108346

Final Report
Geophysical Survey
Utility/Structure Clearance, 49 Proposed Locations
Five Areas Surrounding Quanta Resources Superfund Site
163 River Road
Edgewater, NJ
Enviroscan Reference Number 010828a

Prepared For: CH2M Hill
Prepared By: Enviroscan, Inc.
August 27, 2008

1051 Columbia Avenue ● Lancaster, PA 17603 ● 717.396.8922 ● Fax 717.396.8746 ● email@enviroscan.com ● www.enviroscan.com

307662

ENVIROSCAN, INC.

August 27, 2008

Mr. Matthew Greenberg
CH2M Hill
25 New Chardon Street
Suite 300
Boston, MA 02114

RE: Geophysical Survey
Utility/Structure Clearance, 49 Proposed Locations
Five Areas Surrounding Quanta Resources Superfund Site
163 River Road
Edgewater, NJ
Enviroscan Reference Number 010828a

Dear Mr. Greenberg:

Pursuant to our proposal, dated May 13, 2008, Enviroscan, Inc. (Enviroscan) has completed a geophysical survey of the above-referenced site. Fieldwork was conducted on August 13 and 14, 2008. The following report, table and figures describe the methods and results of the investigation.

Purpose and Background

The purpose of the survey was to map the locations of underground metallic and non-metallic utilities (i.e. sanitary, storm, telephone, water, and electric lines) at approximately 49 proposed boring locations. The locations were located within a combination of asphalt-and grass-covered areas surrounding the Quanta Resources Superfund Site (see Figures 1A and 1B).

Survey Methods

The utility survey was completed using standard and/or routinely accepted practices of the geophysical industry and equipment representing the best available technology, including:

- a Fisher TW-6 electromagnetic (EM) pipe and cable locator/tracer;
- a Radiodetection C.A.T. and Genny pipe and cable locator/tracer;
- a Radiodetection RD4000 Multi-Frequency pipe and cable tracer; and

- a GSSI SIR-2000 ground penetrating radar (GPR) system.

The principles of these techniques are detailed below.

TW-6

In order to detect and trace underground utilities, Enviroscan employed a Fisher TW-6 pipe and cable locator and tracer. In pipe and cable search mode, the TW-6 is essentially a deep-sensing metal detector that detects any highly electrically conductive materials (e.g. metals) by creating an electromagnetic field with a transmitting coil. A receiving coil at a fixed separation from the transmitter measures the field strength. As the instrument is swept along the ground surface, subsurface metallic bodies distort the transmitted field. The change in field strength/orientation is sensed by the receiver, setting off an audible alarm and/or causing deflection of an analog meter. The TW-6 can nominally detect a 2-inch metal pipe to a depth of 8 feet and a 10-inch metal pipe to a depth of 14 feet.

In pipe and cable tracing mode, the TW-6 transmitter can be coupled directly (conductively) to exposed portions of a metallic pipe, cable, or wire or inductively to a subsurface metallic utility with known location and orientation. The transmitter remains stationary and energizes or excites the metallic utility to be traced with an 81.92-kilohertz signal that can be traced at the ground surface using the mobile TW-6 receiver wand or probe.

C.A.T. and Genny

The survey areas were also scanned with a Radiodetection C.A.T. and Genny pipe and cable locator and tracer. In Power mode, the C.A.T. detects the 50 to 60 Hertz (Hz) electromagnetic field generated by live power cables and other metallic utilities to which a live line is grounded. In Radio mode, the C.A.T. detects buried conductors (cables or metallic pipes) as they conduct and re-transmit commercial broadcast radio energy. In Genny mode, the C.A.T. detects signal generated by the Genny transmitter. The Genny transmitter can be coupled directly (conductively) to exposed portions of a metallic pipe, cable, or wire or inductively to a subsurface metallic utility with known location and orientation.

RD4000

Utility tracing was also conducted using a Radiodetection RD4000 digital cable and pipe tracer. Similar to the TW-6 and C.A.T./Genny, the transmitter can be directly coupled to exposed portions of a metallic pipe, cable, or wire or indirectly (inductively) to a subsurface metallic utility of known location/orientation. The transmitter remains stationary and energizes the metallic utility at a frequency selected by the operator (512 Hz, 8 kHz, 33 kHz, or 65 kHz), which is received at the ground surface by the digital locator. When the transmitter is directly coupled to the metallic utility, the digital receiver can also calculate the depth of the utility to an accuracy of ±10% of the actual depth of the utility. Please note the close proximity to bends in the traced line or poor signal strength can result in erroneous depth estimations.

GPR

GPR systems produce cross-sectional images of subsurface features and layers by continuously emitting pulses of radar-frequency energy from a scanning antenna as it is towed along a survey profile. The radar pulses are reflected by interfaces between materials with differing dielectric properties. The reflections return to the antenna and are displayed on a video monitor as a continuous cross section in real time. Since the electrical properties of metal are distinctly different from soil and backfill materials, metallic pipes and other structures commonly produce dramatic and characteristic reflections. Fiberglass, plastic, concrete, and terra-cotta pipes and structures also produce recognizable, but less dramatic reflections. Scanning was performed using a GSSI SIR-2000 GPR controller with an internal hard drive and a color display, and a high-frequency, high-resolution 400 megaHertz (MHz) antenna or transducer. For this investigation, GPR profiles were scanned at 2.5-foot intervals around each client-designated boring location.

Results

The utility survey results are summarized in Table 1 and shown on Figures 1A and 1B. The geophysical investigation indicated the presence of underground utilities or suspected obstructions within ten feet of 20 of the 61 proposed boring locations surveyed (Table 1). Figures 1A and 1B show both the proposed boring location and the position of suspected underground utilities as traced using the electromagnetic methods described above (electric, water, sanitary sewer, storm sewer, etc.). Proposed boring locations with suspected underground utilities or possible debris within 10 feet are shown with a 10-foot black circle around the proposed location.

Limitations

The geophysical survey described above was completed using standard and/or routinely accepted practices of the geophysical industry and equipment representing the best available technology. Enviroscan does not accept responsibility for survey limitations due to inherent technological limitations or unforeseen site-specific conditions.

Mr. Greenberg
August 27, 2008
Page 5

We have appreciated the opportunity to work with you. If you have any questions, please do not hesitate to contact me.

Sincerely,
Enviroscan, Inc.

Charles H. Rhine, M.Sc., P.G.
Senior Geophysics Project Manager

Technical Review By:
Enviroscan, Inc.

Felicia Kegel Bechtel, M.Sc., P.G.
President

enc.: Table 1: Geophysical Survey Results
Figure 1A: Geophysical Survey Results – North
Figure 1B: Geophysical Survey Results – South

Table 1
Geophysical Survey Results

Boring ID	Easting (ft)	Norting (ft)	Notes:
MW123	632591.331	718730.499	No underground utilities observed.
MW124	632418.669	718613.942	Radiodetection: Possible Water line less than 5 feet south of original location: Enviroscan re painted 10 feet north.
MW125	632633.728	719382.664	No underground utilities observed.
MW126	632793.086	719162.75	C.A.T: 60Hz Anomaly less than 1 foot south of proposed location.
MW127	632453.542	718836.536	No underground utilities observed.
MW128	632439.694	719224.719	No underground utilities observed.
MW129	632429.144	719050.235	No underground utilities observed.
MW130	633031.104	718487.906	No underground utilities observed.
MW131	633097.977	718176.808	No underground utilities observed.
MW132	633160.321	718077.373	No underground utilities observed.
MW133	633478.42	718806.372	No underground utilities observed.
MW134	633689.683	718686.996	No underground utilities observed.
MW135	633661.67	718637.761	No underground utilities observed.
MW136	632599.834	718848.757	No underground utilities observed.
MW56	632609.622	719311.537	GPR & TW 6: Large metal debris 1 foot south of proposed location.
MW57	632592.288	719274.928	No underground utilities observed.
MW58	632567.173	719224.368	No underground utilities observed.
MW59	632538.849	719163.028	No underground utilities observed.
SB39	632414.597	718922.535	GPR: Abandon gas and sanitary sewer north over 8 feet north of proposed location.
SB40	632630.684	718931.062	No underground utilities observed.
SB42	632540.149	718871.933	No underground utilities observed.
SB44	632519.111	718794.569	C.A.T: Communication line 2 feet south of proposed location.
SB45	632476.274	718894.909	No underground utilities observed.
SB47	632437.747	718702.421	No underground utilities observed.
SB48	632419.792	718498.63	No underground utilities observed.
SB49	632981.678	719087.881	C.A.T: Unknown signal (suspected rebar) less than 1 foot north of proposed location.
SB50	632966.91	719180.984	C.A.T: Suspected 60Hz electric line less than 1 foot northwest of proposed location (traffic light).
SB51	633069.279	719202.813	C.A.T: Communication line 7 feet northwest of proposed location. Gas line 8 feet northwest of proposed location.
SB52	632841.544	719288.234	GPR: Storm sewer less than 2 feet south of proposed location.
SB54	633074.811	719138.937	No underground utilities observed.
SB55	632979.603	718363.406	No underground utilities observed.
SB61	632382.892	718661.231	C.A.T: Water lines 6 feet west of proposed location.
SB62	632355.29	718441.623	No underground utilities observed.
SB63	632371.266	718294.554	C.A.T: Water lines less than 4 feet south and east of proposed location.
TL10.0-11.25	632453.54	718614.794	Radiodetection: Possible Water line less than 5 feet south of original location: Enviroscan re painted 10 feet north.
TL10.0-6.5	632855.222	718357.707	No underground utilities observed.
TL10.0-7.5	632743.074	718422.957	No underground utilities observed.

Table 1
Geophysical Survey Results

Boring ID	Easting (ft)	Norting (ft)	Notes:
TL10.0-9.0	632645.897	718491.421	C.A.T: Electric line 4 feet north of proposed location.
TL10.5-10.5	632560.66	718603.294	Multiple Instruments: Communication lines 3 feet south of proposed location.
TL10.5-9.5	632632.248	718543.091	C.A.T: Electric line less than 2 feet southeast of proposed location.
TL11.0-10.5	632570.05	718653.979	No underground utilities observed.
TL11.0-11.25	632503.183	718694.47	C.A.T: Electric line less than 1 foot west of proposed location.
TL11.0-11.75	632462.938	718719.859	No underground utilities observed.
TL11.0-12.25	632438.868	718718.736	No underground utilities observed.
TL11.5-10.5	632592.287	718696.483	GPR & TW 6: Metal debris 15 20 feet around proposed location.
TL11.5-12.0	632463.021	718760.482	No underground utilities observed.
TL12.0-0.5	633464.339	718212.369	No underground utilities observed.
TL12.0-1.5	633388.784	718270.399	No underground utilities observed.
TL12.5-10.5	632657.2558	718776.9548	C.A.T: Gas line less than 5 feet southwest of proposed location.
TL13.5-10.5	632712.892	718870.804	No underground utilities observed.
TL14.5-11.75	632644.572	719018.368	No underground utilities observed.
TL14-12.25	632574.299	718999.824	No underground utilities observed.
TL14-13.25	632507.802	719052.05	No underground utilities observed.
TL8.5-10.5	632439.9193	718427.3631	C.A.T: Electric line and Light pole 2 feet west of proposed location.
TL8.5-11.25	632403.508	718439.441	C.A.T: Electric line 10 feet northeast of proposed location.
TL9.0-6.5	632804.608	718271.135	No underground utilities observed.
TL9.0-7.5	632705.317	718330.42	No underground utilities observed.
TL9.0-9.0	632621.385	718399.027	No underground utilities observed.
TL9.5-10.5	632508.19	718519.789	No underground utilities observed.
TL9.5-11.25	632421.954	718558.078	Multiple Instruments: Possible Water line and sanitary line less than 5 feet north of original location: Enviroscan re painted 10 feet south.

Prepared by:

ENVIROSCAN, INC.

Enviroscan, Inc.
1051 Columbia Avenue
Lancaster, PA 17603
(717) 396-8922

Geophysical Survey Results - North

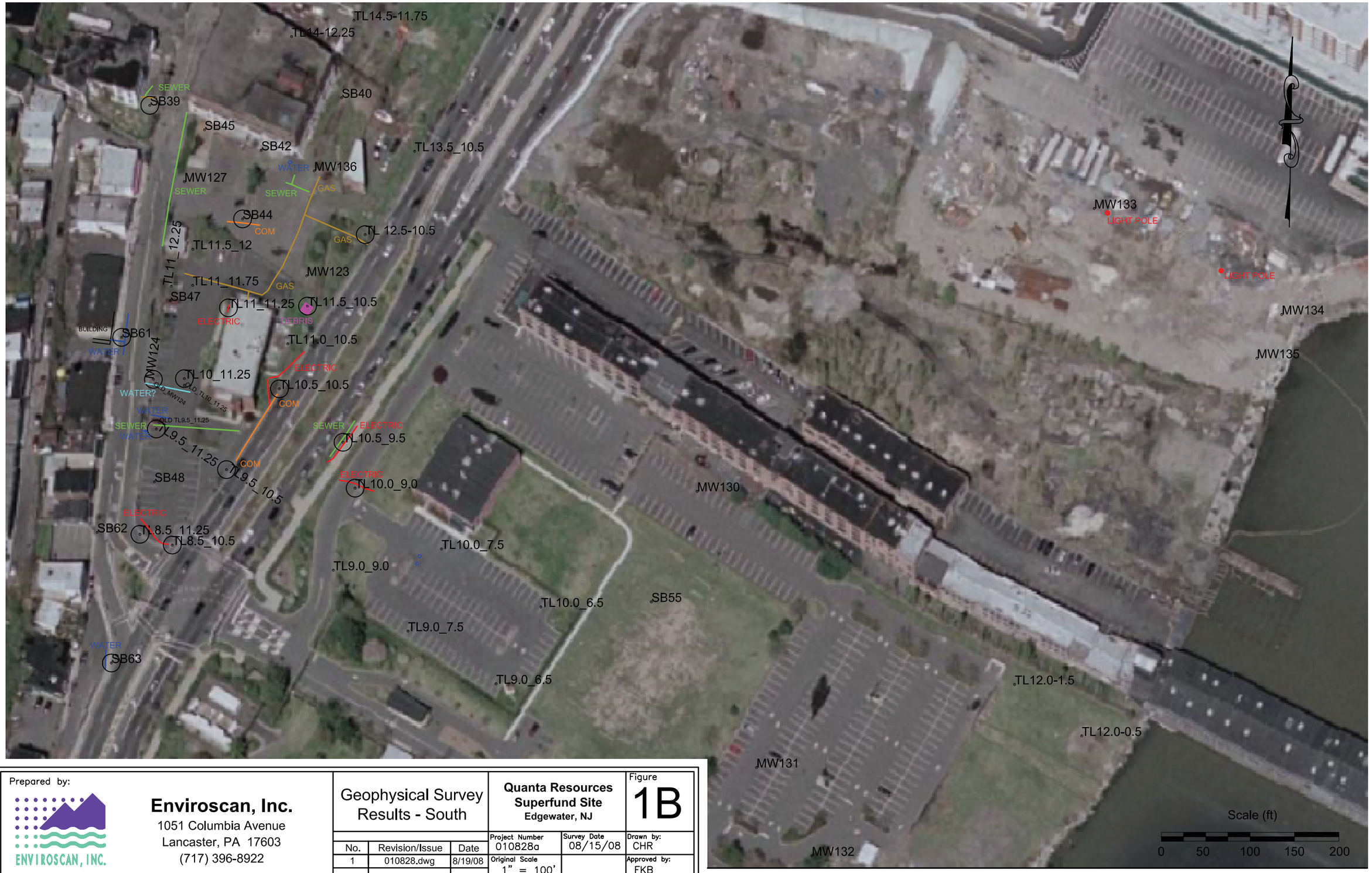
Quanta Resources Superfund Site
Edgewater, NJ

Figure **1A**

No.	Revision/Issue	Date
1	010828.dwg	8/19/08

Project Number	Survey Date	Drawn by:
010828a	08/15/08	CHR
Original Scale 1" = 100'		Approved by: FKB

B07670



Prepared by:

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ENVIROSCAN, INC.

Geophysical Survey Results - South

No.	Revision/Issue	Date
1	010828.dwg	8/19/08

Quanta Resources Superfund Site
Edgewater, NJ

Project Number	Survey Date	Drawn by:
010828a	08/15/08	CHR
Original Scale		Approved by:
1" = 100'		FKB

Figure **1B**

307671

ENVIROSCAN, INC.

Final Report
Geophysical Survey
Utility/Structure Clearance Survey
Block 92.10 and Block 94 Properties
Quanta Resources Site
Edgewater, NJ
Enviroscan Reference Number 010923

Prepared for: CH2M HILL
Prepared By: Enviroscan, Inc.
April 2, 2009

1051 Columbia Avenue ● Lancaster, PA 17603 ● 717.396.8922 ● Fax 717.396.8746 ● email@enviroscan.com ● www.enviroscan.com

ENVIROSCAN, INC.

April 2, 2009

Ms. Theresa Himmer
CH2M Hill
25 New Chardon Street
Boston, MA 02114

RE: Geophysical Survey
Utility/Structure Clearance Survey
Block 92.10 and Block 94 Properties
Quanta Resources Site
Edgewater, NJ
Enviroscan Reference Number 010923

Dear Ms. Himmer:

Pursuant to our proposal, dated January 16, 2009, Enviroscan, Inc. completed a geophysical survey at the above-referenced site on February 17, 2009. The purpose of the survey was to provide up to one day of scanning to locate underground metallic and non-metallic utilities (i.e. sanitary, storm, gas, telephone, water, and electric lines) in client-designated areas beneath the site. To ensure detection of the widest possible range of subsurface utility and structure types, the survey employed metal detection (MD), ground penetrating radar (GPR), and magnetic (MAG) methods as described below.

1051 Columbia Avenue ● Lancaster, PA 17603 ● 717.396.8922 ● Fax 717.396.8746 ● email@enviroscan.com ● www.enviroscan.com

Methods

MD

The survey area was scanned with a Fisher TW-6 pipe and cable locator and tracer. In pipe and cable search mode, the TW-6 is essentially a deep-sensing metal detector that detects any electrically conductive materials by creating an electromagnetic field with a transmitting coil. A receiving coil at a fixed separation from the transmitter measures the field strength. As the instrument is swept along the ground surface, subsurface metallic bodies distort the transmitted field. The change in field strength is sensed by the receiver, setting off an audible alarm and/or causing deflection of an analog meter. The TW-6 can nominally detect a 2-inch metal pipe to a depth of 8 feet and a 10-inch metal pipe to a depth of 14 feet. In pipe and cable tracing mode, the TW-6 transmitter can be coupled directly (conductively) to exposed portions of a metallic pipe, cable, or wire or inductively to a subsurface metallic utility with known location and orientation. The transmitter remains stationary and energizes the utility to be traced with an 81.92 kilohertz signal which can be traced at the ground surface using the mobile TW-6 receiver. Depths to metallic utilities can be determined (to within approximately 0.5 feet where possible) using inductive or conductive mode triangulation.

Enviroscan also employed a Radiodetection CAT & Genny system (which operates in a fashion similar to the TW-6 in pipe tracing mode but with a different signal frequency), and a Radiodetection RD400 digital PDL-2 cable and pipe locator and RD433HCTx-2 transmitter. Similar to the TW-6, the transmitter can be directly coupled to exposed portions of a pipe, or indirectly (inductively) to a subsurface metallic utility of known location/orientation. The HCTx-2 transmitter produces an electromagnetic field around the metallic utility at a frequency selected by the operator (512 Hz, 8 kHz, 33 kHz, or 65 kHz), which is received at the ground surface by the PDL-2 locator.

GPR

GPR systems produce cross-sectional images of subsurface features and layers by continuously emitting pulses of radar-frequency energy from a scanning antenna as it is towed along a survey profile. The radar pulses are reflected by interfaces between materials with differing dielectric properties. The reflections return to the antenna and are printed on a strip chart recorder or displayed on a video monitor as a continuous cross section in real time. Since the electrical properties of metal are distinctly different from soil and backfill materials, metallic pipes and other structures produce dramatic and characteristic reflections. Fiberglass, plastic, concrete, and terra-cotta pipes and structures also produce recognizable, but less dramatic reflections. Initial scanning at the site indicated poor GPR signal penetration due to possible fill material and highly conductive soils with an elevated water table.

MAG

The survey area was also scanned with a Schoenstedt G72cd MAG instrument which contains two elements that measure the difference in total strength of the earth's magnetic field between two fixed heights above the ground surface (i.e. the magnetic gradient). In the absence of artificial magnetic fields or buried ferromagnetic objects, the natural gradient of the earth's field is relatively constant. Where buried magnetic or ferromagnetic objects (e.g. cast iron) are present, the gradient varies rapidly as the instrument is swept along the ground surface, triggering an audible alarm. The MAG instrument employed for this survey can nominally detect a 2-inch steel pipe to a depth of 4 feet.

The survey was performed by first directly connecting to all visible cleanouts and fittings in the survey area. The lines were frequently traced in reverse to identify any jumping of signal from one utility to other utilities (e.g. water, sewer, electric, etc.) or suspected metal reinforcing and/or abandoned utility lines. Following marking of traceable lines, the CAT system was utilized in search mode over the survey area to detect metallic utility lines and electric lines.

Survey Results

As described above, GPR was not effective due to the presence of fill material and highly conductive soils, which limited effective signal penetration. Seven soil boring locations (SB-39, SB-52, SB-58, ALT-1, ALT-2, ALT-3, and ALT-5) and two monitoring well locations (MW-128 and MW-129) were surveyed to identify any subsurface utility within a 10-foot radius of the proposed boring/well location. Boring SB-39, MW-129, and MW-128 were relocated and designated with an "A" qualifier in the name. One electric line was identified connecting the parking lights in the parking lot area near River Road. Boring ALT-5 was not relocated and painted on the ground. Instead, the first parking spot to the south of ALT-5 was cleared and the client indicated that the boring would be installed in that area.

Limitations

The subsurface utility survey was completed using standard and/or routinely accepted practices of the geophysical industry and equipment representing the best available technology. Enviroscan does not accept responsibility for survey limitations due to inherent technological limitations or site-specific conditions. However, we make every effort to identify and notify the client of such limitations or conditions. In particular, please note that the accuracy of the utility tracing techniques employed for this survey can vary based on many site-specific subsurface conditions (e.g. soil composition, utility geometry and construction, etc.). Therefore, Enviroscan recommends that borings or excavations honor the 18-inch clearance zone for marked utilities and a 3-foot clearance zone for multiple utilities/duct banks, as specified by the one-call community.

We have enjoyed and appreciated this opportunity to have worked with you. If you have any questions, please do not hesitate to contact me.

Sincerely,
Enviroscan, Inc.

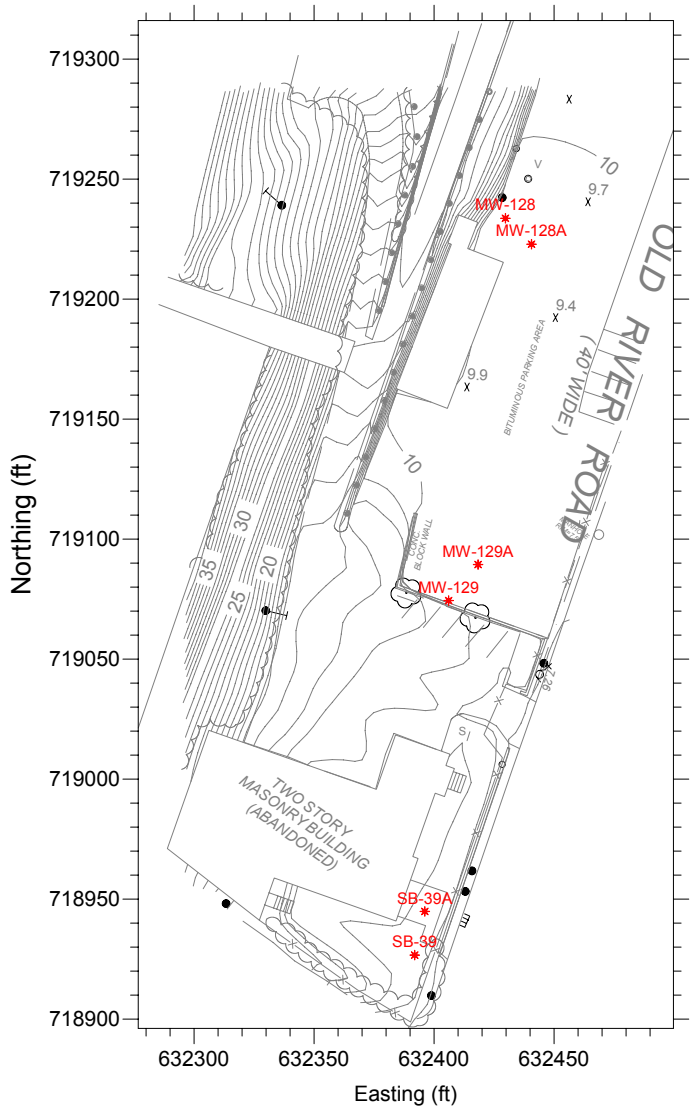
Craig Ulrich, M.Sc.
Project Geophysicist

Technical Review By:
Enviroscan, Inc.

Felicia Kegel Bechtel, M.Sc., P.G.
President

enc.: Figure 1: Boring Clearance Map with Survey Results

Old River Road Area



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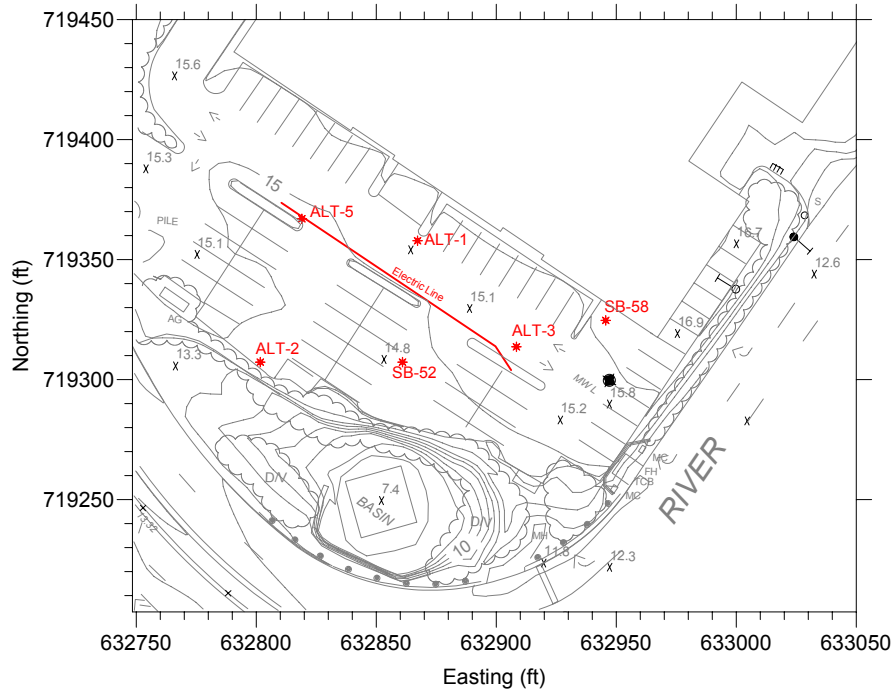
River Road Area



Notes:

Base map from client in NJ State Plane NAD83.
Boring locations from Enviroscan field GPS survey.

Scale (ft)

0 40 80 120 160

1' = 80'

Prepared by:	Title:	Project Location:		Figure
Enviroscan, Inc. 1051 Columbia Ave. Lancaster PA 17603 717-396-8922 www.enviroscan.com	**Boring Clearance Map with Survey Results**	**Quanta Resources Site Edgewater, NJ**		1 of 1
		Project Number 010923	Revision/Issue Rev. 03/19/09	
		Original Scale 1" = 80'	Survey Ending Date 02/17/09	Drawn by: CAU / Approved by: FKB

307678

BORING LOG

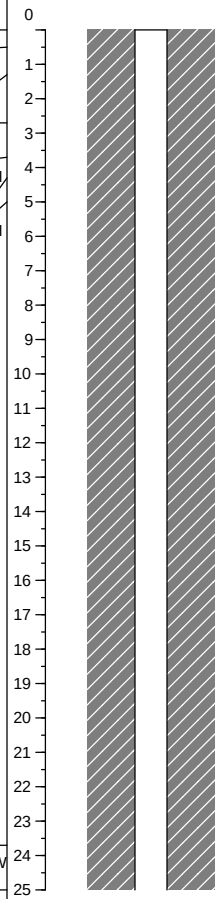
CH2MHILL

BORING/WELL ID: BH-1

PROJECT NAME: Quanta Resources Superfund Site
SURFACE ELEVATION: 5.9 ft. MSL
LOCATION: Quanta Property Shoreline
MEASURING POINT: PVC Casing
PROJECT NUMBER: 363725
MEASURING POINT ELEVATION: 6.27 ft. MSL
CLIENT: Honeywell Inc.
TOTAL DEPTH: 41.5 ft. bgs
DRILLING CONTRACTOR: Boart Longyear
FOREMAN: J Graglia
DRILLING METHOD: Rotasonic Drill Rig
DRILLING EQUIPMENT: Boart Longyear Mini Rotasonic
SAMPLING METHOD: 5 ft. core barrel
CH2M OBSERVER: A. Harclerode
START DATE: 9/17/08
FINISH DATE: 9/17/08
NORTHING: 718555.52
EASTING: 633638.32
APPROX. DEPTH TO WATER: 5.0 ft. bgs 9/17/08

DEPTH (FT. BGS)	SAMPLE OR RUN DESIGNATION	SAMPLE TYPE	BLOWS PER 6 INCHES or CORE RUN (time/ft.)	RECOVERY/ PENETRATION (FT.)	RQD	SCREENING DATA PID	SCREENING DATA FID	ELEVATION (ft. MSL)	MATERIALS DESCRIPTION (SOILS: classification, secondary grain size, color, moisture, and other descriptors; ROCK: rock type, hardness, major mineral types, color, weathering, and degree of fracturing)	USCS GROUP SYMBOL
0		RC	N/A	3.0/5.0	N/A	NM	NM	5	Hard TAR	GP
						2.2	NM		Fine to coarse sub-angular GRAVEL, some semi-solid, soft tar, very dark brown, 7.5YR, 2.5/2, dry, loose (FILL)	
						0.1	NM		CINDER and SLAG, some silty sand, very dark brown, 7.5YR, 2.5/2 and black, dry, loose (FILL)	ML
						0.3	NM			
						9.1	NM		SILT with fine sub-rounded to sub-angular GRAVEL, dark brown, 7.5YR, 3/2, trace fine to coarse sand, moist, stiff (FILL)	OL/OH
5		RC	N/A	3.2/5.0	N/A	NM	NM	0		OL/OH
						374	NM		Clayey SILT, trace wood, trace to some organics, trace fine to medium sub-angular to sub-rounded gravel, some staining and some product (FILL)	
						86	NM		BOULDER fill, some clayey silt, trace wood, trace to some organics, trace fine to medium sub-angular to sub-rounded gravel, some staining and product (FILL)	
10		RC	N/A	3.0/5.0	N/A	101	NM	-5	Intermixed organic SILT, WOOD, CINDER, SLAG, some coarse sand, and fine sub-rounded gravel, prevalent product and obvious odor, black, wet, loose/soft (FILL)	
									Silty CLAY/native, black, moist, soft, product-impacted to approximately 9' bgs	
15		RC	N/A	2.0/5.0	N/A	22.2	NM	-10	Silty CLAY, trace to some organic matter, centimeter scale lenses/seams of product, very dark grey, 7.5YR, 4/1, moist, soft, 13 - 15 ft.: trace millimeter scale product lenses/seams	
						1.9	NM		Silty CLAY, trace to some organic matter, trace lenses/seams of product, very dark grey, 7.5YR, 4/1, moist, soft	
20		RC	N/A	5.0/5.0	N/A	0.2	NM	-15	Silty CLAY, trace to some organic matter, some shell fragments, trace fine to coarse sand, very dark grey, 7.5YR, 4/1, trace lenses/seams of product, moist, soft	
									Silty CLAY with fine to coarse rounded to sub-angular GRAVEL, trace to some organic matter, some shell fragments, trace fine to coarse sand, very dark grey, 7.5YR, 4/1, wet, medium dense	
						0.2	NM		Sandy GRAVEL, fine to coarse sub-rounded SAND, fine to coarse GRAVEL, little silt, product staining, wet	GW/SW
25										

WELL CONSTRUCTION



LEGEND:
msl = mean sea level
bgs = below ground surface
ND = not detected
NM = not measured
N/A = not applicable

SAMPLE TYPES:
D: drive
W: washed
ST: Shelby Tube
A: Auger
HA: hand auger
C: cored
RC: rotasonic core

SOIL:
MOISTURE:
dry
moist
wet

GRANULAR SOILS DENSITY:
0-4: very loose
5-10: loose
11-29: medium dense
30-49: dense
50+: very dense

PLASTIC SOILS DENSITY:
0-2: very soft
3-4: soft
5-8: medium soft
9-15: stiff
16-30: very stiff
>30: hard

PROPORTIONS:
Trace: <5% Few: 16-30%
Little: 6-15% Some: 31-49%

Density designation based on blow counts for each 12" of penetration using a 140 lb. hammer w/30" drop
When blow counts were not possible, density descriptions, as included in the "Materials Description" are based upon a thumb penetration test

NOTES:
No analytical samples collected at this location

ROCK:
RQD (rock quality designation):
reported in % = [length of core in pieces 4" and longer/ length of run] x100

307679

BORING LOG

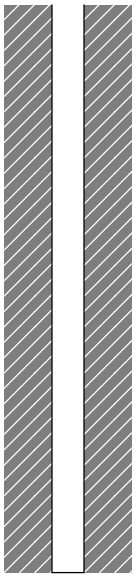
BORING/WELL ID: BH-1

PROJECT NAME: Quanta Resources Superfund Site
SURFACE ELEVATION: 5.9 ft. MSL
LOCATION: Quanta Property Shoreline
MEASURING POINT: PVC Casing
PROJECT NUMBER: 363725
MEASURING POINT ELEVATION: 6.27 ft. MSL
CLIENT: Honeywell Inc.
TOTAL DEPTH: 41.5 ft. bgs
DRILLING CONTRACTOR: Boart Longyear
FOREMAN: J Graglia
DRILLING METHOD: Rotasonic Drill Rig
DRILLING EQUIPMENT: Boart Longyear Mini Rotasonic
SAMPLING METHOD: 5 ft. core barrel
CH2M OBSERVER: A. Harclerode
START DATE: 9/17/08
FINISH DATE: 9/17/08
NORTHING: 718555.52
EASTING: 633638.32
APPROX. DEPTH TO WATER: 5.0 ft. bgs 9/17/08

DEPTH (FT. BGS)	SAMPLE OR RUN DESIGNATION	SAMPLE TYPE	BLOWS PER 6 INCHES or CORE RUN (time/ft.)	RECOVERY/ PENETRATION (FT.)	RQD	SCREENING DATA PID	SCREENING DATA FID	ELEVATION (ft. MSL)	MATERIALS DESCRIPTION (SOILS: classification, secondary grain size, color, moisture, and other descriptors; ROCK: rock type, hardness, major mineral types, color, weathering, and degree of fracturing)	USCS GROUP SYMBOL
25		RC	N/A	4.0/4.0	N/A	NM		-20	Silty, fine to coarse grained SAND, little sub-rounded to sub-angular, fine to coarse gravel, cobble-sized pieces of rock cored through, wet, trace product	SM
									SANDSTONE, dry, broken up with drilling/core barrel advancement	
		RC	N/A	1.0/1.0	N/A	ND	NM		Fine to coarse grained SAND, little clay, wet, trace partially lithified sandstone pieces, light grey, 7.5YR, 7/1	SW
30		RC	N/A	5.0/5.0	N/A	NM	NM	-25	Interbedded, partially lithified and unlithified sub-rounded SAND, weak red, 10R, 4/3, dense, dry	
						NM	NM			
						NM	NM		ROCK flour and pieces of medium SAND, white, 7.5YR, 8/1, dry	
									Clayey SAND and partially lithified medium grained sandstone, pinkish grey, 7.5YR, 7/3, moist/wet	
35		RC	N/A	2.5/2.5	N/A	NM	NM	-30	Interbedded SILTSTONE and SANDSTONE, partially lithified, white, 7.5YR, 8/1, dry	
						NM	NM		SILTSTONE, lithified and partially lithified pieces, weak red, 10R, 4/4, dry	
		RC	N/A	3.3/4.0	N/A	NM	NM		SANDSTONE, white, 7.5YR, 8/1, dry, broken up/pulverized by drilling/core barrel advancement	
						NM	NM			
40								-35	Core drilled with water to aid advancement. Fine to medium grained SAND interbedded with SANDSTONE, trace coarse sand, trace silt, pinkish grey, 7.5YR, 6/2	
									Bottom of boring @ 41.5 ft. bgs	
45								-40		
50										

GRAPHICAL LOG

WELL CONSTRUCTION



LEGEND:
msl = mean sea level
bgs = below ground surface
ND = not detected
NM = not measured
N/A = not applicable

SAMPLE TYPES:
D: drive
W: washed
ST: Shelby Tube
A: Auger
HA: hand auger
C: cored
RC: rotasonic core

SOIL:

MOISTURE:
dry
moist
wet

GRANULAR SOILS DENSITY:
0-4: very loose
5-10: loose
11-29: medium dense
30-49: dense
50+: very dense

PLASTIC SOILS DENSITY:
0-2: very soft
3-4: soft
5-8: medium soft
9-15: stiff
16-30: very stiff
>30: hard

PROPORTIONS:
Trace: <5% Few: 16-30%
Little: 6-15% Some: 31-49%

Density designation based on blow counts for each 12" of penetration using a 140 lb. hammer w/30" drop
When blow counts were not possible, density descriptions, as included in the "Materials Description" are based upon a thumb penetration test

NOTES:
No analytical samples collected at this location

ROCK:
RQD (rock quality designation): reported in % = [length of core in pieces 4" and longer/ length of run] x100

307680

BORING LOG

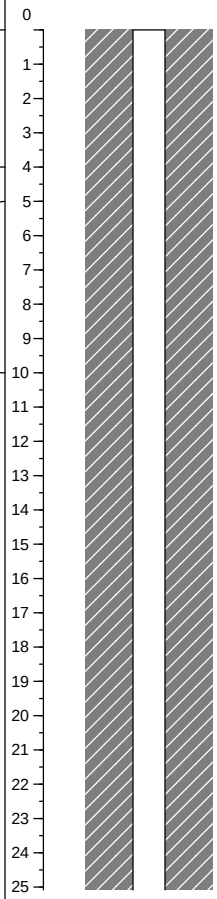
BORING/WELL ID: BH-2

PROJECT NAME: Quanta Resources Superfund Site
SURFACE ELEVATION: 5.8 ft. MSL
LOCATION: Quanta Property Shoreline
MEASURING POINT: PVC Casing
PROJECT NUMBER: 363725
MEASURING POINT ELEVATION: 6.11 ft. MSL
CLIENT: Honeywell Inc.
TOTAL DEPTH: 55 ft. bgs
DRILLING CONTRACTOR: Boart Longyear
FOREMAN: J Graglia
DRILLING METHOD: Rotasonic Drill Rig
DRILLING EQUIPMENT: Boart Longyear Mini Rotasonic
SAMPLING METHOD: 5 ft. core barrel
CH2M OBSERVER: A. Harclerode
START DATE: 9/18/08
FINISH DATE: 9/23/08
NORTHING: 718463.72
EASTING: 633605.07
APPROX. DEPTH TO WATER: 5.0 ft. bgs 9/18/08

DEPTH (FT. BGS)	SAMPLE OR RUN DESIGNATION	SAMPLE TYPE	BLOWS PER 6 INCHES or CORE RUN (time/ft.)	RECOVERY/ PENETRATION (FT.)	RQD	SCREENING DATA PID	SCREENING DATA FID	ELEVATION (ft. MSL)	MATERIALS DESCRIPTION (SOILS: classification, secondary grain size, color, moisture, and other descriptors; ROCK: rock type, hardness, major mineral types, color, weathering, and degree of fracturing)	USCS GROUP SYMBOL
0		RC	N/A	3.0/5.0		NM	NM	5	WOOD, black (FILL)	
						3.0	NM		COAL and CINDER pieces, silt to gravel-sized, black, dry (FILL)	
						0.9	NM		SILT, trace fine to coarse sand and angular fine gravel, brown, 7.5YR, 4/4, dry (FILL)	ML
5		RC	N/A	0.2/5.0		NM	NM	0	WOOD; driller reports drilling through wood for entire interval. Second attempt made at recovery but was unsuccessful (FILL)	
10		RC	N/A	0.7/5.0		4.2	NM	-5	SILT, black, little clay, trace to little fine to coarse sand, trace wood, trace sub-angular fine to coarse gravel, wet, very soft, staining and product sheen. Note: softness of material makes it difficult to keep sample in core barrel	OL/OH
15		RC	N/A	0.9/5.0		9.9	NM	-10	Silty CLAY, some wood and shell fragments, black, soft, wet, product seams present	
20		RC	N/A	2.5/5.0		7.3	NM	-15	Silty CLAY, some wood and shell fragments, black, soft, wet, product seams present	
25	24' to 24.5' (SB-BH2a-24.25)									

GRAPHICAL LOG

WELL CONSTRUCTION



LEGEND:
msl = mean sea level
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NM = not measured
N/A = not applicable

SAMPLE TYPES:
D: drive
W: washed
ST: Shelby Tube
A: Auger
HA: hand auger
C: cored
RC: rotasonic core

SOIL: GRANULAR SOILS DENSITY:
0-4: very loose
5-10: loose
11-29: medium dense
30-49: dense
50+: very dense

PLASTIC SOILS DENSITY:
0-2: very soft
3-4: soft
5-8: medium soft
9-15: stiff
16-30: very stiff
>30: hard

MOISTURE:
dry
moist
wet

PROPORTIONS:
Trace: <5% Few: 16-30%
Little: 6-15% Some: 31-49%

Density designation based on blow counts for each 12" of penetration using a 140 lb. hammer w/30" drop
When blow counts were not possible, density descriptions, as included in the "Materials Description" are based upon a thumb penetration test

NOTES:
SB-BH2a (24.0 - 24.5): TPH Fingerprint

ROCK:
RQD (rock quality designation):
reported in % = [length of core in pieces 4" and longer/ length of run] x100

307681

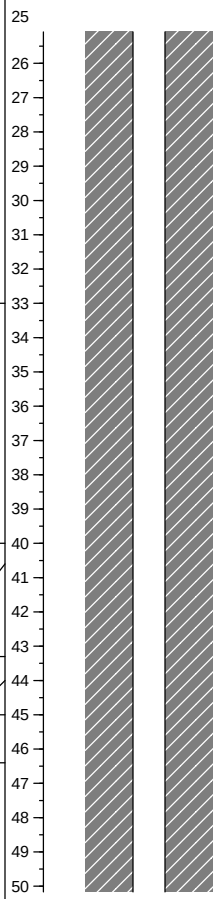
BORING LOG

BORING/WELL ID: BH-2

PROJECT NAME: Quanta Resources Superfund Site
SURFACE ELEVATION: 5.8 ft. MSL
LOCATION: Quanta Property Shoreline
MEASURING POINT: PVC Casing
PROJECT NUMBER: 363725
MEASURING POINT ELEVATION: 6.11 ft. MSL
CLIENT: Honeywell Inc.
TOTAL DEPTH: 55 ft. bgs
DRILLING CONTRACTOR: Boart Longyear
FOREMAN: J Graglia
DRILLING METHOD: Rotasonic Drill Rig
DRILLING EQUIPMENT: Boart Longyear Mini Rotasonic
SAMPLING METHOD: 5 ft. core barrel
CH2M OBSERVER: A. Harclerode
START DATE: 9/18/08
FINISH DATE: 9/23/08
NORTHING: 718463.72
EASTING: 633605.07
APPROX. DEPTH TO WATER: 5.0 ft. bgs 9/18/08

