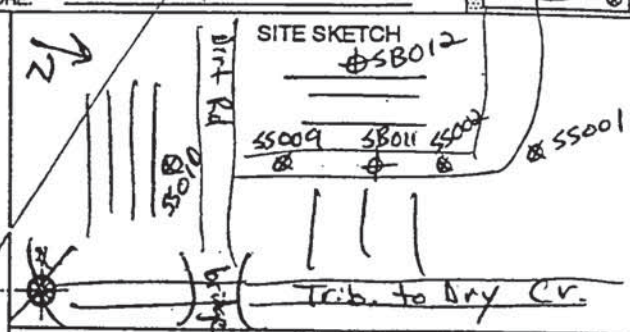
COMPANY: Weston
PROJECT: Columbia Gas
PROPERTY: Bangs OC
SITE/AREA: Pipeyard /

LOCATION ID: BAN-SS010
DATE: 11/8/95
SAMPLER: (b) (4) [redacted]
SIGNATURE:

SURFACE ELEVATION: ESTIMATED / GPS _____ SURVEYED _____
N. COORDINATE:
E. COORDINATE:
LOCATION TYPE: SSS - SED - BOR - PIT - OTH:
GRID COORD.: / GRID ID: NA
GROUND SLOPE: FLT - SLJ - MOD - STP - NA
WATER BODY/SOIL SERIES NAME:

WATER TYPE: LAK - PND - EST - RVR - STF - STI - LAG - PIP - CHN - WET
NA - OTH: FLOW: FLD - FLU - LOW - POO - DRY - NA
WATER DEPTH: FT-M BMP VELOCITY: NON - LOW - MOD - HGH

SITE SKETCH



SAMPLING INFORMATION

SAMPLE ID: BAN-SS010-40001
COLLECTION TIME (24:00): 11:20
SAMPLE DEPTH INTERVAL: 6 TO 7 FT-M BGS
SAMPLE TYPE: DISCRETE - COMPOSITE - OTH:
PURPOSE: BKG - RSK - GEO - EXP - CHR - REM - OTH:
ASSOCIATED WATER SAMPLE ID:
SAMPLING METHOD: TRL - SPT - BLP - DRG - BUC - SPS - CSS - STS
CUT - CTS - COR - OTH: Direct Push
SAMPLER DECONTAMINATION: DED - LAB - FLD - NON
(1) DET - (2) STM - (3) ACE - (4) HEX - (5) MET - (6) DIW - (7) POT - (8) NO3
(9) OTH: SEQUENCE:
SAMPLING PROCEDURES USED: NON - SAP/QAPP - SOP - OTH
REFERENCE:
CHAIN-OF-CUSTODY FORM(S) FILLED OUT: YES - NO
QA SAMPLES: MS/MSD SAMPLE COLLECTED: YES - NO
DUPLICATE ID:
TRIP BLANK ID:
RINSE BLANK ID:

SAMPLE DESCRIPTION

MATERIAL: NAT - FIL - PRD - SDG - UNC - OTH:
ODOR: NOR - SEW - PET - CHM - ANB - NON - OTH:
SHEEN/STAIN (2): NON - SLI - MOD - HVY PET - IRN - BAC - OTH
INST. 1 TYPE: OVM READING: 3.39 UNITS: PPM
INST. 1 TYPE: READING: UNITS:
SURFACE LAYER: SOD - GRS - LVS - VEG - GVL - ASP - CMT - FIL
OTHER:
THICKNESS (IN/CM): REMOVED - SAMPLED

SECONDARY TYPE: NA - BED
OVERALL COLOR: MUN - GSA - NON - WET - DRY
CODE: Red/brown
COLORATION: UN - STN - MOT - VAR
TEXTURE: %C - M - F - VF
GRAVEL: M 30 %
SAND: C F 40 %
SILT: 20 %
CLAY: 10 %
ORGANIC: %
ROUNDNESS:
GRAVEL: FAC - ANG - SBA - SBR - RND - NA
SAND: ANG - SBA - SBR - RND - NA
SORTING: BIM - WEL - MOD - POR - NA
PLASTICITY: NON - LOW - MOD - HGH - NA
MOISTURE: DRY - MST - WET - SAT
STRENGTH: NONCOHESIVE: LSE - FIR - DEN - VDN
COHESIVE: VSF - SFT - FRM - STF - VST - HRD