DEPTH (FT. BGS)	SAMPLE OR RUN DESIGNATION	SAMPLE TYPE	BLOWS PER 6 INCHES or CORE RUN (time/ft.)	RECOVERY/ PENETRATION (FT.)	RQD	SCREENING DATA PID	SCREENING DATA FID	ELEVATION (ft. MSL)	MATERIALS DESCRIPTION (SOILS: classification, secondary grain size, color, moisture, and other descriptors; ROCK: rock type, hardness, major mineral types, color, weathering, and degree of fracturing)	USCS GROUP SYMBOL
25		RC	N/A	5.0/8.0		3.0	NM	-20	Silty CLAY, black, trace wood and shell fragments, trace product at 25.3 to 25.7 ft., within wood fragments' pore space, moist	
30		RC	N/A	0.0/3.0		NM	NM	-25	No Recovery	
									Silty SAND, trace clay, little rounded, fine to coarse gravel, trace wood, dark grey, 10YR, 4/1, wet	
		RC	N/A	5.2/7.0		NM	NM		Silty SAND, trace to little clay, trace sub-rounded to sub-angular fine to coarse gravel, grades to little gravel, trace rounded cobble, reddish brown, 5YR, 5/4, wet, moderately dense, moist, (some cobble is siltstone/sandstone)	SM
35						NM	NM	-30		
									Fine to medium SAND, little coarse sand, trace subangular to angular fine gravel, trace silt, grades to medium to coarse sand, brown, 7.5YR, 4/3, wet	
40		RC	N/A	5.0/5.0		NM	NM	-35		SP
						NM	NM		Silty fine to medium SAND and GRAVEL, trace coarse sand, gravel is sub-angular to angular, fine grained, brown, 7.5YR, 4/3, wet	SM
						NM	NM			
						NM	NM		Silty SAND, little clay, fine to medium sand, little coarse sand, little sub-rounded to sub-angular fine to coarse gravel, trace cobble, brown, 10YR, 4/3, moist, very dense	SP
						NM	NM			
45		RC	N/A	4.6/5.0		NM	NM	-40	Fine to medium grained SAND, well rounded, trace rounded fine gravel, dark reddish grey, 10R, 4/1, dry, dense	SM
						NM	NM		Interbedded SILTSTONE and SANDSTONE, white, 7.5YR, 8/1, dry, partially lithified, partially pulverized by coring	
									Silty SAND, little clay, fine to medium sand, little coarse sand, little sub-rounded to sub-angular fine to coarse gravel, trace cobble, brown, 10YR, 4/3, moist, very dense	
50										

WELL CONSTRUCTION



LEGEND:
msl = mean sea level
bgs = below ground surface
ND = not detected
NM = not measured
N/A = not applicable

SAMPLE TYPES:
D: drive
W: washed
ST: Shelby Tube
A: Auger
HA: hand auger
C: cored
RC: rotasonic core

SOIL: GRANULAR SOILS DENSITY:
0-4: very loose
5-10: loose
11-29: medium dense
30-49: dense
50+: very dense

PLASTIC SOILS DENSITY:
0-2: very soft
3-4: soft
5-8: medium soft
9-15: stiff
16-30: very stiff
>30: hard

MOISTURE:
dry
moist
wet

PROPORTIONS:
Trace: <5% Few: 16-30%
Little: 6-15% Some: 31-49%

Density designation based on blow counts for each 12" of penetration using a 140 lb. hammer w/30" drop
When blow counts were not possible, density descriptions, as included in the "Materials Description" are based upon a thumb penetration test

NOTES:
SB-BH2a (24.0 - 24.5): TPH Fingerprint

ROCK:
RQD (rock quality designation):
reported in % = [length of core in pieces 4" and longer/ length of run] x100

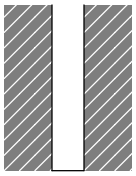
307682

BORING LOG

BORING/WELL ID: BH-2

PROJECT NAME: Quanta Resources Superfund Site
SURFACE ELEVATION: 5.8 ft. MSL
LOCATION: Quanta Property Shoreline
MEASURING POINT: PVC Casing
PROJECT NUMBER: 363725
MEASURING POINT ELEVATION: 6.11 ft. MSL
CLIENT: Honeywell Inc.
TOTAL DEPTH: 55 ft. bgs
DRILLING CONTRACTOR: Boart Longyear
FOREMAN: J Graglia
DRILLING METHOD: Rotasonic Drill Rig
DRILLING EQUIPMENT: Boart Longyear Mini Rotasonic
SAMPLING METHOD: 5 ft. core barrel
CH2M OBSERVER: A. Harclerode
START DATE: 9/18/08
FINISH DATE: 9/23/08
NORTHING: 718463.72
EASTING: 633605.07
APPROX. DEPTH TO WATER: 5.0 ft. bgs 9/18/08

DEPTH (FT. BGS)	SAMPLE OR RUN DESIGNATION	SAMPLE TYPE	BLOWS PER 6 INCHES or CORE RUN (time/ft.)	RECOVERY/ PENETRATION (FT.)	RQD	SCREENING DATA PID	SCREENING DATA FID	ELEVATION (ft. MSL)	MATERIALS DESCRIPTION (SOILS: classification, secondary grain size, color, moisture, and other descriptors; ROCK: rock type, hardness, major mineral types, color, weathering, and degree of fracturing)	GRAPHICAL LOG	USCS GROUP SYMBOL	WELL CONSTRUCTION
50		RC	N/A	2.7/5.0		NM	NM	-45	ROCK flour and partially lithified SANDSTONE, some unlithified sand, white, 7.5YR, 8/1, dry			
									Competent SANDSTONE, primarily fine to medium grained, sub-rounded, trace coarse grained thin beds, light brownish grey, 10YR, 6/2, brownish yellow, 10YR, 6/6, very thin beds of siltstone, strong competency, slight weathering/oxidation			
55									Bottom of boring @ 55' bgs			
								-50				
60								-55				
65								-60				
70								-65				
75												



LEGEND:
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ND = not detected
NM = not measured
N/A = not applicable

SAMPLE TYPES:
D: drive
W: washed
ST: Shelby Tube
A: Auger
HA: hand auger
C: cored
RC: rotasonic core

SOIL:

MOISTURE:
dry
moist
wet

GRANULAR SOILS DENSITY:
0-4: very loose
5-10: loose
11-29: medium dense
30-49: dense
50+: very dense

PLASTIC SOILS DENSITY:
0-2: very soft
3-4: soft
5-8: medium soft
9-15: stiff
16-30: very stiff
>30: hard

PROPORTIONS:
Trace: <5% Few: 16-30%
Little: 6-15% Some: 31-49%

Density designation based on blow counts for each 12" of penetration using a 140 lb. hammer w/30" drop
When blow counts were not possible, density descriptions, as included in the "Materials Description" are based upon a thumb penetration test

NOTES:
SB-BH2a (24.0 - 24.5): TPH Fingerprint

ROCK:
RQD (rock quality designation):
reported in % = [length of core in pieces 4" and longer/ length of run] x100

307683

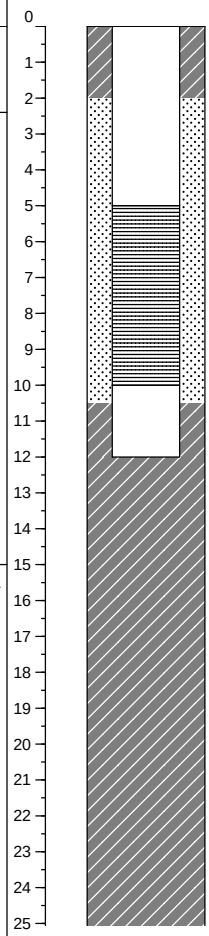
BORING LOG

BORING/WELL ID: MW-123

PROJECT NAME: Quanta Resources Superfund Site
SURFACE ELEVATION: 6.0 ft. MSL
LOCATION: NE Corner of Block 93 South
MEASURING POINT: PVC Casing
PROJECT NUMBER: 363725
MEASURING POINT ELEVATION: 5.54 ft. MSL
CLIENT: Honeywell Inc.
TOTAL DEPTH: 30 ft. bgs
DRILLING CONTRACTOR: Boart Longyear
FOREMAN: J Graglia
DRILLING METHOD: Rotasonic Drill Rig
DRILLING EQUIPMENT: Boart Longyear Mini Rotasonic
SAMPLING METHOD: 5 ft. core barrell
CH2M OBSERVER: A. Harclerode
START DATE: 9/11/08
FINISH DATE: 9/11/08
NORTHING: 718728.96
EASTING: 632591.99
APPROX. DEPTH TO WATER: 2.4 ft. bgs 9/11/08

DEPTH (FT. BGS)	SAMPLE OR RUN DESIGNATION	SAMPLE TYPE	BLOWS PER 6 INCHES or CORE RUN (time/ft.)	RECOVERY/ PENETRATION (FT.)	RQD	SCREENING DATA PID	SCREENING DATA FID	ELEVATION (ft. MSL)	MATERIALS DESCRIPTION (SOILS: color, class, moisture, density/consistency, secondary structure; ROCK: rock type, hardness, major mineral types, color, weathering, and degree of fracturing)	USCS GROUP SYMBOL
0										
	0.5' to 1.0' (SB-123-0.75)	RC	N/A	4.6/5.0	N/A	ND	NM	5	0 to 0.1 ft.: ASPHALT. SILT, some sub-angular fine to coarse gravel, trace fine to coarse sand, dark greyish brown, 2.5Y, 4/2, dry (FILL)	ML
						ND	NM		SILT, trace coal pieces, trace sub-angular fine to coarse gravel, black, moist (FILL)	SW
						ND	NM		Gravelly SAND, fine to coarse sand, fine to coarse sub-angular GRAVEL, little slag, black, wet, slightly obvious odor (FILL)	
5	4.0' to 4.5' (SB-123-4.25)	RC	N/A	5.0/5.0	N/A	0.1	NM	0	Gravelly SAND, fine to coarse sand, fine to coarse sub-angular GRAVEL, little slag, black, wet, slightly obvious odor (FILL)	
						1.2	NM		CINDER and COAL, trace white cinder, black, wet (FILL)	
									WOOD - one competent piece cored through - obvious creosote odor (FILL)	
10		RC	N/A	3.7/5.0	N/A	NM	NM	-5	Gravelly SAND, fine to coarse sand, fine to coarse sub-angular GRAVEL, little slag, black, wet, slightly obvious odor, product very pervasive from 10.6 to 15 ft. bgs (FILL)	
						87.1	NM			
15		RC	N/A	4.0/5.0	N/A	49.5	NM	-10	Clayey PEAT, very dark brown, 7.5YR, 2.5/2, impacted with product, soft, moist	PT/OL
						3.1	NM		Clayey PEAT, very dark brown, 7.5YR, 2.5/2, soft, moist	
20		RC	N/A	3.0/5.0	N/A	6.4	NM	-15	Clayey PEAT, very dark brown, 7.5YR, 2.5/2, soft, moist, discrete intervals that contain product	
25										

WELL CONSTRUCTION



LEGEND:
msl = mean sea level
bgs = below ground surface
ND = not detected
NM = not measured
N/A = not applicable

SAMPLE TYPES:
D: drive
W: washed
ST: Shelby Tube
A: Auger
HA: hand auger
C: cored
RC: rotasonic core

SOIL: GRANULAR SOILS DENSITY:
0-4: very loose
5-10: loose
11-29: medium dense
30-49: dense
50+: very dense

PLASTIC SOILS DENSITY:
0-2: very soft
3-4: soft
5-8: medium soft
9-15: stiff
16-30: very stiff
>30: hard

MOISTURE:
dry
moist
wet

PROPORTIONS:
Trace: <5% Few: 16-30%
Little: 6-15% Some: 31-49%

Density designation based on blow counts for each 12" of penetration using a 140 lb. hammer w/30" drop
When blow counts were not possible, density descriptions, as included in the "Materials Description" are based upon a thumb penetration test

NOTES:
SB-123 (0.5 - 1.0): VOCs, SVOCs, PCBs, TAL Metals
SB-123 (4.0 - 4.5): VOCs, SVOCs, PCBs, TAL Metals

ROCK:
RQD (rock quality designation):
reported in % = [length of core in pieces 4" and longer/ length of run] x100

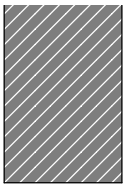
307684

BORING LOG

BORING/WELL ID: MW-123

PROJECT NAME: Quanta Resources Superfund Site
SURFACE ELEVATION: 6.0 ft. MSL
LOCATION: NE Corner of Block 93 South
MEASURING POINT: PVC Casing
PROJECT NUMBER: 363725
MEASURING POINT ELEVATION: 5.54 ft. MSL
CLIENT: Honeywell Inc.
TOTAL DEPTH: 30 ft. bgs
DRILLING CONTRACTOR: Boart Longyear
FOREMAN: J Graglia
DRILLING METHOD: Rotasonic Drill Rig
DRILLING EQUIPMENT: Boart Longyear Mini Rotasonic
SAMPLING METHOD: 5 ft. core barrell
CH2M OBSERVER: A. Harclerode
START DATE: 9/11/08
FINISH DATE: 9/11/08
NORTHING: 718728.96
EASTING: 632591.99
APPROX. DEPTH TO WATER: 2.4 ft. bgs 9/11/08

DEPTH (FT. BGS)	SAMPLE OR RUN DESIGNATION	SAMPLE TYPE	BLOWS PER 6 INCHES or CORE RUN (time/ft.)	RECOVERY/ PENETRATION (FT.)	RQD	SCREENING DATA PID	SCREENING DATA FID	ELEVATION (ft. MSL)	MATERIALS DESCRIPTION (SOILS: color, class, moisture, density/consistency, secondary structure; ROCK: rock type, hardness, major mineral types, color, weathering, and degree of fracturing)	GRAPHICAL LOG	USCS GROUP SYMBOL	WELL CONSTRUCTION
25		RC	N/A	2.6/5.0	N/A	1.6	NM		Clayey PEAT, very dark brown, 7.5YR, 2.5/2, soft, moist			
						ND	NM	-20	CLAY, some "varves", trace silt, fat/plastic, some mottling - mostly brown, 7.5YR, 4/2, some gley 1, 5/1, moist, very stiff		CH	
									Bottom of boring @ 30 ft. bgs			
30								-25				
35								-30				
40								-35				
45								-40				
50												



LEGEND:
msl = mean sea level
bgs = below ground surface
ND = not detected
NM = not measured
N/A = not applicable

SAMPLE TYPES:
D: drive
W: washed
ST: Shelby Tube
A: Auger
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C: cored
RC: rotasonic core

SOIL: GRANULAR SOILS DENSITY:
0-4: very loose
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11-29: medium dense
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50+: very dense

PLASTIC SOILS DENSITY:
0-2: very soft
3-4: soft
5-8: medium soft
9-15: stiff
16-30: very stiff
>30: hard

MOISTURE:
dry
moist
wet

PROPORTIONS:
Trace: <5% Few: 16-30%
Little: 6-15% Some: 31-49%

Density designation based on blow counts for each 12" of penetration using a 140 lb. hammer w/30" drop
When blow counts were not possible, density descriptions, as included in the "Materials Description" are based upon a thumb penetration test

NOTES:
SB-123 (0.5 - 1.0): VOCs, SVOCs, PCBs, TAL Metals
SB-123 (4.0 - 4.5): VOCs, SVOCs, PCBs, TAL Metals

ROCK:
RQD (rock quality designation):
reported in % = [length of core in pieces 4" and longer/ length of run] x100

307685

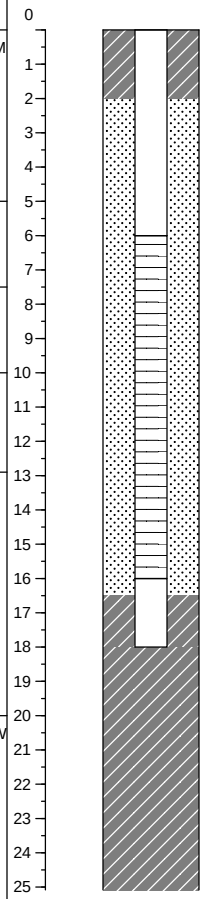
BORING LOG

BORING/WELL ID: MW-124

PROJECT NAME: Quanta Resources Superfund Site
SURFACE ELEVATION: 7.7 ft. MSL
LOCATION: West Side of Block 93 South
MEASURING POINT: PVC Casing
PROJECT NUMBER: 363725
MEASURING POINT ELEVATION: 7.48 ft. MSL
CLIENT: Honeywell Inc.
TOTAL DEPTH: 30 ft. bgs
DRILLING CONTRACTOR: Boart Longyear
FOREMAN: J Graglia
DRILLING METHOD: Rotasonic Drill Rig
DRILLING EQUIPMENT: Boart Longyear Mini Rotasonic
SAMPLING METHOD: 5 ft. core barrel
CH2M OBSERVER: A. Harclerode
START DATE: 9/12/08
FINISH DATE: 9/12/08
NORTHING: 718620.61
EASTING: 632423.84
APPROX. DEPTH TO WATER: 5.0 ft. bgs 9/12/08

DEPTH (FT. BGS)	SAMPLE OR RUN DESIGNATION	SAMPLE TYPE	BLOWS PER 6 INCHES or CORE RUN (time/ft.)	RECOVERY/ PENETRATION (FT.)	RQD	SCREENING DATA PID	SCREENING DATA FID	ELEVATION (ft. MSL)	MATERIALS DESCRIPTION (SOILS: classification, secondary grain size, color, moisture, and other descriptors; ROCK: rock type, hardness, major mineral types, color, weathering, and degree of fracturing)	USCS GROUP SYMBOL
0		RC	N/A	2.0/5.0	N/A	0.1	NM	5	Intermixed ASPHALT, fractured ROCK, fine to coarse angular/sub-angular GRAVEL, some silty to coarse sand, some concrete, brown, 1.5YR, 4/2, and some very dark grey 7.5YR, 3/1 @ bottom, dry to moist with depth, loose to medium dense with depth, 3.5 to 5.0 ft. has less fractured rock and concrete, more sand (FILL)	GW/SM
	1.0' to 2.0' (SB-124-1.5)									
5		RC	N/A	1.9/5.0	N/A	NM	NM	0	Silty SAND, trace sub-rounded fine to coarse gravel, trace cinder and coal pieces, very dark grey, 7.5YR, 3/1, wet (FILL)	SM
	8.0' to 10.0' (SB-124-9.0)								COAL and CINDER pieces, 7.5YR, 4/1, trace wood, wet (FILL)	
10		RC	N/A	5.0/5.0	N/A	0.8	NM	-5	Silty SAND, fine to medium grained, little coarse sand, trace clay, little sub-rounded fine to coarse gravel, greyish brown, 10YR, 5/2, wet	SM
						0.3	NM		SAND, fine to medium grained, grades to fine sand, trace silt, trace rounded fine to coarse gravel, yellowish red, 5YR, 4/6, wet	SP
15		RC	N/A	2.5/5.0	N/A	ND	NM		SAND, fine to medium grained, trace silt, trace coarse sand, brown, 7.5YR, 4/4, wet	
						ND	NM	-10	SAND, fine, medium and coarse GRAVEL, little silt, little fine to coarse sub-rounded gravel, brown, 7.5YR, 4/4, wet	
						ND	NM		SAND, fine to medium grained, trace silt, trace coarse sand, brown, 7.5YR, 4/4, wet	
20		RC	N/A	3.0/5.0	N/A	NM	NM	-15	SAND and GRAVEL, fine, medium, coarse sand, sub-rounded to rounded fine to coarse gravel, trace rounded cobble, trace to little silt, brown, 7.5YR, 5/3, wet	SW/GW
25										

WELL CONSTRUCTION



LEGEND:
msl = mean sea level
bgs = below ground surface
ND = not detected
NM = not measured
N/A = not applicable

SAMPLE TYPES:
D: drive
W: washed
ST: Shelby Tube
A: Auger
HA: hand auger
C: cored
RC: rotasonic core

SOIL: GRANULAR SOILS DENSITY:
0-4: very loose
5-10: loose
11-29: medium dense
30-49: dense
50+: very dense

PLASTIC SOILS DENSITY:
0-2: very soft
3-4: soft
5-8: medium soft
9-15: stiff
16-30: very stiff
>30: hard

MOISTURE:
dry
moist
wet

PROPORTIONS:
Trace: <5% Few: 16-30%
Little: 6-15% Some: 31-49%

Density designation based on blow counts for each 12" of penetration using a 140 lb. hammer w/30" drop
When blow counts were not possible, density descriptions, as included in the "Materials Description" are based upon a thumb penetration test

NOTES:
SB-124 (1.0 - 2.0): VOCs, SVOCs, PCBs, TAL Metals
SB-124 (8.0 - 10.0): VOCs, SVOCs, PCBs, TAL Metals

ROCK:
RQD (rock quality designation):
reported in % = [length of core in pieces 4" and longer/ length of run] x100

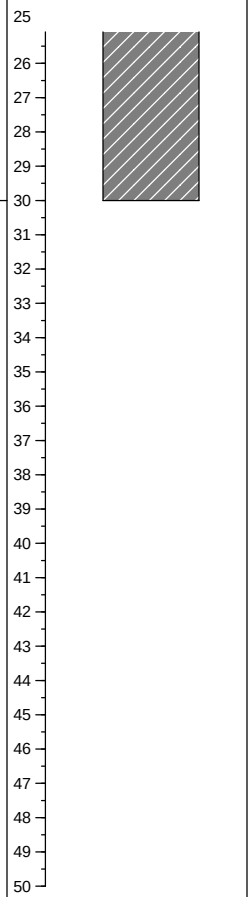
307686

BORING LOG

BORING/WELL ID: MW-124

PROJECT NAME: Quanta Resources Superfund Site
SURFACE ELEVATION: 7.7 ft. MSL
LOCATION: West Side of Block 93 South
MEASURING POINT: PVC Casing
PROJECT NUMBER: 363725
MEASURING POINT ELEVATION: 7.48 ft. MSL
CLIENT: Honeywell Inc.
TOTAL DEPTH: 30 ft. bgs
DRILLING CONTRACTOR: Boart Longyear
FOREMAN: J Graglia
DRILLING METHOD: Rotasonic Drill Rig
DRILLING EQUIPMENT: Boart Longyear Mini Rotasonic
SAMPLING METHOD: 5 ft. core barrel
CH2M OBSERVER: A. Harclerode
START DATE: 9/12/08
FINISH DATE: 9/12/08
NORTHING: 718620.61
EASTING: 632423.84
APPROX. DEPTH TO WATER: 5.0 ft. bgs 9/12/08

DEPTH (FT. BGS)	SAMPLE OR RUN DESIGNATION	SAMPLE TYPE	BLOWS PER 6 INCHES or CORE RUN (time/ft.)	RECOVERY/ PENETRATION (FT.)	RQD	SCREENING DATA PID	SCREENING DATA FID	ELEVATION (ft. MSL)	MATERIALS DESCRIPTION (SOILS: classification, secondary grain size, color, moisture, and other descriptors; ROCK: rock type, hardness, major mineral types, color, weathering, and degree of fracturing)	GRAPHICAL LOG	USCS GROUP SYMBOL	WELL CONSTRUCTION
25		RC	N/A	4.4/5.0	N/A	ND	NM		SAND and GRAVEL, fine, medium, coarse sand, sub-rounded to rounded fine to coarse gravel, trace rounded cobble, trace to little silt, brown, 7.5YR, 5/3, wet, increasing gravel/cobble content with depth			
								-20				
									Bottom of boring @ 30 ft. bgs			
30												
								-25				
35												
								-30				
40												
								-35				
45												
								-40				
50												



LEGEND:
msl = mean sea level
bgs = below ground surface
ND = not detected
NM = not measured
N/A = not applicable

SAMPLE TYPES:
D: drive
W: washed
ST: Shelby Tube
A: Auger
HA: hand auger
C: cored
RC: rotasonic core

SOIL: GRANULAR SOILS DENSITY:
0-4: very loose
5-10: loose
11-29: medium dense
30-49: dense
50+: very dense

PLASTIC SOILS DENSITY:
0-2: very soft
3-4: soft
5-8: medium soft
9-15: stiff
16-30: very stiff
>30: hard

MOISTURE:
dry
moist
wet

PROPORTIONS:
Trace: <5% Few: 16-30%
Little: 6-15% Some: 31-49%

Density designation based on blow counts for each 12" of penetration using a 140 lb. hammer w/30" drop
When blow counts were not possible, density descriptions, as included in the "Materials Description" are based upon a thumb penetration test

NOTES:
SB-124 (1.0 - 2.0): VOCs, SVOCs, PCBs, TAL Metals
SB-124 (8.0 - 10.0): VOCs, SVOCs, PCBs, TAL Metals

ROCK:
RQD (rock quality designation):
reported in % = [length of core in pieces 4" and longer/ length of run] x100

307687

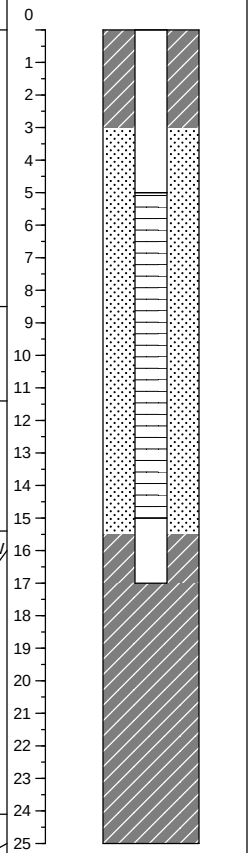
BORING LOG

BORING/WELL ID: MW-125

PROJECT NAME: Quanta Resources Superfund Site
SURFACE ELEVATION: 12.4 ft. MSL
LOCATION: Intersection of Gorge and Old River Roads
MEASURING POINT: PVC Casing
PROJECT NUMBER: 363725
MEASURING POINT ELEVATION: 11.97 ft. MSL
CLIENT: Honeywell Inc.
TOTAL DEPTH: 25 ft. bgs
DRILLING CONTRACTOR: Boart Longyear
FOREMAN: J Graglia
DRILLING METHOD: Rotasonic Drill Rig
DRILLING EQUIPMENT: Boart Longyear Mini Rotasonic
SAMPLING METHOD: 5 ft. core barrel
CH2M OBSERVER: A. Harclerode
START DATE: 9/15/08
FINISH DATE: 9/15/08
NORTHING: 719375.31
EASTING: 632626.42
APPROX. DEPTH TO WATER: 8.5 ft. bgs 9/15/08

DEPTH (FT. BGS)	SAMPLE OR RUN DESIGNATION	SAMPLE TYPE	BLOWS PER 6 INCHES or CORE RUN (time/ft.)	RECOVERY/ PENETRATION (FT.)	RQD	SCREENING DATA PID	SCREENING DATA FID	ELEVATION (ft. MSL)	MATERIALS DESCRIPTION (SOILS: classification, secondary grain size, color, moisture, and other descriptors; ROCK: rock type, hardness, major mineral types, color, weathering, and degree of fracturing)	USCS GROUP SYMBOL
0		RC	N/A	2.8/5.0	N/A	N/A	N/A		Fractured ROCK (granite?), possibly former sidewalk (FILL)	GW
						ND	NM	10	Fine to coarse sub-angular to sub-rounded GRAVEL with crushed ROCK, some fine to medium sand, grey, 7.5YR, 5/1, dry, loose (FILL)	
5	4.5' to 5.0' (SB-125-4.75)	RC	N/A	1.7/5.0	N/A	ND	NM		Fine to coarse sub-angular to sub-rounded GRAVEL with crushed ROCK and some fine to medium sand, trace brick with silt, very dark brown, 7.5YR, 2.5/2, moist, medium dense (FILL)	
						ND	NM	5	Fine to coarse sub-angular to sub-rounded GRAVEL with crushed ROCK and some fine to medium sand, very dark brown, 7.5YR, 2.5/2, trace brick with silt, moist, medium dense (FILL)	
						NM	NM			GM
10	9.5' to 10.0' (SB-125-9.75)	RC	N/A	3.7/5.0	N/A	ND	NM		Silty fine to coarse sub-angular to angular GRAVEL, very dark greyish brown, 2.5Y, 3/2, wet (FILL)	
						ND	NM	0	Silty fine to coarse sub-angular to angular GRAVEL, very dark greyish brown, 2.5Y, 3/2, wet (FILL)	SP
									Fine grained SAND, trace to little silt, dark yellowish brown, 10YR, 4/4, wet, grades to trace silt	
15		RC	N/A	5.0/5.0	N/A	ND	NM		Fine grained SAND, trace to little silt, dark yellowish brown, 10YR, 4/4, wet, grades to trace silt	
						ND	NM		Gravelly fine SAND, sub-rounded fine to coarse GRAVEL, trace clay, little silt, dark yellowish brown, 10YR, 4/4, wet	SP/GW
						ND	NM	-5	Silty CLAY, high plasticity, brown, 7.5YR, 4/4, dry, very tight	CL
20		RC	N/A	3.7/5.0	N/A	1.0	NM		Silty CLAY, high plasticity, brown, 7.5YR, 4/4, dry, very tight	
								-10		
						1.3	NM		SILT, little fine to coarse sub-angular to sub-rounded gravel, trace fine to coarse sand, brown, 7.5YR, 4/4, moist	ML
25									Bottom of boring @ 25 ft. bgs	

WELL CONSTRUCTION



LEGEND:
msl = mean sea level
bgs = below ground surface
ND = not detected
NM = not measured
N/A = not applicable

SAMPLE TYPES:
D: drive
W: washed
ST: Shelby Tube
A: Auger
HA: hand auger
C: cored
RC: rotasonic core

SOIL: GRANULAR SOILS DENSITY:
0-4: very loose
5-10: loose
11-29: medium dense
30-49: dense
50+: very dense

PLASTIC SOILS DENSITY:
0-2: very soft
3-4: soft
5-8: medium soft
9-15: stiff
16-30: very stiff
>30: hard

MOISTURE:
dry
moist
wet

PROPORTIONS:
Trace: <5% Few: 16-30%
Little: 6-15% Some: 31-49%

Density designation based on blow counts for each 12" of penetration using a 140 lb. hammer w/30" drop
When blow counts were not possible, density descriptions, as included in the "Materials Description" are based upon a thumb penetration test

NOTES:
SB-125 (4.5 - 5.0): VOCs, SVOCs, PCBs, TAL Metals
SB-125 (9.5 - 10.0): VOCs, SVOCs, PCBs, TAL Metals

ROCK:
RQD (rock quality designation):
reported in % = [length of core in pieces 4" and longer/ length of run] x100

307688

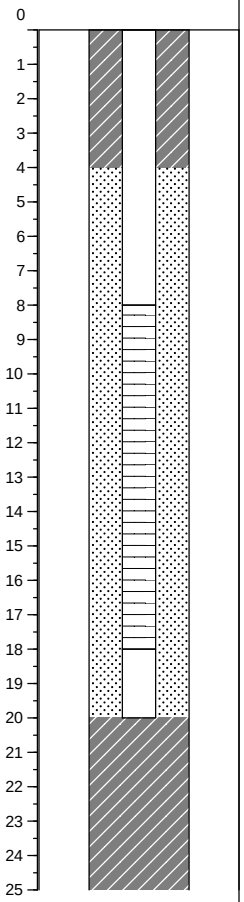
BORING LOG

BORING/WELL ID: MW-126

PROJECT NAME: Quanta Resources Superfund Site
SURFACE ELEVATION: 14.3 ft. MSL
LOCATION: W of Gorge and River Road Intersection
MEASURING POINT: PVC Casing
PROJECT NUMBER: 363725
MEASURING POINT ELEVATION: 13.87 ft. MSL
CLIENT: Honeywell Inc.
TOTAL DEPTH: 30 ft. bgs
DRILLING CONTRACTOR: Boart Longyear
FOREMAN: J Graglia
DRILLING METHOD: Rotasonic Drill Rig
DRILLING EQUIPMENT: Boart Longyear Mini Rotasonic
SAMPLING METHOD: 5 ft. core barrel
CH2M OBSERVER: A. Harclerode
START DATE: 10/14/08
FINISH DATE: 10/14/08
NORTHING: 719166.66
EASTING: 632793.59
APPROX. DEPTH TO WATER: 9.0 ft. bgs 10/14/08

DEPTH (FT. BGS)	SAMPLE OR RUN DESIGNATION	SAMPLE TYPE	BLOWS PER 6 INCHES or CORE RUN (time/ft.)	RECOVERY/ PENETRATION (FT.)	RQD	SCREENING DATA PID	SCREENING DATA FID	ELEVATION (ft. MSL)	MATERIALS DESCRIPTION (SOILS: classification, secondary grain size, color, moisture, and other descriptors; ROCK: rock type, hardness, major mineral types, color, weathering, and degree of fracturing)	USCS GROUP SYMBOL
0		RC	N/A	4.3/5.0	N/A	0.7	NM		Silty SAND with some fine to coarse sub-angular gravel, trace angular cobble, dark brown, 7.5YR, 3/3, dry, loose (FILL)	SM
						ND	NM		Fractured BRICK (FILL)	
						NM	NM		Fractured ROCK/pulverized ROCK (FILL)	SM
	4.3' to 4.8' (SB-126-4.5)					1.1	NM	10	Fractured ROCK with silty SAND, some fine to coarse sub-angular to sub-rounded gravel, trace brick, brown, 7.5YR, 3/2, dry, medium dense (FILL)	
5		RC	N/A	NR	N/A	0.8	NM		Fractured ROCK with silty SAND, some fine to coarse sub-angular to sub-rounded gravel and brick, brown, 7.5YR, 3/2, dry, medium dense (FILL)	
						1.8	NM			CL
						1.9	NM	5	Silty CLAY and fine to medium angular GRAVEL, some coarse rounded sand and coarse angular gravel, trace sub-rounded cobble, very dark grey, 7.5YR, 3/1, moist, medium dense (FILL)	CL
10		RC	N/A	3.6/5.0	N/A	1.9	NM			
	11.0' to 11.5' (SB-126-11.25)					5.9	NM		CINDERS, some medium to coarse angular to sub-angular gravel, black, dry, loose (FILL)	
						20	NM		Silty CLAY with fine sub-rounded GRAVEL, some coarse rounded sand, some medium sub-rounded gravel, trace slag, very dark brown, 7.5YR, 2.5/2, wet, medium stiff (FILL)	
						3.7	NM	0		SP
15		RC	N/A	5.0/5.0	N/A	0.6	NM		SLAG/crushed SLAG, some silt, some fine to medium sub-angular gravel, pervasive low viscosity product in pore space, black, wet, loose (FILL)	
									Sheety CARDBOARD/PAPER, cleaves into individual, thin (~1 millimeter) sheets, obvious odor, trace product/semi-solid tar, very dark brown, 7.5YR, 2.5/2, moist, medium stiff (FILL)	
								-5	Silty/Clayey fine SAND/native, very dark brown 7.5YR, 2.5/2 to brown, 7.5YR, 5/3 (with depth), wet, loose	
20		RC	N/A	6.0/10.0	N/A	0.2	NM		Fine SAND, clean, very dark brown, 7.5YR, 3/2, wet, medium dense	
	22.0' to 23.0' (SB-126-22.5)								Fine SAND, clean, strong brown, 7.5YR, 4/6, wet, medium dense	
25								-10		

WELL CONSTRUCTION



LEGEND:
msl = mean sea level
bgs = below ground surface
ND = not detected
NM = not measured
N/A = not applicable

SAMPLE TYPES:
D: drive
W: washed
ST: Shelby Tube
A: Auger
HA: hand auger
C: cored
RC: rotasonic core

SOIL: GRANULAR SOILS DENSITY:
0-4: very loose
5-10: loose
11-29: medium dense
30-49: dense
50+: very dense

PLASTIC SOILS DENSITY:
0-2: very soft
3-4: soft
5-8: medium soft
9-15: stiff
16-30: very stiff
>30: hard

MOISTURE:
dry
moist
wet

PROPORTIONS:
Trace: <5% Few: 16-30%
Little: 6-15% Some: 31-49%

Density designation based on blow counts for each 12" of penetration using a 140 lb. hammer w/30" drop
When blow counts were not possible, density descriptions, as included in the "Materials Description" are based upon a thumb penetration test

NOTES:
SB-126 (4.3 - 4.8): VOCs, SVOCs, PCBs, TAL Metals, TOC
SB-126 (11.0 - 11.5): VOCs, SVOCs, PCBs, TPH Fingerprint, TAL Metals, TOC, Arsenic by SEP
SB-126 (22.0 - 23.0): TOC, Total Arsenic, Arsenic by SEP

ROCK:
RQD (rock quality designation):
reported in % = [length of core in pieces 4" and longer/ length of run] x100

307689

BORING LOG

BORING/WELL ID: MW-126

PROJECT NAME: Quanta Resources Superfund Site
SURFACE ELEVATION: 14.3 ft. MSL
LOCATION: W of Gorge and River Road Intersection
MEASURING POINT: PVC Casing
PROJECT NUMBER: 363725
MEASURING POINT ELEVATION: 13.87 ft. MSL
CLIENT: Honeywell Inc.
TOTAL DEPTH: 30 ft. bgs
DRILLING CONTRACTOR: Boart Longyear
FOREMAN: J Graglia
DRILLING METHOD: Rotasonic Drill Rig
DRILLING EQUIPMENT: Boart Longyear Mini Rotasonic
SAMPLING METHOD: 5 ft. core barrel
CH2M OBSERVER: A. Harclerode
START DATE: 10/14/08
FINISH DATE: 10/14/08
NORTHING: 719166.66
EASTING: 632793.59
APPROX. DEPTH TO WATER: 9.0 ft. bgs 10/14/08

DEPTH (FT. BGS)	SAMPLE OR RUN DESIGNATION	SAMPLE TYPE	BLOWS PER 6 INCHES or CORE RUN (time/ft.)	RECOVERY/ PENETRATION (FT.)	RQD	SCREENING DATA PID	SCREENING DATA FID	ELEVATION (ft. MSL)	MATERIALS DESCRIPTION SOILS: classification, secondary grain size, color, moisture, and other descriptors ROCK: rock type, hardness, major mineral types, color, weathering, and degree of fracturing	GRAPHICAL LOG	USCS GROUP SYMBOL	WELL CONSTRUCTION
25												25
												26
												27
												28
								-15	Bottom of boring @ 30 ft. bgs			29
30												30
												31
												32
												33
								-20				34
35												35
												36
												37
												38
								-25				39
40												40
												41
												42
												43
								-30				44
45												45
												46
												47
												48
								-35				49
50												50

LEGEND:
msl = mean sea level
bgs = below ground surface
ND = not detected
NM = not measured
N/A = not applicable

SAMPLE TYPES:
D: drive
W: washed
ST: Shelby Tube
A: Auger
HA: hand auger
C: cored
RC: rotasonic core

SOIL: GRANULAR SOILS DENSITY:
0-4: very loose
5-10: loose
11-29: medium dense
30-49: dense
50+: very dense

PLASTIC SOILS DENSITY:
0-2: very soft
3-4: soft
5-8: medium soft
9-15: stiff
16-30: very stiff
>30: hard

MOISTURE:
dry
moist
wet

PROPORTIONS:
Trace: <5% Few: 16-30%
Little: 6-15% Some: 31-49%

Density designation based on blow counts for each 12" of penetration using a 140 lb. hammer w/30" drop
When blow counts were not possible, density descriptions, as included in the "Materials Description" are based upon a thumb penetration test

NOTES:
SB-126 (4.3 - 4.8): VOCs, SVOCs, PCBs, TAL Metals, TOC
SB-126 (11.0 - 11.5): VOCs, SVOCs, PCBs, TPH Fingerprint, TAL Metals, TOC, Arsenic by SEP
SB-126 (22.0 - 23.0): TOC, Total Arsenic, Arsenic by SEP

ROCK:
RQD (rock quality designation):
reported in % = [length of core in pieces 4" and longer/ length of run] x100

307690

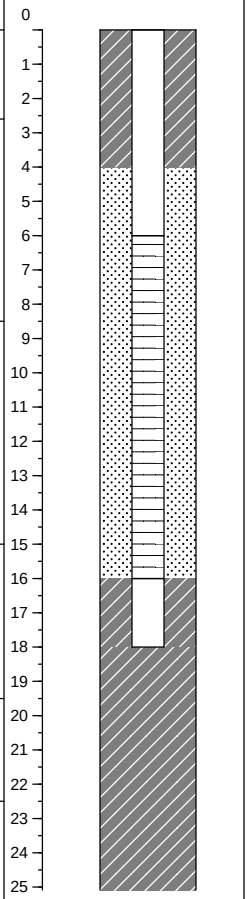
BORING LOG

BORING/WELL ID: MW-127

PROJECT NAME: Quanta Resources Superfund Site
SURFACE ELEVATION: 6.8
LOCATION: SW Block 93 Central
MEASURING POINT: PVC Casing
PROJECT NUMBER: 363725
MEASURING POINT ELEVATION: 6.35 ft. MSL
CLIENT: Honeywell Inc.
TOTAL DEPTH: 30 ft. bgs
DRILLING CONTRACTOR: Boart Longyear
FOREMAN: J Graglia
DRILLING METHOD: Rotasonic Drill Rig
DRILLING EQUIPMENT: Boart Longyear Mini Rotasonic
SAMPLING METHOD: 5 ft. core barrel
CH2M OBSERVER: A. Harclerode
START DATE: 9/11/08
FINISH DATE: 9/11/08
NORTHING: 718828.53
EASTING: 632458.81
APPROX. DEPTH TO WATER: 5.0 ft. bgs 9/11/08