SECONDARY

ANALYTICAL PARAMETERS

LAB NAME

CHM: VOC - BNA - PES - PCB - HRB - PHE - TOC - TPH - MET - OTH:
CHM: VOC - BNA - PES - PCB - HRB - PHE - TOC - TPH - MET - OTH:
TCLP: VOC - BNA - PES - HRB - MET - OTH:
RAD/OTH: GAL - GBT - GGM - SAL - TRT - ASB - OTH:
GEOTECH: GRA - SPG - ATL - POR - PRM - CON - CMP - SHR - OTH:

SPLIT SAMPLES: NON - CLI - OWN - OVR - OTH:
ORGANIZATION NAME:
REPRESENTATIVES NAME:
SPLIT SAMPLE ID NO.:
PARAMETERS: SAME - OTHER:
QA/QC SAMPLES: NON - DUP - RNS - TRP - MSD

COMMENTS: Converted to soil boring; see soil boring log BAN-SS010.

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GEOLIS® Soil/Sediment Sampling Form

COMPANY: Weston
PROJECT: Columbia Gas
PROPERTY: Bangs OC
SITE/AREA: former Waste Drum Storage Area

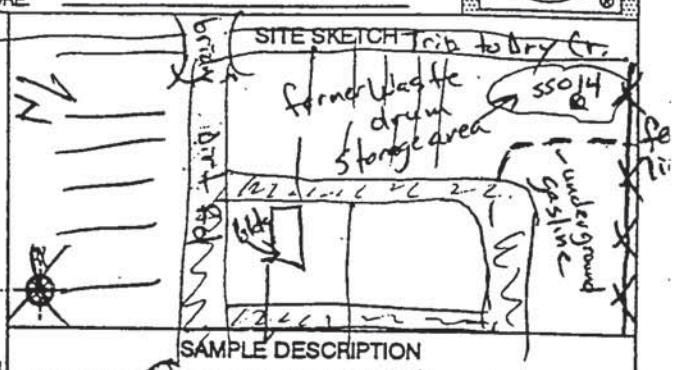
LOCATION ID: BAN SS014
DATE: 11.6.95
SAMPLER: (b) (4) [redacted]
SIGNATURE:

	ESTIMATED / GPS	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		

LOCATION TYPE: SSS - SED - BOR - PIT - OTH:
GRID COORD.: ____ / ____ GRID ID: ____ NA
GROUND SLOPE: FLT - SLI - MOD - STP - NA
WATER BODY/SOIL SERIES NAME:

WATER TYPE: LAK - PND - EST - RVR - STP - STI - LAG - PIP - CHN - WET
NA - OTH: FLOW: FLD - FLU - LOW - POO - DRY - NA
WATER DEPTH: FT-M BMP VELOCITY: NON - LOW - MOD - HGH

SITE SKETCH Trib to Dry Cr.



SAMPLING INFORMATION

SAMPLE ID: BAN - SS014 - 40001
COLLECTION TIME (24:00): 14:15
SAMPLE DEPTH INTERVAL: .5 TO 1.5 FT-M BGS
SAMPLE TYPE: DISCRETE - COMPOSITE - OTH:
PURPOSE: BKG - RSK - GEO - EXP - CHR - REM - OTH:
ASSOCIATED WATER SAMPLE ID:
SAMPLING METHOD: TRL - SPT - BLP - DRG - BUC - SPS - CSS - STS
CUT - CTS - COR - OTH: Direct Push
SAMPLER DECONTAMINATION: DED - LAB - FLD - NON
(1) DET - (2) STM - (3) ACE - (4) HEX - (5) MET - (6) DIW - (7) POT - (8) NO3
(9) OTH: Air Dry SEQUENCE: 1 7 5 4 9 6
SAMPLING PROCEDURES USED: NON - SAP - QAPP - SOP - OTH
REFERENCE:
CHAIN-OF-CUSTODY FORM(S) FILLED OUT: YES - NO
QA SAMPLES: MS/MSD SAMPLE COLLECTED: YES - NO
DUPLICATE ID:
TRIP BLANK ID:
RINSE BLANK ID:

SAMPLE DESCRIPTION

MATERIAL: NAT - FIL - PRD - SDG - UNC - OTH:
ODOR: NOR - SEW - PET - CHM - ANB - NON - OTH:
SHEEN/STAIN (2): NON - SLI - MOD - HVY PET - IRN - BAC - OTH
INST. 1 TYPE: OVM READING: 0 UNITS: PPM
INST. 1 TYPE: READING: UNITS:
SURFACE LAYER: SOL - GRS - LVS - VEG - GVL - ASP - CMT - FIL
OTHER:
THICKNESS (IN/CM): REMOVED - SAMPLED

SECONDARY TYPE: NA - BED
OVERALL COLOR: MUN - GSA - NON WET - DRY
CODE:
COLORATION: UNI - STN - MOT - VAR
TEXTURE: %C - M - F - VF

				SECONDARY
GRAVEL:			%	%
SAND:		F-VF	40 %	%
SILT:			20 %	%
CLAY:			40 %	%
ORGANIC:			%	%

ROUNDNESS:
GRAVEL: FAC - ANG - SBA - SBR - RND - NA
SAND: ANG - SBA - SBR - RND - NA
SORTING: BIM - WEL - MOD - POR - NA
PLASTICITY: NON - LOW - MOD - HGH - NA
MOISTURE: DRY - MST - WET - SAT
STRENGTH: NONCOHESIVE: LSE - FIR - DEN - VDN
COHESIVE: VSF - SFT - FRM - STF - VST - HRD

ANALYTICAL PARAMETERS

	LAB NAME
CHM: VOC - BNA - PES - PCB - HRB - PHE - TOC - TPH - MET - OTH:	RECRA
CHM: VOC - BNA - PES - PCB - HRB - PHE - TOC - TPH - MET - OTH:	
TCLP: VOC - BNA - PES - HRB - MET - OTH:	
RAD/OTH: GAL - GBT - GGM - SAL - TRT - ASB - OTH:	
GEOTECH: GRA - SPG - ATL - POR - PRM - CON - CMP - SHR - OTH:	

SPLIT SAMPLES: NON - CLI - OWN - OVR - OTH:
ORGANIZATION NAME:
REPRESENTATIVES NAME:
SPLIT SAMPLE ID NO.:
PARAMETERS: SAME - OTHER:
QA/QC SAMPLES: NON - DUP - RNS - TRP - MSD

COMMENTS: Skipped surface soil sample IDs SS011-SS013; So:1 sampled with 2" by 4' Geoprobe macrosampler. Lithologic description is for sampled material only.

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GEOLIS® Soil/Sediment Sampling Form

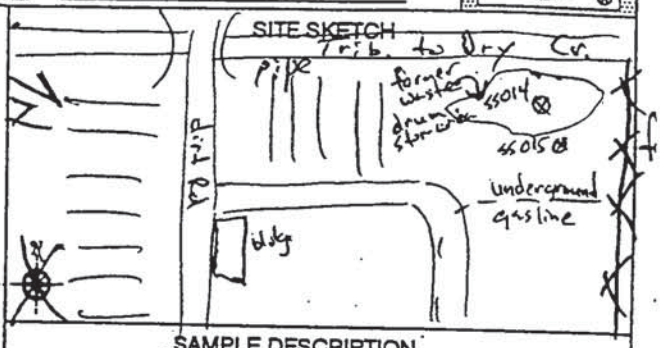
COMPANY: Weston
PROJECT: Columbia Gas
PROPERTY: Bangs OC
SITE/AREA: Former Waste Drum Storage Area