DEPTH (FT. BGS)	SAMPLE OR RUN DESIGNATION	SAMPLE TYPE	BLOWS PER 6 INCHES or CORE RUN (time/ft.)	RECOVERY/ PENETRATION (FT.)	RQD	SCREENING DATA PID	SCREENING DATA FID	ELEVATION (ft. MSL)	MATERIALS DESCRIPTION (SOILS: classification, secondary grain size, color, moisture, and other descriptors; ROCK: rock type, hardness, major mineral types, color, weathering, and degree of fracturing)	USCS GROUP SYMBOL
0		RC	N/A	2.1/5.0	N/A	NM	NM		Fine to coarse sub-angular GRAVEL, some silt, black, trace semi-solid plastic tar, dry (FILL)	GW
	1.5' to 2.0' (SB-127-1.75)					NM	NM	5		
									SILT, some sub-angular fine to coarse gravel, trace fine to coarse sand, trace plastic pieces, brown, 7.5YR, 4/2, moist (FILL)	ML
5		RC	N/A	2.7/5.0	N/A	0.2	NM		SILT, some sub-angular fine to coarse gravel, trace fine to coarse sand, trace plastic pieces, brown, 7.5YR, 4/2, obvious petroleum odor and staining @ 8.0 to 8.5 ft., trace wood @ 8.3-8.5 ft., wet (FILL)	
								0		
	8.0' to 8.5' (SB-127-8.25)					ND	NM		Peaty CLAY, trace organics, very dark grey, 7.5YR, 3/1, moist	OH/PT
10	9.0' to 10.0' (SB-127-9.5)	RC	N/A	4.0/5.0	N/A	ND	NM		Peaty CLAY and fine to coarse angular to sub-angular GRAVEL, slightly obvious odor, some staining and slight sheen, wet, soft	
						0.2	NM	-5	Peaty CLAY, trace organics, very dark grey, 7.5YR, 3/1, moist	
15		RC	N/A	2.3/5.0	N/A	ND	NM		Peaty SILT, some clay, trace organics, very dark brown, 7.5YR, 2.5/2, very soft, moist to wet	OL/PT
								-10		
									Silty, fine SAND, trace fine to coarse sub-angular gravel and sub-angular cobbles, very dark grey, 7.5YR, 3/1, soft to medium dense, wet	
20						ND	NM			SM
		RC	N/A	1.8/5.0	N/A	ND	NM		Silty, fine SAND, trace fine to coarse sub-angular gravel and sub-angular cobbles, very dark grey, 7.5YR, 3/1, soft to medium dense, wet	
								-15		
						0.1	NM		Silty, fine SAND and medium COBBLE, some fine to coarse rounded gravel, reddish brown, 5YR, 4/4	SP
						0.1	NM		Medium SAND, trace fine to medium rounded gravel, reddish brown, 5YR, 4/4, wet, loose	
25										

WELL CONSTRUCTION



LEGEND:
msl = mean sea level
bgs = below ground surface
ND = not detected
NM = not measured
N/A = not applicable

SAMPLE TYPES:
D: drive
W: washed
ST: Shelby Tube
A: Auger
HA: hand auger
C: cored
RC: rotasonic core

SOIL: GRANULAR SOILS DENSITY:
0-4: very loose
5-10: loose
11-29: medium dense
30-49: dense
50+: very dense

PLASTIC SOILS DENSITY:
0-2: very soft
3-4: soft
5-8: medium soft
9-15: stiff
16-30: very stiff
>30: hard

MOISTURE:
dry
moist
wet

PROPORTIONS:
Trace: <5% Few: 16-30%
Little: 6-15% Some: 31-49%

Density designation based on blow counts for each 12" of penetration using a 140 lb. hammer w/30" drop
When blow counts were not possible, density descriptions, as included in the "Materials Description" are based upon a thumb penetration test

NOTES:
SB-127 (1.5 - 2.0): VOCs, SVOCs, PCBs, TAL Metals
SB-127 (8.0 - 8.5): VOCs, SVOCs, PCBs, TAL Metals, TPH Fingerprint
SB-127 (9.0 - 10.0): VOCs, SVOCs, PCBs, TAL Metals

ROCK:
RQD (rock quality designation):
reported in % = [length of core in pieces 4" and longer/ length of run] x100

307691

BORING LOG

BORING/WELL ID: MW-127

PROJECT NAME: Quanta Resources Superfund Site
SURFACE ELEVATION: 6.8
LOCATION: SW Block 93 Central
MEASURING POINT: PVC Casing
PROJECT NUMBER: 363725
MEASURING POINT ELEVATION: 6.35 ft. MSL
CLIENT: Honeywell Inc.
TOTAL DEPTH: 30 ft. bgs
DRILLING CONTRACTOR: Boart Longyear
FOREMAN: J Graglia
DRILLING METHOD: Rotasonic Drill Rig
DRILLING EQUIPMENT: Boart Longyear Mini Rotasonic
SAMPLING METHOD: 5 ft. core barrel
CH2M OBSERVER: A. Harclerode
START DATE: 9/11/08
FINISH DATE: 9/11/08
NORTHING: 718828.53
EASTING: 632458.81
APPROX. DEPTH TO WATER: 5.0 ft. bgs 9/11/08

DEPTH (FT. BGS)	SAMPLE OR RUN DESIGNATION	SAMPLE TYPE	BLOWS PER 6 INCHES or CORE RUN (time/ft.)	RECOVERY/ PENETRATION (FT.)	RQD	SCREENING DATA PID	SCREENING DATA FID	ELEVATION (ft. MSL)	MATERIALS DESCRIPTION (SOILS: classification, secondary grain size, color, moisture, and other descriptors; ROCK: rock type, hardness, major mineral types, color, weathering, and degree of fracturing)	GRAPHICAL LOG	USCS GROUP SYMBOL	WELL CONSTRUCTION
25		RC	N/A	4.5/5.0	N/A	0.2	NM	-20	SAND, some fine to medium sub-rounded gravel, reddish brown, 5YR, 4/4, wet, loose			
						0.5	NM		Very poorly sorted/intermixed SILT, fine to coarse sub-rounded SAND, fine to coarse sub-rounded to rounded GRAVEL, some rounded cobbles, some clay, loose to very dense, very dense layers		SM	
30									Bottom of boring @ 30 ft. bgs			
35								-25				
40								-30				
45								-35				
50								-40				

LEGEND:
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ND = not detected
NM = not measured
N/A = not applicable

SAMPLE TYPES:
D: drive
W: washed
ST: Shelby Tube
A: Auger
HA: hand auger
C: cored
RC: rotasonic core

SOIL:
MOISTURE:
dry
moist
wet

GRANULAR SOILS DENSITY:
0-4: very loose
5-10: loose
11-29: medium dense
30-49: dense
50+: very dense

PLASTIC SOILS DENSITY:
0-2: very soft
3-4: soft
5-8: medium soft
9-15: stiff
16-30: very stiff
>30: hard

PROPORTIONS:
Trace: <5% Few: 16-30%
Little: 6-15% Some: 31-49%

Density designation based on blow counts for each 12" of penetration using a 140 lb. hammer w/30" drop
When blow counts were not possible, density descriptions, as included in the "Materials Description" are based upon a thumb penetration test

NOTES:
SB-127 (1.5 - 2.0): VOCs, SVOCs, PCBs, TAL Metals
SB-127 (8.0 - 8.5): VOCs, SVOCs, PCBs, TAL Metals, TPH Fingerprint
SB-127 (9.0 - 10.0): VOCs, SVOCs, PCBs, TAL Metals

ROCK:
RQD (rock quality designation):
reported in % = [length of core in pieces 4" and longer/ length of run] x100

307692

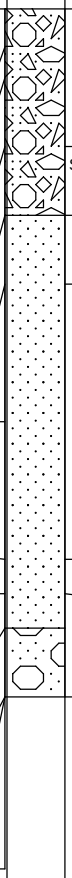
BORING LOG

BORING/WELL ID: MW-128

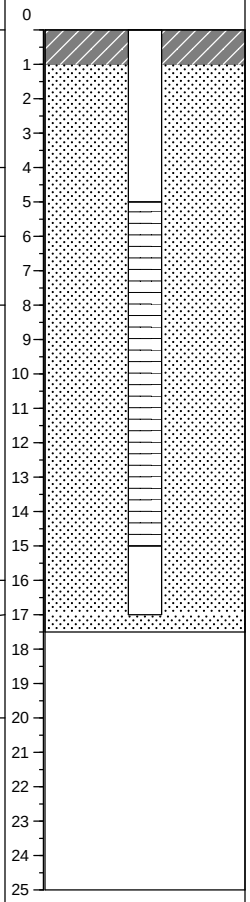
PROJECT NAME:	Quanta Resources Superfund Site	**SURFACE ELEVATION:**	9.0 ft. MSL
LOCATION:	N-central edge of Block 94	**MEASURING POINT:**	PVC Casing
PROJECT NUMBER:	385722	**MEASURING POINT ELEVATION:**	8.69 ft. MSL
CLIENT:	Honeywell Inc.	**TOTAL DEPTH:**	20 ft. bgs
DRILLING CONTRACTOR:	EPI, Inc.	**FOREMAN:**	Ron Higgins
DRILLING METHOD:	Hollow Stem Auger	**DRILLING EQUIPMENT:**	Hurricane Direct Push and Auger Rig
SAMPLING METHOD:	4 ft. macrocore sampler	**CH2M OBSERVER:**	A. Harclerode
START DATE:	2/24/09	**FINISH DATE:**	2/24/09
NORTHING: 719191.81	**EASTING:** 632438.65	**APPROX. DEPTH TO WATER:**	5.5 ft. bgs 2/24/09

DEPTH (FT. BGS)	SAMPLE OR RUN DESIGNATION	SAMPLE TYPE	BLOWS PER 6 INCHES or CORE RUN (time/ft.)	RECOVERY/ PENETRATION (FT.)	RQD	SCREENING DATA PID	SCREENING DATA FID	ELEVATION (ft. MSL)	MATERIALS DESCRIPTION (SOILS: classification, secondary grain size, color, moisture, and other descriptors; ROCK: rock type, hardness, major mineral types, color, weathering, and degree of fracturing)	USCS GROUP SYMBOL
0		D	N/A	2.1/4.0	N/A	ND	NM		Intermixed SILT, fine SAND and fine to medium sub-angular to angular GRAVEL, very dark brown, 7.5YR, 3/3 to black, moist, loose/soft to firm/medium dense (FILL)	
	1.6' to 2.0' (SB-128-1.8)					ND	NM			
						14.7	NM		CINDER, glassy luster, black, loose, dry (FILL)	
	3.6' to 4.0' (SB-128-3.8)	D	N/A	2.8/4.0	N/A	ND	NM	5	CINDER, glassy luster, black, dry, loose to firm, slight sheen, obvious odor present, little to some semi-solid, tar-like substance (FILL)	SP/SM
5						ND	NM		Intermixed CINDER, SILT, and fine SAND, black, moist to wet with depth, firm, some plasticity, inclusion of medium sand @ 5.8 ft. (FILL)	SP
	8.0' to 9.0' (SB-128-8.5)	D	N/A	1.9/4.0	N/A	ND	NM	0	Interval above grades into medium SAND, some fine to coarse sub-angular to sub-rounded gravel, little silt, reddish brown, 5YR, 3/2, wet to moist with depth, dense	SW
10									Fine to coarse well-graded SAND and fine to medium sub-rounded GRAVEL, reddish brown, 5YR, 3/2, wet, dense	
		D	N/A	3.8/4.0	N/A	ND	NM		Fine to coarse well-graded SAND and fine to medium sub-rounded GRAVEL, coarse gravel and fractured cobbles @ bottom 0.2 ft. of recovery, reddish brown, 5YR, 3/2, wet, dense	
	13.0' to 14.0' (SB-128-13.5)							-5		
15										
		D	N/A	0.0/1.0	N/A	N/A	N/A		No recovery; possible cobble interval	NR
		D	N/A	3.0/3.0	N/A	ND	NM		Medium SAND, very dark grey, 7.5YR, 3/1, wet, medium dense	SP
						ND	NM	-10	Medium SAND, some fine to medium sub-rounded gravel, grades into gravelly, very stiff silt (till-like) @ 19.7 to 20 ft., reddish brown, 5YR, 3/2, wet, dense to very dense	
20									Refusal/Bottom of boring @ 20 ft. bgs	
								-15		
25										

GRAPHICAL LOG



WELL CONSTRUCTION



LEGEND:
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N/A = not applicable

SAMPLE TYPES:
D: drive
W: washed
ST: Shelby Tube
A: Auger
HA: hand auger
C: cored
RC: rotasonic core

SOIL: GRANULAR SOILS DENSITY:
0-4: very loose
5-10: loose
11-29: medium dense
30-49: dense
50+: very dense

PLASTIC SOILS DENSITY:
0-2: very soft
3-4: soft
5-8: medium soft
9-15: stiff
16-30: very stiff
>30: hard

MOISTURE:
dry
moist
wet

PROPORTIONS:
Trace: <5% Few: 16-30%
Little: 6-15% Some: 31-49%

Density designation based on blow counts for each 12" of penetration using a 140 lb. hammer w/30" drop
When blow counts were not possible, density descriptions, as included in the "Materials Description" are based upon a thumb penetration test

NOTES:
SB-128 (1.5 - 2.0): VOCs, SVOCs, PCBs, TAL Metals
SB-128 (3.6 - 4.0): VOCs, SVOCs, PCBs, TAL Metals
SB-128 (8.0 - 9.0): TOC, Total Arsenic, Arsenic by SEP
SB-128 (13.0 - 14.0): TOC, Total Arsenic, Arsenic by SEP

ROCK:
RQD (rock quality designation):
reported in % = [length of core in pieces 4" and longer/ length of run] x100

307693

BORING LOG

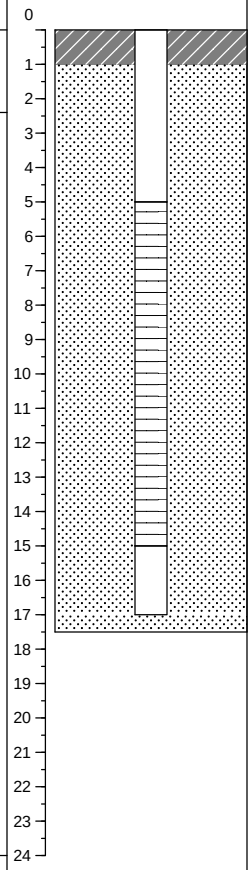
BORING/WELL ID: MW-129

PROJECT NAME: Quanta Resources Superfund Site
SURFACE ELEVATION: 7.8 ft. MSL
LOCATION: E Edge of Block 94
MEASURING POINT: PVC Casing
PROJECT NUMBER: 385722
MEASURING POINT ELEVATION: 7.29 ft. MSL
CLIENT: Honeywell Inc.
TOTAL DEPTH: 24 ft. bgs
DRILLING CONTRACTOR: EPI, Inc.
FOREMAN: Ron Higgins
DRILLING METHOD: Geoprobe Direct Push/Hollow Stem Auger
DRILLING EQUIPMENT: Hurricane Direct Push and Auger Rig
SAMPLING METHOD: 4 ft. macrocore sampler
CH2M OBSERVER: A. Harclerode
START DATE: 2/24/09
FINISH DATE: 2/24/09
NORTHING: 719073.57
EASTING: 632425.96
APPROX. DEPTH TO WATER: 3.5 ft. bgs 2/24/09

DEPTH (FT. BGS)	SAMPLE OR RUN DESIGNATION	SAMPLE TYPE	BLOWS PER 6 INCHES or CORE RUN (time/ft.)	RECOVERY/ PENETRATION (FT.)	RQD	SCREENING DATA PID	SCREENING DATA FID	ELEVATION (ft. MSL)	MATERIALS DESCRIPTION (SOILS: classification, secondary grain size, color, moisture, and other descriptors; ROCK: rock type, hardness, major mineral types, color, weathering, and degree of fracturing)	USCS GROUP SYMBOL
0		D	N/A	2.4/4.0	N/A	ND	NM		ASPHALT (FILL)	
						ND	NM		Pulverized CONCRETE (FILL)	
	1.6' to 2.0' (SB-129-1.8)					ND	NM	5	SILT, some fine sand, little coarse sand, fine sub-angular gravel, and slag, very dark brown, 7.5YR, 3/3, moist, firm (FILL)	SP
						ND	NM			
5		D	N/A	2.4/4.0	N/A	ND	NM		Fine SAND, little silt, coarse sand, and fine gravel, moist to wet, firm	
									Fine SAND, little coarse sand, trace silt and gravel, little gravel @ 5 ft., brown, 7.5YR, 4/4, wet	
	7.0' to 8.0' (SB-129-7.5)							0	Fine to coarse, round to sub-angular GRAVEL, some silt, black gravel and brown silt, 7.5YR, 4/4, wet, dense	
		D	N/A	2.0/4.0	N/A	ND	NM		Fine SAND, little silt and coarse sand, trace to some coarse sub-rounded gravel, some mottling with dark reddish brown, 5YR, 3/4, moist to wet, firm	
10						ND	NM			
						ND	NM			
		D	N/A	4.0/4.0	N/A	ND	NM	-5	Well-graded SAND, trace to some silt, some fine to coarse sub-rounded gravel, trace coarse sand, some mottling with dark reddish brown, 5YR, 3/4, moist to wet, medium dense to dense	
						ND	NM		Fine SAND, dark reddish brown, 5YR, 3/2, wet, loose to medium dense	
15						ND	NM			
		D	N/A	4.0/4.0	N/A	ND	NM		Medium SAND, some coarse sand, little to some fine to medium sub-angular to sub-rounded gravel, reddish brown, 5YR, 3/2, wet, dense	
								-10	Medium SAND, little fine to medium sub-rounded gravel, trace silt, reddish brown, 5YR, 3/2, wet, dense	
20									Medium SAND, some coarse sand, little to some fine to medium sub-angular to sub-rounded gravel, trace fine sand, approx. 0.25 ft. of fine sand and silty clay @ 19.5 ft., reddish brown, 5YR, 3/2, wet, dense	
		D	N/A	4.0/4.0	N/A	ND	NM			
								-15	Fine to coarse, well-graded SAND, reddish brown, 5YR, 3/2, wet, loose to dense, trace to little fine to sub-rounded gravel @ 23 to 24 ft., cored cobble @ bottom of recovery	
									Refusal/Bottom of boring @ 24 ft. bgs	

GRAPHICAL LOG

WELL CONSTRUCTION



LEGEND:
msl = mean sea level
bgs = below ground surface
ND = not detected
NM = not measured
N/A = not applicable

SAMPLE TYPES:
D: drive
W: washed
ST: Shelby Tube
A: Auger
HA: hand auger
C: cored
RC: rotasonic core

SOIL: GRANULAR SOILS DENSITY:
0-4: very loose
5-10: loose
11-29: medium dense
30-49: dense
50+: very dense

PLASTIC SOILS DENSITY:
0-2: very soft
3-4: soft
5-8: medium soft
9-15: stiff
16-30: very stiff
>30: hard

MOISTURE:
dry
moist
wet

PROPORTIONS:
Trace: <5% Few: 16-30%
Little: 6-15% Some: 31-49%

Density designation based on blow counts for each 12" of penetration using a 140 lb. hammer w/30" drop
When blow counts were not possible, density descriptions, as included in the "Materials Description" are based upon a thumb penetration test

NOTES:
SB-129 (1.6 - 2.0): VOCs, SVOCs, PCBs, and TAL Metals
SB-129 (7.0 - 8.0): VOCs, SVOCs, PCBs, and TAL Metals

ROCK:
RQD (rock quality designation):
reported in % = [length of core in pieces 4" and longer/ length of run] x100

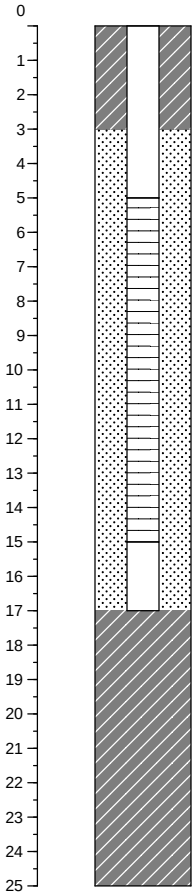
307694

BORING LOG

BORING/WELL ID: MW-130A

PROJECT NAME:	Quanta Resources Superfund Site	**SURFACE ELEVATION:**	6.7 ft. MSL
LOCATION:	N Edge of Fmr. Lever Bros.	**MEASURING POINT:**	PVC Casing
PROJECT NUMBER:	363725	**MEASURING POINT ELEVATION:**	6.34 ft. MSL
CLIENT:	Honeywell Inc.	**TOTAL DEPTH:**	25 ft. bgs
DRILLING CONTRACTOR:	Boart Longyear	**FOREMAN:**	J Graglia
DRILLING METHOD:	Rotasonic Drill Rig	**DRILLING EQUIPMENT:**	Boart Longyear Mini Rotasonic
SAMPLING METHOD:	5 ft. core barrel	**CH2M OBSERVER:**	A. Harclerode
START DATE:	10/9/08	**FINISH DATE:**	10/9/08
NORTHING: 718485.12	**EASTING:** 633029.60	**APPROX. DEPTH TO WATER:**	Not noted

DEPTH (FT. BGS)	SAMPLE OR RUN DESIGNATION	SAMPLE TYPE	BLOWS PER 6 INCHES or CORE RUN (time/ft.)	RECOVERY/ PENETRATION (FT.)	RQD	SCREENING DATA PID	SCREENING DATA FID	ELEVATION (ft. MSL)	MATERIALS DESCRIPTION	GRAPHICAL LOG	USCS GROUP SYMBOL	WELL CONSTRUCTION
0									SOILS: classification, secondary grain size, color, moisture, and other descriptors ROCK: rock type, hardness, major mineral types, color, weathering, and degree of fracturing			
								5	No soil logging was performed at MW-130A. For soil descriptions, refer to soil boring log for MW-130B.			
5								0				
10								-5				
15								-10				
20								-15				
25									Bottom of boring @ 25 ft. bgs			



LEGEND:
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bgs = below ground surface
ND = not detected
NM = not measured
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SAMPLE TYPES:
D: drive
W: washed
ST: Shelby Tube
A: Auger
HA: hand auger
C: cored
RC: rotasonic core

SOIL:

MOISTURE:
dry
moist
wet

GRANULAR SOILS DENSITY:
0-4: very loose
5-10: loose
11-29: medium dense
30-49: dense
50+: very dense

PLASTIC SOILS DENSITY:
0-2: very soft
3-4: soft
5-8: medium soft
9-15: stiff
16-30: very stiff
>30: hard

PROPORTIONS:
Trace: <5% Few: 16-30%
Little: 6-15% Some: 31-49%

Density designation based on blow counts for each 12" of penetration using a 140 lb. hammer w/30" drop
When blow counts were not possible, density descriptions, as included in the "Materials Description" are based upon a thumb penetration test

NOTES:
No analytical samples collected.

ROCK:
RQD (rock quality designation):
reported in % = [length of core in pieces 4" and longer/ length of run] x100

307695

BORING LOG

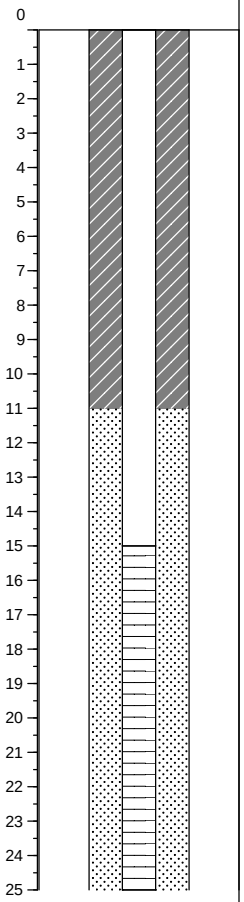
BORING/WELL ID: MW-130B

PROJECT NAME: Quanta Resources Superfund Site
SURFACE ELEVATION: 6.7 ft. MSL
LOCATION: N Edge of Fmr. Lever Bros.
MEASURING POINT: PVC Casing
PROJECT NUMBER: 363725
MEASURING POINT ELEVATION: 6.47 ft. MSL
CLIENT: Honeywell Inc.
TOTAL DEPTH: 30 ft. bgs
DRILLING CONTRACTOR: Boart Longyear
FOREMAN: J Graglia
DRILLING METHOD: Rotasonic Drill Rig
DRILLING EQUIPMENT: Boart Longyear Mini Rotasonic
SAMPLING METHOD: 5 ft. core barrel
CH2M OBSERVER: A. Harclerode
START DATE: 10/8/08
FINISH DATE: 10/9/08
NORTHING: 718487.18
EASTING: 633030.76
APPROX. DEPTH TO WATER: Not noted

DEPTH (FT. BGS)	SAMPLE OR RUN DESIGNATION	SAMPLE TYPE	BLOWS PER 6 INCHES or CORE RUN (time/ft.)	RECOVERY/ PENETRATION (FT.)	RQD	SCREENING DATA PID	SCREENING DATA FID	ELEVATION (ft. MSL)	MATERIALS DESCRIPTION (SOILS: classification, secondary grain size, color, moisture, and other descriptors; ROCK: rock type, hardness, major mineral types, color, weathering, and degree of fracturing)	USCS GROUP SYMBOL
0		RC	N/A	3.6/5.0	N/A	NM	NM	5	Fractured and pulverized CONCRETE (FILL)	
						NM	NM		Medium to coarse angular GRAVEL, trace coarse sub-rounded sand, some fine sub-angular to sub-rounded gravel, very dark grey, 7.5YR, 3/1, moist, dense (FILL)	SW
5		RC	N/A	0.5/5.0	N/A	NM	NM	0	Crushed/fractured CONCRETE, wet (FILL)	
10		RC	N/A	5.0/5.0	N/A	NM	NM	-5	WOOD pile coated with silty clay (FILL)	
15	16.0' to 17.0' (SB-130-16.5)	RC	N/A	5.0/5.0	N/A	1.8	NM	-10	WOOD with some silt coating, wet (FILL)	
						1.5	NM		Fine to medium SAND, well-sorted, trace fine sub-angular gravel, trace silty sand, @ 17 - 18 ft.: obvious petroleum odor and staining and/or very dark grey, 7.5YR, 3/1 coloration, @ 18 - 20 ft. color is brown, 7.5YR, 3/3, wet, loose	SW
20	20.0' to 21.0' (SB-130-20.5)	RC	N/A	5.0/5.0	N/A	22.5	NM	-15	Fine to medium SAND, well-sorted, trace fine sub-angular gravel, trace silty sand, obvious odor, 20 - 21 ft. is brown, 7.5YR, 3/3, 21 - 23 ft. is very dark grey, 7.5YR, 3/1, wet, loose, trace product and staining @ 23.25 ft. bgs	
						85.8	NM		Silty CLAY, trace fine sand seams with product, moist, medium stiff to stiff, olive brown, 2.5Y, 4/4, obvious odor, grades into following unit	CL
25						351	NM		24.5 - 25 ft.: SAND with some silty clay, very dark grey,	SP

GRAPHICAL LOG

WELL CONSTRUCTION



LEGEND:
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SAMPLE TYPES:
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16-30: very stiff
>30: hard

PROPORTIONS:
Trace: <5% Few: 16-30%
Little: 6-15% Some: 31-49%

Density designation based on blow counts for each 12" of penetration using a 140 lb. hammer w/30" drop
When blow counts were not possible, density descriptions, as included in the "Materials Description" are based upon a thumb penetration test

NOTES:
SB-130 (16.0 - 17.0): TOC, Total Arsenic, Arsenic by SEP
SB-130 (20.0 - 21.0): TOC, Total Arsenic, Arsenic by SEP
SB-130 (25.0 - 25.3) TPH Fingerprint

ROCK:
RQD (rock quality designation):
reported in % = [length of core in pieces 4" and longer/ length of run] x100

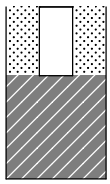
307696

BORING LOG

BORING/WELL ID: MW-130B

PROJECT NAME: Quanta Resources Superfund Site
SURFACE ELEVATION: 6.7 ft. MSL
LOCATION: N Edge of Fmr. Lever Bros.
MEASURING POINT: PVC Casing
PROJECT NUMBER: 363725
MEASURING POINT ELEVATION: 6.47 ft. MSL
CLIENT: Honeywell Inc.
TOTAL DEPTH: 30 ft. bgs
DRILLING CONTRACTOR: Boart Longyear
FOREMAN: J Graglia
DRILLING METHOD: Rotasonic Drill Rig
DRILLING EQUIPMENT: Boart Longyear Mini Rotasonic
SAMPLING METHOD: 5 ft. core barrel
CH2M OBSERVER: A. Harclerode
START DATE: 10/8/08
FINISH DATE: 10/9/08
NORTHING: 718487.18
EASTING: 633030.76
APPROX. DEPTH TO WATER: Not noted

DEPTH (FT. BGS)	SAMPLE OR RUN DESIGNATION	SAMPLE TYPE	BLOWS PER 6 INCHES or CORE RUN (time/ft.)	RECOVERY/ PENETRATION (FT.)	RQD	SCREENING DATA PID	SCREENING DATA FID	ELEVATION (ft. MSL)	MATERIALS DESCRIPTION (SOILS: classification, secondary grain size, color, moisture, and other descriptors; ROCK: rock type, hardness, major mineral types, color, weathering, and degree of fracturing)	GRAPHICAL LOG	USCS GROUP SYMBOL	WELL CONSTRUCTION
25	25.0' to 25.3' (SB-130-25)	RC	N/A	5.0/5.0	N/A	263 10	NM NM	-20	7.5YR, 3/1 and olive brown, 25Y, 4/4, wet, medium stiff to medium dense, pervasive product - black in pore space, especially at contact with sand and silty clay, obvious odor 25 - 25.3 ft.: SAND with trace silty clay, very dark grey, 7.5YR, 3/1 and olive brown, 25Y, 4/4, wet, medium stiff to medium dense, pervasive product - black in pore space, obvious odor		CL	
30								-25	25.3 - 30 ft.: Silty CLAY/clay with some silt, reddish brown, 5YR, 4/4, moist, stiff to very stiff Bottom of boring @ 30 ft. bgs			
35								-30				
40								-35				
45								-40				
50												



LEGEND:
msl = mean sea level
bgs = below ground surface
ND = not detected
NM = not measured
N/A = not applicable

SAMPLE TYPES:
D: drive
W: washed
ST: Shelby Tube
A: Auger
HA: hand auger
C: cored
RC: rotasonic core

SOIL:

MOISTURE:
dry
moist
wet

GRANULAR SOILS DENSITY:
0-4: very loose
5-10: loose
11-29: medium dense
30-49: dense
50+: very dense

PLASTIC SOILS DENSITY:
0-2: very soft
3-4: soft
5-8: medium soft
9-15: stiff
16-30: very stiff
>30: hard

PROPORTIONS:
Trace: <5% Few: 16-30%
Little: 6-15% Some: 31-49%

Density designation based on blow counts for each 12" of penetration using a 140 lb. hammer w/30" drop
When blow counts were not possible, density descriptions, as included in the "Materials Description" are based upon a thumb penetration test

NOTES:
SB-130 (16.0 - 17.0): TOC, Total Arsenic, Arsenic by SEP
SB-130 (20.0 - 21.0): TOC, Total Arsenic, Arsenic by SEP
SB-130 (25.0 - 25.3) TPH Fingerprint

ROCK:
RQD (rock quality designation):
reported in % = [length of core in pieces 4" and longer/ length of run] x100

307697

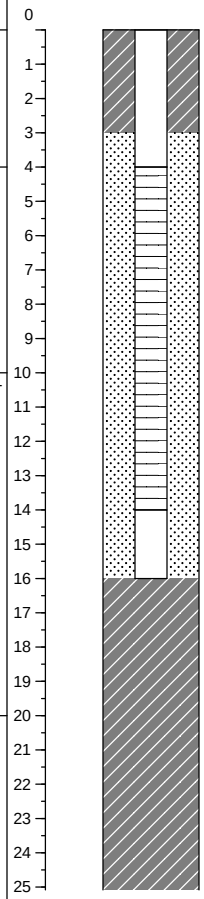
BORING LOG

BORING/WELL ID: MW-131

PROJECT NAME: Quanta Resources Superfund Site
SURFACE ELEVATION: 7.2 ft. MSL
LOCATION: E Side of Fmr. Lever Bros.
MEASURING POINT: PVC Casing
PROJECT NUMBER: 363725
MEASURING POINT ELEVATION: 6.88 ft. MSL
CLIENT: Honeywell Inc.
TOTAL DEPTH: 30 ft. bgs
DRILLING CONTRACTOR: Boart Longyear
FOREMAN: J Graglia
DRILLING METHOD: Rotasonic Drill Rig
DRILLING EQUIPMENT: Boart Longyear Mini Rotasonic
SAMPLING METHOD: 5 ft. core barrel
CH2M OBSERVER: A. Harclerode
START DATE: 10/6/08
FINISH DATE: 10/6/08
NORTHING: 718179.94
EASTING: 633097.72
APPROX. DEPTH TO WATER: 5.0 ft. bgs 10/6/08

DEPTH (FT. BGS)	SAMPLE OR RUN DESIGNATION	SAMPLE TYPE	BLOWS PER 6 INCHES or CORE RUN (time/ft.)	RECOVERY/ PENETRATION (FT.)	RQD	SCREENING DATA PID	SCREENING DATA FID	ELEVATION (ft. MSL)	MATERIALS DESCRIPTION (SOILS: classification, secondary grain size, color, moisture, and other descriptors; ROCK: rock type, hardness, major mineral types, color, weathering, and degree of fracturing)	USCS GROUP SYMBOL
0		RC	N/A	2.7/4.0	N/A	0.5	NM	5	Intermixed silty SAND, fine to coarse rounded to sub-angular GRAVEL, some wood and siltstone cobble/fractured rock, trace brick, black, dry to moist, loose, obvious petroleum odor @ ~ 2.5 ft. (FILL)	SM
		RC	N/A	1.0/1.0	N/A	0.1	NM		Fine to medium sub-rounded GRAVEL, trace to some rounded coarse sand, trace slag, trace siltstone fine angular gravel, trace fractured rock, very dark brown, 7.5YR, 2.5/2, moist to wet, loose (FILL)	GP
5		RC	N/A	1.4/3.0	N/A	ND	NM	0	Fine to medium sub-rounded GRAVEL, SLAG, SILTSTONE, fine angular GRAVEL, black, trace to some rounded coarse sand, trace fractured rock, wet, loose (FILL)	
	7.0' to 8.0' (SB-131-7.5)	RC	N/A	2.0/2.0	N/A	NM	NM		Fine to medium sub-rounded GRAVEL, SLAG, SILTSTONE, fine angular GRAVEL, black, trace to some rounded coarse sand, trace fractured rock, wet, loose (FILL)	
10		RC	N/A	5.0/5.0	N/A	0.2	NM	-5	Organic/peaty CLAY, very dark brown, 7.5YR, 2.5/2, moist, wet, medium stiff	OH/PT
15		RC	N/A	5.0/5.0	N/A	ND	NM	-10	Organic/peaty CLAY, very dark brown, 7.5YR, 2.5/2, moist, wet, medium stiff	
20	19.25' to 19.75' (SB-131-19.5)	RC	N/A	0.0/5.0	N/A	N/A	N/A	-15	No recovery	
25										

WELL CONSTRUCTION



LEGEND:
msl = mean sea level
bgs = below ground surface
ND = not detected
NM = not measured
N/A = not applicable

SAMPLE TYPES:
D: drive
W: washed
ST: Shelby Tube
A: Auger
HA: hand auger
C: cored
RC: rotasonic core

SOIL: GRANULAR SOILS DENSITY:
0-4: very loose
5-10: loose
11-29: medium dense
30-49: dense
50+: very dense

PLASTIC SOILS DENSITY:
0-2: very soft
3-4: soft
5-8: medium soft
9-15: stiff
16-30: very stiff
>30: hard

MOISTURE:
dry
moist
wet

PROPORTIONS:
Trace: <5% Few: 16-30%
Little: 6-15% Some: 31-49%

Density designation based on blow counts for each 12" of penetration using a 140 lb. hammer w/30" drop
When blow counts were not possible, density descriptions, as included in the "Materials Description" are based upon a thumb penetration test

NOTES:
SB-131 (7.0 - 8.0): TOC, Total Arsenic, Arsenic by SEP
SB-131 (19.25 - 19.75): TOC, Total Arsenic, Arsenic by SEP

ROCK:
RQD (rock quality designation):
reported in % = [length of core in pieces 4" and longer/ length of run] x100

307698

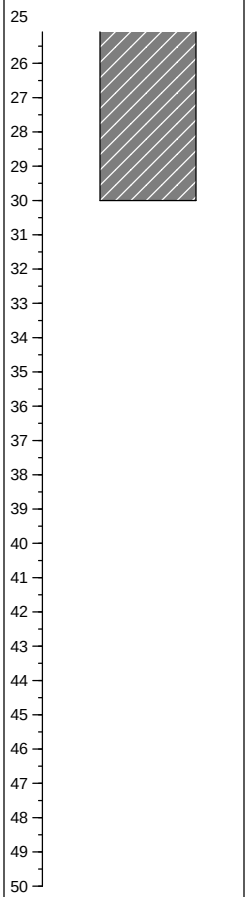
CH2MHILL

BORING LOG

BORING/WELL ID: MW-131

PROJECT NAME: Quanta Resources Superfund Site
SURFACE ELEVATION: 7.2 ft. MSL
LOCATION: E Side of Fmr. Lever Bros.
MEASURING POINT: PVC Casing
PROJECT NUMBER: 363725
MEASURING POINT ELEVATION: 6.88 ft. MSL
CLIENT: Honeywell Inc.
TOTAL DEPTH: 30 ft. bgs
DRILLING CONTRACTOR: Boart Longyear
FOREMAN: J Graglia
DRILLING METHOD: Rotasonic Drill Rig
DRILLING EQUIPMENT: Boart Longyear Mini Rotasonic
SAMPLING METHOD: 5 ft. core barrel
CH2M OBSERVER: A. Harclerode
START DATE: 10/6/08
FINISH DATE: 10/6/08
NORTHING: 718179.94
EASTING: 633097.72
APPROX. DEPTH TO WATER: 5.0 ft. bgs 10/6/08

DEPTH (FT. BGS)	SAMPLE OR RUN DESIGNATION	SAMPLE TYPE	BLOWS PER 6 INCHES or CORE RUN (time/ft.)	RECOVERY/ PENETRATION (FT.)	RQD	SCREENING DATA PID	SCREENING DATA FID	ELEVATION (ft. MSL)	MATERIALS DESCRIPTION (SOILS: classification, secondary grain size, color, moisture, and other descriptors; ROCK: rock type, hardness, major mineral types, color, weathering, and degree of fracturing)	GRAPHICAL LOG	USCS GROUP SYMBOL	WELL CONSTRUCTION
25		RC	N/A	0.0/5.0	N/A	N/A	N/A		No recovery			
								-20				
									Bottom of boring @ 30 ft. bgs			
30												
								-25				
35												
								-30				
40												
								-35				
45												
								-40				
50												



LEGEND:
msl = mean sea level
bgs = below ground surface
ND = not detected
NM = not measured
N/A = not applicable

SAMPLE TYPES:
D: drive
W: washed
ST: Shelby Tube
A: Auger
HA: hand auger
C: cored
RC: rotasonic core

SOIL: GRANULAR SOILS DENSITY:
0-4: very loose
5-10: loose
11-29: medium dense
30-49: dense
50+: very dense

PLASTIC SOILS DENSITY:
0-2: very soft
3-4: soft
5-8: medium soft
9-15: stiff
16-30: very stiff
>30: hard

MOISTURE:
dry
moist
wet

PROPORTIONS:
Trace: <5% Few: 16-30%
Little: 6-15% Some: 31-49%

Density designation based on blow counts for each 12" of penetration using a 140 lb. hammer w/30" drop
When blow counts were not possible, density descriptions, as included in the "Materials Description" are based upon a thumb penetration test

NOTES:
SB-131 (7.0 - 8.0): TOC, Total Arsenic, Arsenic by SEP
SB-131 (19.25 - 19.75): TOC, Total Arsenic, Arsenic by SEP

ROCK:
RQD (rock quality designation):
reported in % = [length of core in pieces 4" and longer/ length of run] x100

307699

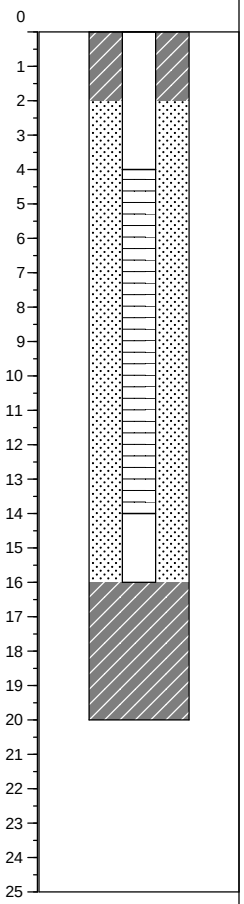
BORING LOG

BORING/WELL ID: MW-132

PROJECT NAME: Quanta Resources Superfund Site
SURFACE ELEVATION: 6.3 ft. MSL
LOCATION: E Side of Fmr. Lever Bros.
MEASURING POINT: PVC Casing
PROJECT NUMBER: 363725
MEASURING POINT ELEVATION: 5.90 ft. MSL
CLIENT: Honeywell Inc.
TOTAL DEPTH: 20 ft. bgs
DRILLING CONTRACTOR: Boart Longyear
FOREMAN: J Graglia
DRILLING METHOD: Rotasonic Drill Rig
DRILLING EQUIPMENT: Boart Longyear Mini Rotasonic
SAMPLING METHOD: 5 ft. core barrel
CH2M OBSERVER: A. Harclerode
START DATE: 10/7/08
FINISH DATE: 10/7/08
NORTHING: 718079.22
EASTING: 633160.00
APPROX. DEPTH TO WATER: 5.0 ft. bgs 10/7/08

DEPTH (FT. BGS)	SAMPLE OR RUN DESIGNATION	SAMPLE TYPE	BLOWS PER 6 INCHES or CORE RUN (time/ft.)	RECOVERY/ PENETRATION (FT.)	RQD	SCREENING DATA PID	SCREENING DATA FID	ELEVATION (ft. MSL)	MATERIALS DESCRIPTION (SOILS: classification, secondary grain size, color, moisture, and other descriptors; ROCK: rock type, hardness, major mineral types, color, weathering, and degree of fracturing)	USCS GROUP SYMBOL
0		RC	N/A	5.0/5.0	N/A	0.1	NM	5	Intermixed silty SAND and fine to coarse sub-angular to sub-rounded GRAVEL, trace brick, trace sub-rounded cobbles, very dark brown, 7.5YR, 2.5/2, dry to moist, loose (FILL)	SM/GP
5		RC	N/A	4.0/4.0	N/A	0.1	NM	0	SILT, some fine to coarse sub-angular to sub-rounded gravel, very dark brown, 7.5YR, 2.5/2, wet, loose (FILL)	ML
						2.2	NM		WOOD with coarse, rounded SAND and fine to medium sub-rounded GRAVEL, some slight staining/sheen, no free-phase product or obvious product odor observed, black, wet, loose (FILL)	
	8.0' to 9.0' (SB-132-8.5)					3.8	NM			GP
		RC	N/A	0.0/1.0	N/A	N/A	N/A		Fine to coarse sub-angular GRAVEL, some coarse rounded sand and wood, trace brick, trace to some slag, black, wet, loose, large metal piece @ 8 ft. (FILL)	
10		RC	N/A	3.7/5.0	N/A	0.1	NM	-5		GP
									No recovery	
									Fine to coarse sub-angular GRAVEL, some coarse rounded sand, wood, coal, and possible white slag pieces, trace mollusk shells and brick, trace to some slag, black, wet, loose (FILL)	
						ND	NM			OL
15		RC	N/A	5.0/5.0	N/A	ND	NM	-10	Silty CLAY, very dark grey, 7.5YR, 3/1, moist, soft	
									Silty CLAY, some mollusk shells and organics, very dark grey, 7.5YR, 3/1, moist, soft	
	19.0' to 20.0' (SB-132-19.5)								Bottom of boring @ 20 ft. bgs	
20								-15		
25										

WELL CONSTRUCTION



LEGEND:
msl = mean sea level
bgs = below ground surface
ND = not detected
NM = not measured
N/A = not applicable

SAMPLE TYPES:
D: drive
W: washed
ST: Shelby Tube
A: Auger
HA: hand auger
C: cored
RC: rotasonic core

SOIL: GRANULAR SOILS DENSITY:
0-4: very loose
5-10: loose
11-29: medium dense
30-49: dense
50+: very dense

PLASTIC SOILS DENSITY:
0-2: very soft
3-4: soft
5-8: medium soft
9-15: stiff
16-30: very stiff
>30: hard