LOCATION ID: BAN-SS015
DATE: 11/8/95
SAMPLER: (b) (4) [redacted]
SIGNATURE:

SURFACE ELEVATION: ESTIMATED / GPS _____ SURVEYED _____
N. COORDINATE:
E. COORDINATE:
LOCATION TYPE: SSS - SED - BOR - PIT - OTH:
GRID COORD.: ____ / ____ GRID ID: ____ NA
GROUND SLOPE: FLT - SLI - MOD - STP - NA
WATER BODY/SOIL SERIES NAME:

WATER TYPE: LAK - PND - EST - RVR - STP - STI - LAG - PIP - CHN - WET
NA - OTH: FLOW: FLD - FLU - LOW - POO - DRY - NA
WATER DEPTH: ____ FT-M BMP VELOCITY: NON - LOW - MOD - HGH

SITE SKETCH



SAMPLING INFORMATION

SAMPLE ID: BNA-SS015-40001
COLLECTION TIME (24:00): 14:20
SAMPLE DEPTH INTERVAL: .5 TO 1.5 (FT)-M BGS
SAMPLE TYPE: DISCRETE - COMPOSITE - OTH:
PURPOSE: BKG - RSK - GEO - EXP - CHR - REM - OTH:
ASSOCIATED WATER SAMPLE ID:
SAMPLING METHOD: TRL - SPT - BLP - DRG - BUC - SPS - CSS - STS
CUT - CTS - COR - OTH: Direct Push
SAMPLER DECONTAMINATION: DED - LAB - PRD - NON
(1) DET - (2) STM - (3) ACE - (4) HEX - (5) MET - (6) DIW - (7) POT - (8) NO3
(9) OTH: Air dry SEQUENCE: 1 7 5 4 9 6
SAMPLING PROCEDURES USED: NON - SAP - QAPP - SOP - OTH
REFERENCE:
CHAIN-OF-CUSTODY FORM(S) FILLED OUT: YES - NO
QA SAMPLES: MS/MSD SAMPLE COLLECTED: YES - NO
DUPLICATE ID:
TRIP BLANK ID:
RINSE BLANK ID:

SAMPLE DESCRIPTION

MATERIAL: NAT - FIL - PRD - SDG - UNC - OTH:
ODOR: NOR - SEW - PET - CHM - ANB - NON - OTH:
SHEEN/STAIN (2): NON - SLI - MOD - HVY PET - IRN - BAC - OTH
INST. 1 TYPE: OVM READING: 0 UNITS: PPM
INST. 1 TYPE: ____ READING: ____ UNITS: ____
SURFACE LAYER: SOIL - GRS - LVS - VEG - GVL - ASP - CMT - FIL
OTHER:
THICKNESS (IN/CM): ____ REMOVED - SAMPLED

SECONDARY TYPE: NA - BED
OVERALL COLOR: MUN - GSA - NON WET - DRY
CODE:
COLORATION: UNI - STN - MOT - VAR
TEXTURE: %C - M - F - VF

				SECONDARY
GRAVEL:			%	%
SAND:		F-VF	40 %	%
SILT:			20 %	%
CLAY:			40 %	%
ORGANIC:			%	%

ROUNDNESS:
GRAVEL: FAC - ANG - SBA - SBR - RND - NA
SAND: ANG - SBA - SBR - RND - NA
SORTING: BIM - WEL - MOD - POR - NA
PLASTICITY: NON - LOW - MOD - HGH - NA
MOISTURE: DRY - MST - WET - SAT
STRENGTH: NONCOHESIVE: LSE - FIR - DEN - VDN
COHESIVE: VSF - SFT - FRM - STF - VST - HRD