MOISTURE:
dry
moist
wet

PROPORTIONS:
Trace: <5% Few: 16-30%
Little: 6-15% Some: 31-49%

Density designation based on blow counts for each 12" of penetration using a 140 lb. hammer w/30" drop
When blow counts were not possible, density descriptions, as included in the "Materials Description" are based upon a thumb penetration test

NOTES:
SB-132 (8.0 - 9.0): TOC, Total Arsenic, Arsenic by SEP
SB-132 (19.0 - 20.0): TOC, Total Arsenic, Arsenic by SEP

ROCK:
RQD (rock quality designation):
reported in % = [length of core in pieces 4" and longer/ length of run] x100

307700

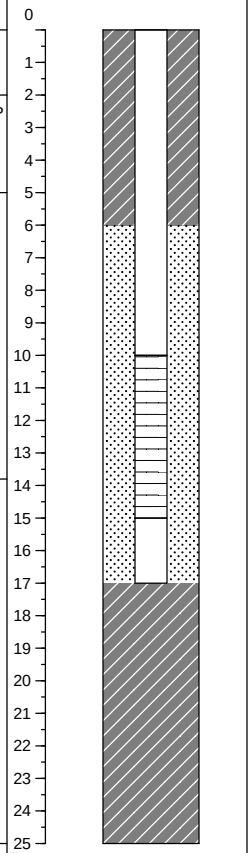
BORING LOG

BORING/WELL ID: MW-133

PROJECT NAME: Quanta Resources Superfund Site
SURFACE ELEVATION: 15.7 ft. MSL
LOCATION: S Portion of Edgewater Enterprises
MEASURING POINT: PVC Casing
PROJECT NUMBER: 363725
MEASURING POINT ELEVATION: 15.38 ft. MSL
CLIENT: Honeywell Inc.
TOTAL DEPTH: 25 ft. bgs
DRILLING CONTRACTOR: Boart Longyear
FOREMAN: J Graglia
DRILLING METHOD: Rotasonic Drill Rig
DRILLING EQUIPMENT: Boart Longyear Mini Rotasonic
SAMPLING METHOD: 5 ft. core barrel
CH2M OBSERVER: A. Harclerode
START DATE: 10/2/08
FINISH DATE: 10/2/08
NORTHING: 718804.18
EASTING: 633478.47
APPROX. DEPTH TO WATER: 10.0 ft. bgs 10/2/08

DEPTH (FT. BGS)	SAMPLE OR RUN DESIGNATION	SAMPLE TYPE	BLOWS PER 6 INCHES or CORE RUN (time/ft.)	RECOVERY/ PENETRATION (FT.)	RQD	SCREENING DATA PID	SCREENING DATA FID	ELEVATION (ft. MSL)	MATERIALS DESCRIPTION (SOILS: classification, secondary grain size, color, moisture, and other descriptors; ROCK: rock type, hardness, major mineral types, color, weathering, and degree of fracturing)	USCS GROUP SYMBOL
0		RC	N/A	3.0/5.0	N/A	N/A	N/A	15	Driller reports hard obstruction - boulder to approx, 2 ft. (FILL)	
						ND	NM		Intermixed silty SAND, fine to coarse sub-angular to sub-rounded gravel, small angular cobbles, some brick, very dark brown, 7.5YR, 2.5/2, dry, medium dense (FILL)	SM/GP
5		RC	N/A	1.8/5.0	N/A	ND	NM	10	SILT, little rounded to angular fine to coarse gravel, trace brick and slag, trace to little fine to coarse sand, moist (FILL)	ML
10		RC	N/A	2.0/5.0	N/A	NM	NM	5	SILT with fine SAND, trace sub-rounded fine to coarse gravel, very dark grey, 7.5YR, 3/1, moist to wet	
	13.0' to 13.5' (SB-133-13.25)					ND	NM		ROCK, SANDSTONE cobble in unlithified fine to medium SAND matrix, light grey, 7.5YR, 7/1, wet	
15		RC	N/A	5.0/5.0	N/A	ND	NM	0	ROCK flour and partially lithified SANDSTONE, light grey, 7.5YR, 3/1, dry	
20		RC	N/A	2.5/4.0	N/A	ND	NM	-5	ROCK flour and partially lithified SANDSTONE, light grey, 7.5YR, 3/1, dry	
		RC	N/A	1.0/1.0	N/A	NM	NM		ROCK flour and partially lithified SANDSTONE, light grey, 7.5YR, 3/1, dry	
25									Bottom of boring @ 25 ft. bgs	

WELL CONSTRUCTION



LEGEND:
msl = mean sea level
bgs = below ground surface
ND = not detected
NM = not measured
N/A = not applicable

SAMPLE TYPES:
D: drive
W: washed
ST: Shelby Tube
A: Auger
HA: hand auger
C: cored
RC: rotasonic core

SOIL:

MOISTURE:
dry
moist
wet

GRANULAR SOILS DENSITY:
0-4: very loose
5-10: loose
11-29: medium dense
30-49: dense
50+: very dense

PLASTIC SOILS DENSITY:
0-2: very soft
3-4: soft
5-8: medium soft
9-15: stiff
16-30: very stiff
>30: hard

PROPORTIONS:
Trace: <5% Few: 16-30%
Little: 6-15% Some: 31-49%

Density designation based on blow counts for each 12" of penetration using a 140 lb. hammer w/30" drop
When blow counts were not possible, density descriptions, as included in the "Materials Description" are based upon a thumb penetration test

NOTES:
SB-133 (13.0 - 13.5) TOC, Total Arsenic, Arsenic by SEP

ROCK:
RQD (rock quality designation):
reported in % = [length of core in pieces 4" and longer/ length of run] x100

307701

BORING LOG

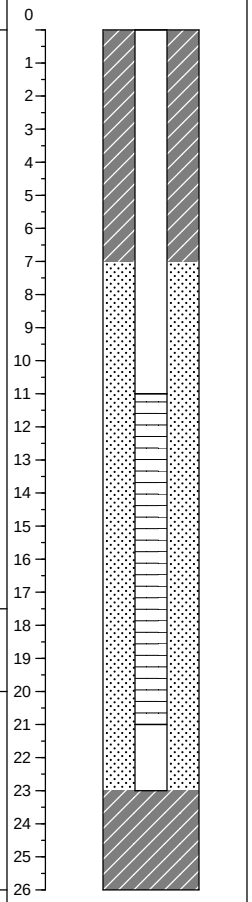
BORING/WELL ID: MW-134

PROJECT NAME: Quanta Resources Superfund Site
SURFACE ELEVATION: 14.5 ft. MSL
LOCATION: SE Corner of Edgewater Enterprises
MEASURING POINT: PVC Casing
PROJECT NUMBER: 363725
MEASURING POINT ELEVATION: 14.13 ft. MSL
CLIENT: Honeywell Inc.
TOTAL DEPTH: 26 ft. bgs
DRILLING CONTRACTOR: Boart Longyear
FOREMAN: J Graglia
DRILLING METHOD: Rotasonic Drill Rig
DRILLING EQUIPMENT: Boart Longyear Mini Rotasonic
SAMPLING METHOD: 5 ft. core barrel
CH2M OBSERVER: A. Harclerode
START DATE: 10/1/08
FINISH DATE: 10/1/08
NORTHING: 718686.21
EASTING: 633687.67
APPROX. DEPTH TO WATER: 15.0 ft. bgs 10/1/08

DEPTH (FT. BGS)	SAMPLE OR RUN DESIGNATION	SAMPLE TYPE	BLOWS PER 6 INCHES or CORE RUN (time/ft.)	RECOVERY/ PENETRATION (FT.)	RQD	SCREENING DATA PID	SCREENING DATA FID	ELEVATION (ft. MSL)	MATERIALS DESCRIPTION (SOILS: classification, secondary grain size, color, moisture, and other descriptors; ROCK: rock type, hardness, major mineral types, color, weathering, and degree of fracturing)	USCS GROUP SYMBOL
0		RC	N/A	2.3/5.0	N/A	0.7	NM		SILT, trace angular fine gravel, trace medium to coarse sand, trace organics (roots), reddish brown, 5YR, 4/3, moist (FILL)	ML
						ND	NM		Clayey SILT, trace angular fine to coarse gravel, dark grey, 2.5Y, 4/1, dry, boulder drilled through @ 4.3 to 4.5 ft. (FILL)	
5						NM	NM	10	SILT, little fine to coarse sand, trace sub-angular to angular fine to coarse gravel, dark brown, 7.5YR, 3/2, dry (FILL)	
		RC	N/A	3.1/5.0	N/A	NM	NM		SILT, little clay, trace wood, brick, and sub-rounded fine to coarse gravel, some boulders cored through, very dark grey, 7.5YR, 3/1, moist (FILL)	
								5		
10		RC	N/A	3.8/5.0	N/A	0.9	NM		SILT, little clay, trace wood, brick, and sub-rounded fine to coarse gravel, some boulders cored through, very dark grey, 7.5YR, 3/1, moist (FILL)	
						5.0	NM		Pulverized and fractured ROCK, interbedded with trace silt, light grey, 7.5YR, 7/1, dry (FILL)	
15	14.5' to 15' (SB-134-14.75)					259	NM	0	SILT, little fine to coarse sand, trace brick and wood, black, moist to wet, loose, staining present, noticeable petroleum odor (FILL)	
		RC	N/A	5.0/5.0	N/A	6.1	NM		SILT, trace clay, brick, fine to coarse sand and sub-rounded fine to coarse gravel, trace localized product and stained centimeter-scale lenses, black product and staining, dark grey/brown, 10YR, 4/2, moist to wet, dense/stiff (FILL)	
	17' to 18' (SB-134-17.5)					24	NM			SM
						30	NM	-5	Silty SAND, some fine to coarse sub-rounded to sub-angular gravel, trace brick, some product and staining in pore space, black, wet, medium dense (FILL)	
20		RC	N/A	6.0/6.0	N/A	0.1	NM		WOOD and SILT, some fine sand, some staining, obvious odor, black, wet, medium dense (FILL)	OL
									Silty CLAY, very dark grey, 7.5YR, 3/1, moist, medium stiff	
								-10		
25									Bottom of boring @ 26 ft. bgs	

GRAPHICAL LOG

WELL CONSTRUCTION



LEGEND:
msl = mean sea level
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N/A = not applicable

SAMPLE TYPES:
D: drive
W: washed
ST: Shelby Tube
A: Auger
HA: hand auger
C: cored
RC: rotasonic core

SOIL: GRANULAR SOILS DENSITY:
0-4: very loose
5-10: loose
11-29: medium dense
30-49: dense
50+: very dense

PLASTIC SOILS DENSITY:
0-2: very soft
3-4: soft
5-8: medium soft
9-15: stiff
16-30: very stiff
>30: hard

MOISTURE:
dry
moist
wet

PROPORTIONS:
Trace: <5% Few: 16-30%
Little: 6-15% Some: 31-49%

Density designation based on blow counts for each 12" of penetration using a 140 lb. hammer w/30" drop
When blow counts were not possible, density descriptions, as included in the "Materials Description" are based upon a thumb penetration test

NOTES:
SB-134 (14.5 - 15.0): TPH Fingerprint, TOC, Total Arsenic, Arsenic by SEP
SB-134 (17.0 - 18.0): TPH Fingerprint, TOC, Total Arsenic, Arsenic by SEP

ROCK:
RQD (rock quality designation):
reported in % = [length of core in pieces 4" and longer/ length of run] x100

307702

BORING LOG

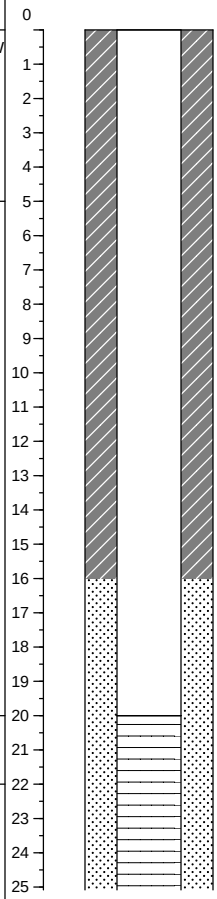
CH2MHILL

BORING/WELL ID: MW-135

PROJECT NAME: Quanta Resources Superfund Site
SURFACE ELEVATION: 15.2 ft. MSL
LOCATION: SE Corner of Edgewater Enterprises
MEASURING POINT: PVC Casing
PROJECT NUMBER: 363725
MEASURING POINT ELEVATION: 15.00 ft. MSL
CLIENT: Honeywell Inc.
TOTAL DEPTH: 45 ft. bgs
DRILLING CONTRACTOR: Boart Longyear
FOREMAN: J Graglia
DRILLING METHOD: Rotasonic Drill Rig
DRILLING EQUIPMENT: Boart Longyear Mini Rotasonic
SAMPLING METHOD: 5 ft. core barrel
CH2M OBSERVER: A. Harclerode
START DATE: 9/16/08
FINISH DATE: 9/16/08
NORTHING: 718635.16
EASTING: 633660.04
APPROX. DEPTH TO WATER: ~18 ft. bgs 11/25/08

DEPTH (FT. BGS)	SAMPLE OR RUN DESIGNATION	SAMPLE TYPE	BLOWS PER 6 INCHES or CORE RUN (time/ft.)	RECOVERY/ PENETRATION (FT.)	RQD	SCREENING DATA PID	SCREENING DATA FID	ELEVATION (ft. MSL)	MATERIALS DESCRIPTION (SOILS: classification, secondary grain size, color, moisture, and other descriptors; ROCK: rock type, hardness, major mineral types, color, weathering, and degree of fracturing)	USCS GROUP SYMBOL
0								15		
		RC	N/A	2.4/5.0	N/A	ND	NM		Intermixed silty SAND and fine to coarse GRAVEL, trace brick and concrete, some small cobbles, angular to sub-angular gravel, very dark brown, 7.5YR, 2.5/2, moist, loose (FILL)	SM/GW
5		RC	N/A	3.1/5.0	N/A	NM	NM	10	Sandy SILT, fine to coarse SAND, trace brick, some fine to coarse sub-rounded to sub-angular gravel, several boulders have been cored through, wet from drilling water (FILL)	ML
10		RC	N/A	3.2/5.0	N/A	NM	NM	5	Sandy SILT, fine to coarse SAND, trace wood, brick, and plastic pieces, some fine to coarse sub-rounded to sub-angular gravel, several boulders have been cored through, wet from drilling water (FILL)	
15		RC	N/A	3.6/5.0	N/A	0.5	NM	0	Sandy SILT, fine to coarse SAND, trace wood, brick, and plastic pieces, some fine to coarse sub-rounded to sub-angular gravel, several boulders have been cored through, wet from drilling water, product seam @ 17.9 ft., that is <0.1 ft. wide (FILL)	
						5.9	NM		Clayey SILT and large WOOD pieces, trace fine to coarse sand, wet (FILL)	
20		RC	N/A	5.0/5.0	N/A	ND	NM	-5	Silty fine to coarse angular GRAVEL, little fine to coarse sand, grey, 7.5YR, 5/1, slightly wet (FILL)	GM
						51.0	NM		SILT, little fine to coarse angular gravel, trace fine to coarse sand, trace wood, piece of steel bar present, cobble, product stain and product present with obvious odor, black, wet, product also present in 2 solid forms: vitreous solid, breakable chunks, and as a rubbery, plastic form (FILL)	OL/OH
						190	NM			
25								-10	Silty CLAY, trace organics, black, moist	

WELL CONSTRUCTION



LEGEND:
msl = mean sea level
bgs = below ground surface
ND = not detected
NM = not measured
N/A = not applicable

SAMPLE TYPES:
D: drive
W: washed
ST: Shelby Tube
A: Auger
HA: hand auger
C: cored
RC: rotasonic core

SOIL: GRANULAR SOILS DENSITY:
0-4: very loose
5-10: loose
11-29: medium dense
30-49: dense
50+: very dense

PLASTIC SOILS DENSITY:
0-2: very soft
3-4: soft
5-8: medium soft
9-15: stiff
16-30: very stiff
>30: hard

MOISTURE:
dry
moist
wet

PROPORTIONS:
Trace: <5% Few: 16-30%
Little: 6-15% Some: 31-49%

Density designation based on blow counts for each 12" of penetration using a 140 lb. hammer w/30" drop
When blow counts were not possible, density descriptions, as included in the "Materials Description" are based upon a thumb penetration test

NOTES:
No analytical samples collected. PID screening not performed at 5 - 15 ft. due to malfunctioning PID.

ROCK:
RQD (rock quality designation):
reported in % = [length of core in pieces 4" and longer/ length of run] x100

307703

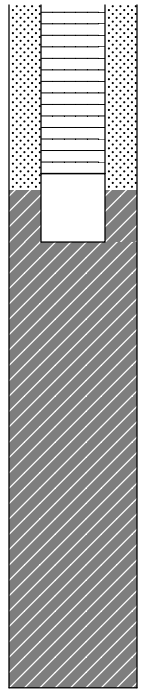
BORING LOG

BORING/WELL ID: MW-135

PROJECT NAME: Quanta Resources Superfund Site
SURFACE ELEVATION: 15.2 ft. MSL
LOCATION: SE Corner of Edgewater Enterprises
MEASURING POINT: PVC Casing
PROJECT NUMBER: 363725
MEASURING POINT ELEVATION: 15.00 ft. MSL
CLIENT: Honeywell Inc.
TOTAL DEPTH: 45 ft. bgs
DRILLING CONTRACTOR: Boart Longyear
FOREMAN: J Graglia
DRILLING METHOD: Rotasonic Drill Rig
DRILLING EQUIPMENT: Boart Longyear Mini Rotasonic
SAMPLING METHOD: 5 ft. core barrel
CH2M OBSERVER: A. Harclerode
START DATE: 9/16/08
FINISH DATE: 9/16/08
NORTHING: 718635.16
EASTING: 633660.04
APPROX. DEPTH TO WATER: ~18 ft. bgs 11/25/08

DEPTH (FT. BGS)	SAMPLE OR RUN DESIGNATION	SAMPLE TYPE	BLOWS PER 6 INCHES or CORE RUN (time/ft.)	RECOVERY/ PENETRATION (FT.)	RQD	SCREENING DATA PID	SCREENING DATA FID	ELEVATION (ft. MSL)	MATERIALS DESCRIPTION (SOILS: classification, secondary grain size, color, moisture, and other descriptors; ROCK: rock type, hardness, major mineral types, color, weathering, and degree of fracturing)	USCS GROUP SYMBOL
25		RC	N/A	5.0/5.0	N/A	134	NM	-10	Silty CLAY, trace shell fragments, trace coal pieces, trace product lenses, black, moist to wet	SP
						NM	NM		Fine to medium grained SAND, clay within pore space, grey, 7.5YR, 5/1, dry, very dense	
						16.9	NM		SANDSTONE cobble in silty CLAY matrix, weak red, 10R, 4/3, wet	SC
						2.7	NM		ROCK, crushed/pulverized by drilling, dry	
30		RC	N/A	3.0/3.0	N/A	3.9	NM	-15	Clayey fine to medium grained SAND, little silt, brown, 7.5YR, 5/2, dry	
						3.0	NM		Clayey fine to coarse grained SAND with broken pieces of SANDSTONE, trace clay, dark grey, 7.5YR, 4/1, wet	GW/ML
						0.7	NM		SANDSTONE, metamorphosed, broken up by drilling/coring	
35		RC	N/A	2.5/7.0	N/A	1.8	NM	-20	33 - 38.6 ft.: Fine to coarse rounded GRAVEL. 38.6 - 40 ft.: Fine to coarse rounded GRAVEL in silty matrix, trace fine to coarse sand, wet, very small (<0.01 ft.) product lenses/pockets, red, 10R, 4/6 (Drilled using water to advance core barrel, washing out most matrix material)	
40		RC	N/A	3.0/3.0	N/A	ND	NM	-25	Fine to coarse sub-angular GRAVEL in silty matrix, trace fine sand, trace shells, red, 10R, 4/6, wet	
									SILT and SAND, little sub-rounded fine to coarse gravel, trace clay, partially lithified, dry	SM
		RC	N/A	2.0/2.0	N/A	ND	NM		Silty CLAY, trace fine to coarse sand, trace sub-angular fine to coarse gravel, grey, 10YR, 6/1, wet	CL
45								-30	ROCK - gravel to cobble-sized, pulverized pieces, dry	
									Bottom of boring @ 45 ft. bgs	
50										

WELL CONSTRUCTION



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A: Auger
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SOIL: GRANULAR SOILS DENSITY:
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50+: very dense

PLASTIC SOILS DENSITY:
0-2: very soft
3-4: soft
5-8: medium soft
9-15: stiff
16-30: very stiff
>30: hard

MOISTURE:
dry
moist
wet

PROPORTIONS:
Trace: <5% Few: 16-30%
Little: 6-15% Some: 31-49%

Density designation based on blow counts for each 12" of penetration using a 140 lb. hammer w/30" drop
When blow counts were not possible, density descriptions, as included in the "Materials Description" are based upon a thumb penetration test

NOTES:
No analytical samples collected. PID screening not performed at 5 - 15 ft. due to malfunctioning PID.

ROCK:
RQD (rock quality designation):
reported in % = [length of core in pieces 4" and longer/ length of run] x100

307704

BORING LOG

CH2MHILL

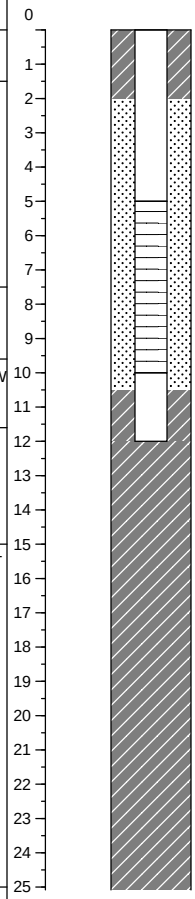
BORING/WELL ID: MW-136

PROJECT NAME: Quanta Resources Superfund Site
SURFACE ELEVATION: 5.3 ft. MSL
LOCATION: Center of Block 93 Central
MEASURING POINT: PVC Casing
PROJECT NUMBER: 363725
MEASURING POINT ELEVATION: 5.02 ft. MSL
CLIENT: Honeywell Inc.
TOTAL DEPTH: 30 ft. bgs
DRILLING CONTRACTOR: Boart Longyear
FOREMAN: J Graglia
DRILLING METHOD: Rotasonic Drill Rig
DRILLING EQUIPMENT: Boart Longyear Mini Rotasonic
SAMPLING METHOD: 5 ft. core barrel
CH2M OBSERVER: A. Harclerode
START DATE: 9/10/08
FINISH DATE: 9/10/08
NORTHING: 718854.68
EASTING: 632600.74
APPROX. DEPTH TO WATER: 1.0 ft. bgs 9/10/08

DEPTH (FT. BGS)	SAMPLE OR RUN DESIGNATION	SAMPLE TYPE	BLOWS PER 6 INCHES or CORE RUN (time/ft.)	RECOVERY/ PENETRATION (FT.)	RQD	SCREENING DATA PID	SCREENING DATA FID	ELEVATION (ft. MSL)	MATERIALS DESCRIPTION (SOILS: classification, secondary grain size, color, moisture, and other descriptors; ROCK: rock type, hardness, major mineral types, color, weathering, and degree of fracturing)	USCS GROUP SYMBOL
0	0.5' to 1.0' (SB-136-1.0)	RC	N/A	3.1/5.0	N/A	0.1	NM	5	Silty SAND with fractured ROCK/coarse GRAVEL, some fine to medium gravel, very dark brown, 7.5YR, 2.5/2, medium dense, moist, slightly noticeable odor (FILL)	SM
						0.1	NM		Coarse SAND, fine to coarse sub-angular to angular GRAVEL, black, trace brick and cinder, wet, loose to medium dense, slightly noticeable odor (FILL)	SW
5		RC	N/A	1.6/5.0	N/A	ND	NM	0	Coarse SAND, fine to coarse sub-angular to angular GRAVEL, black, trace brick and cinder, wet, loose, slightly noticeable odor, increasing silt content with depth (FILL)	
						ND	NM		Clayey SILT, some fine to medium sub-rounded gravel, trace to some cinder, black, wet (FILL)	ML
	8.5' to 9.5' (SB-136-8.5)								Coarse SAND and fine sub-angular GRAVEL, trace to some cinder, wet (FILL)	
10		RC	N/A	1.7/5.0	N/A	ND	NM	-5		SW/GW
						ND	NM		Coarse SAND and fine sub-angular GRAVEL, trace to some cinder, some sub-angular cobbles, wet (FILL)	
						ND	NM		Well graded sub-angular to round GRAVEL, with CINDER, trace coarse sand, trace product, slight sheen, slightly obvious odor (FILL)	GW
15		RC	N/A	2.8/5.0	N/A	0.3	NM	-10	Peaty CLAY, trace fine sand, very dark grey, 7.5YR, 3/1, moist	OH/PT
20	21.0' to 22.0' (SB-136-21.5)	RC	N/A	2.6/5.0	N/A	28.1	NM	-15	Peaty CLAY, trace cobble, trace fine sand, some product in peat @ 21 to 23 ft. bgs, very dark grey, 7.5YR, 3/1, moist to wet (impacted zone is wetter), odor present	
25								-20	Silty CLAY, some rounded cobble, black, little fine to coarse	

GRAPHICAL LOG

WELL CONSTRUCTION



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SAMPLE TYPES:
D: drive
W: washed
ST: Shelby Tube
A: Auger
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C: cored
RC: rotasonic core

SOIL: GRANULAR SOILS DENSITY:
0-4: very loose
5-10: loose
11-29: medium dense
30-49: dense
50+: very dense

PLASTIC SOILS DENSITY:
0-2: very soft
3-4: soft
5-8: medium soft
9-15: stiff
16-30: very stiff
>30: hard

MOISTURE:
dry
moist
wet

PROPORTIONS:
Trace: <5% Few: 16-30%
Little: 6-15% Some: 31-49%

Density designation based on blow counts for each 12" of penetration using a 140 lb. hammer w/30" drop
When blow counts were not possible, density descriptions, as included in the "Materials Description" are based upon a thumb penetration test

NOTES:
SB-136 (0.5 - 1.0): VOCs, SVOCs, PCBs, TAL Metals
SB-136 (8.5 - 9.5): VOCs, SVOCs, PCBs, TAL Metals
SB-136 (21.0 - 22.0): VOCs, SVOCs, PCBs, TAL Metals

ROCK:
RQD (rock quality designation):
reported in % = [length of core in pieces 4" and longer/ length of run] x100

307705

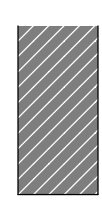
BORING LOG

BORING/WELL ID: MW-136

PROJECT NAME: Quanta Resources Superfund Site
SURFACE ELEVATION: 5.3 ft. MSL
LOCATION: Center of Block 93 Central
MEASURING POINT: PVC Casing
PROJECT NUMBER: 363725
MEASURING POINT ELEVATION: 5.02 ft. MSL
CLIENT: Honeywell Inc.
TOTAL DEPTH: 30 ft. bgs
DRILLING CONTRACTOR: Boart Longyear
FOREMAN: J Graglia
DRILLING METHOD: Rotasonic Drill Rig
DRILLING EQUIPMENT: Boart Longyear Mini Rotasonic
SAMPLING METHOD: 5 ft. core barrel
CH2M OBSERVER: A. Harclerode
START DATE: 9/10/08
FINISH DATE: 9/10/08
NORTHING: 718854.68
EASTING: 632600.74
APPROX. DEPTH TO WATER: 1.0 ft. bgs 9/10/08

DEPTH (FT. BGS)	SAMPLE OR RUN DESIGNATION	SAMPLE TYPE	BLOWS PER 6 INCHES or CORE RUN (time/ft.)	RECOVERY/ PENETRATION (FT.)	RQD	SCREENING DATA PID	SCREENING DATA FID	ELEVATION (ft. MSL)	MATERIALS DESCRIPTION (SOILS: classification, secondary grain size, color, moisture, and other descriptors; ROCK: rock type, hardness, major mineral types, color, weathering, and degree of fracturing)	GRAPHICAL LOG	USCS GROUP SYMBOL
25		RC	N/A	5.0/5.0	N/A	ND	NM	-20	Silty CLAY, some rounded cobble, black, little fine to coarse sand and fine to coarse sub-rounded gravel, wet		CL
						ND	NM		CLAY, alternating SILT and CLAY lenses throughout, some mottling of brown 7.5YR, 4/2 and greenish grey, GLEY2, 6/1, lean, moderate plasticity, dry, tight		
									Bottom of boring @ 30 ft. bgs		
30								-25			
35								-30			
40								-35			
45								-40			
50											

WELL CONSTRUCTION



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ST: Shelby Tube
A: Auger
HA: hand auger
C: cored
RC: rotasonic core

SOIL:

MOISTURE:
dry
moist
wet

GRANULAR SOILS DENSITY:
0-4: very loose
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11-29: medium dense
30-49: dense
50+: very dense

PLASTIC SOILS DENSITY:
0-2: very soft
3-4: soft
5-8: medium soft
9-15: stiff
16-30: very stiff
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PROPORTIONS:
Trace: <5% Few: 16-30%
Little: 6-15% Some: 31-49%

Density designation based on blow counts for each 12" of penetration using a 140 lb. hammer w/30" drop
When blow counts were not possible, density descriptions, as included in the "Materials Description" are based upon a thumb penetration test

NOTES:
SB-136 (0.5 - 1.0): VOCs, SVOCs, PCBs, TAL Metals
SB-136 (8.5 - 9.5): VOCs, SVOCs, PCBs, TAL Metals
SB-136 (21.0 - 22.0): VOCs, SVOCs, PCBs, TAL Metals

ROCK:
RQD (rock quality designation):
reported in % = [length of core in pieces 4" and longer/ length of run] x100

307706

BORING LOG

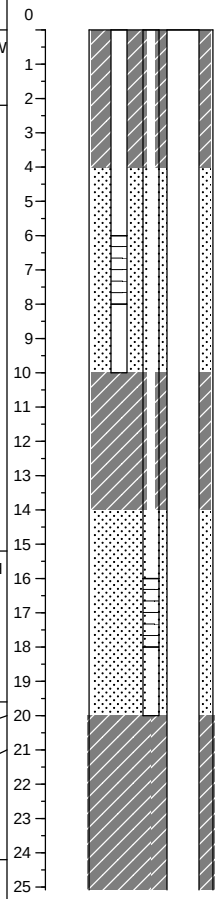
BORING/WELL ID: PZ-6

PROJECT NAME: Quanta Resources Superfund Site
SURFACE ELEVATION: 6.0 ft. MSL
LOCATION: Quanta Property Shoreline
MEASURING POINT: PVC Casing
PROJECT NUMBER: 363725
MEASURING POINT ELEVATION: 5.79 ft. MSL
CLIENT: Honeywell Inc.
TOTAL DEPTH: 34 ft. bgs
DRILLING CONTRACTOR: Boart Longyear
FOREMAN: J Graglia
DRILLING METHOD: Rotasonic Drill Rig
DRILLING EQUIPMENT: Boart Longyear Mini Rotasonic
SAMPLING METHOD: 5 ft. core barrel
CH2M OBSERVER: A Harclerode
START DATE: 9/23/08
FINISH DATE: 9/24/08
NORTHING: 718579.95
EASTING: 633648.02
APPROX. DEPTH TO WATER: Unable to observe during drilling

DEPTH (FT. BGS)	SAMPLE OR RUN DESIGNATION	SAMPLE TYPE	BLOWS PER 6 INCHES or CORE RUN (time/ft.)	RECOVERY/ PENETRATION (FT.)	RQD	SCREENING DATA PID	SCREENING DATA FID	ELEVATION (ft. MSL)	MATERIALS DESCRIPTION (SOILS: classification, secondary grain size, color, moisture, and other descriptors; ROCK: rock type, hardness, major mineral types, color, weathering, and degree of fracturing)	USCS GROUP SYMBOL
0		RC	N/A	2.4/5.0	N/A	1.8	NM	5	Intermixed coarse sub-rounded SAND and fine to coarse sub-angular to sub-rounded GRAVEL, some wood and roots, very dark brown, 7.5YR, 2.5/2, wet (from drilling water), loose (FILL)	SW/GW
						36.8	NM		Cored WOOD with some silt, very dark brown, 7.5YR, 2.5/2, wet, dense, stained (FILL)	
5		RC	N/A	2.9/5.0	N/A	4.6	NM	0	Cored WOOD, trace to some silty gravel, obvious creosote odor, trace to some product and pervasive staining present, very dark brown, 7.5YR, 2.5/2, black, wet, dense (FILL)	
10		RC	N/A	N/A	N/A	N/A	N/A	-5	SLOUGH with braided steel cable, product @ first foot of material (FILL)	
									Possible cored metamorphosed trap ROCK (FILL)	
15	15.5' to 16.0' (SB-PZ6-15.75)	RC	N/A	5.0/5.0	N/A	N/A	N/A	-10	SILT with some fine SAND, trace wood, and shell, heavily impacted with product from 15 to approx. 18.5 ft. bgs, becomes clayier and has less product with depth, trace product becomes none observed @ 19 ft., very soft, black, wet	OL/OH
						31.4	NM			
									Cored metamorphic ROCK	
20		RC	N/A	4.5/5.0	N/A	7.0	NM	-15	Medium sub-angular GRAVEL, some fine sub-angular gravel, trace to some pulverized rock and medium to coarse sand, dark reddish brown, 5YR, 3/3, moist, medium dense	GP
						ND	NM			CH
						ND	NM		Gravelly CLAY with some fractured cobbles/rock, weak red, 2.5YR, 4/2, moist, stiff/dense	
						ND	NM			
25						NM	NM		CLAY with some gravel and fractured cobbles/rock, weak red, 2.5YR, 4/2, moist, stiff/dense	

GRAPHICAL LOG

WELL CONSTRUCTION



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SAMPLE TYPES:
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MOISTURE:
dry
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wet

PROPORTIONS:
Trace: <5% Few: 16-30%
Little: 6-15% Some: 31-49%

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NOTES:
SB-PZ6 (15.5 - 16.0): TPH Fingerprint

ROCK:
RQD (rock quality designation):
reported in % = [length of core in pieces 4" and longer/ length of run] x100

307707

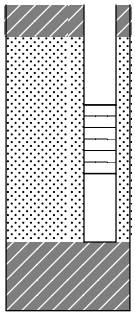
BORING LOG

BORING/WELL ID: PZ-6

PROJECT NAME: Quanta Resources Superfund Site
SURFACE ELEVATION: 6.0 ft. MSL
LOCATION: Quanta Property Shoreline
MEASURING POINT: PVC Casing
PROJECT NUMBER: 363725
MEASURING POINT ELEVATION: 5.79 ft. MSL
CLIENT: Honeywell Inc.
TOTAL DEPTH: 34 ft. bgs
DRILLING CONTRACTOR: Boart Longyear
FOREMAN: J Graglia
DRILLING METHOD: Rotasonic Drill Rig
DRILLING EQUIPMENT: Boart Longyear Mini Rotasonic
SAMPLING METHOD: 5 ft. core barrel
CH2M OBSERVER: A Harclerode
START DATE: 9/23/08
FINISH DATE: 9/24/08
NORTHING: 718579.95
EASTING: 633648.02
APPROX. DEPTH TO WATER: Unable to observe during drilling

DEPTH (FT. BGS)	SAMPLE OR RUN DESIGNATION	SAMPLE TYPE	BLOWS PER 6 INCHES or CORE RUN (time/ft.)	RECOVERY/ PENETRATION (FT.)	RQD	SCREENING DATA PID	SCREENING DATA FID	ELEVATION (ft. MSL)	MATERIALS DESCRIPTION (SOILS: classification, secondary grain size, color, moisture, and other descriptors; ROCK: rock type, hardness, major mineral types, color, weathering, and degree of fracturing)	GRAPHICAL LOG	USCS GROUP SYMBOL
25		RC	N/A	4.1/5.0	N/A	ND ND	NM NM	-20	Fractured white fine to medium grained SANDSTONE, slightly weathered, moderately competent with white clay/pulverized rock paste (drilled without using water), moist to wet, dense		
									ROCK flour and partially lithified SANDSTONE, white, 7.5YR, 8/1, lens of 5YR, 4/3, reddish brown color from 27.5 to 27.8 ft., trace lithified sandstone, rock is only partially lithified and breaks easily, dry		
30		RC	N/A	3.8/5.0	N/A	NM	NM	-25	ROCK flour and partially lithified SANDSTONE, white, 7.5YR, 8/1, trace lithified sandstone, rock is only partially lithified and breaks easily, dry		
									Bottom of boring @ 34 ft. bgs		
35								-30			
40								-35			
45								-40			
50											

WELL CONSTRUCTION



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HA: hand auger
C: cored
RC: rotasonic core

SOIL: GRANULAR SOILS DENSITY:
0-4: very loose
5-10: loose
11-29: medium dense
30-49: dense
50+: very dense

PLASTIC SOILS DENSITY:
0-2: very soft
3-4: soft
5-8: medium soft
9-15: stiff
16-30: very stiff
>30: hard

MOISTURE:
dry
moist
wet

PROPORTIONS:
Trace: <5% Few: 16-30%
Little: 6-15% Some: 31-49%

Density designation based on blow counts for each 12" of penetration using a 140 lb. hammer w/30" drop
When blow counts were not possible, density descriptions, as included in the "Materials Description" are based upon a thumb penetration test

NOTES:
SB-PZ6 (15.5 - 16.0): TPH Fingerprint

ROCK:
RQD (rock quality designation):
reported in % = [length of core in pieces 4" and longer/ length of run] x100

307708

BORING LOG

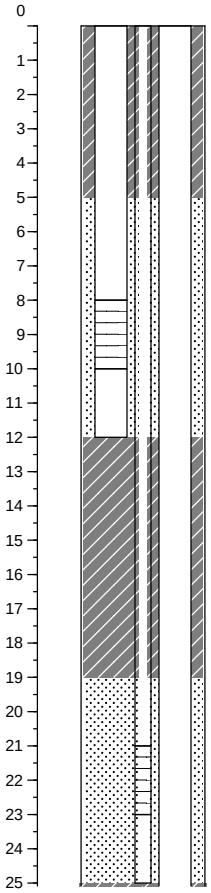
BORING/WELL ID: PZ-7

PROJECT NAME: Quanta Resources Superfund Site
SURFACE ELEVATION: 6.0 ft. MSL
LOCATION: Quanta Property Shoreline
MEASURING POINT: PVC Casing
PROJECT NUMBER: 363725
MEASURING POINT ELEVATION: 5.69 ft. MSL
CLIENT: Honeywell Inc.
TOTAL DEPTH: 40 ft. bgs
DRILLING CONTRACTOR: Boart Longyear
FOREMAN: J Graglia
DRILLING METHOD: Rotasonic Drill Rig
DRILLING EQUIPMENT: Boart Longyear Mini Rotasonic
SAMPLING METHOD: 5 ft. core barrel
CH2M OBSERVER: A. Harclerode
START DATE: 9/18/08
FINISH DATE: 9/18/08
NORTHING: 718511.80
EASTING: 633625.02
APPROX. DEPTH TO WATER: 5.0 ft. bgs 9/18/08

DEPTH (FT. BGS)	SAMPLE OR RUN DESIGNATION	SAMPLE TYPE	BLOWS PER 6 INCHES or CORE RUN (time/ft.)	RECOVERY/ PENETRATION (FT.)	RQD	SCREENING DATA PID	SCREENING DATA FID	ELEVATION (ft. MSL)	MATERIALS DESCRIPTION (SOILS: classification, secondary grain size, color, moisture, and other descriptors; ROCK: rock type, hardness, major mineral types, color, weathering, and degree of fracturing)	USCS GROUP SYMBOL
0										
		RC	N/A	3.0/5.0	N/A	0.3	NM	5	Fine to coarse angular to sub-rounded GRAVEL, some coarse rounded sand, very dark grey, 7.5YR, 4/1 to black, dry, loose (FILL)	GW
						0.2	NM		Intermixed CINDER and SLAG, trace to some coarse sand, trace silt, black, dry, loose, 0.2 ft. thick piece of semi-solid tar @ ~ 2.2 to 2.4 ft. bgs (FILL)	
						0.2	NM		Gravelly CLAY, fine to coarse angular to sub-angular GRAVEL, some sub-angular cobbles, dark brown, 7.5YR, 3/4, moist, dense (FILL)	CL
5		RC	N/A	2.4/5.0	N/A	2.7	NM	0		ML/GW
						1.3	NM		SILT and GRAVEL with sub-angular COBBLE, black, wet, loose, product-impacted (FILL)	
									Product impacted WOOD (FILL)	
						1.1	NM		SILT and GRAVEL with sub-angular COBBLE, black, wet, loose, product-impacted (FILL)	
10	10.5 to 11.0' (SB-PZ7-10.75)	RC	N/A	4.5/5.0	N/A	3.7	NM	-5	Fine to medium grained SAND, trace coarse sand, little sub-angular to angular gravel, trace brick, coal and silt, trace silt, black, obvious product odor (FILL)	SW
						17.9	NM		WOOD piece cored through (FILL)	
15		RC	N/A	3.6/5.0	N/A	5.1	NM		WOOD with some silt, black, wet, loose, product-impacted (FILL)	
	16.0' to 16.5' (SB-PZ7-16.25)					0.5	NM	-10	Silty CLAY, black, moist, soft	OH
						0.8	NM		SILT with some wood and shell fragments, trace fine to medium sand, black, wet, soft, some product impacts @ 19 - 20 ft. bgs	OL
20		RC	N/A	3.5/5.0	N/A	20.0	NM	-15	Silty CLAY with fine to coarse SAND, some wood and shell fragments, black, soft, wet, pervasive product present	OH
						12.0	NM		Silty CLAY, trace wood and shell fragments, some centimeter scale product seams/lenses to 23 ft. bgs	
25										

GRAPHICAL LOG

WELL CONSTRUCTION



LEGEND:
msl = mean sea level
bgs = below ground surface
ND = not detected
NM = not measured
N/A = not applicable

SAMPLE TYPES:
D: drive
W: washed
ST: Shelby Tube
A: Auger
HA: hand auger
C: cored
RC: rotasonic core

SOIL: GRANULAR SOILS DENSITY:
0-4: very loose
5-10: loose
11-29: medium dense
30-49: dense
50+: very dense

PLASTIC SOILS DENSITY:
0-2: very soft
3-4: soft
5-8: medium soft
9-15: stiff
16-30: very stiff
>30: hard

MOISTURE:
dry
moist
wet

PROPORTIONS:
Trace: <5% Few: 16-30%
Little: 6-15% Some: 31-49%

Density designation based on blow counts for each 12" of penetration using a 140 lb. hammer w/30" drop
When blow counts were not possible, density descriptions, as included in the "Materials Description" are based upon a thumb penetration test

NOTES:
SB-PZ7 (10.5 - 11.0): TPH Fingerprint
SB-PZ7 (16.0 - 16.5): VOCs, SVOCs

ROCK:
RQD (rock quality designation):
reported in % = [length of core in pieces 4" and longer/ length of run] x100

307709

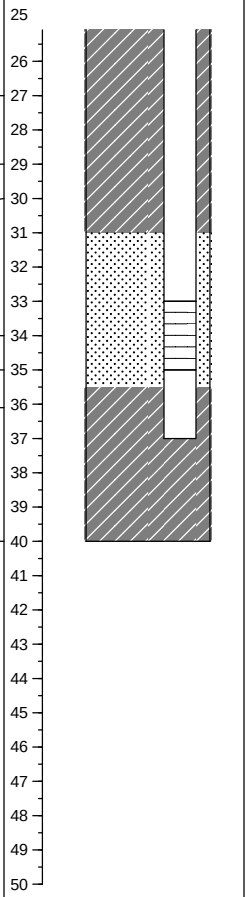
BORING LOG

BORING/WELL ID: PZ-7

PROJECT NAME: Quanta Resources Superfund Site
SURFACE ELEVATION: 6.0 ft. MSL
LOCATION: Quanta Property Shoreline
MEASURING POINT: PVC Casing
PROJECT NUMBER: 363725
MEASURING POINT ELEVATION: 5.69 ft. MSL
CLIENT: Honeywell Inc.
TOTAL DEPTH: 40 ft. bgs
DRILLING CONTRACTOR: Boart Longyear
FOREMAN: J Graglia
DRILLING METHOD: Rotasonic Drill Rig
DRILLING EQUIPMENT: Boart Longyear Mini Rotasonic
SAMPLING METHOD: 5 ft. core barrel
CH2M OBSERVER: A. Harclerode
START DATE: 9/18/08
FINISH DATE: 9/18/08
NORTHING: 718511.80
EASTING: 633625.02
APPROX. DEPTH TO WATER: 5.0 ft. bgs 9/18/08

DEPTH (FT. BGS)	SAMPLE OR RUN DESIGNATION	SAMPLE TYPE	BLOWS PER 6 INCHES or CORE RUN (time/ft.)	RECOVERY/ PENETRATION (FT.)	RQD	SCREENING DATA PID	SCREENING DATA FID	ELEVATION (ft. MSL)	MATERIALS DESCRIPTION (SOILS: classification, secondary grain size, color, moisture, and other descriptors; ROCK: rock type, hardness, major mineral types, color, weathering, and degree of fracturing)	USCS GROUP SYMBOL
25		RC	N/A	5.0/5.0	N/A	ND	NM	-20	Silty CLAY, trace wood and shell fragments	
						ND	NM		Silty fine to medium SAND, some coarse sand, some fine to coarse sub-rounded gravel, trace sub-rounded cobble	SM
						ND	NM		Previous interval grades to SILT with sub-angular to angular fine to medium GRAVEL, trace sub-angular cobble, dark brown, 7.5YR, 3/2, moderately dense to dense with depth, semi-lithified towards bottom	ML
30		RC	N/A	5.0/5.0	N/A	ND	NM	-25	Silty fine to medium SAND, some coarse sand, some fine to coarse sub-rounded gravel, trace sub-rounded cobble, wet @ 30 - 32 ft., moist @ 32 - 34 ft.	SM
						ND	NM		Semi-lithified SILTSTONE, weak red, 10R, 4/2, dry/moist, medium dense	
35		RC	N/A	4.5/5.0	N/A	NM	NM	-30	SILT, little fine to medium sand, some sub-rounded fine to coarse gravel, trace clay, weak red, 10R, 4/2, dry	ML
						NM	NM		SILTSTONE and pulverized siltstone, dry	
						NM	NM		ROCK flour and partially lithified SANDSTONE, white, 7.5YR, 8/1, dry	
40								-35	Bottom of boring @ 40 ft. bgs	
45								-40		
50										

WELL CONSTRUCTION



LEGEND:
msl = mean sea level
bgs = below ground surface
ND = not detected
NM = not measured
N/A = not applicable

SAMPLE TYPES:
D: drive
W: washed
ST: Shelby Tube
A: Auger
HA: hand auger
C: cored
RC: rotasonic core

SOIL: GRANULAR SOILS DENSITY:
0-4: very loose
5-10: loose
11-29: medium dense
30-49: dense
50+: very dense

PLASTIC SOILS DENSITY:
0-2: very soft
3-4: soft
5-8: medium soft
9-15: stiff
16-30: very stiff
>30: hard

MOISTURE:
dry
moist
wet

PROPORTIONS:
Trace: <5% Few: 16-30%
Little: 6-15% Some: 31-49%

Density designation based on blow counts for each 12" of penetration using a 140 lb. hammer w/30" drop
When blow counts were not possible, density descriptions, as included in the "Materials Description" are based upon a thumb penetration test

NOTES:
SB-PZ7 (10.5 - 11.0): TPH Fingerprint
SB-PZ7 (16.0 - 16.5): VOCs, SVOCs

ROCK:
RQD (rock quality designation):
reported in % = [length of core in pieces 4" and longer/ length of run] x100

307710

BORING LOG

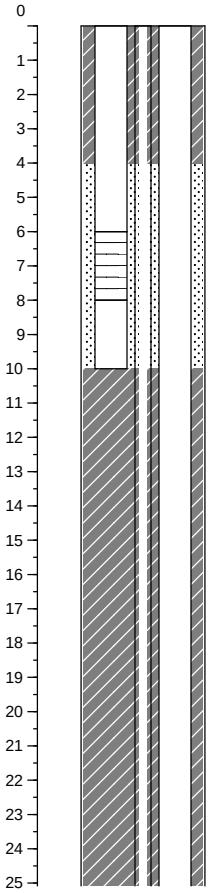
CH2MHILL

BORING/WELL ID: PZ-8

PROJECT NAME: Quanta Resources Superfund Site
SURFACE ELEVATION: 4.8 ft. MSL
LOCATION: Quanta Property Shoreline
MEASURING POINT: PVC Casing
PROJECT NUMBER: 363725
MEASURING POINT ELEVATION: 4.53 ft. MSL
CLIENT: Honeywell Inc.
TOTAL DEPTH: 75 ft. bgs
DRILLING CONTRACTOR: Boart Longyear
FOREMAN: J Graglia
DRILLING METHOD: Rotasonic Drill Rig
DRILLING EQUIPMENT: Boart Longyear Mini Rotasonic
SAMPLING METHOD: 5 ft. core barrel
CH2M OBSERVER: A. Harclerode
START DATE: 9/25/08
FINISH DATE: 9/29/08
NORTHING: 718374.96
EASTING: 633554.42
APPROX. DEPTH TO WATER: 3.5 ft. bgs 9/25/08

DEPTH (FT. BGS)	SAMPLE OR RUN DESIGNATION	SAMPLE TYPE	BLOWS PER 6 INCHES or CORE RUN (time/ft.)	RECOVERY/ PENETRATION (FT.)	RQD	SCREENING DATA PID	SCREENING DATA FID	ELEVATION (ft. MSL)	MATERIALS DESCRIPTION (SOILS: classification, secondary grain size, color, moisture, and other descriptors; ROCK: rock type, hardness, major mineral types, color, weathering, and degree of fracturing)	GRAPHICAL LOG	USCS GROUP SYMBOL
0		RC	N/A	2.1/5.0	N/A	0.8	NM		SILT with ORGANICS, trace gravel, trace fine, medium, coarse sand, dark brown, 7.5YR, 3/2, dry (FILL)		OL
						ND	NM		CINDER and COAL, coarse sand to fine gravel-sized pieces, moist, little slag, black (FILL)		SW
5		RC	N/A	2.6/10.0	N/A	4.9 to 47.3	NM	0	CINDER and COAL, coarse SAND to fine gravel-sized pieces, increasing product impacts with depth, trace wood and brick, little slag @ 14 - 15 ft. bgs, pervasively impacted with product, obvious odor, moist, black, PID screening shows increase values with depth (FILL)		
10								-5			
15	14' to 14.5' (SB-PZ8-14.25)	RC	N/A	0.0/5.0	N/A	N/A	N/A	-10	No recovery		OL/OH
20		RC	N/A	15.6/30.0	N/A	0.9	NM	-15	Silty CLAY, trace shells, very dark grey to black, moderately soft, wet, cobble and wood with product in pore spaces @ 25 ft. bgs		
25								-20			

WELL CONSTRUCTION



LEGEND:
msl = mean sea level
bgs = below ground surface
ND = not detected
NM = not measured
N/A = not applicable

SAMPLE TYPES:
D: drive
W: washed
ST: Shelby Tube
A: Auger
HA: hand auger
C: cored
RC: rotasonic core

SOIL: GRANULAR SOILS DENSITY:
0-4: very loose
5-10: loose
11-29: medium dense
30-49: dense
50+: very dense

PLASTIC SOILS DENSITY:
0-2: very soft
3-4: soft
5-8: medium soft
9-15: stiff
16-30: very stiff
>30: hard

MOISTURE:
dry
moist
wet

PROPORTIONS:
Trace: <5% Few: 16-30%
Little: 6-15% Some: 31-49%

Density designation based on blow counts for each 12" of penetration using a 140 lb. hammer w/30" drop
When blow counts were not possible, density descriptions, as included in the "Materials Description" are based upon a thumb penetration test

NOTES:
SB-PZ8 (14.0 - 14.5): TPH Fingerprint

ROCK:
RQD (rock quality designation):
reported in % = [length of core in pieces 4" and longer/ length of run] x100

307711

BORING LOG

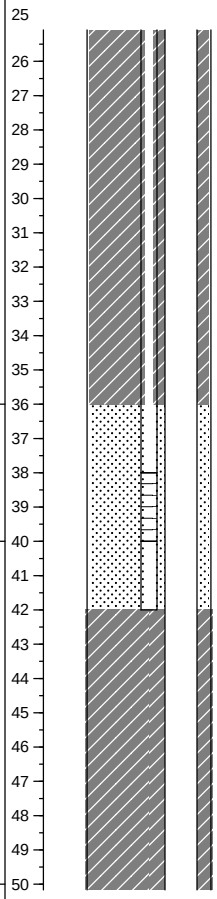
BORING/WELL ID: PZ-8

PROJECT NAME: Quanta Resources Superfund Site
SURFACE ELEVATION: 4.8 ft. MSL
LOCATION: Quanta Property Shoreline
MEASURING POINT: PVC Casing
PROJECT NUMBER: 363725
MEASURING POINT ELEVATION: 4.53 ft. MSL
CLIENT: Honeywell Inc.
TOTAL DEPTH: 75 ft. bgs
DRILLING CONTRACTOR: Boart Longyear
FOREMAN: J Graglia
DRILLING METHOD: Rotasonic Drill Rig
DRILLING EQUIPMENT: Boart Longyear Mini Rotasonic
SAMPLING METHOD: 5 ft. core barrel
CH2M OBSERVER: A. Harclerode
START DATE: 9/25/08
FINISH DATE: 9/29/08
NORTHING: 718374.96
EASTING: 633554.42
APPROX. DEPTH TO WATER: 3.5 ft. bgs 9/25/08

DEPTH (FT. BGS)	SAMPLE OR RUN DESIGNATION	SAMPLE TYPE	BLOWS PER 6 INCHES or CORE RUN (time/ft.)	RECOVERY/ PENETRATION (FT.)	RQD	SCREENING DATA PID	SCREENING DATA FID	ELEVATION (ft. MSL)	MATERIALS DESCRIPTION (SOILS: classification, secondary grain size, color, moisture, and other descriptors; ROCK: rock type, hardness, major mineral types, color, weathering, and degree of fracturing)	USCS GROUP SYMBOL
25						0.4	NM		Medium grained SAND, some rounded coarse sand, trace sub-angular fine to medium gravel	SP
30						0.4	NM	-25	Medium grained SAND, some rounded coarse sand, medium to coarse siltstone gravel within sand	
35						0.1	NM	-30	Medium grained SAND, some rounded coarse sand, medium to coarse siltstone gravel within sand, grades into silty clay, dark grey, 7.5YR, 4/1	SP/CL
40						ND	NM	-35	Silty CLAY, varved, dry, grey, 7.5YR, 5/1, brown, 7.5YR, 4/3, varves ~ 0.01 ft. thick	CL
45						ND	NM	-40	CLAY, trace silt, reddish brown, 5YR, 5/4, wet, fat/plastic, grades into silt with some clay @ 47.5 ft.	
50								-45		

GRAPHICAL LOG

WELL CONSTRUCTION



LEGEND:
msl = mean sea level
bgs = below ground surface
ND = not detected
NM = not measured
N/A = not applicable

SAMPLE TYPES:
D: drive
W: washed
ST: Shelby Tube
A: Auger
HA: hand auger
C: cored
RC: rotasonic core

SOIL: GRANULAR SOILS DENSITY:
0-4: very loose
5-10: loose
11-29: medium dense
30-49: dense
50+: very dense

PLASTIC SOILS DENSITY:
0-2: very soft
3-4: soft
5-8: medium soft
9-15: stiff
16-30: very stiff
>30: hard

MOISTURE:
dry
moist
wet

PROPORTIONS:
Trace: <5% Few: 16-30%
Little: 6-15% Some: 31-49%

Density designation based on blow counts for each 12" of penetration using a 140 lb. hammer w/30" drop
When blow counts were not possible, density descriptions, as included in the "Materials Description" are based upon a thumb penetration test

NOTES:
SB-PZ8 (14.0 - 14.5): TPH Fingerprint

ROCK:
RQD (rock quality designation):
reported in % = [length of core in pieces 4" and longer/ length of run] x100

307712

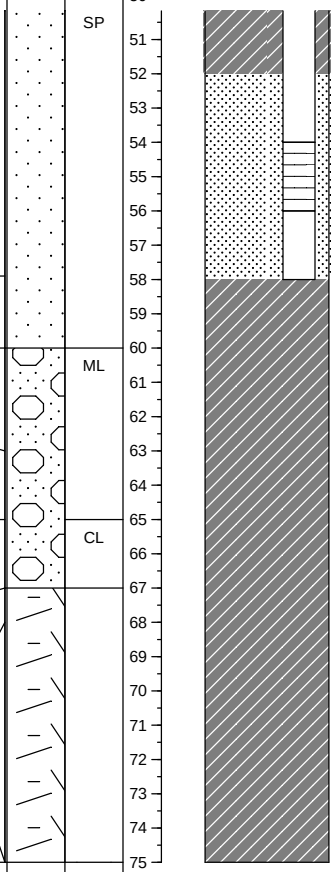
BORING LOG

BORING/WELL ID: PZ-8

PROJECT NAME: Quanta Resources Superfund Site
SURFACE ELEVATION: 4.8 ft. MSL
LOCATION: Quanta Property Shoreline
MEASURING POINT: PVC Casing
PROJECT NUMBER: 363725
MEASURING POINT ELEVATION: 4.53 ft. MSL
CLIENT: Honeywell Inc.
TOTAL DEPTH: 75 ft. bgs
DRILLING CONTRACTOR: Boart Longyear
FOREMAN: J Graglia
DRILLING METHOD: Rotasonic Drill Rig
DRILLING EQUIPMENT: Boart Longyear Mini Rotasonic
SAMPLING METHOD: 5 ft. core barrel
CH2M OBSERVER: A. Harclerode
START DATE: 9/25/08
FINISH DATE: 9/29/08
NORTHING: 718374.96
EASTING: 633554.42
APPROX. DEPTH TO WATER: 3.5 ft. bgs 9/25/08

DEPTH (FT. BGS)	SAMPLE OR RUN DESIGNATION	SAMPLE TYPE	BLOWS PER 6 INCHES or CORE RUN (time/ft.)	RECOVERY/ PENETRATION (FT.)	RQD	SCREENING DATA PID	SCREENING DATA FID	ELEVATION (ft. MSL)	MATERIALS DESCRIPTION (SOILS: classification, secondary grain size, color, moisture, and other descriptors; ROCK: rock type, hardness, major mineral types, color, weathering, and degree of fracturing)	USCS GROUP SYMBOL
50		RC	N/A	6.2/10.0	N/A	ND	NM		Fine grained SAND, trace silt, trace to little silt from 50 to 51.9 ft. (running sands), brown, 7.5YR, 4/3, wet	SP
55						ND	NM	-50	Fine grained SAND, little medium sand and silt, some sub-rounded fine to coarse gravel, trace sub-rounded cobble and coarse sand, brown, 7.5YR, 4/2, wet	
60		RC	N/A	0.0/3.0	N/A	N/A	N/A	-55	No recovery - driller reports conditions becoming very hard within core run	ML
		RC	N/A	1.3/2.0	N/A	ND	NM		SILT, some fine sand, little rounded to sub-angular gravel, trace cobble and coarse sand, some fine to medium sand and clay, brown, 7.5YR, 4/2	
65		RC	N/A	3.0/3.0	N/A	ND	NM	-60	Silty CLAY with fine to coarse sub-rounded GRAVEL, trace small rounded cobbles, trace fine sand, dusky red, 10R, 3/4, wet, very dense	CL
						ND	NM		Medium to coarse grained SANDSTONE, unweathered, strong competency, weak red, 10R, 4/2	
		RC	N/A	2.5/7.0	N/A	ND	NM		SANDSTONE, cored using water, washing away matrix between rock, weak red, 10R, 4/3, fractured	
70								-65		
75								-70	Bottom of boring @ 75 ft. bgs	

GRAPHICAL LOG



WELL CONSTRUCTION

LEGEND:
msl = mean sea level
bgs = below ground surface
ND = not detected
NM = not measured
N/A = not applicable

SAMPLE TYPES:
D: drive
W: washed
ST: Shelby Tube
A: Auger
HA: hand auger
C: cored
RC: rotasonic core

SOIL: GRANULAR SOILS DENSITY:
0-4: very loose
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30-49: dense
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PLASTIC SOILS DENSITY:
0-2: very soft
3-4: soft
5-8: medium soft
9-15: stiff
16-30: very stiff
>30: hard

MOISTURE:
dry
moist
wet

PROPORTIONS:
Trace: <5% Few: 16-30%
Little: 6-15% Some: 31-49%

Density designation based on blow counts for each 12" of penetration using a 140 lb. hammer w/30" drop
When blow counts were not possible, density descriptions, as included in the "Materials Description" are based upon a thumb penetration test

NOTES:
SB-PZ8 (14.0 - 14.5): TPH Fingerprint

ROCK:
RQD (rock quality designation):
reported in % = [length of core in pieces 4" and longer/ length of run] x100

307713

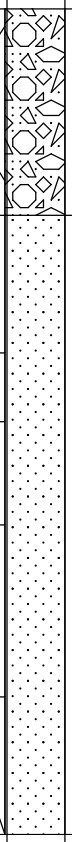
BORING LOG

BORING/WELL ID: SB-39

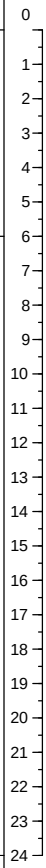
PROJECT NAME: Quanta Resources Superfund Site
SURFACE ELEVATION: 9.9 ft. MSL
LOCATION: SE corner of Block 94
MEASURING POINT: PVC Casing
PROJECT NUMBER: 385722
MEASURING POINT ELEVATION: N/A
CLIENT: Honeywell Inc.
TOTAL DEPTH: 24 ft. bgs
DRILLING CONTRACTOR: EPI, Inc.
FOREMAN: Ron Higgins
DRILLING METHOD: Geoprobe Direct Push
DRILLING EQUIPMENT: Geoprobe 7720
SAMPLING METHOD: 4 ft. macrocore sampler
CH2M OBSERVER: A. Harclerode
START DATE: 2/24/09
FINISH DATE: 2/24/09
NORTHING: 718919.42
EASTING: 632411.38
APPROX. DEPTH TO WATER: 5.8 ft. bgs 2/24/09

DEPTH (FT. BGS)	SAMPLE OR RUN DESIGNATION	SAMPLE TYPE	BLOWS PER 6 INCHES or CORE RUN (time/ft.)	RECOVERY/ PENETRATION (FT.)	RQD	SCREENING DATA PID	SCREENING DATA FID	ELEVATION (ft. MSL)	MATERIALS DESCRIPTION (SOILS: classification, secondary grain size, color, moisture, and other descriptors; ROCK: rock type, hardness, major mineral types, color, weathering, and degree of fracturing)	USCS GROUP SYMBOL
0		D	N/A	2.7/5.0	N/A	ND	NM		ASPHALT and GRAVEL (FILL)	
	0.8' to 1.2' (SB-39-1.0)					ND	NM		SILT, some fine sub-rounded black gravel, little clay, brown 7.5YR, 4/3, moist, stiff, moderate plasticity (FILL)	
5	5.0' to 5.5' (SB-39-5.3)	D	N/A	2.7/5.0	N/A	ND	NM	5	SILT, some fine sub-rounded black gravel, little clay, brown 7.5YR, 4/3, moist, stiff, moderate plasticity (FILL)	
						ND	NM		Interval above grades into fine SAND, trace silt, brown, 7.5YR, 4/3, wet, medium dense	SP
10		D	N/A	4.4/5.0	N/A	ND	NM	0	Fine SAND, trace silt, brown, 7.5YR, 4/3, wet, loose, medium dense	
						ND	NM		Silty, fine to medium SAND with fine to medium sub-rounded GRAVEL, brown, 7.5YR, 4/3, moist, medium dense	
15		D	N/A	1.6/5.0	N/A	ND	NM	-5	Silty, fine to medium SAND with fine to medium sub-rounded GRAVEL, brown, 7.5YR, 4/3, moist, medium dense	
20		D	N/A	1.8/4.0	N/A	ND	NM	-10	Silty, fine to medium SAND with fine to medium GRAVEL, brown, 7.5YR, 4/3, moist, medium dense, hard @ bottom 0.2 ft. of recovery	
									Refusal/Bottom of boring @ 24 ft. bgs	

GRAPHICAL LOG



WELL CONSTRUCTION



LEGEND:
msl = mean sea level
bgs = below ground surface
ND = not detected
NM = not measured
N/A = not applicable

SAMPLE TYPES:
D: drive
W: washed
ST: Shelby Tube
A: Auger
HA: hand auger
C: cored
RC: rotasonic core

SOIL: GRANULAR SOILS DENSITY:
0-4: very loose
5-10: loose
11-29: medium dense
30-49: dense
50+: very dense

PLASTIC SOILS DENSITY:
0-2: very soft
3-4: soft
5-8: medium soft
9-15: stiff
16-30: very stiff
>30: hard

MOISTURE:
dry
moist
wet

PROPORTIONS:
Trace: <5% Few: 16-30%
Little: 6-15% Some: 31-49%

Density designation based on blow counts for each 12" of penetration using a 140 lb. hammer w/30" drop
When blow counts were not possible, density descriptions, as included in the "Materials Description" are based upon a thumb penetration test

NOTES:
SB-39 (0.8 - 1.2): VOCs, SVOCs, PCBs, TAL Metals
SB-39 (5.0 - 5.5): VOCs, SVOCs, PCBs, TAL Metals

ROCK:
RQD (rock quality designation):
reported in % = [length of core in pieces 4" and longer/ length of run] x100

307714

BORING LOG

BORING/WELL ID: SB-40

PROJECT NAME: Quanta Resources Superfund Site
SURFACE ELEVATION: 5.4 ft. MSL
LOCATION: NE Corner of Block 93 Central
MEASURING POINT: N/A
PROJECT NUMBER: 363725
MEASURING POINT ELEVATION: N/A
CLIENT: Honeywell Inc.
TOTAL DEPTH: 25 ft. bgs
DRILLING CONTRACTOR: SGS Environmental Services, Inc.
FOREMAN: J Rousa
DRILLING METHOD: Geoprobe Direct Push
DRILLING EQUIPMENT: Geoprobe 7010DT
SAMPLING METHOD: 5 ft. macrocore sampler
CH2M OBSERVER: A. Harclerode
START DATE: 8/26/08
FINISH DATE: 8/26/08
NORTHING: 718936.46
EASTING: 632632.33
APPROX. DEPTH TO WATER: 4.0 ft. bgs 8/26/08

DEPTH (FT. BGS)	SAMPLE OR RUN DESIGNATION	SAMPLE TYPE	BLOWS PER 6 INCHES or CORE RUN (time/ft.)	RECOVERY/ PENETRATION (FT.)	RQD	SCREENING DATA PID	SCREENING DATA FID	ELEVATION (ft. MSL)	MATERIALS DESCRIPTION (SOILS: classification, secondary grain size, color, moisture, and other descriptors; ROCK: rock type, hardness, major mineral types, color, weathering, and degree of fracturing)	GRAPHICAL LOG	USCS GROUP SYMBOL
0											
	0' to 1.5' (SB-40-1.0)	D	N/A	2.35/5.0	N/A	0.6	NM	5	Intermixed crushed ROCK, fine to coarse, sub-rounded to sub-angular GRAVEL and fine to coarse SAND, some silt, dry to wet, medium dense, trace cinder, barely obvious product odor @ approx. 4 ft. bgs, product present (FILL)		
5		D	N/A	3.35/5.0	N/A	0.8	NM	0	Well graded, fine to coarse, sub-rounded GRAVEL, trace brick, wet, medium dense (FILL)		
						0.6	NM		Fibrous PAPER-LIKE material, black, wet, obvious strong odor (FILL)		CL/PT
						1.3	NM				
	3.8' to 5.0' (SB-40-4.5)					0.4	NM		Intermixed fine sub-angular GRAVEL, fine SAND and SILT, mottled dark grey, 7.5YR, 4/1 and brown 7.5YR, 5/6, wet, loose to medium dense, some wood with obvious moderate creosote odor at bottom of interval (FILL)		
10		D	N/A	2.45/5.0	N/A	0.3	NM	-5	Clay with PEAT, native, black, 7.5YR, 2.5/1, moist, soft, organic material present, 6.7 to 7.1 ft. contained a piece of very hard quasi-plastic black tar with odor		
									Clay with PEAT, native, black, 7.5YR, 2.5/1, moist, soft, organic material present, no tar		
15		D	N/A	1.85/5.0	N/A	0.3	NM	-10	Clay with PEAT, native, black, 7.5YR, 2.5/1, moist, soft, organic material present		
20		D	N/A	1.8/5.0	N/A	0.1	NM	-15	Clay with PEAT, native, black, 7.5YR, 2.5/1, moist, soft, organic material present		
									Silty CLAY, brown, 7.5YR, 4/2, moist, stiff		
25						0.1	NM		Bottom of boring @ 25 ft. bgs		CL

WELL CONSTRUCTION: 0 1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25

LEGEND:
msl = mean sea level
bgs = below ground surface
ND = not detected
NM = not measured
N/A = not applicable

SAMPLE TYPES:
D: drive
W: washed
ST: Shelby Tube
A: Auger
HA: hand auger
C: cored
RC: rotasonic core

SOIL: GRANULAR SOILS DENSITY:
0-4: very loose
5-10: loose
11-29: medium dense
30-49: dense
50+: very dense

PLASTIC SOILS DENSITY:
0-2: very soft
3-4: soft
5-8: medium soft
9-15: stiff
16-30: very stiff
>30: hard

MOISTURE:
dry
moist
wet

PROPORTIONS:
Trace: <5% Few: 16-30%
Little: 6-15% Some: 31-49%

Density designation based on blow counts for each 12" of penetration using a 140 lb. hammer w/30" drop
When blow counts were not possible, density descriptions, as included in the "Materials Description" are based upon a thumb penetration test

NOTES:
SB-40 (0.0 - 1.5): VOCs, SVOCs, PCBs, TAL Metals
SB-40 (3.8 - 5.0): VOCs, SVOCs, PCBs, TAL Metals

ROCK:
RQD (rock quality designation):
reported in % = [length of core in pieces 4" and longer/ length of run] x100

307715

BORING LOG

BORING/WELL ID: SB-42

PROJECT NAME: Quanta Resources Superfund Site
SURFACE ELEVATION: 5.5 ft. MSL
LOCATION: S Corner of Block 93 Central
MEASURING POINT: N/A
PROJECT NUMBER: 363725
MEASURING POINT ELEVATION: N/A
CLIENT: Honeywell Inc.
TOTAL DEPTH: 20 ft. bgs
DRILLING CONTRACTOR: SGS Environmental Services, Inc.
FOREMAN: J. Rousa
DRILLING METHOD: Geoprobe Direct Push
DRILLING EQUIPMENT: Geoprobe 7010DT
SAMPLING METHOD: 5 ft. macrocore sampler
CH2M OBSERVER: A. Harclerode
START DATE: 8/26/08
FINISH DATE: 8/26/08
NORTHING: 718855.95
EASTING: 632552.85
APPROX. DEPTH TO WATER: 4.0 ft. bgs 8/26/08

DEPTH (FT. BGS)	SAMPLE OR RUN DESIGNATION	SAMPLE TYPE	BLOWS PER 6 INCHES or CORE RUN (time/ft.)	RECOVERY/ PENETRATION (FT.)	RQD	SCREENING DATA PID	SCREENING DATA FID	ELEVATION (ft. MSL)	MATERIALS DESCRIPTION (SOILS: classification, secondary grain size, color, moisture, and other descriptors; ROCK: rock type, hardness, major mineral types, color, weathering, and degree of fracturing)	GRAPHICAL LOG	USCS GROUP SYMBOL	WELL CONSTRUCTION
0												0
	0' to 1.5' (SB-42-1.0)	D	N/A	3.2/5.0	N/A	0.4	NM	5	Crushed ROCK and CONCRETE, dry, dense (FILL)			1
						0.4	NM		Crushed BRICK, dry, dense (FILL)			2
									Intermixed fine angular to sub-angular GRAVEL, coarse SAND, some silt, very dark brown 7.5YR, 2.5/2, moist to wet with depth, dense (FILL)			3, 4
5		D	N/A	3.35/5.0	N/A	0.7	NM	0	Well graded sub-angular to sub-rounded GRAVEL, very dark brown, 7.5YR, 2.5/2, wet, loose (FILL)			5
						0.7	NM		Silty CLAY, some fine sub-angular gravel, black, moist, stiff (FILL)			6, 7
						0.7	NM		Sandy sub-rounded GRAVEL, coarse and fine sand, wet, medium dense, incadenscent sheen and odor @ 8.5 to 10 ft. (FILL)			8, 9
	8.5' to 10.0' (SB-42-9.0)											
10		D	N/A	3.0/5.0	N/A		NM	-5	Clayey PEAT, native, very dark brown, 7.5YR, 2.5/2, moist, medium stiff, organic matter, obvious sulfur odor		CL/PT	10, 11, 12, 13, 14
15		D	N/A	0.0/5.0	N/A	N/A	N/A	-10	No Recovery		No Reco-very	15, 16, 17, 18, 19
									Bottom of boring @ 20 ft. bgs (Refusal)			
20								-15				20, 21, 22, 23, 24
25												25

LEGEND:
msl = mean sea level
bgs = below ground surface
ND = not detected
NM = not measured
N/A = not applicable

SAMPLE TYPES:
D: drive
W: washed
ST: Shelby Tube
A: Auger
HA: hand auger
C: cored
RC: rotasonic core

SOIL:
MOISTURE:
dry
moist
wet

GRANULAR SOILS DENSITY:
0-4: very loose
5-10: loose
11-29: medium dense
30-49: dense
50+: very dense

PLASTIC SOILS DENSITY:
0-2: very soft
3-4: soft
5-8: medium soft
9-15: stiff
16-30: very stiff
>30: hard

PROPORTIONS:
Trace: <5% Few: 16-30%
Little: 6-15% Some: 31-49%

Density designation based on blow counts for each 12" of penetration using a 140 lb. hammer w/30" drop
When blow counts were not possible, density descriptions, as included in the "Materials Description" are based upon a thumb penetration test

NOTES:
SB-42 (0.0 - 1.5): VOCs, SVOCs, PCBs, TAL Metals
SB-42 (8.5 - 10.0): VOCs, SVOCs, PCBs, TAL Metals

ROCK:
RQD (rock quality designation):
reported in % = [length of core in pieces 4" and longer/ length of run] x100

307716

BORING LOG

BORING/WELL ID: SB-43

PROJECT NAME: Quanta Resources Superfund Site
SURFACE ELEVATION: 6.3 ft. MSL
LOCATION: W Edge of Block 93 Central
MEASURING POINT: N/A
PROJECT NUMBER: 363725
MEASURING POINT ELEVATION: N/A
CLIENT: Honeywell Inc.
TOTAL DEPTH: 20 ft. bgs
DRILLING CONTRACTOR: SGS Environmental Services, Inc.
FOREMAN: J. Rousa
DRILLING METHOD: Geoprobe Direct Push
DRILLING EQUIPMENT: Geoprobe 7010DT
SAMPLING METHOD: 5 ft. macrocore sampler
CH2M OBSERVER: A. Harclerode
START DATE: 8/26/08
FINISH DATE: 8/26/08
NORTHING: 718888.48
EASTING: 632452.28
APPROX. DEPTH TO WATER: Not noted

DEPTH (FT. BGS)	SAMPLE OR RUN DESIGNATION	SAMPLE TYPE	BLOWS PER 6 INCHES or CORE RUN (time/ft.)	RECOVERY/ PENETRATION (FT.)	RQD	SCREENING DATA PID	SCREENING DATA FID	ELEVATION (ft. MSL)	MATERIALS DESCRIPTION (SOILS: classification, secondary grain size, color, moisture, and other descriptors; ROCK: rock type, hardness, major mineral types, color, weathering, and degree of fracturing)	GRAPHICAL LOG	USCS GROUP SYMBOL	WELL CONSTRUCTION
0	0' to 1.0' (SB-43-0.5)	D	N/A	2.8//5.0	N/A	N/A	NM	5	Crushed CONCRETE (FILL)			
	3.0' to 4.0' (SB-43-3.5)					ND	NM		Intermixed SILT and fine SAND, some fine sub-angular gravel, potential cinder material, and potential coal or shale pieces, trace glass, very dark brown, 7.5YR, 2.5/2, moist to wet with depth, loose to medium dense (FILL)			
5		D	N/A	4.15/5.0	N/A	ND	NM	0	CLAY with ORGANIC matter, native, some silt, trace medium sub-angular gravel, very dark brown, 7.5YR, 2.5/2, moist, medium stiff, fat/plastic		CH	
10		D	N/A	2.2/5.0	N/A	ND	NM	-5	CLAY with ORGANIC matter, native, some silt, trace medium sub-angular gravel, dark brown, 7.5YR, 3/4, moist, very stiff, fat/plastic			
15		D	N/A	3.3/5.0	N/A		NM	-10	CLAY with ORGANIC matter, native, some silt, trace medium sub-angular gravel, lenses of wet medium sand, dark brown, 7.5YR, 3/4, moist, very stiff, fat/plastic			
20								-15	Bottom of boring @ 20 ft. bgs			
25												

LEGEND:
msl = mean sea level
bgs = below ground surface
ND = not detected
NM = not measured
N/A = not applicable

SAMPLE TYPES:
D: drive
W: washed
ST: Shelby Tube
A: Auger
HA: hand auger
C: cored
RC: rotasonic core

SOIL:
MOISTURE:
dry
moist
wet

GRANULAR SOILS DENSITY:
0-4: very loose
5-10: loose
11-29: medium dense
30-49: dense
50+: very dense

PLASTIC SOILS DENSITY:
0-2: very soft
3-4: soft
5-8: medium soft
9-15: stiff
16-30: very stiff
>30: hard

PROPORTIONS:
Trace: <5% Few: 16-30%
Little: 6-15% Some: 31-49%

Density designation based on blow counts for each 12" of penetration using a 140 lb. hammer w/30" drop
When blow counts were not possible, density descriptions, as included in the "Materials Description" are based upon a thumb penetration test

NOTES:
SB-43 (0.0 - 1.0): VOCs, SVOCs, PCBs, TAL Metals
SB-43 (3.0 - 4.0): VOCs, SVOCs, PCBs, TAL Metals

ROCK:
RQD (rock quality designation):
reported in % = [length of core in pieces 4" and longer/ length of run] x100

307717

BORING LOG

BORING/WELL ID: SB-44

PROJECT NAME: Quanta Resources Superfund Site
SURFACE ELEVATION: 5.8 ft. MSL
LOCATION: Center of Block 93 Central
MEASURING POINT: N/A
PROJECT NUMBER: 363725
MEASURING POINT ELEVATION: N/A
CLIENT: Honeywell Inc.
TOTAL DEPTH: 25 ft. bgs
DRILLING CONTRACTOR: SGS Environmental Services, Inc.
FOREMAN: J. Rousa
DRILLING METHOD: Geoprobe Direct Push
DRILLING EQUIPMENT: Geoprobe 7010DT
SAMPLING METHOD: 5 ft. macrocore sampler
CH2M OBSERVER: A. Harclerode
START DATE: 9/4/08
FINISH DATE: 9/4/08
NORTHING: 718794.96
EASTING: 632515.61
APPROX. DEPTH TO WATER: 4.2 ft. bgs 9/4/08

DEPTH (FT. BGS)	SAMPLE OR RUN DESIGNATION	SAMPLE TYPE	BLOWS PER 6 INCHES or CORE RUN (time/ft.)	RECOVERY/ PENETRATION (FT.)	RQD	SCREENING DATA PID	SCREENING DATA FID	ELEVATION (ft. MSL)	MATERIALS DESCRIPTION (SOILS: classification, secondary grain size, color, moisture, and other descriptors; ROCK: rock type, hardness, major mineral types, color, weathering, and degree of fracturing)	USCS GROUP SYMBOL
0										
	0.5' to 1.5' (SB-44-1.0)	D	N/A	2.5/5.0	N/A	N/A	NM	5	Crushed CONCRETE (FILL)	
						0.1	NM		Silty SAND, some fine rounded gravel, trace slag, coal and brick, some fractured rock, very dark brown, 7.5YR, 2.5/2, moist to wet, medium dense (FILL)	SM
5		D	N/A	2.5/5.0	N/A	27.9	NM	0	Intermixed fine to medium sub-rounded GRAVEL and fine to medium SAND, some silt, trace brick, very dark brown, 7.5YR, 2.5/2, product seam @ ~6 ft. - 0.1ft. thick, medium dense, wet, obvious odor (FILL)	GW
	7.0' to 9.0' (SB-44-8.0)					27.9	NM		Well graded GRAVEL, some coarse sand, very dark brown, 7.5YR, 2.5/2, crushed brick interval @ ~7.2 to 7.6 ft., prominent incandescent sheen, product impact zone @ 3.3 to 3.8 ft., obvious odor (FILL)	
						27.9	NM		Clayey PEAT, very dark brown, 7.5YR, 2.5/2, moist/wet, soft	PT/OH
10		D	N/A	2.7/5.0	N/A	7.5	NM	-5	Clayey PEAT, very dark brown, 7.5YR, 2.5/2, moist/wet, soft	
15		D	N/A	1.6/5.0	N/A	7.8	NM	-10	Clayey PEAT, very dark brown, 7.5YR, 2.5/2, moist/wet, soft	
20		D	N/A	2.0/5.0	N/A	7.9	NM	-15	Clayey PEAT, very dark brown, 7.5YR, 2.5/2, moist/wet, soft, fractured metamorphic rock @ 25 ft. bgs	
25									Bottom of boring @ 25 ft. bgs	

WELL CONSTRUCTION

LEGEND:
msl = mean sea level
bgs = below ground surface
ND = not detected
NM = not measured
N/A = not applicable

SAMPLE TYPES:
D: drive
W: washed
ST: Shelby Tube
A: Auger
HA: hand auger
C: cored
RC: rotasonic core

SOIL: GRANULAR SOILS DENSITY:
0-4: very loose
5-10: loose
11-29: medium dense
30-49: dense
50+: very dense

PLASTIC SOILS DENSITY:
0-2: very soft
3-4: soft
5-8: medium soft
9-15: stiff
16-30: very stiff
>30: hard

MOISTURE:
dry
moist
wet

PROPORTIONS:
Trace: <5% Few: 16-30%
Little: 6-15% Some: 31-49%

Density designation based on blow counts for each 12" of penetration using a 140 lb. hammer w/30" drop
When blow counts were not possible, density descriptions, as included in the "Materials Description" are based upon a thumb penetration test

NOTES:
SB-44 (0.5 - 1.5): VOCs, SVOCs, PCBs, TAL Metals
SB-44 (7.0 - 9.0): VOCs, SVOCs, PCBs, TAL Metals

ROCK:
RQD (rock quality designation):
reported in % = [length of core in pieces 4" and longer/ length of run] x100

307718

BORING LOG

BORING/WELL ID: SB-47

PROJECT NAME: Quanta Resources Superfund Site
SURFACE ELEVATION: 7.4 ft. MSL
LOCATION: Western Edge of Block 93 South
MEASURING POINT: N/A
PROJECT NUMBER: 363725
MEASURING POINT ELEVATION: N/A
CLIENT: Honeywell Inc.
TOTAL DEPTH: 20 ft. bgs
DRILLING CONTRACTOR: SGS Environmental Services, Inc.
FOREMAN: J. Rousa
DRILLING METHOD: Geoprobe Direct Push
DRILLING EQUIPMENT: Geoprobe 7010 DT
SAMPLING METHOD: 5 ft. macrocore sampler
CH2M OBSERVER: A. Harclerode
START DATE: 8/27/08
FINISH DATE: 8/27/08
NORTHING: 718695.85
EASTING: 632433.91
APPROX. DEPTH TO WATER: 5.0 ft. bgs 8/27/08

DEPTH (FT. BGS)	SAMPLE OR RUN DESIGNATION	SAMPLE TYPE	BLOWS PER 6 INCHES or CORE RUN (time/ft.)	RECOVERY/ PENETRATION (FT.)	RQD	SCREENING DATA PID	SCREENING DATA FID	ELEVATION (ft. MSL)	MATERIALS DESCRIPTION (SOILS: classification, secondary grain size, color, moisture, and other descriptors; ROCK: rock type, hardness, major mineral types, color, weathering, and degree of fracturing)	GRAPHICAL LOG	USCS GROUP SYMBOL
0		D	N/A	3.0/5.0	N/A	N/A	N/A		Crushed ASPHALT and ROCK		
	1.0' to 2.0' (SB-47-1.5)					ND	NM	5	Intermixed silty SAND, some fine angular GRAVEL, crushed COAL, and CINDER, dark brown, 7.5YR, 3/3 and black, dry to moist, medium dense (FILL)		
	2.7' to 3.7' (SB-47-3.2)										
5		D	N/A	3.7/5.0	N/A	0.1	NM		Sandy GRAVEL fill, fine to coarse subangular GRAVEL, very dark grey, 7.5YR, 3/1, wet, loose (FILL)		
						0.2	NM	0	Organic fat CLAY with ROOTS and PEAT, very dark grey, 7.5YR, 3/1, moist, medium stiff		CL/PT
10		D	N/A	1.95/5.0	N/A	0.1	NM		Organic fat CLAY, some fine to medium sub-rounded gravel, trace small rounded cobble, less roots and peat than @ 7.5 to 10 ft., very dark grey, 7.5YR, 3/1, moist, medium stiff		
								-5			
15		D	N/A	3.55/5.0	N/A		NM		Fat CLAY, brown, 7.5YR, 4/3, moist, very stiff		CH
								-10			
									Bottom of boring @ 20 ft. bgs		
20											
								-15			
25											

WELL CONSTRUCTION

LEGEND:
msl = mean sea level
bgs = below ground surface
ND = not detected
NM = not measured
N/A = not applicable

SAMPLE TYPES:
D: drive
W: washed
ST: Shelby Tube
A: Auger
HA: hand auger
C: cored
RC: rotasonic core

SOIL: GRANULAR SOILS DENSITY:
0-4: very loose
5-10: loose
11-29: medium dense
30-49: dense
50+: very dense

PLASTIC SOILS DENSITY:
0-2: very soft
3-4: soft
5-8: medium soft
9-15: stiff
16-30: very stiff
>30: hard

MOISTURE:
dry
moist
wet

PROPORTIONS:
Trace: <5% Few: 16-30%
Little: 6-15% Some: 31-49%

Density designation based on blow counts for each 12" of penetration using a 140 lb. hammer w/30" drop
When blow counts were not possible, density descriptions, as included in the "Materials Description" are based upon a thumb penetration test