ANALYTICAL PARAMETERS

LAB NAME

CHM: VOC - BNA - PES - PCB - HRB - PHE - TOC - TPH - MET - OTH: RECRA
CHM: VOC - BNA - PES - PCB - HRB - PHE - TOC - TPH - MET - OTH:
TCLP: VOC - BNA - PES - HRB - MET - OTH:
RAD/OTH: GAL - GBT - GGM - SAL - TRT - ASB - OTH:
GEOTECH: GRA - SPG - ATL - POR - PRM - CON - CMP - SHR - OTH:

SPLIT SAMPLES: NON - CLI - OWN - OVR - OTH:
ORGANIZATION NAME:
REPRESENTATIVES NAME:
SPLIT SAMPLE ID NO.:
PARAMETERS: SAME - OTHER:
QA/QC SAMPLES: NON - DUP - RNS - TRP - MSD

COMMENTS: Same as SS014; soil sampled with 2" by 4' geoprobe macrosampler. Lithologic description is for sampled interval only.

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GEOLIS® Soil/Sediment Sampling Form

COMPANY: Weston
PROJECT: Columbia Gas
PROPERTY: Bangs OC
SITE/AREA: Former Comp. / Bldg Area

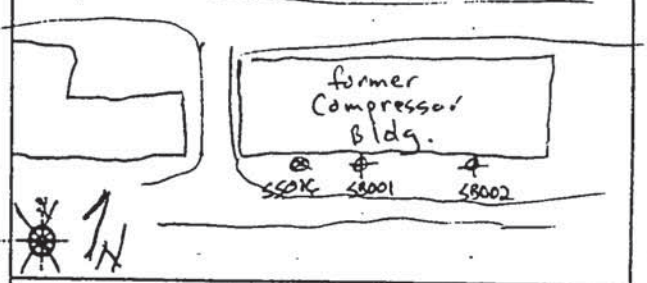
LOCATION ID: BAN-SS016
DATE: 11/8/95
SAMPLER: (b) (4) [redacted]
SIGNATURE:

	ESTIMATED / GPS	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		

LOCATION TYPE: SSS - SED - BOR - PIT - OTH:
GRID COORD.: ____ / ____ GRID ID: ____ NA
GROUND SLOPE: FLT - SLI - MOD - STP - NA
WATER BODY/SOIL SERIES NAME:

WATER TYPE: LAK - PND - EST - RVR - STP - STI - LAG - PIP - CHN - WET
NA - OTH: FLOW: FLD - FLU - LOW - POO - DRY - NA
WATER DEPTH: FT-M BMP VELOCITY: NON - LOW - MOD - HGH

SITE SKETCH



SAMPLING INFORMATION

SAMPLE ID: BAN-SS016-40001
COLLECTION TIME (24:00): 14:50
SAMPLE DEPTH INTERVAL: .5 TO 1.5 FT-M BGS
SAMPLE TYPE: DISCRETE - COMPOSITE - OTH:
PURPOSE: BKG - RSK - GEO - EXP - CHR - REM - OTH:
ASSOCIATED WATER SAMPLE ID:
SAMPLING METHOD: TRL - SPT - BLP - DRG - BUC - SPS - CSS - STS
CUT - CTS - COR - OTH: Direct Push
SAMPLER DECONTAMINATION: DED - LAB - FLD - NON
(1) DET - (2) STM - (3) ACE - (4) HEX - (5) MET - (6) DIW - (7) POT - (8) NO3
(9) OTH: Air Dry SEQUENCE: 1 7 5 4 9 6
SAMPLING PROCEDURES USED: NON - SAP - QAPP - SOP - OTH
REFERENCE:
CHAIN-OF-CUSTODY FORM(S) FILLED OUT: YES - NO
QA SAMPLES: MS/MSD SAMPLE COLLECTED: YES - NO
DUPLICATE ID:
TRIP BLANK ID:
RINSE BLANK ID:

SAMPLE DESCRIPTION

MATERIAL: NAT - FIL - PRD - SDG - UNC - OTH:
ODOR: NOR - SEW - PET - CHM - ANB - NON - OTH:
SHEEN/STAIN (2): NON - SLI - MOD - HVY PET - IRN - BAC - OTH
INST. 1 TYPE: OVM READING: 0 UNITS: ppm
INST. 1 TYPE: READING: UNITS:
SURFACE LAYER: SOIL - GRS - LVS - VEG - GVL - ASP - CMT - FIL
OTHER:
THICKNESS (IN/CM): REMOVED - SAMPLED

SECONDARY TYPE: NA - BED
OVERALL COLOR: MUN - GSA - NON WET - DRY
CODE: Brown
COLORATION: UNI - STN - MOT - VAR
TEXTURE: % C - M - F - VF

					SECONDARY
GRAVEL:			F	20 %	%
SAND:		M	F	50 %	%
SILT:				25 %	%
CLAY:				5 %	%
ORGANIC:				%	%

ROUNDNESS:
GRAVEL: FAC - ANG - SBA - SBR - RND - NA
SAND: ANG - SBA - SBR - RND - NA
SORTING: BIM - WEL - MOD - POR - NA
PLASTICITY: NON - LOW - MOD - HGH - NA
MOISTURE: DRY - MST - WET - SAT
STRENGTH: NONCOHESIVE - LSE - FIR - DEN - VDN
COHESIVE: VSF - SFT - FRM - STF - VST - HRD

ANALYTICAL PARAMETERS

LAB NAME: RECRA

CHM: VOC - BNA - PES - PCB - HRB - PHE - TOC - TPH - MET - OTH:
CHM: VOC - BNA - PES - PCB - HRB - PHE - TOC - TPH - MET - OTH:
TCLP: VOC - BNA - PES - HRB - MET - OTH:
RAD/OTH: GAL - GBT - GGM - SAL - TRT - ASB - OTH:
GEOTECH: GRA - SPG - ATL - POR - PRM - CON - CMP - SHR - OTH:

SPLIT SAMPLES: NON - CLI - OWN - OVR - OTH:
ORGANIZATION NAME:
REPRESENTATIVES NAME:
SPLIT SAMPLE ID NO.:
PARAMETERS: SAME - OTHER:
QA/QC SAMPLES: NON - DUP - RNS - TRP - MSD

COMMENTS: Sample collected with 1" by 2' Geoprobe macrosampler. Lithologic description is of sampled interval only.

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GEOLIS® Soil/Sediment Sampling Form

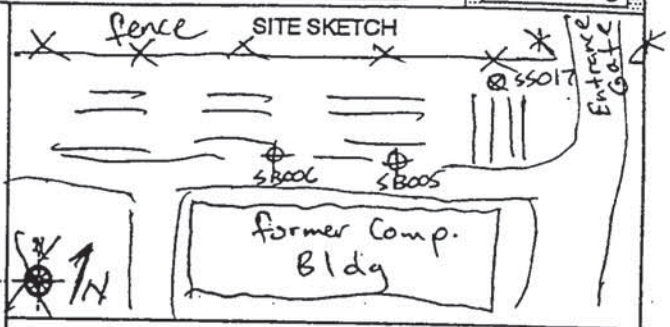
COMPANY: Weston
PROJECT: Columbia Gas
PROPERTY: Bangs OC
SITE/AREA: Former Comp./ Bldg Area

LOCATION ID: ~~SS017~~ BAN-SS017
DATE: 11/8/95
SAMPLER: (b) (4) [redacted]
SIGNATURE:

	ESTIMATED / GPS	SURVEYED
SURFACE ELEVATION:		
N. COORDINATE:		
E. COORDINATE:		

LOCATION TYPE: SSS - SED - BOR - PIT - OTH:
GRID COORD.: / GRID ID: NA
GROUND SLOPE: FLT - SLI - MOD - STP - NA
WATER BODY/SOIL SERIES NAME:
WATER TYPE: LAK - PND - EST - RVR - STP - STI - LAG - PIP - CHN - WET NA - OTH: FLOW: FLD - FLU - LOW - POO - DRY - NA
WATER DEPTH: FT-M BMP VELOCITY: NON - LOW - MOD - HGH