NOTES:
SB-47 (1.0 - 2.0): VOCs, SVOCs, PCBs, TAL Metals
SB-47 (2.7 - 3.7): VOCs, SVOCs, PCBs, TAL Metals

ROCK:
RQD (rock quality designation):
reported in % = [length of core in pieces 4" and longer/ length of run] x100

307719

BORING LOG

BORING/WELL ID: SB-48

PROJECT NAME: Quanta Resources Superfund Site
SURFACE ELEVATION: 8.3 ft. MSL
LOCATION: S Edge of Block 93 South
MEASURING POINT: N/A
PROJECT NUMBER: 363725
MEASURING POINT ELEVATION: N/A
CLIENT: Honeywell Inc.
TOTAL DEPTH: 25 ft. bgs
DRILLING CONTRACTOR: SGS Environmental Services, Inc.
FOREMAN: J. Rousa
DRILLING METHOD: Geoprobe Direct Push
DRILLING EQUIPMENT: Geoprobe 7010DT
SAMPLING METHOD: 5 ft. macrocore sampler
CH2M OBSERVER: A. Harclerode
START DATE: 8/27/08
FINISH DATE: 8/27/08
NORTHING: 718501.54
EASTING: 632419.00
APPROX. DEPTH TO WATER: 6.0 ft. bgs, 8/27/08

DEPTH (FT. BGS)	SAMPLE OR RUN DESIGNATION	SAMPLE TYPE	BLOWS PER 6 INCHES or CORE RUN (time/ft.)	RECOVERY/ PENETRATION (FT.)	RQD	SCREENING DATA PID	SCREENING DATA FID	ELEVATION (ft. MSL)	MATERIALS DESCRIPTION (SOILS: classification, secondary grain size, color, moisture, and other descriptors; ROCK: rock type, hardness, major mineral types, color, weathering, and degree of fracturing)	USCS GROUP SYMBOL
0		D	N/A	0.0/5.0	N/A		NM	5	No recovery; very difficult conditions, causing damage to sample liner. CONCRETE observed in sleeve, but it is unable to be opened.	
5	5.0' to 7.0' (SB-48-6.0)	D	N/A	1.2/5.0	N/A	0.1	NM	0	Intermixed medium SAND and fine sub-angular GRAVEL, some wood and fine coal pieces, very dark grey, 7.5YR, 3/1, moist to wet with depth, loose/medium dense (FILL)	
10		D	N/A	2.1/5.0	N/A	0.1	NM	-5	Clayey PEAT, very dark brown, 10YR, 2/2, moist medium stiff	CH/PT
						0.1	NM		Clayey PEAT, less organic matter than 10 to 14 ft., very dark brown, 10YR, 2/2, moist, medium stiff	
15		D	N/A	2.1/5.0	N/A	ND	NM		Clayey PEAT with fine SAND mottled with yellowish brown, 10YR, 4/4, very dark brown, 10YR, 2/2, moist to wet, medium stiff	
						ND	NM	-10	Gravelly SAND (well-graded), some silt/clay towards bottom of run, dark yellowish brown, 10YR, 4/4, wet, dense, some small rounded gravel in lens @ 18.5 ft.	SW/SC
20		D	N/A	2.1/5.0	N/A	ND	NM	-15	Clayey SAND/sandy CLAY, trace small rounded gravel, dark yellowish brown, 10YR, 4/4, wet, stiff	CL/SC
25									Bottom of boring @ 25 ft. bgs	

WELL CONSTRUCTION

LEGEND:
msl = mean sea level
bgs = below ground surface
ND = not detected
NM = not measured
N/A = not applicable

SAMPLE TYPES:
D: drive
W: washed
ST: Shelby Tube
A: Auger
HA: hand auger
C: cored
RC: rotasonic core

SOIL: GRANULAR SOILS DENSITY:
0-4: very loose
5-10: loose
11-29: medium dense
30-49: dense
50+: very dense

PLASTIC SOILS DENSITY:
0-2: very soft
3-4: soft
5-8: medium soft
9-15: stiff
16-30: very stiff
>30: hard

MOISTURE:
dry
moist
wet

PROPORTIONS:
Trace: <5% Few: 16-30%
Little: 6-15% Some: 31-49%

Density designation based on blow counts for each 12" of penetration using a 140 lb. hammer w/30" drop
When blow counts were not possible, density descriptions, as included in the "Materials Description" are based upon a thumb penetration test

NOTES:
SB-48 (5.0 - 7.0): VOCs, SVOCs, PCBs, TAL Metals

ROCK:
RQD (rock quality designation):
reported in % = [length of core in pieces 4" and longer/ length of run] x100

307720

BORING LOG

CH2MHILL

BORING/WELL ID: SB-49

PROJECT NAME: Quanta Resources Superfund Site
SURFACE ELEVATION: 12.1 ft. MSL
LOCATION: SE Corner of River Road/Gorge Road Intersection
MEASURING POINT: N/A
PROJECT NUMBER: 636725
MEASURING POINT ELEVATION: N/A
CLIENT: Honeywell Inc.
TOTAL DEPTH: 30 ft. bgs
DRILLING CONTRACTOR: SGS Environmental Services, Inc.
FOREMAN: J. Rousa
DRILLING METHOD: Geoprobe Direct Push
DRILLING EQUIPMENT: Geoprobe 7010DT
SAMPLING METHOD: 5 ft. macrocore sampler
CH2M OBSERVER: A. Harclerode
START DATE: 9/2/08
FINISH DATE: 9/2/08
NORTHING: 719087.66
EASTING: 632980.70
APPROX. DEPTH TO WATER: Not noted

DEPTH (FT. BGS)	SAMPLE OR RUN DESIGNATION	SAMPLE TYPE	BLOWS PER 6 INCHES or CORE RUN (time/ft.)	RECOVERY/ PENETRATION (FT.)	RQD	SCREENING DATA PID	SCREENING DATA FID	ELEVATION (ft. MSL)	MATERIALS DESCRIPTION (SOILS: classification, secondary grain size, color, moisture, and other descriptors; ROCK: rock type, hardness, major mineral types, color, weathering, and degree of fracturing)	USCS GROUP SYMBOL
0		D	N/A	1.7/5.0	N/A	ND	NM		Crushed CONCRETE (FILL)	
						ND	NM	10	Intermixed fine SAND and crushed ROCK/CONCRETE (FILL)	SP/GW
						ND	NM		Crushed CONCRETE (FILL)	
						ND	NM		Intermixed SILT, SAND, and fine to medium sub-rounded GRAVEL, very dark brown, 7.5YR, 2.5/2, some mottling/inclusions of very dusky red, 2.5YR, 2.5/2, and yellowish brown, 10YR, 5/6, moist, medium dense (FILL)	SM/GW
5	4.0' to 5.0' (SB-49-4.5)	D	N/A	3.1/5.0	N/A	3.3	NM			
						50	NM		Crushed CONCRETE (FILL)	SM
						NM	NM	5	Silty, medium SAND, some fine sub-rounded gravel, dark brown, 7.5YR, 3/3, moist, medium dense (FILL)	SM/GW
10	9.0' to 10.0' (SB-49-9.5)	D	N/A	2.4/5.0	N/A	33	NM		Intermixed silty SAND, BRICK, SLAG, crushed ROCK, fine to coarse GRAVEL, some product lenses @ ~9.5 ft., black and red, some reddish purple material (possible crushed brick) (FILL)	
								0	Intermixed silty SAND, SLAG, crushed ROCK, fine to coarse GRAVEL, some brick, black and red, inclusion of yellowish crushed material @ 13.5 ft., semi-solid, viscous product intermittent in core, obvious odor, trace reddish purple material in product interval @ ~13.5 ft. (FILL)	
15		D	N/A	1.7/5.0	N/A	0.2	NM		Refusal @ 16 ft.; offset and resume drilling - Peaty SAND, very dark grey, 7.5YR, 3/1, wet, loose	SP/PT
								-5		
						44	NM		Medium SAND, product impacted zone @ ~19 to19.5 ft., dark grey, 7.5YR, 4/1, loose to medium dense	SP
20		D	N/A	1.95/5.0	N/A	ND	NM		Medium SAND, dark grey, 7.5YR, 4/1, wet, medium dense to dense	
								-10		
25										

WELL CONSTRUCTION

LEGEND:
msl = mean sea level
bgs = below ground surface
ND = not detected
NM = not measured
N/A = not applicable

SAMPLE TYPES:
D: drive
W: washed
ST: Shelby Tube
A: Auger
HA: hand auger
C: cored
RC: rotasonic core

SOIL: GRANULAR SOILS DENSITY:
0-4: very loose
5-10: loose
11-29: medium dense
30-49: dense
50+: very dense

PLASTIC SOILS DENSITY:
0-2: very soft
3-4: soft
5-8: medium soft
9-15: stiff
16-30: very stiff
>30: hard

MOISTURE:
dry
moist
wet

PROPORTIONS:
Trace: <5% Few: 16-30%
Little: 6-15% Some: 31-49%

Density designation based on blow counts for each 12" of penetration using a 140 lb. hammer w/30" drop
When blow counts were not possible, density descriptions, as included in the "Materials Description" are based upon a thumb penetration test

NOTES:
SB-49 (4.0 - 5.0): VOCs, SVOCs, PCBs, TAL Metals
SB-49 (9.0 - 10.0): VOCs, SVOCs, PCBs, TAL Metals

ROCK:
RQD (rock quality designation):
reported in % = [length of core in pieces 4" and longer/ length of run] x100

307721

BORING LOG

BORING/WELL ID: SB-49

PROJECT NAME: Quanta Resources Superfund Site
SURFACE ELEVATION: 12.1 ft. MSL
LOCATION: SE Corner of River Road/Gorge Road Intersection
MEASURING POINT: N/A
PROJECT NUMBER: 636725
MEASURING POINT ELEVATION: N/A
CLIENT: Honeywell Inc.
TOTAL DEPTH: 30 ft. bgs
DRILLING CONTRACTOR: SGS Environmental Services, Inc.
FOREMAN: J. Rousa
DRILLING METHOD: Geoprobe Direct Push
DRILLING EQUIPMENT: Geoprobe 7010DT
SAMPLING METHOD: 5 ft. macrocore sampler
CH2M OBSERVER: A. Harclerode
START DATE: 9/2/08
FINISH DATE: 9/2/08
NORTHING: 719087.66
EASTING: 632980.70
APPROX. DEPTH TO WATER: Not noted

DEPTH (FT. BGS)	SAMPLE OR RUN DESIGNATION	SAMPLE TYPE	BLOWS PER 6 INCHES or CORE RUN (time/ft.)	RECOVERY/ PENETRATION (FT.)	RQD	SCREENING DATA PID	SCREENING DATA FID	ELEVATION (ft. MSL)	MATERIALS DESCRIPTION (SOILS: classification, secondary grain size, color, moisture, and other descriptors; ROCK: rock type, hardness, major mineral types, color, weathering, and degree of fracturing)	GRAPHICAL LOG	USCS GROUP SYMBOL	WELL CONSTRUCTION
25		D	N/A	2.2/5.0	N/A	0.1	NM		Silty CLAY, lean, mottled dark grey, 7.5YR, 4/1, and brown, 7.5YR, 4/2, moist, stiff		CL	
								-15				
									Bottom of boring @ 30 ft. bgs			
30												
								-20				
35												
								-25				
40												
								-30				
45												
								-35				
50												

LEGEND:
msl = mean sea level
bgs = below ground surface
ND = not detected
NM = not measured
N/A = not applicable

SAMPLE TYPES:
D: drive
W: washed
ST: Shelby Tube
A: Auger
HA: hand auger
C: cored
RC: rotasonic core

SOIL: GRANULAR SOILS DENSITY:
0-4: very loose
5-10: loose
11-29: medium dense
30-49: dense
50+: very dense

PLASTIC SOILS DENSITY:
0-2: very soft
3-4: soft
5-8: medium soft
9-15: stiff
16-30: very stiff
>30: hard

MOISTURE:
dry
moist
wet

PROPORTIONS:
Trace: <5% Few: 16-30%
Little: 6-15% Some: 31-49%

Density designation based on blow counts for each 12" of penetration using a 140 lb. hammer w/30" drop
When blow counts were not possible, density descriptions, as included in the "Materials Description" are based upon a thumb penetration test

NOTES:
SB-49 (4.0 - 5.0): VOCs, SVOCs, PCBs, TAL Metals
SB-49 (9.0 - 10.0): VOCs, SVOCs, PCBs, TAL Metals

ROCK:
RQD (rock quality designation):
reported in % = [length of core in pieces 4" and longer/ length of run] x100

307722

BORING LOG

BORING/WELL ID: SB-50

PROJECT NAME: Quanta Resources Superfund Site
SURFACE ELEVATION: 12.1 ft. MSL
LOCATION: River Road/Gorge Road Intersection
MEASURING POINT: N/A
PROJECT NUMBER: 363725
MEASURING POINT ELEVATION: N/A
CLIENT: Honeywell Inc.
TOTAL DEPTH: 30 ft. bgs
DRILLING CONTRACTOR: Boart Longyear
FOREMAN: J Graglia
DRILLING METHOD: Rotasonic Drill Rig
DRILLING EQUIPMENT: Boart Longyear Mini Rotasonic
SAMPLING METHOD: 5 ft. core barrel
CH2M OBSERVER: A. Harclerode
START DATE: 9/2/08
FINISH DATE: 10/16/08
NORTHING: 719202.95
EASTING: 632992.23
APPROX. DEPTH TO WATER: 5.0 ft. bgs 9/2/08

DEPTH (FT. BGS)	SAMPLE OR RUN DESIGNATION	SAMPLE TYPE	BLOWS PER 6 INCHES or CORE RUN (time/ft.)	RECOVERY/ PENETRATION (FT.)	RQD	SCREENING DATA PID	SCREENING DATA FID	ELEVATION (ft. MSL)	MATERIALS DESCRIPTION (SOILS: classification, secondary grain size, color, moisture, and other descriptors; ROCK: rock type, hardness, major mineral types, color, weathering, and degree of fracturing)	GRAPHICAL LOG	USCS GROUP SYMBOL	WELL CONSTRUCTION
0												0
		RC	N/A	3.0/5.0	N/A	NM	NM	10	Intermixed crushed ROCK, some cobbles, fine to coarse sub-angular gravel, silty coarse sand, trace cinder and coal, dry. Note: Sample taken using direct push technology (FILL)			1 2 3 4
	2.5' to 3.5' (SB-50-3.0)											
5		RC	N/A	2.5/2.5	N/A	ND	NM	5	Small to medium COBBLES, rounded to sub-rounded with SILT, some coarse sand and fine rounded gravel, trace brick, black, moist, loose (FILL)			5 6 7
		RC	N/A	0.0/2.5	N/A	N/A	N/A		Drilled through CONCRETE (FILL)			8 9
10		RC	N/A	2.3/5.0	N/A	57	NM	0	Intermixed fractured ROCK, WOOD, and SLAG with pervasive product, black, wet, loose (FILL)			10 11 12
	11.0' to 11.5' (SB-50-11.25)											
						7.2	NM		Peaty CLAY, trace product seams to 15 ft. bgs, very dark brown, 7.5YR, 2.5/2, moist, soft		OH/PT	13 14
15		RC	N/A	5.0/5.0	N/A	23.9	NM	-5	Fine SAND, trace to some organics, trace silt, brown, 7.5YR, 4/2, wet, medium dense		SP	15 16 17
						5.8	NM		Medium sub-rounded SAND, trace silt, brown, 7.5YR, 4/2, wet, medium dense			18 19
20		RC	N/A	4.0/5.0	N/A	27.6	NM	-10	Medium sub-rounded SAND, grades to medium to coarse sand with depth, trace silt, brown, 7.5YR, 4/2, 0.2 ft. of product in pore space @ approx. 24.5 - 24.7 ft., wet, medium dense			20 21 22 23
									Silty CLAY, some fine sand, olive brown, 2.5Y, 4/3, moist, medium stiff			24
25						NM	NM				CL	25

LEGEND:
msl = mean sea level
bgs = below ground surface
ND = not detected
NM = not measured
N/A = not applicable

SAMPLE TYPES:
D: drive
W: washed
ST: Shelby Tube
A: Auger
HA: hand auger
C: cored
RC: rotasonic core

SOIL: GRANULAR SOILS DENSITY:
0-4: very loose
5-10: loose
11-29: medium dense
30-49: dense
50+: very dense

PLASTIC SOILS DENSITY:
0-2: very soft
3-4: soft
5-8: medium soft
9-15: stiff
16-30: very stiff
>30: hard

MOISTURE:
dry
moist
wet

PROPORTIONS:
Trace: <5% Few: 16-30%
Little: 6-15% Some: 31-49%

Density designation based on blow counts for each 12" of penetration using a 140 lb. hammer w/30" drop
When blow counts were not possible, density descriptions, as included in the "Materials Description" are based upon a thumb penetration test

NOTES:
SB-50 (2.5 - 3.5): VOCs, SVOCs, PCBs, TAL Metals, TPH Fingerprint
SB-50 (11.0 - 11.5): VOCs, SVOCs, PCBs, TAL Metals, TPH Fingerprint, Fuel/Petroleum Biomarkers, MAH/PAHs, Alkylated PAHs

ROCK:
RQD (rock quality designation):
reported in % = [length of core in pieces 4" and longer/ length of run] x100

307723

BORING LOG

BORING/WELL ID: SB-50

PROJECT NAME: Quanta Resources Superfund Site
SURFACE ELEVATION: 12.1 ft. MSL
LOCATION: River Road/Gorge Road Intersection
MEASURING POINT: N/A
PROJECT NUMBER: 363725
MEASURING POINT ELEVATION: N/A
CLIENT: Honeywell Inc.
TOTAL DEPTH: 30 ft. bgs
DRILLING CONTRACTOR: Boart Longyear
FOREMAN: J Graglia
DRILLING METHOD: Rotasonic Drill Rig
DRILLING EQUIPMENT: Boart Longyear Mini Rotasonic
SAMPLING METHOD: 5 ft. core barrel
CH2M OBSERVER: A. Harclerode
START DATE: 9/2/08
FINISH DATE: 10/16/08
NORTHING: 719202.95
EASTING: 632992.23
APPROX. DEPTH TO WATER: 5.0 ft. bgs 9/2/08

DEPTH (FT. BGS)	SAMPLE OR RUN DESIGNATION	SAMPLE TYPE	BLOWS PER 6 INCHES or CORE RUN (time/ft.)	RECOVERY/ PENETRATION (FT.)	RQD	SCREENING DATA PID	SCREENING DATA FID	ELEVATION (ft. MSL)	MATERIALS DESCRIPTION (SOILS: classification, secondary grain size, color, moisture, and other descriptors; ROCK: rock type, hardness, major mineral types, color, weathering, and degree of fracturing)	GRAPHICAL LOG	USCS GROUP SYMBOL	WELL CONSTRUCTION
25		RC	N/A	5.0/5.0	N/A	ND	NM		Silty CLAY, some fine sand, greyish brown, 10YR, 4/2 and yellowish brown, 10YR, 5/6 (inside of core), moist, medium stiff			
						ND	NM	-15	Silty CLAY, some fine sand, greyish brown, 10YR, 4/2, moist, medium stiff			
									Bottom of boring @ 30 ft. bgs			
30												
								-20				
35												
								-25				
40												
								-30				
45												
								-35				
50												

LEGEND:
msl = mean sea level
bgs = below ground surface
ND = not detected
NM = not measured
N/A = not applicable

SAMPLE TYPES:
D: drive
W: washed
ST: Shelby Tube
A: Auger
HA: hand auger
C: cored
RC: rotasonic core

SOIL: GRANULAR SOILS DENSITY:
0-4: very loose
5-10: loose
11-29: medium dense
30-49: dense
50+: very dense

PLASTIC SOILS DENSITY:
0-2: very soft
3-4: soft
5-8: medium soft
9-15: stiff
16-30: very stiff
>30: hard

MOISTURE:
dry
moist
wet

PROPORTIONS:
Trace: <5% Few: 16-30%
Little: 6-15% Some: 31-49%

Density designation based on blow counts for each 12" of penetration using a 140 lb. hammer w/30" drop
When blow counts were not possible, density descriptions, as included in the "Materials Description" are based upon a thumb penetration test

NOTES:
SB-50 (2.5 - 3.5): VOCs, SVOCs, PCBs, TAL Metals, TPH Fingerprint
SB-50 (11.0 - 11.5): VOCs, SVOCs, PCBs, TAL Metals, TPH Fingerprint, Fuel/Petroleum Biomarkers, MAH/PAHs, Alkylated PAHs

ROCK:
RQD (rock quality designation):
reported in % = [length of core in pieces 4" and longer/ length of run] x100

307724

BORING LOG

BORING/WELL ID: SB-51

PROJECT NAME: Quanta Resources Superfund Site
SURFACE ELEVATION: 11.1 ft. MSL
LOCATION: River Road/Gorge Road Intersection
MEASURING POINT: N/A
PROJECT NUMBER: 363725
MEASURING POINT ELEVATION: N/A
CLIENT: Honeywell Inc.
TOTAL DEPTH: 25 ft. bgs
DRILLING CONTRACTOR: SGS Environmental Services, Inc.
FOREMAN: J. Rousa
DRILLING METHOD: Geoprobe Direct Push
DRILLING EQUIPMENT: Geoprobe 7010DT
SAMPLING METHOD: 5 ft. macrocore sampler
CH2M OBSERVER: A. Harclerode
START DATE: 9/2/08
FINISH DATE: 9/2/08
NORTHING: 719209.49
EASTING: 633062.82
APPROX. DEPTH TO WATER: 4.75 ft. bgs 9/2/08

DEPTH (FT. BGS)	SAMPLE OR RUN DESIGNATION	SAMPLE TYPE	BLOWS PER 6 INCHES or CORE RUN (time/ft.)	RECOVERY/ PENETRATION (FT.)	RQD	SCREENING DATA PID	SCREENING DATA FID	ELEVATION (ft. MSL)	MATERIALS DESCRIPTION (SOILS: classification, secondary grain size, color, moisture, and other descriptors; ROCK: rock type, hardness, major mineral types, color, weathering, and degree of fracturing)	USCS GROUP SYMBOL
0		D	N/A	2.4/5.0	N/A	NM	NM	10	Crushed ASPHALT and CONCRETE, dry (FILL)	
						NM	NM		Well sorted SAND, trace medium sub-angular gravel, brown, 7.5YR, 4/4, dry, medium dense (FILL)	SP
	3.0' to 4.0' (SB-51-3.5)					ND	NM		Crushed ROCK, BRICK, silty to fine sandy, dark brown, 7.5YR, 3/2, moist to wet (FILL)	GP/SM
5		D	N/A	2.4/5.0	N/A	ND	NM	5	Intermixed crushed ROCK and fine to medium SAND, wet/moist (FILL)	GP/SP
						ND	NM		Silty SAND, fine GRAVEL, COAL, SLAG, very dusky red, 2.5YR, 2.5/2, wet, medium dense (FILL)	SM
						0.1	NM		Clayey SILT, very dark brown, 7.5YR, 2.5/2, some well graded sand @ ~8.5 to 8.75 ft., soft to medium dense/stiff	ML
10		D	N/A	1.3/5.0	N/A	ND	NM	0	Medium SAND, native, brown, 7.5YR, 4/2, wet, loose to medium dense	SP
15		D	N/A	2.2/5.0	N/A	0.5	NM	-5	Medium SAND, native, brown, 7.5YR, 4/2, wet, loose, medium dense, obvious odor, some black mottling (potential staining)	
	17.5' to 18.5' (SB-51-18)									
20		D	N/A	2.6/5.0	N/A	ND	NM	-10	Medium SAND, native, brown, 7.5YR, 4/2, wet, loose, medium dense, obvious odor, gravel @ last 0.1ft.	
						ND	NM		Silty CLAY, brown, 7.5YR, 4/2, lean, stiff to very stiff, moist	CL
25									Bottom of boring @ 25 ft. bgs	

WELL CONSTRUCTION

LEGEND:
msl = mean sea level
bgs = below ground surface
ND = not detected
NM = not measured
N/A = not applicable

SAMPLE TYPES:
D: drive
W: washed
ST: Shelby Tube
A: Auger
HA: hand auger
C: cored
RC: rotasonic core

SOIL: GRANULAR SOILS DENSITY:
0-4: very loose
5-10: loose
11-29: medium dense
30-49: dense
50+: very dense

PLASTIC SOILS DENSITY:
0-2: very soft
3-4: soft
5-8: medium soft
9-15: stiff
16-30: very stiff
>30: hard

MOISTURE:
dry
moist
wet

PROPORTIONS:
Trace: <5% Few: 16-30%
Little: 6-15% Some: 31-49%

Density designation based on blow counts for each 12" of penetration using a 140 lb. hammer w/30" drop
When blow counts were not possible, density descriptions, as included in the "Materials Description" are based upon a thumb penetration test

NOTES:
SB-51 (3.0 - 4.0): VOCs, SVOCs, PCBs, TAL Metals
SB-51 (17.5 - 18.5): VOCs, SVOCs, PCBs, TAL Metals

ROCK:
RQD (rock quality designation):
reported in % = [length of core in pieces 4" and longer/ length of run] x100

307725

BORING LOG

CH2MHILL

BORING/WELL ID: SB-52

PROJECT NAME: Quanta Resources Superfund Site
SURFACE ELEVATION: 14.6 ft. MSL
LOCATION: Middle of parking lot on S end of Block 92.01
MEASURING POINT: PVC Casing
PROJECT NUMBER: 385722
MEASURING POINT ELEVATION: N/A
CLIENT: Honeywell Inc.
TOTAL DEPTH: 28 ft. bgs
DRILLING CONTRACTOR: EPI, Inc.
FOREMAN: Ron Higgins
DRILLING METHOD: Geoprobe Direct Push
DRILLING EQUIPMENT: Hurricane Direct Push and Auger Rig
SAMPLING METHOD: 4 ft. macrocore sampler
CH2M OBSERVER: A. Harclerode
START DATE: 2/24/09
FINISH DATE: 2/24/09
NORTHING: 719312.35
EASTING: 632862.42
APPROX. DEPTH TO WATER: 8 ft. bgs 2/24/09

DEPTH (FT. BGS)	SAMPLE OR RUN DESIGNATION	SAMPLE TYPE	BLOWS PER 6 INCHES or CORE RUN (time/ft.)	RECOVERY/ PENETRATION (FT.)	RQD	SCREENING DATA PID	SCREENING DATA FID	ELEVATION (ft. MSL)	MATERIALS DESCRIPTION (SOILS: classification, secondary grain size, color, moisture, and other descriptors; ROCK: rock type, hardness, major mineral types, color, weathering, and degree of fracturing)	USCS GROUP SYMBOL
0										
		D	N/A	2.5/4.0	N/A	ND	NM		Intermixed silty SAND, fine to medium angular GRAVEL, and pulverized CONCRETE, trace brick, coarse gravel/fractured rock, and black cinders, very dark brown, 7.5YR, 3/3 and black, dry, medium dense (FILL)	
	2.0' to 4.0' (SB-52-3.0)									
5		D	N/A	2.4/4.0	N/A	ND	NM	10	Intermixed silty SAND, fine to medium angular GRAVEL, and pulverized CONCRETE, trace brick and coarse gravel/fractured rock, trace to little cinders, very dark brown, 7.5YR, 3/3 and black, slightly moist, medium dense (FILL)	
	5.7' to 6.3' (SB-52-6.0)									
		D	N/A	2.7/4.0	N/A	ND	NM		Silty SAND, trace to little fine to medium sub-angular GRAVEL, dark brown, 7.5YR, 3/3, wet, soft/loose	SP/SM
10						ND	NM	5	Silty SAND, some medium angular to sub-angular gravel, dark brown, 7.5YR, 3/4 to very dark grey, 7.5YR, 3/1, moist to wet with depth, firm to stiff with depth	
		D	N/A	0.0/4.0	N/A	N/A	NM		No recovery - runny slough	NR
15								0		
		D	N/A	4.0/4.0	N/A	0.1	NM		Silty SAND, little peat @ ~17.8 ft., very dark grey, 7.5YR, 3/1, wet, soft/loose	SM
						ND	NM		Interval above grades into medium SAND, trace rounded coarse sand, dark brown, 7.5YR, 3/2, moist, dense	SP
20								-5	Fine SAND, trace rounded coarse sand, dark brown, 7.5YR, 3/2, wet, loose	
		D	N/A	4.0/4.0	N/A	ND	NM			
						ND	NM		Medium SAND, trace coarse angular gravel, very dark grey, 7.5YR, 3/1	
									Medium sub-rounded sand, brown 7.5YR, 4/3, moist, dense	
25		D	N/A	0.0/4.0	N/A	N/A	NM	-10	Medium sub-rounded sand, brown, 7.5YR, 4/3, moist, dense	

GRAPHICAL LOG

WELL CONSTRUCTION

LEGEND:
msl = mean sea level
bgs = below ground surface
ND = not detected
NM = not measured
N/A = not applicable

SAMPLE TYPES:
D: drive
W: washed
ST: Shelby Tube
A: Auger
HA: hand auger
C: cored
RC: rotasonic core

SOIL: GRANULAR SOILS DENSITY:
0-4: very loose
5-10: loose
11-29: medium dense
30-49: dense
50+: very dense

PLASTIC SOILS DENSITY:
0-2: very soft
3-4: soft
5-8: medium soft
9-15: stiff
16-30: very stiff
>30: hard

MOISTURE:
dry
moist
wet

PROPORTIONS:
Trace: <5% Few: 16-30%
Little: 6-15% Some: 31-49%

Density designation based on blow counts for each 12" of penetration using a 140 lb. hammer w/30" drop
When blow counts were not possible, density descriptions, as included in the "Materials Description" are based upon a thumb penetration test

NOTES:
SB-52 (2.0 - 4.0): VOCs, SVOCs, PCBs, TAL Metals
SB-52 (5.7 - 6.3): VOCs, SVOCs, PCBs, TAL Metals

ROCK:
RQD (rock quality designation):
reported in % = [length of core in pieces 4" and longer/ length of run] x100

307726

CH2MHILL

BORING LOG

BORING/WELL ID: SB-52

PROJECT NAME: Quanta Resources Superfund Site
SURFACE ELEVATION: 14.6 ft. MSL
LOCATION: Middle of parking lot on S end of Block 92.01
MEASURING POINT: PVC Casing
PROJECT NUMBER: 385722
MEASURING POINT ELEVATION: N/A
CLIENT: Honeywell Inc.
TOTAL DEPTH: 28 ft. bgs
DRILLING CONTRACTOR: EPI, Inc.
FOREMAN: Ron Higgins
DRILLING METHOD: Geoprobe Direct Push
DRILLING EQUIPMENT: Hurricane Direct Push and Auger Rig
SAMPLING METHOD: 4 ft. macrocore sampler
CH2M OBSERVER: A. Harclerode
START DATE: 2/24/09
FINISH DATE: 2/24/09
NORTHING: 719312.35
EASTING: 632862.42
APPROX. DEPTH TO WATER: 8 ft. bgs 2/24/09

DEPTH (FT. BGS)	SAMPLE OR RUN DESIGNATION	SAMPLE TYPE	BLOWS PER 6 INCHES or CORE RUN (time/ft.)	RECOVERY/ PENETRATION (FT.)	RQD	SCREENING DATA PID	SCREENING DATA FID	ELEVATION (ft. MSL)	MATERIALS DESCRIPTION SOILS: classification, secondary grain size, color, moisture, and other descriptors ROCK: rock type, hardness, major mineral types, color, weathering, and degree of fracturing	GRAPHICAL LOG	USCS GROUP SYMBOL	WELL CONSTRUCTION
25												25
												26
												27
									Bottom of boring @ 28 ft. bgs			28
												29
30								-15				30
												31
												32
												33
												34
35								-20				35
												36
												37
												38
												39
40								-25				40
												41
												42
												43
												44
45								-30				45
												46
												47
												48
												49
50								-35				50

LEGEND:
msl = mean sea level
bgs = below ground surface
ND = not detected
NM = not measured
N/A = not applicable

SAMPLE TYPES:
D: drive
W: washed
ST: Shelby Tube
A: Auger
HA: hand auger
C: cored
RC: rotasonic core

SOIL: GRANULAR SOILS DENSITY:
0-4: very loose
5-10: loose
11-29: medium dense
30-49: dense
50+: very dense

PLASTIC SOILS DENSITY:
0-2: very soft
3-4: soft
5-8: medium soft
9-15: stiff
16-30: very stiff
>30: hard

MOISTURE:
dry
moist
wet

PROPORTIONS:
Trace: <5% Few: 16-30%
Little: 6-15% Some: 31-49%

Density designation based on blow counts for each 12" of penetration using a 140 lb. hammer w/30" drop
When blow counts were not possible, density descriptions, as included in the "Materials Description" are based upon a thumb penetration test

NOTES:
SB-52 (2.0 - 4.0): VOCs, SVOCs, PCBs, TAL Metals
SB-52 (5.7 - 6.3): VOCs, SVOCs, PCBs, TAL Metals

ROCK:
RQD (rock quality designation):
reported in % = [length of core in pieces 4" and longer/ length of run] x100

307727

BORING LOG

BORING/WELL ID: SB-53

PROJECT NAME: Quanta Resources Superfund Site
SURFACE ELEVATION: 7.0 ft. MSL
LOCATION: N Corner of Quanta
MEASURING POINT: N/A
PROJECT NUMBER: 363725
MEASURING POINT ELEVATION: N/A
CLIENT: Honeywell Inc.
TOTAL DEPTH: 20 ft. bgs
DRILLING CONTRACTOR: SGS Environmental Services, Inc.
FOREMAN: J. Rousa
DRILLING METHOD: Geoprobe Direct Push
DRILLING EQUIPMENT: Geoprobe 7010DT
SAMPLING METHOD: 5 ft. macrocore sampler
CH2M OBSERVER: A. Harclerode
START DATE: 9/5/08
FINISH DATE: 9/5/08
NORTHING: 718997.16
EASTING: 633163.65
APPROX. DEPTH TO WATER: 3.8 ft. bgs 9/5/08

DEPTH (FT. BGS)	SAMPLE OR RUN DESIGNATION	SAMPLE TYPE	BLOWS PER 6 INCHES or CORE RUN (time/ft.)	RECOVERY/ PENETRATION (FT.)	RQD	SCREENING DATA PID	SCREENING DATA FID	ELEVATION (ft. MSL)	MATERIALS DESCRIPTION (SOILS: classification, secondary grain size, color, moisture, and other descriptors; ROCK: rock type, hardness, major mineral types, color, weathering, and degree of fracturing)	USCS GROUP SYMBOL
0		D	N/A	2.5/5.0	N/A	0.1	NM		Intermixed silty SAND, fine to coarse sub-angular to sub-rounded GRAVEL, some fractured rock, dark brown, 7.5YR, 3/2, dry, medium dense (FILL)	SM
	2.5' to 3.5' (SB-53-3.0)					NM	NM	5	Crushed COAL and fine to coarse sub-rounded GRAVEL, some wood, black, dry, medium dense, slight odor (FILL)	GW
						NM	NM		Intermixed silty SAND, fine to coarse sub-angular to sub-rounded GRAVEL, some fractured rock, dark brown, 7.5YR, 3/2, medium dense, moist to wet (FILL)	SM
5		D	N/A	2.0/5.0	N/A	0.1	NM	0	Well graded sub-angular to sub-rounded GRAVEL, trace brick, trace white silty sand, some fractured rock, very dark grey, 7.5YR, 3/1, wet, medium dense (FILL)	OW
10		D	N/A	3.3/5.0	N/A	NM	NM		Clayey PEAT, very dark brown, 7.5YR, 2.5/2, soft, moist	PT/OL
						NM	NM	-5	Clayey PEAT grades into fine to medium SAND, dark grey, 7.5YR, 4/1, wet, loose/medium dense	SP
15		D	N/A	3.6/5.0	N/A	NM	NM		Fine to medium SAND, dark grey, 7.5YR, 4/1, wet, loose/medium dense, some fine to medium sub-rounded gravel at bottom of interval	
	16.0' to 17.0' (SB-53-16.5)							-10		
						NM	NM		Silty CLAY, some fine to coarse sand and gravel, brown, 7.5YR, 4/3, moist, very stiff	CL
20									Bottom of boring @ 20 ft. bgs	
								-15		
25										

GRAPHICAL LOG

WELL CONSTRUCTION

LEGEND:
msl = mean sea level
bgs = below ground surface
ND = not detected
NM = not measured
N/A = not applicable

SAMPLE TYPES:
D: drive
W: washed
ST: Shelby Tube
A: Auger
HA: hand auger
C: cored
RC: rotasonic core

SOIL: GRANULAR SOILS DENSITY:
0-4: very loose
5-10: loose
11-29: medium dense
30-49: dense
50+: very dense

PLASTIC SOILS DENSITY:
0-2: very soft
3-4: soft
5-8: medium soft
9-15: stiff
16-30: very stiff
>30: hard

MOISTURE:
dry
moist
wet

PROPORTIONS:
Trace: <5% Few: 16-30%
Little: 6-15% Some: 31-49%

Density designation based on blow counts for each 12" of penetration using a 140 lb. hammer w/30" drop
When blow counts were not possible, density descriptions, as included in the "Materials Description" are based upon a thumb penetration test

NOTES:
SB-53 (2.5 - 3.5): Total Arsenic, Arsenic by SEP, TOC
SB-53 (16.0 - 17.0): Total Arsenic, Arsenic by SEP, TOC

ROCK:
RQD (rock quality designation):
reported in % = [length of core in pieces 4" and longer/ length of run] x100

307728

BORING LOG

BORING/WELL ID: SB-54

PROJECT NAME: Quanta Resources Superfund Site
SURFACE ELEVATION: 12.4 ft. MSL
LOCATION: E Side of River Road/Gorge Road Intersection
MEASURING POINT: N/A
PROJECT NUMBER: 363725
MEASURING POINT ELEVATION: N/A
CLIENT: Honeywell Inc.
TOTAL DEPTH: 25 ft. bgs
DRILLING CONTRACTOR: Boart Longyear
FOREMAN: J Graglia
DRILLING METHOD: Rotasonic Drill Rig
DRILLING EQUIPMENT: Boart Longyear Mini Rotasonic
SAMPLING METHOD: 5 ft. core barrel
CH2M OBSERVER: A. Harclerode
START DATE: 10/3/08
FINISH DATE: 10/3/08
NORTHING: 719141.86
EASTING: 633070.43
APPROX. DEPTH TO WATER: 10.0 ft. bgs 10/3/08

DEPTH (FT. BGS)	SAMPLE OR RUN DESIGNATION	SAMPLE TYPE	BLOWS PER 6 INCHES or CORE RUN (time/ft.)	RECOVERY/ PENETRATION (FT.)	RQD	SCREENING DATA PID	SCREENING DATA FID	ELEVATION (ft. MSL)	MATERIALS DESCRIPTION (SOILS: classification, secondary grain size, color, moisture, and other descriptors; ROCK: rock type, hardness, major mineral types, color, weathering, and degree of fracturing)	USCS GROUP SYMBOL
0		RC	N/A	1.6/4.0	N/A	ND	NM		Fine to medium rounded SAND, trace sub-angular, fine to medium gravel, brown 7.5YR, 4/3, dry, loose (FILL)	SP
						0.1	NM	10	Silty SAND with fine to coarse sub-angular to angular GRAVEL, very dark grey, 7.5YR, 3/1, dry, loose to medium dense (FILL)	SM
5		RC	N/A	2.5/3.0	N/A	ND	NM		Silty SAND with fine to coarse sub-angular to angular GRAVEL and cored boulder, very dark grey, 7.5YR, 3/1, dry, loose, medium dense (FILL)	
		RC	N/A	2.4/3.0	N/A	ND	NM	5	Silty fine to coarse SAND, little fine to coarse sub-angular to angular gravel, trace slag, black, moist, wood from 9.2 - 9.4 ft. (FILL)	
10						ND	NM		SILT, trace sand, dusky red, 10R, 3/2, moist (FILL)	ML
	10.25' to 10.75' (SB-54-10.5)	RC	N/A	4.1/5.0	N/A	1.6	NM		SAND, SILT, trace wood and slag, dusky red, 10R, 3/3, wet (FILL)	
						ND	NM	0	Silty SLAG, CINDER, and COAL, trace wood, brick, and terra cotta pipe pieces, black, wet, trace product, stain in lenses, trace sheen at 13.3 to 14.75 ft. (FILL)	
						6.5	NM			
15	14.25' to 14.75' (SB-54-14.5)	RC	N/A	4.4/5.0	N/A	ND	NM		Fine grained SAND, little silt, trace medium sand and organic matter, dark grey, 10YR, 4/1, wet	SP
						ND	NM	-5	Fine to medium grained SAND, very dark greyish brown, 10YR, 3/2, wet	
20		RC	N/A	5.0/5.0	N/A	ND	NM		Fine to medium grained SAND, trace localized product lenses and noticeable odor, very dark greyish brown, 10YR, 3/2, wet	
	22.5' to 23.0' (SB-54-22.75)					ND	NM	-10	Silty CLAY, yellowish brown, 10YR, 5/4 with 5Y, 6/1, gray mottling, dry, lean, very hard	CL
25									Bottom of boring @ 25 ft. bgs	

LEGEND:
msl = mean sea level
bgs = below ground surface
ND = not detected
NM = not measured
N/A = not applicable

SAMPLE TYPES:
D: drive
W: washed
ST: Shelby Tube
A: Auger
HA: hand auger
C: cored
RC: rotasonic core

SOIL: GRANULAR SOILS DENSITY:
0-4: very loose
5-10: loose
11-29: medium dense
30-49: dense
50+: very dense

PLASTIC SOILS DENSITY:
0-2: very soft
3-4: soft
5-8: medium soft
9-15: stiff
16-30: very stiff
>30: hard

MOISTURE:
dry
moist
wet

PROPORTIONS:
Trace: <5% Few: 16-30%
Little: 6-15% Some: 31-49%

Density designation based on blow counts for each 12" of penetration using a 140 lb. hammer w/30" drop
When blow counts were not possible, density descriptions, as included in the "Materials Description" are based upon a thumb penetration test

NOTES:
SB-54 (10.25 - 10.75): TOC, Total Arsenic, Arsenic by SEP
SB-54 (14.25 - 14.75): TPH Fingerprint
SB-54 (22.5 - 23.0): TOC, Total Arsenic, Arsenic by SEP

ROCK:
RQD (rock quality designation):
reported in % = [length of core in pieces 4" and longer/ length of run] x100

307729

BORING LOG

BORING/WELL ID: SB-55

PROJECT NAME: Quanta Resources Superfund Site
SURFACE ELEVATION: 7.4 ft. MSL
LOCATION: N Portion of Fmr. Lever Bros.
MEASURING POINT: N/A
PROJECT NUMBER: 363725
MEASURING POINT ELEVATION: N/A
CLIENT: Honeywell Inc.
TOTAL DEPTH: 25 ft. bgs
DRILLING CONTRACTOR: Boart Longyear
FOREMAN: J Graglia
DRILLING METHOD: Rotasonic Drill Rig
DRILLING EQUIPMENT: Boart Longyear Mini Rotasonic
SAMPLING METHOD: 5 ft. core barrel
CH2M OBSERVER: A. Harclerode
START DATE: 10/7/08
FINISH DATE: 10/8/08
NORTHING: 718366.93
EASTING: 632979.26
APPROX. DEPTH TO WATER: 5.0 ft. bgs 10/7/08

DEPTH (FT. BGS)	SAMPLE OR RUN DESIGNATION	SAMPLE TYPE	BLOWS PER 6 INCHES or CORE RUN (time/ft.)	RECOVERY/ PENETRATION (FT.)	RQD	SCREENING DATA PID	SCREENING DATA FID	ELEVATION (ft. MSL)	MATERIALS DESCRIPTION (SOILS: classification, secondary grain size, color, moisture, and other descriptors; ROCK: rock type, hardness, major mineral types, color, weathering, and degree of fracturing)	USCS GROUP SYMBOL
0		RC	N/A	4.5/5.0	N/A	ND	NM		SILT with ORGANICS and trace fine sand, very dark brown, 7.5YR, 2.5/2, moist, stiff (FILL)	OL
						ND	NM	5	Silty SAND, trace coarse rounded sand with fine to coarse sub-angular to sub-rounded gravel, trace brick and rounded cobble, very dark brown, 7.5YR, 2.5/2, moist, medium dense to stiff (FILL)	SM
						0.1	NM		Silty SAND with BRICK, trace coarse rounded sand with fine to coarse sub-angular to sub-rounded gravel, trace rounded cobble, cored wood in shoe, very dark brown, 7.5YR, 2.5/2, moist, medium dense to stiff (FILL)	
5	5.0' to 5.5' (SB-55-5.25)	RC	N/A	2.5/3.5	N/A	5.1	NM			GP
						6.9	NM	0	Intermixed fine to medium sub-angular GRAVEL and BRICK, trace angular coarse gravel, trace to some slag, black, wet, loose (FILL)	OL/OH
						2.2	NM			
		RC	N/A	1.5/1.5	N/A	4.7	NM		Organic silty CLAY, very dark brown, 7.5YR, 2.5/2, moist, soft, obvious petroleum odor (FILL)	OL/OH
10		RC	N/A	5.0/5.0	N/A	5.7	NM		Crushed and fractured CONCRETE (FILL)	SP
						7.9	NM	-5	Organic silty CLAY, very dark brown, 7.5YR, 2.5/2, moist, soft (FILL)	
									Crushed and fractured CONCRETE (FILL)	
15		RC	N/A	5.0/5.0	N/A	17.8	NM		Medium, well-sorted SAND, some small sub-rounded cobbles @ 10 - 11 ft. bgs, dark brown, 7.5YR, 3/4, wet, loose, obvious odor @ approx. 14 - 15 ft.	
								-10	Medium, well-sorted SAND, dark brown, 7.5YR, 3/4, wet, loose, obvious odor present and stronger with depth	
20	19.0' to 20.0' (SB-55-19.5)	RC	N/A	5.0/5.0	N/A	295	NM		Medium, well-sorted SAND, dark brown, 7.5YR, 3/4, wet, loose, obvious odor, pervasive staining and some low viscosity product, amber colored product	
						2.8 to 8.6	NM	-15	Silty CLAY, lean, brown, 10YR, 4/3, moist, stiff to very stiff	CL
25									Bottom of boring @ 25 ft. bgs	

WELL CONSTRUCTION

LEGEND:
msl = mean sea level
bgs = below ground surface
ND = not detected
NM = not measured
N/A = not applicable

SAMPLE TYPES:
D: drive
W: washed
ST: Shelby Tube
A: Auger
HA: hand auger
C: cored
RC: rotasonic core

SOIL: GRANULAR SOILS DENSITY:
0-4: very loose
5-10: loose
11-29: medium dense
30-49: dense
50+: very dense

PLASTIC SOILS DENSITY:
0-2: very soft
3-4: soft
5-8: medium soft
9-15: stiff
16-30: very stiff
>30: hard

MOISTURE:
dry
moist
wet

PROPORTIONS:
Trace: <5% Few: 16-30%
Little: 6-15% Some: 31-49%

Density designation based on blow counts for each 12" of penetration using a 140 lb. hammer w/30" drop
When blow counts were not possible, density descriptions, as included in the "Materials Description" are based upon a thumb penetration test

NOTES:
SB-55 (5.0 - 5.5): TOC, Total Arsenic, Arsenic by SEP
SB-55 (19.0 - 20.0): TOC, Total Arsenic, Arsenic by SEP

ROCK:
RQD (rock quality designation):
reported in % = [length of core in pieces 4" and longer/ length of run] x100

307730

BORING LOG

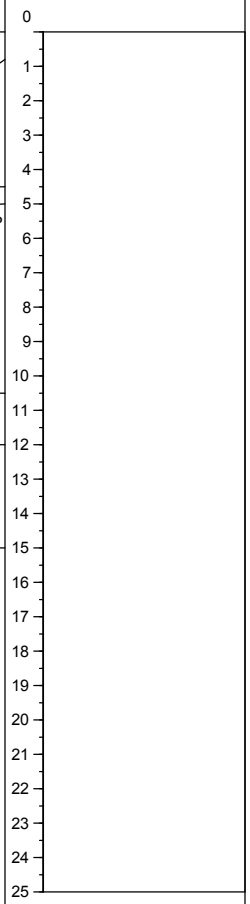
BORING/WELL ID: SB-56

PROJECT NAME: Quanta Resources Superfund Site
SURFACE ELEVATION: 5.6 ft. MSL
LOCATION: Center of Quanta Resources Property
MEASURING POINT: N/A
PROJECT NUMBER: 363725
MEASURING POINT ELEVATION: N/A
CLIENT: Honeywell Inc.
TOTAL DEPTH: 15 ft. bgs
DRILLING CONTRACTOR: Boart Longyear
FOREMAN: J Graglia
DRILLING METHOD: Rotasonic Drill Rig
DRILLING EQUIPMENT: Boart Longyear Mini Rotasonic
SAMPLING METHOD: 5 ft. core barrel
CH2M OBSERVER: A. Harclerode
START DATE: 10/15/08
FINISH DATE: 10/15/08
NORTHING: 718709.86
EASTING: 633142.36
APPROX. DEPTH TO WATER: 5.0 ft. bgs 10/15/08

DEPTH (FT. BGS)	SAMPLE OR RUN DESIGNATION	SAMPLE TYPE	BLOWS PER 6 INCHES or CORE RUN (time/ft.)	RECOVERY/ PENETRATION (FT.)	RQD	SCREENING DATA PID	SCREENING DATA FID	ELEVATION (ft. MSL)	MATERIALS DESCRIPTION (SOILS: classification, secondary grain size, color, moisture, and other descriptors; ROCK: rock type, hardness, major mineral types, color, weathering, and degree of fracturing)	USCS GROUP SYMBOL
0	0.0' to 2.5' (SB-56-1.3)	RC	N/A	4.2/5.0	N/A	16.2	NM	5	Silty CLAY, some fine sand, with organic matter, olive brown, 2.5Y, 4/3, moist, medium stiff (FILL)	OL/OH
	2.5' to 5.0' (SB-56-3.8)					9.8	NM		Silty SAND, trace to some medium to coarse sub-rounded sand, some brick, trace wood and slag, trace to some coal and cinder, trace to some product and some staining and semi-solid tar, black, medium wet, loose (FILL)	SM
						NM	NM		Solid TAR (FILL)	
5	5.0' to 7.5' (SB-56-6.3)	RC	N/A	3.6/5.0	N/A	0.2	NM	0	Medium SAND, trace medium to coarse sub-angular gravel, dark grey, 7.5YR, 4/1, wet, loose, odor, possible staining (FILL)	SW/GP
	7.5' to 10.0' (SB-56-3.8)					2.4	NM		Medium SAND, trace medium to coarse sub-angular gravel, some product and staining, some solid, brittle tar, dark grey, 7.5YR, 4/1, wet, loose, odor (FILL)	
10	10.0' to 12.5' (SB-56-11.3)	RC	N/A	4.0/5.0	N/A	NM	NM	-5	CINDER, black, dry, loose (FILL)	
						NM	NM			
	12.5' to 15.0' (SB-56-13.8)					NM	NM		SAND, fine to medium with depth, trace medium sub-rounded gravel, trace silt, brown, 7.5YR, 4/2, wet, loose	SP
15									Bottom of boring @ 15 ft. bgs	
								-10		
20								-15		
25										

GRAPHICAL LOG

WELL CONSTRUCTION



LEGEND:
msl = mean sea level
bgs = below ground surface
ND = not detected
NM = not measured
N/A = not applicable

SAMPLE TYPES:
D: drive
W: washed
ST: Shelby Tube
A: Auger
HA: hand auger
C: cored
RC: rotasonic core

SOIL: GRANULAR SOILS DENSITY:
0-4: very loose
5-10: loose
11-29: medium dense
30-49: dense
50+: very dense

PLASTIC SOILS DENSITY:
0-2: very soft
3-4: soft
5-8: medium soft
9-15: stiff
16-30: very stiff
>30: hard

MOISTURE:
dry
moist
wet

PROPORTIONS:
Trace: <5% Few: 16-30%
Little: 6-15% Some: 31-49%

Density designation based on blow counts for each 12" of penetration using a 140 lb. hammer w/30" drop
When blow counts were not possible, density descriptions, as included in the "Materials Description" are based upon a thumb penetration test

NOTES:
All samples were analyzed for TPH Fingerprint, Fuel/Petroluem Biomarkers, MAH/PAHs, Alkylated PAHs. SB-56-1.3, SB-56-3.8, SB-56-6.3, and SB-56-11.3 were also analyzed for PCBs.

ROCK:
RQD (rock quality designation):
reported in % = [length of core in pieces 4" and longer/ length of run] x100

307731

BORING LOG

BORING/WELL ID: SB-57

PROJECT NAME: Quanta Resources Superfund Site
SURFACE ELEVATION: 5.9 ft. MSL
LOCATION: Center of Quanta Resources Property
MEASURING POINT: N/A
PROJECT NUMBER: 363725
MEASURING POINT ELEVATION: N/A
CLIENT: Honeywell Inc.
TOTAL DEPTH: 15 ft. bgs
DRILLING CONTRACTOR: Boart Longyear
FOREMAN: J Graglia
DRILLING METHOD: Rotasonic Drill Rig
DRILLING EQUIPMENT: Boart Longyear Mini Rotasonic
SAMPLING METHOD: 5 ft. core barrel
CH2M OBSERVER: A. Harclerode
START DATE: 10/15/08
FINISH DATE: 10/15/08
NORTHING: 718664.68
EASTING: 633177.88
APPROX. DEPTH TO WATER: 5.0 ft. bgs 10/15/08

DEPTH (FT. BGS)	SAMPLE OR RUN DESIGNATION	SAMPLE TYPE	BLOWS PER 6 INCHES or CORE RUN (time/ft.)	RECOVERY/ PENETRATION (FT.)	RQD	SCREENING DATA PID	SCREENING DATA FID	ELEVATION (ft. MSL)	MATERIALS DESCRIPTION (SOILS: classification, secondary grain size, color, moisture, and other descriptors; ROCK: rock type, hardness, major mineral types, color, weathering, and degree of fracturing)	USCS GROUP SYMBOL
0										
	0.0' to 2.5' (SB-57-1.3)	RC	N/A	3.7/5.0	N/A	0.1	NM	5	Silty CLAY, some fine sand with organic matter, olive brown, 2.5Y, 4/3, moist, medium stiff (FILL)	CL
						62.9	NM		Silty SAND, trace to some medium to coarse sub-rounded sand, some brick, trace wood and slag, trace to some coal and cinder, pervasive product and staining, black, medium wet, loose (FILL)	SM
	2.5' to 5.0' (SB-57-3.8)									
						NM	NM		WOOD and very hard TAR compacted into solid blocks/chunks (FILL)	
5	5.0' to 7.5' (SB-57-6.3)	RC	N/A	4.0/5.0	N/A	2.2	NM	0	Fine to medium SAND (coarser with depth), trace coarse sub-rounded sand, trace small angular cobble, brown, 7.5YR, 4/2 to very dark grey, 7.5YR, 3/1 with depth (dark grey is possible staining), wet, loose (FILL)	SP
	7.5' to 10.0' (SB-57-8.8)					5.0	NM			
10	10.0' to 12.5' (SB-57-13.8)	RC	N/A	4.1/5.0	N/A	4.8	NM	-5	Fine to medium SAND (coarser with depth), trace coarse sub-rounded sand, trace small angular cobble, very dark grey, 7.5YR, 3/1 (dark grey is possible staining) wet, loose	
	12.5' to 15.0' (SB-57-13.8)					1.8	NM			
15									Bottom of boring @ 15 ft. bgs	
								-10		
20								-15		
25										

WELL CONSTRUCTION

LEGEND:
msl = mean sea level
bgs = below ground surface
ND = not detected
NM = not measured
N/A = not applicable

SAMPLE TYPES:
D: drive
W: washed
ST: Shelby Tube
A: Auger
HA: hand auger
C: cored
RC: rotasonic core

SOIL: GRANULAR SOILS DENSITY:
0-4: very loose
5-10: loose
11-29: medium dense
30-49: dense
50+: very dense

PLASTIC SOILS DENSITY:
0-2: very soft
3-4: soft
5-8: medium soft
9-15: stiff
16-30: very stiff
>30: hard

MOISTURE:
dry
moist
wet

PROPORTIONS:
Trace: <5% Few: 16-30%
Little: 6-15% Some: 31-49%

Density designation based on blow counts for each 12" of penetration using a 140 lb. hammer w/30" drop
When blow counts were not possible, density descriptions, as included in the "Materials Description" are based upon a thumb penetration test

NOTES:
All samples were analyzed for TPH Fingerprint, Fuel/Petroleum Biomarkers, MAH/PAHs, Alkylated PAHs.

ROCK:
RQD (rock quality designation):
reported in % = [length of core in pieces 4" and longer/ length of run] x100

307732

BORING LOG

BORING/WELL ID: SB-58

PROJECT NAME: Quanta Resources Superfund Site
SURFACE ELEVATION: 16.2 ft. MSL
LOCATION: NE corner of parking lot on S end of Block 92.01
MEASURING POINT: PVC Casing
PROJECT NUMBER: 385722
MEASURING POINT ELEVATION: N/A
CLIENT: Honeywell Inc.
TOTAL DEPTH: 28 ft. bgs
DRILLING CONTRACTOR: EPI, Inc.
FOREMAN: Ron Higgins
DRILLING METHOD: Geoprobe Direct Push
DRILLING EQUIPMENT: Hurricane Direct Push and Auger Rig
SAMPLING METHOD: 4 ft. macrocore sampler
CH2M OBSERVER: A. Harclerode
START DATE: 2/25/09
FINISH DATE: 2/25/09
NORTHING: 719329.30
EASTING: 632943.51
APPROX. DEPTH TO WATER: 14.5 ft. bgs 2/25/09

DEPTH (FT. BGS)	SAMPLE OR RUN DESIGNATION	SAMPLE TYPE	BLOWS PER 6 INCHES or CORE RUN (time/ft.)	RECOVERY/ PENETRATION (FT.)	RQD	SCREENING DATA PID	SCREENING DATA FID	ELEVATION (ft. MSL)	MATERIALS DESCRIPTION (SOILS: classification, secondary grain size, color, moisture, and other descriptors; ROCK: rock type, hardness, major mineral types, color, weathering, and degree of fracturing)	USCS GROUP SYMBOL
0		D	N/A	2.2/4.0	N/A	ND	NM	15	Intermixed medium SAND, gravel, brick, and concrete, dark brown, 7.5YR, 4/3, dry, dense (FILL)	
5	3.5' to 4.0' (SB-58-3.7)	D	N/A	2.7/4.0	N/A	ND	NM	10	Crushed CONCRETE and SAND, little fine angular gravel, very pale brown, 10YR, 7/3, very dark grey, 7.5YR, 3/1, and black, dry, hard (FILL)	
						ND	NM		SILT, little brick, black, dry, very stiff (FILL)	
10	9.3' to 9.7' (SB-58-9.5)	D	N/A	3.3/4.0	N/A	ND	NM	5	Intermixed medium SAND, GRAVEL, BRICK, and CONCRETE, little silt, trace cinder, dark brown, 7.5YR, 4/3, dry, dense (FILL)	
									Silty, medium to coarse SAND, some fine rounded gravel and brick-like material, dark reddish brown, 5YR, 2.5/2, moist, medium dense (FILL)	
	11.3' to 12.0' (SB-58-11.7)	D	N/A	2.5/4.0	N/A	ND	NM		Intermixed medium SAND, GRAVEL, BRICK, and CONCRETE, dark brown, 7.5YR, 4/3, dry, dense (FILL)	
						ND	NM			
15						ND	NM	0	SILT, little fine angular gravel, trace fine sand, black, wet	ML
		D	N/A	1.4/4.0	N/A	ND	NM		SILT, some fine to medium angular gravel, trace fine sand, black, wet	
						ND	NM		Interval above grades into fine SAND, little silt, brown, 7.5YR, 3/2, wet, medium dense	SP
20		D	N/A	2.6/4.0	N/A	0.1	NM	-5	Fine SAND, little silt, brown, 7.5YR, 3/2, wet, medium dense	
25		D	N/A	4.0/4.0	N/A		NM		Medium SAND, little silt, brown, 7.5YR, 3/2, wet, firm	

GRAPHICAL LOG

WELL CONSTRUCTION

LEGEND:
msl = mean sea level
bgs = below ground surface
ND = not detected
NM = not measured
N/A = not applicable

SAMPLE TYPES:
D: drive
W: washed
ST: Shelby Tube
A: Auger
HA: hand auger
C: cored
RC: rotasonic core

SOIL: GRANULAR SOILS DENSITY:
0-4: very loose
5-10: loose
11-29: medium dense
30-49: dense
50+: very dense

PLASTIC SOILS DENSITY:
0-2: very soft
3-4: soft
5-8: medium soft
9-15: stiff
16-30: very stiff
>30: hard

MOISTURE:
dry
moist
wet

PROPORTIONS:
Trace: <5% Few: 16-30%
Little: 6-15% Some: 31-49%

Density designation based on blow counts for each 12" of penetration using a 140 lb. hammer w/30" drop
When blow counts were not possible, density descriptions, as included in the "Materials Description" are based upon a thumb penetration test

NOTES:
SB-58 (3.5 - 4.0): VOCs, SVOCs, PCBs, TAL Metals
SB-58 (9.3 - 9.7): VOCs, SVOCs, PCBs, TAL Metals
SB-58 (11.3 - 12.0): VOCs, SVOCs, PCBs, TAL Metals

ROCK:
RQD (rock quality designation):
reported in % = [length of core in pieces 4" and longer/ length of run] x100

307733

CH2MHILL

BORING LOG

BORING/WELL ID: SB-58

PROJECT NAME: Quanta Resources Superfund Site
SURFACE ELEVATION: 16.2 ft. MSL
LOCATION: NE corner of parking lot on S end of Block 92.01
MEASURING POINT: PVC Casing
PROJECT NUMBER: 385722
MEASURING POINT ELEVATION: N/A
CLIENT: Honeywell Inc.
TOTAL DEPTH: 28 ft. bgs
DRILLING CONTRACTOR: EPI, Inc.
FOREMAN: Ron Higgins
DRILLING METHOD: Geoprobe Direct Push
DRILLING EQUIPMENT: Hurricane Direct Push and Auger Rig
SAMPLING METHOD: 4 ft. macrocore sampler
CH2M OBSERVER: A. Harclerode
START DATE: 2/25/09
FINISH DATE: 2/25/09
NORTHING: 719329.30
EASTING: 632943.51
APPROX. DEPTH TO WATER: 14.5 ft. bgs 2/25/09

DEPTH (FT. BGS)	SAMPLE OR RUN DESIGNATION	SAMPLE TYPE	BLOWS PER 6 INCHES or CORE RUN (time/ft.)	RECOVERY/ PENETRATION (FT.)	RQD	SCREENING DATA PID	SCREENING DATA FID	ELEVATION (ft. MSL)	MATERIALS DESCRIPTION SOILS: classification, secondary grain size, color, moisture, and other descriptors ROCK: rock type, hardness, major mineral types, color, weathering, and degree of fracturing	GRAPHICAL LOG	USCS GROUP SYMBOL	WELL CONSTRUCTION
25								-10	Bottom of boring @ 28 ft. bgs			25 26 27 28 29
30								-15				30 31 32 33 34
35								-20				35 36 37 38 39
40								-25				40 41 42 43 44
45								-30				45 46 47 48 49
50												50

LEGEND:
msl = mean sea level
bgs = below ground surface
ND = not detected
NM = not measured
N/A = not applicable

SAMPLE TYPES:
D: drive
W: washed
ST: Shelby Tube
A: Auger
HA: hand auger
C: cored
RC: rotasonic core

SOIL: GRANULAR SOILS DENSITY:
0-4: very loose
5-10: loose
11-29: medium dense
30-49: dense
50+: very dense

PLASTIC SOILS DENSITY:
0-2: very soft
3-4: soft
5-8: medium soft
9-15: stiff
16-30: very stiff
>30: hard

MOISTURE:
dry
moist
wet

PROPORTIONS:
Trace: <5% Few: 16-30%
Little: 6-15% Some: 31-49%

Density designation based on blow counts for each 12" of penetration using a 140 lb. hammer w/30" drop
When blow counts were not possible, density descriptions, as included in the "Materials Description" are based upon a thumb penetration test

NOTES:
SB-58 (3.5 - 4.0): VOCs, SVOCs, PCBs, TAL Metals
SB-58 (9.3 - 9.7): VOCs, SVOCs, PCBs, TAL Metals
SB-58 (11.3 - 12.0): VOCs, SVOCs, PCBs, TAL Metals

ROCK:
RQD (rock quality designation):
reported in % = [length of core in pieces 4" and longer/ length of run] x100

307734

BORING LOG

BORING/WELL ID: TL 8.5-10.5

PROJECT NAME: Quanta Resources Superfund Site
SURFACE ELEVATION: 8.4 ft. MSL
LOCATION: S Corner of Block 93 South
MEASURING POINT: N/A
PROJECT NUMBER: 363725
MEASURING POINT ELEVATION: N/A
CLIENT: Honeywell Inc.
TOTAL DEPTH: 20 ft. bgs
DRILLING CONTRACTOR: SGS Environmental Services, Inc.
FOREMAN: J. Rousa
DRILLING METHOD: Geoprobe Direct Push
DRILLING EQUIPMENT: Geoprobe 7010DT
SAMPLING METHOD: 5 ft. macrocore sampler
CH2M OBSERVER: A. Harclerode
START DATE: 8/28/08
FINISH DATE: 8/28/08
NORTHING: 718434.05
EASTING: 632441.45
APPROX. DEPTH TO WATER: 5.0 ft. bgs 8/28/08

DEPTH (FT. BGS)	SAMPLE OR RUN DESIGNATION	SAMPLE TYPE	BLOWS PER 6 INCHES or CORE RUN (time/ft.)	RECOVERY/ PENETRATION (FT.)	RQD	SCREENING DATA PID	SCREENING DATA FID	ELEVATION (ft. MSL)	MATERIALS DESCRIPTION (SOILS: classification, secondary grain size, color, moisture, and other descriptors; ROCK: rock type, hardness, major mineral types, color, weathering, and degree of fracturing)	USCS GROUP SYMBOL
0	0' to 1.0' (TL 8.5-10.5-0.5)	D	N/A	0.9/5.0	N/A	0.5	NM	5	Intermixed fine to coarse SAND, some fine sub-angular gravel, very dark brown, 7.5YR, 2.5/2, wet, loose (FILL)	
5		D	N/A	1.4/5.0	N/A	N/A	NM	0	Intermixed fine to coarse SAND, some fine sub-angular gravel, very dark brown, 7.5YR, 2.5/2, wet, loose (FILL)	
									Intermixed fine to coarse SAND, some fine sub-angular gravel, very dark brown, 7.5YR, 2.5/2, wet, loose (FILL)	
10	12.0' to 14.0' (TL 8.5-10.5-13)	D	N/A	1.9/5.0	N/A	0.3	NM	-5	Peaty CLAY, very dark brown, 7.5YR, 2.5/2, moist, medium stiff	CH/PT
						0.3	NM			
						0.3	NM		Silty CLAY, very dark grey, 7.5YR, 4/1	CH
15		D	N/A	2.6/5.0	N/A	0.2	NM	-10	Well graded SAND, some medium sub-angular gravel, dark grey, 7.5YR, 4/1 to brown, 7.5YR, 4/4	SW
						0.2	NM	-15	Silty CLAY, brown, 7.5YR, 4/4, moist, very stiff, plastic	CH
20									Bottom of boring @ 20 ft. bgs	
25										

WELL CONSTRUCTION

LEGEND:
msl = mean sea level
bgs = below ground surface
ND = not detected
NM = not measured
N/A = not applicable

SAMPLE TYPES:
D: drive
W: washed
ST: Shelby Tube
A: Auger
HA: hand auger
C: cored
RC: rotasonic core

SOIL: GRANULAR SOILS DENSITY:
0-4: very loose
5-10: loose
11-29: medium dense
30-49: dense
50+: very dense

PLASTIC SOILS DENSITY:
0-2: very soft
3-4: soft
5-8: medium soft
9-15: stiff
16-30: very stiff
>30: hard

MOISTURE:
dry
moist
wet

PROPORTIONS:
Trace: <5% Few: 16-30%
Little: 6-15% Some: 31-49%

Density designation based on blow counts for each 12" of penetration using a 140 lb. hammer w/30" drop
When blow counts were not possible, density descriptions, as included in the "Materials Description" are based upon a thumb penetration test

NOTES:
TL 8.5-10.5 (0.0 - 1.0): VOCs, SVOCs, PCBs, TAL Metals
TL 8.5-10.5 (12.0 - 14.0): VOCs, SVOCs, PCBs, TAL Metals

ROCK:
RQD (rock quality designation):
reported in % = [length of core in pieces 4" and longer/ length of run] x100

307735

BORING LOG

BORING/WELL ID: TL 09-09

PROJECT NAME: Quanta Resources Superfund Site
SURFACE ELEVATION: 7.1 ft. MSL
LOCATION: W Side of Fmr. Lever Bros.
MEASURING POINT: N/A
PROJECT NUMBER: 363725
MEASURING POINT ELEVATION: N/A
CLIENT: Honeywell Inc.
TOTAL DEPTH: 25. ft. bgs
DRILLING CONTRACTOR: SGS Environmental Services, Inc.
FOREMAN: J Rousa
DRILLING METHOD: Geoprobe Direct Push
DRILLING EQUIPMENT: Geoprobe 7010DT
SAMPLING METHOD: 5 ft. macrocore sampler
CH2M OBSERVER: A. Harclerode
START DATE: 8/29/08
FINISH DATE: 8/29/08
NORTHING: 718391.10
EASTING: 632617.65
APPROX. DEPTH TO WATER: 4.8 ft. bgs 8/29/08

DEPTH (FT. BGS)	SAMPLE OR RUN DESIGNATION	SAMPLE TYPE	BLOWS PER 6 INCHES or CORE RUN (time/ft.)	RECOVERY/ PENETRATION (FT.)	RQD	SCREENING DATA PID	SCREENING DATA FID	ELEVATION (ft. MSL)	MATERIALS DESCRIPTION (SOILS: classification, secondary grain size, color, moisture, and other descriptors; ROCK: rock type, hardness, major mineral types, color, weathering, and degree of fracturing)	USCS GROUP SYMBOL
0										
	0.5' to 1.5' (TL 09-09-1.0)	D	N/A	3.1/5.0	N/A	N/A	NM		ASPHALT and crushed and broken CONCRETE (FILL)	
						0.1	NM	5	Intermixed fine to coarse GRAVEL, fine to coarse SAND, crushed CONCRETE interval @ approx. 3.8 ft., some coal and slag, very dark brown, 7.5YR, 2.5/2 and black, moist to wet with depth (FILL)	GW/SW
5	4.0' to 5.0' (TL 09-09-4.5)	D	N/A	1.6/5.0	N/A	0.1	NM	0	GRAVEL and SLAG, some coarse sand, trace brick, black, wet, loose (FILL)	GW
10		D	N/A	1.9/5.0	N/A	NM	NM	-5	GRAVEL, some slag, coarse sand, wood, and clay, trace brick, black, wet, medium dense (FILL)	
15		D	N/A	2.7/5.0	N/A	NM	NM	-10	Peaty, organic CLAY, very dark brown, 7.5YR, 2.5/2, moist, medium stiff	OH/PT
20	19.3' to 20.0' (TL 09-09-19.5)	D	N/A	2.1/5.0	N/A	0.8	NM	-15	Peaty, organic CLAY, very dark grey, 10YR, 3/1, moist, medium stiff	
						0.2	NM		CLAY, some to trace organics, dark grey, 7.5YR, 4/1, moist, soft	OL
25									Bottom of boring @ 25 ft. bgs	

WELL CONSTRUCTION

LEGEND:
msl = mean sea level
bgs = below ground surface
ND = not detected
NM = not measured
N/A = not applicable

SAMPLE TYPES:
D: drive
W: washed
ST: Shelby Tube
A: Auger
HA: hand auger
C: cored
RC: rotasonic core

SOIL: GRANULAR SOILS DENSITY:
0-4: very loose
5-10: loose
11-29: medium dense
30-49: dense
50+: very dense

PLASTIC SOILS DENSITY:
0-2: very soft
3-4: soft
5-8: medium soft
9-15: stiff
16-30: very stiff
>30: hard

MOISTURE:
dry
moist
wet

PROPORTIONS:
Trace: <5% Few: 16-30%
Little: 6-15% Some: 31-49%

Density designation based on blow counts for each 12" of penetration using a 140 lb. hammer w/30" drop
When blow counts were not possible, density descriptions, as included in the "Materials Description" are based upon a thumb penetration test

NOTES:
TL 09-09 (0.5 - 1.5): VOCs, SVOCs, PCBs, TAL Metals
TL 09-09 (4.0 - 5.0): VOCs, SVOCs, PCBs, TAL Metals
TL 09-09 (19.3 - 20.0): VOCs, SVOCs, PCBs, TAL Metals

ROCK:
RQD (rock quality designation):
reported in % = [length of core in pieces 4" and longer/ length of run] x100

307736

BORING LOG

BORING/WELL ID: TL 9.5-10.5

PROJECT NAME: Quanta Resources Superfund Site
SURFACE ELEVATION: 7.2 ft. MSL
LOCATION: S Edge of Block 93S
MEASURING POINT: N/A
PROJECT NUMBER: 363725
MEASURING POINT ELEVATION: N/A
CLIENT: Honeywell Inc.
TOTAL DEPTH: 25 ft. bgs
DRILLING CONTRACTOR: SGS Environmental Services, Inc.
FOREMAN: J Rousa
DRILLING METHOD: Geoprobe Direct Push
DRILLING EQUIPMENT: Geoprobe 7010DT
SAMPLING METHOD: 5 ft. macrocore sampler
CH2M OBSERVER: A. Harclerode
START DATE: 8/28/08
FINISH DATE: 8/28/08
NORTHING: 718520.92
EASTING: 632507.36
APPROX. DEPTH TO WATER: 5.0 ft. bgs 8/28/08

DEPTH (FT. BGS)	SAMPLE OR RUN DESIGNATION	SAMPLE TYPE	BLOWS PER 6 INCHES or CORE RUN (time/ft.)	RECOVERY/ PENETRATION (FT.)	RQD	SCREENING DATA PID	SCREENING DATA FID	ELEVATION (ft. MSL)	MATERIALS DESCRIPTION (SOILS: classification, secondary grain size, color, moisture, and other descriptors; ROCK: rock type, hardness, major mineral types, color, weathering, and degree of fracturing)	USCS GROUP SYMBOL
0		D	N/A	2.0/5.0	N/A	1.0	NM		Crushed ASPHALT and CONCRETE, some glass and sand (FILL)	
	1.0' to 2.0' (TL 9.5-10.5-1.5)							5		
	3.0' to 4.0' (TL 9.5-10.5-3.5)						NM		Silty SAND, some fine to coarse sub-angular gravel, very dark brown, moist, dense, crushed concrete present @ 4.5 ft. (FILL)	
5		D	N/A	1.3/5.0	N/A	ND	NM		Sandy GRAVEL fill, well graded sub-angular GRAVEL, trace coal and cinder, dark grey, 10.5YR, 4/1, wet, loose (FILL)	
								0		
10		D	N/A	1.6/5.0	N/A		NM		Sandy GRAVEL fill, well graded subangular GRAVEL, trace coal and cinder, dark grey, 10.5YR, 4/1, wet, loose, product and minor incandescent sheen within coal interval @ 12 - 12.5 ft. (FILL)	
								-5		
							NM		Peaty CLAY, very dark brown, 7.5YR, 2.5/2, moist, soft	CH/PT
15		D	N/A	1.7/5.0	N/A		NM		Peaty CLAY, very dark brown, 7.5YR, 2.5/2, moist, soft	
	16.0' to 17.0' (TL 9.5-10.5-16.5)							-10		
20		D	N/A	1.6/5.0	N/A	0.2	NM		Peaty CLAY, very dark brown, 7.5YR, 2.5/2, moist, very soft	
							NM	-15	Silty CLAY, GLEY1, 4/1, dark greenish grey, moist, medium stiff	CH
							NM		Silty CLAY, brown, 7.5YR, 4/2, moist, very stiff	
25									Bottom of boring @ 25 ft. bgs	

WELL CONSTRUCTION: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25

LEGEND:
msl = mean sea level
bgs = below ground surface
ND = not detected
NM = not measured
N/A = not applicable

SAMPLE TYPES:
D: drive
W: washed
ST: Shelby Tube
A: Auger
HA: hand auger
C: cored
RC: rotasonic core

SOIL: GRANULAR SOILS DENSITY:
0-4: very loose
5-10: loose
11-29: medium dense
30-49: dense
50+: very dense

PLASTIC SOILS DENSITY:
0-2: very soft
3-4: soft
5-8: medium soft
9-15: stiff
16-30: very stiff
>30: hard

MOISTURE:
dry
moist
wet

PROPORTIONS:
Trace: <5% Few: 16-30%
Little: 6-15% Some: 31-49%

Density designation based on blow counts for each 12" of penetration using a 140 lb. hammer w/30" drop
When blow counts were not possible, density descriptions, as included in the "Materials Description" are based upon a thumb penetration test

NOTES:
TL 9.5-10.5 (1.0 - 2.0): VOCs, SVOCs, PCBs, TAL Metals
TL 9.5-10.5 (3.0 - 4.0): VOCs, SVOCs, PCBs, TAL Metals
TL 9.5-10.5 (16.0 - 17.0): VOCs, SVOCs, PCBs, TAL Metals

ROCK:
RQD (rock quality designation):
reported in % = [length of core in pieces 4" and longer/ length of run] x100

307737

BORING LOG

BORING/WELL ID: TL 9.5-11.25

PROJECT NAME: Quanta Resources Superfund Site
SURFACE ELEVATION: 7.9 ft. MSL
LOCATION: S End of Block 93 South
MEASURING POINT: N/A
PROJECT NUMBER: 363725
MEASURING POINT ELEVATION: N/A
CLIENT: Honeywell Inc.
TOTAL DEPTH: 20 ft. bgs
DRILLING CONTRACTOR: SGS Environmental Services, Inc.
FOREMAN: J. Rousa
DRILLING METHOD: Geoprobe Direct Push
DRILLING EQUIPMENT: Geoprobe 7010DT
SAMPLING METHOD: 5 ft. macrocore sampler
CH2M OBSERVER: A. Harclerode
START DATE: 8/28/08
FINISH DATE: 8/28/08
NORTHING: 718561.88
EASTING: 632421.17
APPROX. DEPTH TO WATER: 5.0 ft. bgs 8/28/08

DEPTH (FT. BGS)	SAMPLE OR RUN DESIGNATION	SAMPLE TYPE	BLOWS PER 6 INCHES or CORE RUN (time/ft.)	RECOVERY/ PENETRATION (FT.)	RQD	SCREENING DATA PID	SCREENING DATA FID	ELEVATION (ft. MSL)	MATERIALS DESCRIPTION (SOILS: classification, secondary grain size, color, moisture, and other descriptors; ROCK: rock type, hardness, major mineral types, color, weathering, and degree of fracturing)	GRAPHICAL LOG	USCS GROUP SYMBOL	WELL CONSTRUCTION
0	0.0' to 1.0' (TL 9.5-11.25-0.5)	D	N/A	1.9/5.0	N/A	N/A	NM		Crushed ASPHALT (FILL)			
						0.1	NM	5	Intermixed crushed ROCK, fine to coarse sub-angular GRAVEL, silty SAND, fine to coarse SAND, some coal pieces and glass, trace medium sand with greenish/blue color, very dark brown, 7.5YR, 2.5/2 and black, moist, medium dense (FILL)			
5	5' to 10' (TL 9.5-11.25-7.5)	D	N/A	0.5/5.0	N/A		NM	0	Intermixed medium SAND and fine sub-angular GRAVEL, some small cobbles, very dark grey, 10YR, 3/1, wet, loose (FILL)			
									Intermixed medium SAND and fine sub-angular GRAVEL, some small cobbles, very dark grey, 10YR, 3/1, wet, loose (FILL)			
10		D	N/A	2.0/5.0	N/A		NM		Peaty CLAY, native, very dark brown, 7.5YR, 2.5/2, moist, very soft/soft		CH/PT	
							NM					
							NM	-5	Plastic CLAY, very dark grey, 7.5YR, 3/1, moist, soft		CH	
15		D	N/A	2.05/5.0	N/A	ND	NM		Well graded SAND, some fine sub-angular to sub-rounded gravel, very dark grey, 7.5YR, 3/1 to brown, grades into 7.5YR, 4/4, wet, medium dense		SW	
						ND	NM	-10	Plastic CLAY, some silt, strong brown, 7.5YR, 5/6, stiff, moist		CH	
20									Bottom of boring @ 20 ft. bgs			
								-15				
25												

LEGEND:
msl = mean sea level
bgs = below ground surface
ND = not detected
NM = not measured
N/A = not applicable

SAMPLE TYPES:
D: drive
W: washed
ST: Shelby Tube
A: Auger
HA: hand auger
C: cored
RC: rotasonic core

SOIL: GRANULAR SOILS DENSITY:
0-4: very loose
5-10: loose
11-29: medium dense
30-49: dense
50+: very dense

PLASTIC SOILS DENSITY:
0-2: very soft
3-4: soft
5-8: medium soft
9-15: stiff
16-30: very stiff
>30: hard

MOISTURE:
dry
moist
wet

PROPORTIONS:
Trace: <5% Few: 16-30%
Little: 6-15% Some: 31-49%

Density designation based on blow counts for each 12" of penetration using a 140 lb. hammer w/30" drop
When blow counts were not possible, density descriptions, as included in the "Materials Description" are based upon a thumb penetration test

NOTES:
TL 9.5-11.25 (0.0 - 1.0): VOCs, SVOCs, PCBs, TAL Metals
TL 9.5-11.25 (5.0 - 10.0): VOCs, SVOCs, PCBS, TAL Metals

ROCK:
RQD (rock quality designation):
reported in % = [length of core in pieces 4" and longer/ length of run] x100

307738

BORING LOG

CH2MHILL

BORING/WELL ID: TL 10-9.5

PROJECT NAME: Quanta Resources Superfund Site
SURFACE ELEVATION: 6.7 ft. MSL
LOCATION: Wedge of Former Lever Bros.
MEASURING POINT: N/A
PROJECT NUMBER: 363725
MEASURING POINT ELEVATION: N/A
CLIENT: Honeywell Inc.
TOTAL DEPTH: 30 ft. bgs
DRILLING CONTRACTOR: SGS Environmental Services, Inc.
FOREMAN: J. Rousa
DRILLING METHOD: Geoprobe Direct Push
DRILLING EQUIPMENT: Geoprobe 7010DT
SAMPLING METHOD: 5 ft. macrocore sampler
CH2M OBSERVER: A. Harclerode
START DATE: 9/4/08
FINISH DATE: 9/4/08
NORTHING: 718518.19
EASTING: 632610.46
APPROX. DEPTH TO WATER: 5.0 ft. bgs 9/4/08

DEPTH (FT. BGS)	SAMPLE OR RUN DESIGNATION	SAMPLE TYPE	BLOWS PER 6 INCHES or CORE RUN (time/ft.)	RECOVERY/ PENETRATION (FT.)	RQD	SCREENING DATA PID	SCREENING DATA FID	ELEVATION (ft. MSL)	MATERIALS DESCRIPTION (SOILS: classification, secondary grain size, color, moisture, and other descriptors; ROCK: rock type, hardness, major mineral types, color, weathering, and degree of fracturing)	USCS GROUP SYMBOL
0		D	N/A	0.0/5.0	N/A	N/A	NM	5	SLOUGH	
5		D	N/A	2.15/5.0	N/A	NM	NM	0	Silty SAND, some fine sub-angular gravel, very dark brown, 7.5YR, 2.5/2, wet, loose (FILL)	SM
	6.5' to 8.5' (TL 10-9.5-7.5)								Intermixed silty SAND, fine to medium sub-angular GRAVEL, and SLAG, some coal, very dark grey, 7.5YR, 3/1, wet, medium dense, trace product globs - less than 1 millimeter diameter - some amber product globs in water, slightly obvious odor (FILL)	SM/GW
10		D	N/A	1.0/5.0	N/A	0.1	NM	-5	Coarse SAND and fine sub-rounded GRAVEL, trace brick and cinders, black, wet, dense (FILL)	
						8.1	NM		Clayey PEAT, very dark brown, 7.5YR, 2.5/2, moist, soft	PT/OH
15		D	N/A	2.0/5.0	N/A	21.3	NM	-10	Clayey PEAT, very dark brown, 7.5YR, 2.5/2, moist, soft	
20		D	N/A	1.7/5.0	N/A	19.9	NM	-15	Clayey PEAT, very dark brown, 7.5YR, 2.5/2, moist, soft	
25										

GRAPHICAL LOG

WELL CONSTRUCTION

LEGEND:
msl = mean sea level
bgs = below ground surface
ND = not detected
NM = not measured
N/A = not applicable

SAMPLE TYPES:
D: drive
W: washed
ST: Shelby Tube
A: Auger
HA: hand auger
C: cored
RC: rotasonic core

SOIL: GRANULAR SOILS DENSITY:
0-4: very loose
5-10: loose
11-29: medium dense
30-49: dense
50+: very dense

PLASTIC SOILS DENSITY:
0-2: very soft
3-4: soft
5-8: medium soft
9-15: stiff
16-30: very stiff
>30: hard

MOISTURE:
dry
moist
wet

PROPORTIONS:
Trace: <5% Few: 16-30%
Little: 6-15% Some: 31-49%

Density designation based on blow counts for each 12" of penetration using a 140 lb. hammer w/30" drop
When blow counts were not possible, density descriptions, as included in the "Materials Description" are based upon a thumb penetration test

NOTES:
TL 10-9.5 (6.5 - 8.5): VOCs, SVOCs, PCBs, TAL Metals, TPH Fingerprint

ROCK:
RQD (rock quality designation):
reported in % = [length of core in pieces 4" and longer/ length of run] x100

307739

BORING LOG

BORING/WELL ID: TL 10-9.5

PROJECT NAME: Quanta Resources Superfund Site
SURFACE ELEVATION: 6.7 ft. MSL
LOCATION: Wedge of Former Lever Bros.
MEASURING POINT: N/A
PROJECT NUMBER: 363725
MEASURING POINT ELEVATION: N/A
CLIENT: Honeywell Inc.
TOTAL DEPTH: 30 ft. bgs
DRILLING CONTRACTOR: SGS Environmental Services, Inc.
FOREMAN: J. Rousa
DRILLING METHOD: Geoprobe Direct Push
DRILLING EQUIPMENT: Geoprobe 7010DT
SAMPLING METHOD: 5 ft. macrocore sampler
CH2M OBSERVER: A. Harclerode
START DATE: 9/4/08
FINISH DATE: 9/4/08
NORTHING: 718518.19
EASTING: 632610.46
APPROX. DEPTH TO WATER: 5.0 ft. bgs 9/4/08

DEPTH (FT. BGS)	SAMPLE OR RUN DESIGNATION	SAMPLE TYPE	BLOWS PER 6 INCHES or CORE RUN (time/ft.)	RECOVERY/ PENETRATION (FT.)	RQD	SCREENING DATA PID	SCREENING DATA FID	ELEVATION (ft. MSL)	MATERIALS DESCRIPTION (SOILS: classification, secondary grain size, color, moisture, and other descriptors; ROCK: rock type, hardness, major mineral types, color, weathering, and degree of fracturing)	GRAPHICAL LOG	USCS GROUP SYMBOL	WELL CONSTRUCTION
25		D	N/A	1.8/5.0	N/A	9.7	NM	-20	Clayey PEAT, very dark brown, 7.5YR, 2.5/2, moist, soft		PT/OH	
									Bottom of boring @ 30 ft. bgs			
30								-25				
35								-30				
40								-35				
45								-40				
50												

LEGEND:
msl = mean sea level
bgs = below ground surface
ND = not detected
NM = not measured
N/A = not applicable

SAMPLE TYPES:
D: drive
W: washed
ST: Shelby Tube
A: Auger
HA: hand auger
C: cored
RC: rotasonic core

SOIL: GRANULAR SOILS DENSITY:
0-4: very loose
5-10: loose
11-29: medium dense
30-49: dense
50+: very dense

PLASTIC SOILS DENSITY:
0-2: very soft
3-4: soft
5-8: medium soft
9-15: stiff
16-30: very stiff
>30: hard

MOISTURE:
dry
moist
wet

PROPORTIONS:
Trace: <5% Few: 16-30%
Little: 6-15% Some: 31-49%

Density designation based on blow counts for each 12" of penetration using a 140 lb. hammer w/30" drop
When blow counts were not possible, density descriptions, as included in the "Materials Description" are based upon a thumb penetration test

NOTES:
TL 10-9.5 (6.5 - 8.5): VOCs, SVOCs, PCBs, TAL Metals, TPH Fingerprint

ROCK:
RQD (rock quality designation):
reported in % = [length of core in pieces 4" and longer/ length of run] x100

307740

BORING LOG

BORING/WELL ID: TL 10.5-00

PROJECT NAME: Quanta Resources Superfund Site
SURFACE ELEVATION: 5.2 ft. MSL
LOCATION: NE Corner of Fmr. Lever Bros.
MEASURING POINT: N/A
PROJECT NUMBER: 363725
MEASURING POINT ELEVATION: N/A
CLIENT: Honeywell Inc.
TOTAL DEPTH: 25 ft. bgs
DRILLING CONTRACTOR: SGS Environmental Services, Inc.
FOREMAN: J Rousa
DRILLING METHOD: Geoprobe Direct Push
DRILLING EQUIPMENT: Geoprobe 7010DT
SAMPLING METHOD: 5 ft. macrocore sampler
CH2M OBSERVER: A. Harclerode
START DATE: 9/4/08
FINISH DATE: 9/4/08
NORTHING: 718085.70
EASTING: 633394.89
APPROX. DEPTH TO WATER: 4.9 ft. bgs 9/4/08

DEPTH (FT. BGS)	SAMPLE OR RUN DESIGNATION	SAMPLE TYPE	BLOWS PER 6 INCHES or CORE RUN (time/ft.)	RECOVERY/ PENETRATION (FT.)	RQD	SCREENING DATA PID	SCREENING DATA FID	ELEVATION (ft. MSL)	MATERIALS DESCRIPTION (SOILS: classification, secondary grain size, color, moisture, and other descriptors; ROCK: rock type, hardness, major mineral types, color, weathering, and degree of fracturing)	USCS GROUP SYMBOL
0								5		
		D	N/A	2.9/5.0	N/A	ND	NM		Interlayered silty SAND, silty, gravelly SAND, fine to medium sub-angular GRAVEL, crushed BRICK, coarse SAND, crushed ROCK, crushed CONCRETE, brown, 7.5 YR, 4/2, dry to wet, loose to dense (FILL)	SM/SP
5		D	N/A	1.9/5.0	N/A	N/A	NM	0	Fractured ROCK, very dark brown, 7.5 YR, 2.5/2, wet, loose (FILL)	
						1.3	NM		Well graded SAND, very dark brown 7.5 YR, 2.5/2 to black, medium dense, wet (FILL)	SW
						NM	NM		Silty SAND and fractured ROCK, very dark brown and black, moist, medium stiff/dense (FILL)	SM
10		D	N/A	1.9/5.0	N/A	0.1	NM	-5	Well graded GRAVEL, some coarse sand, black, wet, loose (FILL)	GW
15		D	N/A	0.9/5.0	N/A	ND	NM	-10	Well graded GRAVEL, some coarse sand, black, wet, loose (FILL)	
						ND	NM		Silty CLAY, very dark grey, 7.5 YR, 3/1, moist, wet, soft	OL/OH
20		D	N/A	1.0/5.0	N/A	NM	NM	-15	Silty CLAY, very dark grey, 7.5 YR, 3/1, moist, wet, soft	
25									Bottom of boring @ 25 ft. bgs.	