SITE SKETCH



SAMPLING INFORMATION

SAMPLE ID: BAN-SS017-40001
COLLECTION TIME (24:00): 15:15
SAMPLE DEPTH INTERVAL: .5 TO 1.5 FT-M BGS
SAMPLE TYPE: DISCRETE - COMPOSITE - OTH:
PURPOSE: BKG - RSK - GEO - EXP - CHR - REM - OTH:
ASSOCIATED WATER SAMPLE ID:
SAMPLING METHOD: TRL - SPT - BLP - DRG - BUC - SPS - CSS - STS CUT - CTS - COR - OTH: Direct Push
SAMPLER DECONTAMINATION: DED - LAB - FLD - NON
(1) DET - (2) STM - (3) ACE - (4) HEX - (5) MET - (6) DIW - (7) POT - (8) NO3 (9) OTH: Air Dry SEQUENCE: 1 7 5 4 9 6
SAMPLING PROCEDURES USED: NON - SAP/QAPP - SOP - OTH
REFERENCE:
CHAIN-OF-CUSTODY FORM(S) FILLED OUT: YES - NO
QA SAMPLES: MS/MSD SAMPLE COLLECTED: YES - NO
DUPLICATE ID:
TRIP BLANK ID:
RINSE BLANK ID:

SAMPLE DESCRIPTION

MATERIAL: NAT - FIL - PRD - SDG - UNC - OTH:
ODOR: NOR - SEW - PET - CHM - ANB - NON - OTH:
SHEEN/STAIN (2): NON - SLI - MOD - HVY PET - IRN - BAC - OTH
INST. 1 TYPE: OVM READING: UNITS: ppm
INST. 1 TYPE: READING: UNITS:
SURFACE LAYER: SOL - GRS - LVS - VEG - GVL - ASP - CMT - FIL
OTHER:
THICKNESS (IN/CM): REMOVED - SAMPLED

SECONDARY TYPE: NA - BED
OVERALL COLOR: MUN - GSA - NON WET - DRY
CODE: black
COLORATION: UNI - STN - MOT - VAR
TEXTURE: %C - M - F - VF

				SECONDARY
GRAVEL:		F	20 %	%
SAND:		F	50 %	%
SILT:			20 %	%
CLAY:			10 %	%
ORGANIC:			%	%

ROUNDNESS:
GRAVEL: FAC - ANG - SBA - SBR - RND - NA
SAND: ANG - SBA - SBR - RND - NA
SORTING: BIM - WEL - MOD - POR - NA
PLASTICITY: NON - LOW - MOD - HGH - NA
MOISTURE: DRY - MST - WET - SAT
STRENGTH: NONCOHESIVE - LSE - FIR - DEN - VDN
COHESIVE - VSF - SFT - FRM - STF - VST - HRD

ANALYTICAL PARAMETERS

LAB NAME

CHM: VOC - BNA - PES - PCB - HRB - PHE - TOC - TPH - MET - OTH: RECRA
CHM: VOC - BNA - PES - PCB - HRB - PHE - TOC - TPH - MET - OTH:
TCLP: VOC - BNA - PES - HRB - MET - OTH:
RAD/OTH: GAL - GBT - GGM - SAL - TRT - ASB - OTH:
GEOTECH: GRA - SPG - ATL - POR - PRM - CON - CMP - SHR - OTH:

SPLIT SAMPLES: NON - CLI - OWN - OVR - OTH:
SPLIT SAMPLE ID NO.:
ORGANIZATION NAME:
PARAMETERS: SAME - OTHER:
REPRESENTATIVES NAME:
QA/QC SAMPLES: NON - DUP - RNS - TRP - MSD

COMMENTS: Sample collected with 2" by 4' geoprobe macrosampler. Lithologic description is of sampled interval only.

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