WELL CONSTRUCTION

LEGEND:
msl = mean sea level
bgs = below ground surface
ND = not detected
NM = not measured
N/A = not applicable

SAMPLE TYPES:
D: drive
W: washed
ST: Shelby Tube
A: Auger
HA: hand auger
C: cored
RC: rotasonic core

SOIL: GRANULAR SOILS DENSITY:
0-4: very loose
5-10: loose
11-29: medium dense
30-49: dense
50+: very dense

PLASTIC SOILS DENSITY:
0-2: very soft
3-4: soft
5-8: medium soft
9-15: stiff
16-30: very stiff
>30: hard

MOISTURE:
dry
moist
wet

PROPORTIONS:
Trace: <5% Few: 16-30%
Little: 6-15% Some: 31-49%

Density designation based on blow counts for each 12" of penetration using a 140 lb. hammer w/30" drop
When blow counts were not possible, density descriptions, as included in the "Materials Description" are based upon a thumb penetration test

NOTES:
No analytical samples collected

ROCK:
RQD (rock quality designation): reported in % = [length of core in pieces 4" and longer/ length of run] x100

307741

BORING LOG

BORING/WELL ID: TL 10.5-9.5

PROJECT NAME: Quanta Resources Superfund Site
SURFACE ELEVATION: 7.2 ft. MSL
LOCATION: W Side of Fmr. Lever Bros.
MEASURING POINT: N/A
PROJECT NUMBER: 363725
MEASURING POINT ELEVATION: N/A
CLIENT: Honeywell Inc.
TOTAL DEPTH: 30 ft. bgs
DRILLING CONTRACTOR: SGS Environmental Services, Inc.
FOREMAN: J Rousa
DRILLING METHOD: Geoprobe Direct Push
DRILLING EQUIPMENT: Geoprobe 7010DT
SAMPLING METHOD: 5 ft. macrocore sampler
CH2M OBSERVER: A. Harclerode
START DATE: 8/29/08
FINISH DATE: 8/29/08
NORTHING: 718545.63
EASTING: 632632.22
APPROX. DEPTH TO WATER: 4.5 - 5.0 ft. bgs 8/29/08

DEPTH (FT. BGS)	SAMPLE OR RUN DESIGNATION	SAMPLE TYPE	BLOWS PER 6 INCHES or CORE RUN (time/ft.)	RECOVERY/ PENETRATION (FT.)	RQD	SCREENING DATA PID	SCREENING DATA FID	ELEVATION (ft. MSL)	MATERIALS DESCRIPTION (SOILS: classification, secondary grain size, color, moisture, and other descriptors; ROCK: rock type, hardness, major mineral types, color, weathering, and degree of fracturing)	USCS GROUP SYMBOL
0	0.0' to 1.5' (TL 10.5-9.5-1.0)	D	N/A	2.9/5.0	N/A	ND	NM		Silty SAND, brown, 7.5YR, 5/3, dry, medium dense (FILL)	SM
						0.2	NM	5	Intermixed fine to coarse GRAVEL and fine to coarse SAND, some rounded cobbles, trace brick, some slag, very dark brown, 7.5YR, 2.5/2 and black, moist, medium dense, slight petroleum-like odor (FILL)	GP/SP
5		D	N/A	2.4/5.0	N/A	NM	NM	0	Sandy GRAVEL fill, very dark brown, 7.5YR, 2.5/2, wet, loose, very slight sheen @ approx. 7.5 ft. (FILL)	GP
	9.0' to 1.0' (TL 1.5-9.5-9.5)					NM	NM		Sandy, gravelly CLAY (possibly native), black, moist to wet, very soft (FILL)	CL
10		D	N/A	0.0/5.0	N/A	N/A	N/A	-5	No Recovery	OH/PT
15		D	N/A	1.65/5.0	N/A	12.6	NM	-10	Peaty CLAY, very dark brown 7.5YR, 2.5/2, moist, soft	
20		D	N/A	2.4/5.0	N/A	NM	NM	-15	Peaty CLAY, dark grey, 7.5YR, 4/1, moist, soft, organic matter in lenses	
25	23.0' to 24.0' (TL 10.5-9.5-23.5)									

GRAPHICAL LOG

WELL CONSTRUCTION

LEGEND:
msl = mean sea level
bgs = below ground surface
ND = not detected
NM = not measured
N/A = not applicable

SAMPLE TYPES:
D: drive
W: washed
ST: Shelby Tube
A: Auger
HA: hand auger
C: cored
RC: rotasonic core

SOIL: GRANULAR SOILS DENSITY:
0-4: very loose
5-10: loose
11-29: medium dense
30-49: dense
50+: very dense

PLASTIC SOILS DENSITY:
0-2: very soft
3-4: soft
5-8: medium soft
9-15: stiff
16-30: very stiff
>30: hard

MOISTURE:
dry
moist
wet

PROPORTIONS:
Trace: <5% Few: 16-30%
Little: 6-15% Some: 31-49%

Density designation based on blow counts for each 12" of penetration using a 140 lb. hammer w/30" drop
When blow counts were not possible, density descriptions, as included in the "Materials Description" are based upon a thumb penetration test

NOTES:
TL 10.5-9.5 (0.0 - 1.5): VOCs, SVOCs, PCBs, TAL Metals
TL 10.5-9.5 (9.0 - 10.0): VOCs, SVOCs, PCBs, TAL Metals
TL 10.5-9.5 (23.0 - 24.0): VOCs, SVOCs, PCBs, TAL Metals

ROCK:
RQD (rock quality designation):
reported in % = [length of core in pieces 4" and longer/ length of run] x100

307742

BORING LOG

BORING/WELL ID: TL 10.5-9.5

PROJECT NAME: Quanta Resources Superfund Site
SURFACE ELEVATION: 7.2 ft. MSL
LOCATION: W Side of Fmr. Lever Bros.
MEASURING POINT: N/A
PROJECT NUMBER: 363725
MEASURING POINT ELEVATION: N/A
CLIENT: Honeywell Inc.
TOTAL DEPTH: 30 ft. bgs
DRILLING CONTRACTOR: SGS Environmental Services, Inc.
FOREMAN: J Rousa
DRILLING METHOD: Geoprobe Direct Push
DRILLING EQUIPMENT: Geoprobe 7010DT
SAMPLING METHOD: 5 ft. macrocore sampler
CH2M OBSERVER: A. Harclerode
START DATE: 8/29/08
FINISH DATE: 8/29/08
NORTHING: 718545.63
EASTING: 632632.22
APPROX. DEPTH TO WATER: 4.5 - 5.0 ft. bgs 8/29/08

DEPTH (FT. BGS)	SAMPLE OR RUN DESIGNATION	SAMPLE TYPE	BLOWS PER 6 INCHES or CORE RUN (time/ft.)	RECOVERY/ PENETRATION (FT.)	RQD	SCREENING DATA PID	SCREENING DATA FID	ELEVATION (ft. MSL)	MATERIALS DESCRIPTION (SOILS: classification, secondary grain size, color, moisture, and other descriptors; ROCK: rock type, hardness, major mineral types, color, weathering, and degree of fracturing)	GRAPHICAL LOG	USCS GROUP SYMBOL	WELL CONSTRUCTION
25		D	N/A	2.0/5.0	N/A	NM	NM	-20	Peaty CLAY, dark grey, 7.5YR, 4/1, moist, soft, organic matter in lenses			
									Bottom of boring @ 30 ft. bgs			
30								-25				
35								-30				
40								-35				
45								-40				
50												

LEGEND:
msl = mean sea level
bgs = below ground surface
ND = not detected
NM = not measured
N/A = not applicable

SAMPLE TYPES:
D: drive
W: washed
ST: Shelby Tube
A: Auger
HA: hand auger
C: cored
RC: rotasonic core

SOIL: GRANULAR SOILS DENSITY:
0-4: very loose
5-10: loose
11-29: medium dense
30-49: dense
50+: very dense

PLASTIC SOILS DENSITY:
0-2: very soft
3-4: soft
5-8: medium soft
9-15: stiff
16-30: very stiff
>30: hard

MOISTURE:
dry
moist
wet

PROPORTIONS:
Trace: <5% Few: 16-30%
Little: 6-15% Some: 31-49%

Density designation based on blow counts for each 12" of penetration using a 140 lb. hammer w/30" drop
When blow counts were not possible, density descriptions, as included in the "Materials Description" are based upon a thumb penetration test

NOTES:
TL 10.5-9.5 (0.0 - 1.5): VOCs, SVOCs, PCBs, TAL Metals
TL 10.5-9.5 (9.0 - 10.0): VOCs, SVOCs, PCBs, TAL Metals
TL 10.5-9.5 (23.0 - 24.0): VOCs, SVOCs, PCBs, TAL Metals

ROCK:
RQD (rock quality designation):
reported in % = [length of core in pieces 4" and longer/ length of run] x100

307743

BORING LOG

BORING/WELL ID: TL 10.5-10.5

PROJECT NAME: Quanta Resources Superfund Site
SURFACE ELEVATION: 6.9 ft. MSL
LOCATION: E Edge of Block 93 South
MEASURING POINT: N/A
PROJECT NUMBER: 363725
MEASURING POINT ELEVATION: N/A
CLIENT: Honeywell Inc.
TOTAL DEPTH: 30 ft. bgs
DRILLING CONTRACTOR: SGS Environmental Services, Inc.
FOREMAN: J. Rousa
DRILLING METHOD: Geoprobe Direct Push
DRILLING EQUIPMENT: Geoprobe 7010DT
SAMPLING METHOD: 5 ft. macrocore sampler
CH2M OBSERVER: A. Harclerode
START DATE: 8/27/08
FINISH DATE: 8/27/08
NORTHING: 718610.56
EASTING: 632560.20
APPROX. DEPTH TO WATER: 5.0 ft. bgs 8/27/08

DEPTH (FT. BGS)	SAMPLE OR RUN DESIGNATION	SAMPLE TYPE	BLOWS PER 6 INCHES or CORE RUN (time/ft.)	RECOVERY/ PENETRATION (FT.)	RQD	SCREENING DATA PID	SCREENING DATA FID	ELEVATION (ft. MSL)	MATERIALS DESCRIPTION (SOILS: classification, secondary grain size, color, moisture, and other descriptors; ROCK: rock type, hardness, major mineral types, color, weathering, and degree of fracturing)	GRAPHICAL LOG	USCS GROUP SYMBOL
0	0.0' to 1.0' (TL 10.5-10.5-0.5)	D	N/A	2.6/5.0	N/A	0.1	NM	5	Intermixed silty SAND and fine to coarse GRAVEL, trace possible coal, very dark brown, 7.5YR , 2.5/2, dry to moist with depth, medium dense to dense (FILL)		
5	3.5' to 4.5' (TL 10.5-10.5-4.0)	D	N/A	1.8/5.0	N/A	0.2	NM	0	Medium to coarse SAND, some fine to medium sub-angular gravel, trace brick, very dark grey, 7.5 YR, 3/1, wet, loose (FILL)		
10		D	N/A	1.9/5.0	N/A	42.3	NM	-5	Medium to coarse SAND, some fine to medium sub-angular gravel, trace brick, very dark grey, 7.5 YR, 3/1, wet, loose, 12.4 to 15 ft. impacted with product, obvious odor and sheen (FILL)		
15	14' to 15' (TL 10.5-10.5-14.5)	D	N/A	1.9/5.0	N/A	NM	NM	-10	Peaty CLAY, very dark brown, 7.5, 2.5/2, moist, medium stiff, 15 to 15.5 ft. impacted with product		CH/PT
20		D	N/A	0.6/5.0	N/A	NM	NM	-15	Peaty CLAY, very dark brown, 7.5, 2.5/2, moist, medium stiff		
25											

WELL CONSTRUCTION

LEGEND:
msl = mean sea level
bgs = below ground surface
ND = not detected
NM = not measured
N/A = not applicable

SAMPLE TYPES:
D: drive
W: washed
ST: Shelby Tube
A: Auger
HA: hand auger
C: cored
RC: rotasonic core

SOIL:
MOISTURE:
dry
moist
wet

GRANULAR SOILS DENSITY:
0-4: very loose
5-10: loose
11-29: medium dense
30-49: dense
50+: very dense

PLASTIC SOILS DENSITY:
0-2: very soft
3-4: soft
5-8: medium soft
9-15: stiff
16-30: very stiff
>30: hard

PROPORTIONS:
Trace: <5% Few: 16-30%
Little: 6-15% Some: 31-49%

Density designation based on blow counts for each 12" of penetration using a 140 lb. hammer w/30" drop
When blow counts were not possible, density descriptions, as included in the "Materials Description" are based upon a thumb penetration test

NOTES:
TL 10.5-10.5 (0.0 - 1.0): VOCs, SVOCs, PCBs, TAL Metals
TL 10.5-10.5 (3.5 - 4.5): VOCs, SVOCs, PCBs, TAL Metals
TL 10.5-10.5 (14.0 - 15.0): VOCs, SVOCs, PCBs, TAL Metals

ROCK:
RQD (rock quality designation):
reported in % = [length of core in pieces 4" and longer/ length of run] x100

307744

CH2MHILL

BORING LOG

BORING/WELL ID: TL 10.5-10.5

PROJECT NAME: Quanta Resources Superfund Site
SURFACE ELEVATION: 6.9 ft. MSL
LOCATION: E Edge of Block 93 South
MEASURING POINT: N/A
PROJECT NUMBER: 363725
MEASURING POINT ELEVATION: N/A
CLIENT: Honeywell Inc.
TOTAL DEPTH: 30 ft. bgs
DRILLING CONTRACTOR: SGS Environmental Services, Inc.
FOREMAN: J. Rousa
DRILLING METHOD: Geoprobe Direct Push
DRILLING EQUIPMENT: Geoprobe 7010DT
SAMPLING METHOD: 5 ft. macrocore sampler
CH2M OBSERVER: A. Harclerode
START DATE: 8/27/08
FINISH DATE: 8/27/08
NORTHING: 718610.56
EASTING: 632560.20
APPROX. DEPTH TO WATER: 5.0 ft. bgs 8/27/08

DEPTH (FT. BGS)	SAMPLE OR RUN DESIGNATION	SAMPLE TYPE	BLOWS PER 6 INCHES or CORE RUN (time/ft.)	RECOVERY/ PENETRATION (FT.)	RQD	SCREENING DATA PID	SCREENING DATA FID	ELEVATION (ft. MSL)	MATERIALS DESCRIPTION (SOILS: classification, secondary grain size, color, moisture, and other descriptors; ROCK: rock type, hardness, major mineral types, color, weathering, and degree of fracturing)	GRAPHICAL LOG	USCS GROUP SYMBOL	WELL CONSTRUCTION
25		D	N/A	1.2/5.0	N/A	NM	NM		CLAY, some silt, mottled grey, Gley1, 5/1 and brown 7.5YR, 4/2, moist, very stiff		CH	
								-20				
									Bottom of boring @ 30 ft. bgs			
30												
								-25				
35												
								-30				
40												
								-35				
45												
								-40				
50												

LEGEND:
msl = mean sea level
bgs = below ground surface
ND = not detected
NM = not measured
N/A = not applicable

SAMPLE TYPES:
D: drive
W: washed
ST: Shelby Tube
A: Auger
HA: hand auger
C: cored
RC: rotasonic core

SOIL: GRANULAR SOILS DENSITY:
0-4: very loose
5-10: loose
11-29: medium dense
30-49: dense
50+: very dense

PLASTIC SOILS DENSITY:
0-2: very soft
3-4: soft
5-8: medium soft
9-15: stiff
16-30: very stiff
>30: hard

MOISTURE:
dry
moist
wet

PROPORTIONS:
Trace: <5% Few: 16-30%
Little: 6-15% Some: 31-49%

Density designation based on blow counts for each 12" of penetration using a 140 lb. hammer w/30" drop
When blow counts were not possible, density descriptions, as included in the "Materials Description" are based upon a thumb penetration test

NOTES:
TL 10.5-10.5 (0.0 - 1.0): VOCs, SVOCs, PCBs, TAL Metals
TL 10.5-10.5 (3.5 - 4.5): VOCs, SVOCs, PCBs, TAL Metals
TL 10.5-10.5 (14.0 - 15.0): VOCs, SVOCs, PCBs, TAL Metals

ROCK:
RQD (rock quality designation):
reported in % = [length of core in pieces 4" and longer/ length of run] x100

307745

BORING LOG

BORING/WELL ID: TL 10.5-11.25

PROJECT NAME: Quanta Resources Superfund Site
SURFACE ELEVATION: 7.8 ft. MSL
LOCATION: Center of Block 93 South
MEASURING POINT: N/A
PROJECT NUMBER: 363725
MEASURING POINT ELEVATION: N/A
CLIENT: Honeywell Inc.
TOTAL DEPTH: 20 ft. bgs
DRILLING CONTRACTOR: SGS Environmental Services, Inc.
FOREMAN: J. Rousa
DRILLING METHOD: Geoprobe Direct Push
DRILLING EQUIPMENT: Geoprobe 7010DT
SAMPLING METHOD: 5 ft. macrocore sampler
CH2M OBSERVER: A. Harclerode
START DATE: 8/28/08
FINISH DATE: 8/28/08
NORTHING: 718659.50
EASTING: 632477.23
APPROX. DEPTH TO WATER: 5.0 ft. bgs 8/28/08

DEPTH (FT. BGS)	SAMPLE OR RUN DESIGNATION	SAMPLE TYPE	BLOWS PER 6 INCHES or CORE RUN (time/ft.)	RECOVERY/ PENETRATION (FT.)	RQD	SCREENING DATA PID	SCREENING DATA FID	ELEVATION (ft. MSL)	MATERIALS DESCRIPTION (SOILS: classification, secondary grain size, color, moisture, and other descriptors; ROCK: rock type, hardness, major mineral types, color, weathering, and degree of fracturing)	USCS GROUP SYMBOL
0	0' to 1.5' (TL 10.5-11.25-0.1)	D	N/A	1.1/5.0	N/A	0.1	NM		Intermixed crushed CONCRETE and silty SAND (FILL)	
						0.1	NM	5	Intermixed medium to coarse SAND and COAL, some silt, black and very dark brown, 7.5YR, 2.5/2, dry to moist, dense (FILL)	
5		D	N/A	1.2/5.0	N/A	ND	NM		Intermixed fine to coarse GRAVEL and fine to coarse SAND, dark brown, 7.5 YR, 2.5/2, wet, very loose (FILL)	
	8.0' to 9.0' (TL 10.5-11.25-8.5)					ND	NM	0	Well graded SAND, very dark brown, 7.5YR, 2.5/2, very loose (FILL)	SW
10		D	N/A	2.0/5.0	N/A	ND	NM		Reverse graded SAND, very dark brown, 7.5YR, 2.5/2, wet, medium dense (FILL)	
	11.0' to 12.0' (TL 10.5-11.25-12)					0.2	NM	-5	Clayey PEAT, very dark brown, 7.5YR, 2.5/2, moist, medium stiff	PT/CH
15		D	N/A	1.6/5.0	N/A	0.1	NM		Silty CLAY, very dark grey, 7.5YR, 3/1, moist to wet, soft to medium stiff	CL
						0.1	NM	-10	Silty CLAY, brown, 7.5YR, 4/4, moist to wet, soft to medium stiff	
20									Bottom of boring @ 20 ft. bgs	
								-15		
25										

GRAPHICAL LOG

WELL CONSTRUCTION

LEGEND:
msl = mean sea level
bgs = below ground surface
ND = not detected
NM = not measured
N/A = not applicable

SAMPLE TYPES:
D: drive
W: washed
ST: Shelby Tube
A: Auger
HA: hand auger
C: cored
RC: rotasonic core

SOIL: GRANULAR SOILS DENSITY:
0-4: very loose
5-10: loose
11-29: medium dense
30-49: dense
50+: very dense

PLASTIC SOILS DENSITY:
0-2: very soft
3-4: soft
5-8: medium soft
9-15: stiff
16-30: very stiff
>30: hard

MOISTURE:
dry
moist
wet

PROPORTIONS:
Trace: <5% Few: 16-30%
Little: 6-15% Some: 31-49%

Density designation based on blow counts for each 12" of penetration using a 140 lb. hammer w/30" drop
When blow counts were not possible, density descriptions, as included in the "Materials Description" are based upon a thumb penetration test

NOTES:
TL 10.5-11.25 (0.0 - 1.0): VOCs, SVOCs, PCBs, TAL Metals
TL 10.5-11.25 (8.0 - 9.0): VOCs, SVOCs, PCBs, TAL Metals
TL 10.5-11.25 (11.0 - 12.0): VOCs, SVOCs, PCBs, TAL Metals

ROCK:
RQD (rock quality designation):
reported in % = [length of core in pieces 4" and longer/ length of run] x100

307746

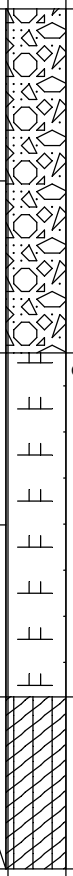
BORING LOG

BORING/WELL ID: TL 11-11.75

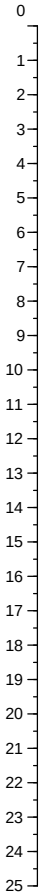
PROJECT NAME: Quanta Resources Superfund Site
SURFACE ELEVATION: 7.6 ft. MSL
LOCATION: Center of Block 93S
MEASURING POINT: N/A
PROJECT NUMBER: 363725
MEASURING POINT ELEVATION: N/A
CLIENT: Honeywell Inc.
TOTAL DEPTH: 25 ft. bgs
DRILLING CONTRACTOR: SGS Environmental Services, Inc.
FOREMAN: J Rousa
DRILLING METHOD: Geoprobe Direct Push
DRILLING EQUIPMENT: Geoprobe 7010DT
SAMPLING METHOD: 5 ft. macrocore sampler
CH2M OBSERVER: A. Harclerode
START DATE: 8/27/08
FINISH DATE: 8/27/08
NORTHING: 718722.42
EASTING: 632461.32
APPROX. DEPTH TO WATER: Not noted

DEPTH (FT. BGS)	SAMPLE OR RUN DESIGNATION	SAMPLE TYPE	BLOWS PER 6 INCHES or CORE RUN (time/ft.)	RECOVERY/ PENETRATION (FT.)	RQD	SCREENING DATA PID	SCREENING DATA FID	ELEVATION (ft. MSL)	MATERIALS DESCRIPTION (SOILS: classification, secondary grain size, color, moisture, and other descriptors; ROCK: rock type, hardness, major mineral types, color, weathering, and degree of fracturing)	USCS GROUP SYMBOL
0		D	N/A	0.0/5.0	N/A	N/A	N/A	5	No recovery; very hard	
5		D	N/A	0.0/5.0	N/A	N/A	N/A	0	No recovery	
10	10' to 12' (TL 11-11.75-11)	D	N/A	1.2/5.0	N/A	0.2	NM	-5	Peaty CLAY, very dark brown, 7.5YR, 2.5/2, moist, soft	CH/PT
15		D	N/A	0.0/5.0	N/A	N/A	N/A	-10	No recovery	
20		D	N/A	4.4/5.0	N/A		NM	-15	CLAY, some silt and rounded coarse sand, brown, 7.5YR, 4/4, moist, stiff to very stiff	CH
25									Bottom of boring @ 25' bgs	

GRAPHICAL LOG



WELL CONSTRUCTION



LEGEND:
msl = mean sea level
bgs = below ground surface
ND = not detected
NM = not measured
N/A = not applicable

SAMPLE TYPES:
D: drive
W: washed
ST: Shelby Tube
A: Auger
HA: hand auger
C: cored
RC: rotasonic core

SOIL: GRANULAR SOILS DENSITY:
0-4: very loose
5-10: loose
11-29: medium dense
30-49: dense
50+: very dense

PLASTIC SOILS DENSITY:
0-2: very soft
3-4: soft
5-8: medium soft
9-15: stiff
16-30: very stiff
>30: hard

MOISTURE:
dry
moist
wet

PROPORTIONS:
Trace: <5% Few: 16-30%
Little: 6-15% Some: 31-49%

Density designation based on blow counts for each 12" of penetration using a 140 lb. hammer w/30" drop
When blow counts were not possible, density descriptions, as included in the "Materials Description" are based upon a thumb penetration test

NOTES:
TL 11-11.75 (10.0 - 12.0): VOCs, SVOCs, PCBs, TAL Metals

ROCK:
RQD (rock quality designation):
reported in % = [length of core in pieces 4" and longer/ length of run] x100

307747

BORING LOG

BORING/WELL ID: TL 11.25-00

PROJECT NAME: Quanta Resources Superfund Site
SURFACE ELEVATION: 6.3 ft. MSL
LOCATION: NE Corner of Fmr. Lever Bros.
MEASURING POINT: N/A
PROJECT NUMBER: 363725
MEASURING POINT ELEVATION: N/A
CLIENT: Honeywell Inc.
TOTAL DEPTH: 25 ft. bgs
DRILLING CONTRACTOR: SGS Environmental Services, Inc.
FOREMAN: J Rousa
DRILLING METHOD: Geoprobe Direct Push
DRILLING EQUIPMENT: Geoprobe 7010DT
SAMPLING METHOD: 5 ft. macrocore sampler
CH2M OBSERVER: A. Harclerode
START DATE: 9/4/08
FINISH DATE: 9/4/08
NORTHING: 718140.59
EASTING: 633437.44
APPROX. DEPTH TO WATER: 9.6 ft. bgs 9/4/08

DEPTH (FT. BGS)	SAMPLE OR RUN DESIGNATION	SAMPLE TYPE	BLOWS PER 6 INCHES or CORE RUN (time/ft.)	RECOVERY/ PENETRATION (FT.)	RQD	SCREENING DATA PID	SCREENING DATA FID	ELEVATION (ft. MSL)	MATERIALS DESCRIPTION (SOILS: classification, secondary grain size, color, moisture, and other descriptors; ROCK: rock type, hardness, major mineral types, color, weathering, and degree of fracturing)	USCS GROUP SYMBOL
0		D	N/A	2.4/5.0	N/A	0.1	NM	5	Silty SAND, some fine to coarse angular to sub-rounded gravel, trace brick and fractured rock, brown, 7.5 YR, 4/4 to dark brown, 7.5 YR, 3/3, dry, loose to medium dense with depth, dry to moist with depth (FILL)	SM
5		D	N/A	2.9/5.0	N/A	2.3	NM	0	SILT, some fine sand and coal pieces, trace brick, crushed concrete @ 5.8 - 6.4 ft., coal @ approx. 7 - 10 ft., some fractured rock, very dark brown, 7.5 YR, 2.5/2, moist to wet with depth, stiff/dense (FILL)	ML
10		D	N/A	1.5/5.0	N/A	N/A	NM	-5	Fractured ROCK, little fine to coarse sub-angular gravel, black, wet, loose, very slight sheen on water (FILL)	GW
									Fine to coarse angular GRAVEL, some coarse sand, black, loose to medium dense, wet, obvious odor (FILL)	
						3.2	NM			
15						NM	NM		Clayey SILT, some medium angular gravel, black, soft to medium stiff, moist, obvious odor	OL/OH
		D	N/A	1.9/5.0	N/A	50	NM	-10	SILT with CLAY, some fine angular gravel, black, moist, medium stiff	
	16.5' to 18.5' (TL11.25-00-17.5)					ND	NM		SILT with CLAY (possibly native), some white "crumbly," silty material, black, moist, soft, obvious odor	
						20.7	NM		Silty CLAY, black, native, medium stiff, moist	OH
20		D	N/A	2.5/5.0	N/A	1.7	NM	-15	Silty CLAY, very dark grey, 7.5 YR, 3/1, moist, soft/medium stiff	
25									Bottom of boring @ 25 ft. bgs.	

LEGEND:
msl = mean sea level
bgs = below ground surface
ND = not detected
NM = not measured
N/A = not applicable

SAMPLE TYPES:
D: drive
W: washed
ST: Shelby Tube
A: Auger
HA: hand auger
C: cored
RC: rotasonic core

SOIL: GRANULAR SOILS DENSITY:
0-4: very loose
5-10: loose
11-29: medium dense
30-49: dense
50+: very dense

PLASTIC SOILS DENSITY:
0-2: very soft
3-4: soft
5-8: medium soft
9-15: stiff
16-30: very stiff
>30: hard

MOISTURE:
dry
moist
wet

PROPORTIONS:
Trace: <5% Few: 16-30%
Little: 6-15% Some: 31-49%

Density designation based on blow counts for each 12" of penetration using a 140 lb. hammer w/30" drop
When blow counts were not possible, density descriptions, as included in the "Materials Description" are based upon a thumb penetration test

NOTES:
TL 11.25-00 (16.5 - 18.5): VOCs, SVOCs, PCBs, TPH Fingerprint, TAL Metals

ROCK:
RQD (rock quality designation):
reported in % = [length of core in pieces 4" and longer/ length of run] x100

307748

BORING LOG

BORING/WELL ID: TL 11.75-00

PROJECT NAME: Quanta Resources Superfund Site
SURFACE ELEVATION: 6.5 ft. MSL
LOCATION: NE Corner of Fmr. Lever Bros.
MEASURING POINT: N/A
PROJECT NUMBER: 363725
MEASURING POINT ELEVATION: N/A
CLIENT: Honeywell Inc.
TOTAL DEPTH: 25 ft. bgs
DRILLING CONTRACTOR: SGS Environmental Services, Inc.
FOREMAN: J Rousa
DRILLING METHOD: Geoprobe Direct Push
DRILLING EQUIPMENT: Geoprobe 7010DT
SAMPLING METHOD: 5 ft. macrocore sampler
CH2M OBSERVER: A. Harclerode
START DATE: 9/3/08
FINISH DATE: 9/3/08
NORTHING: 718165.95
EASTING: 633472.93
APPROX. DEPTH TO WATER: 9.7 ft. bgs 9/3/08

DEPTH (FT. BGS)	SAMPLE OR RUN DESIGNATION	SAMPLE TYPE	BLOWS PER 6 INCHES or CORE RUN (time/ft.)	RECOVERY/ PENETRATION (FT.)	RQD	SCREENING DATA PID	SCREENING DATA FID	ELEVATION (ft. MSL)	MATERIALS DESCRIPTION (SOILS: classification, secondary grain size, color, moisture, and other descriptors; ROCK: rock type, hardness, major mineral types, color, weathering, and degree of fracturing)	USCS GROUP SYMBOL
0		D	N/A	1.4/5.0	N/A	ND	NM	5	Silty SAND, some fine to medium sub-angular gravel, brick, and crushed rock, brown, 7.5 YR, 4/3, loose, dry (FILL)	SM/GW
5		D	N/A	0.5/5.0	N/A	0.1	NM	0	Silty SAND, some fine to medium sub-angular gravel, brick, and crushed rock, brown, 7.5 YR, 4/3, loose, dry, wet at very bottom (FILL)	
10	13.0' to 14.0' (TL11.75-00-13.5)	D	N/A	1.8/5.0	N/A	110	NM	-5	SILT, some clay, black, medium stiff, moist, obvious odor, trace possible product seams (difficult to discern)	OL/OH
15		D	N/A	2.6/5.0	N/A	0.1	NM	-10	SILT, some gravel, wood, and cinders, black, wet, medium dense	
						0.1	NM		Silty CLAY, trace wood, barely obvious odor, moist, medium stiff	
20		D	N/A	1.2/5.0	N/A	0.1	NM	-15	Silty CLAY, some fractured rock, gravel, and cardboard-like material, trace wood, odor present, moist, medium stiff	
									Clayey SILT and silty CLAY, trace wood, moist, medium stiff	
25									Bottom of boring @ 25 ft. bgs	

WELL CONSTRUCTION

LEGEND:
msl = mean sea level
bgs = below ground surface
ND = not detected
NM = not measured
N/A = not applicable

SAMPLE TYPES:
D: drive
W: washed
ST: Shelby Tube
A: Auger
HA: hand auger
C: cored
RC: rotasonic core

SOIL:
MOISTURE:
dry
moist
wet

GRANULAR SOILS DENSITY:
0-4: very loose
5-10: loose
11-29: medium dense
30-49: dense
50+: very dense

PLASTIC SOILS DENSITY:
0-2: very soft
3-4: soft
5-8: medium soft
9-15: stiff
16-30: very stiff
>30: hard

PROPORTIONS:
Trace: <5% Few: 16-30%
Little: 6-15% Some: 31-49%

Density designation based on blow counts for each 12" of penetration using a 140 lb. hammer w/30" drop
When blow counts were not possible, density descriptions, as included in the "Materials Description" are based upon a thumb penetration test

NOTES:
TL 11.75-00 (13.0 - 14.0): VOCs, SVOCs, PCBs, TPH Fingerprint, TAL Metals

ROCK:
RQD (rock quality designation):
reported in % = [length of core in pieces 4" and longer/ length of run] x100

307749

BORING LOG

BORING/WELL ID: TL 12-0.5

PROJECT NAME: Quanta Resources Superfund Site
SURFACE ELEVATION: 7.6 ft. MSL
LOCATION: NE Corner of Fmr. Lever Bros.
MEASURING POINT: N/A
PROJECT NUMBER: 363725
MEASURING POINT ELEVATION: N/A
CLIENT: Honeywell Inc.
TOTAL DEPTH: 30 ft. bgs
DRILLING CONTRACTOR: SGS Environmental Services, Inc.
FOREMAN: J Rousa
DRILLING METHOD: Geoprobe Direct Push
DRILLING EQUIPMENT: Geoprobe 7010DT
SAMPLING METHOD: 5 ft. macrocore sampler
CH2M OBSERVER: A. Harclerode
START DATE: 9/3/08
FINISH DATE: 9/3/08
NORTHING: 718217.72
EASTING: 633457.28
APPROX. DEPTH TO WATER: 10 ft. bgs 9/3/08

DEPTH (FT. BGS)	SAMPLE OR RUN DESIGNATION	SAMPLE TYPE	BLOWS PER 6 INCHES or CORE RUN (time/ft.)	RECOVERY/ PENETRATION (FT.)	RQD	SCREENING DATA PID	SCREENING DATA FID	ELEVATION (ft. MSL)	MATERIALS DESCRIPTION (SOILS: classification, secondary grain size, color, moisture, and other descriptors; ROCK: rock type, hardness, major mineral types, color, weathering, and degree of fracturing)	USCS GROUP SYMBOL
0		D	N/A	2.7/5.0	N/A	ND	NM		Silty, medium SAND, some crushed brick, and fine to course sub-angular to rounded gravel, dark brown, 7.5 YR.3/2, dry, loose (FILL)	SM
						ND	NM	5	Silty, coarse SAND, fine to coarse sub-angular to rounded gravel, some crushed coal, trace cinders, some cobbles, very dark brown, 7.5 YR, 2.5/2 to black, dry, loose (FILL)	SM/GW
						ND	NM			
						ND	NM		Crushed CONCRETE (FILL)	ML
5		D	N/A	1.7/5.0	N/A	ND	NM		Gravelly SILT, trace brick, black, moist, soft to medium stiff (FILL)	GW/SW
	7.0' to 8.0' (TL 12-0.5-7.5)					ND	NM	0	Crushed CONCRETE and fine SAND, some fine to medium sub-angular gravel, dark brown, 7.5 YR 3/2, dry, loose (FILL)	ML
						0.1	NM		WOOD (FILL)	
10		D	N/A	1.3/5.0	N/A	ND	NM		SILT with fine to medium GRAVEL and COAL, possible trace residual product staining, slightly obvious odor, black, color grades to brown 7.5 YR. 4/2, moist, soft (FILL)	
						ND	NM	-5	SILT with fine to medium GRAVEL and COAL, some slag, black, color grades to brown 7.5 YR. 4/2, moist, soft (FILL)	SP/GW
									Medium to coarse SAND, some fine to medium gravel, some slag, wet, medium dense (FILL)	
15		D	N/A	2.6/5.0	N/A	0.1	NM		Medium to coarse SAND, some fine to medium gravel (amount decreases with depth), trace slag, some brick, some wood (becomes silty with depth), wet, medium dense (FILL)	
						3.9	NM	-10	SILT, some wood, obvious odor with possible product staining @ 18.25 - 20 ft., moist	OL/OH
	17.5' to 19.5' (TL 12-0.5-18.5)									
20		D	N/A	0.8/5.0	N/A	101	NM		SILT, some wood, obvious odor, some residual (shiny) product, moist	
								-15		
25										

WELL CONSTRUCTION: 0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25

LEGEND:
msl = mean sea level
bgs = below ground surface
ND = not detected
NM = not measured
N/A = not applicable

SAMPLE TYPES:
D: drive
W: washed
ST: Shelby Tube
A: Auger
HA: hand auger
C: cored
RC: rotasonic core

SOIL: GRANULAR SOILS DENSITY:
0-4: very loose
5-10: loose
11-29: medium dense
30-49: dense
50+: very dense

PLASTIC SOILS DENSITY:
0-2: very soft
3-4: soft
5-8: medium soft
9-15: stiff
16-30: very stiff
>30: hard

MOISTURE:
dry
moist
wet

PROPORTIONS:
Trace: <5% Few: 16-30%
Little: 6-15% Some: 31-49%

Density designation based on blow counts for each 12" of penetration using a 140 lb. hammer w/30" drop
When blow counts were not possible, density descriptions, as included in the "Materials Description" are based upon a thumb penetration test

NOTES:
TL 12-0.5 (7.0 - 8.0): VOCs, SVOCs, PCBs, TPH Fingerprint, TAL Metals
TL 12-0.5 (17.5 - 19.5): VOCs, SVOCs, PCBs, TPH Fingerprint, TAL Metals

ROCK:
RQD (rock quality designation):
reported in % = [length of core in pieces 4" and longer/ length of run] x100

307750

BORING LOG

BORING/WELL ID: TL 12-0.5

PROJECT NAME: Quanta Resources Superfund Site
SURFACE ELEVATION: 7.6 ft. MSL
LOCATION: NE Corner of Fmr. Lever Bros.
MEASURING POINT: N/A
PROJECT NUMBER: 363725
MEASURING POINT ELEVATION: N/A
CLIENT: Honeywell Inc.
TOTAL DEPTH: 30 ft. bgs
DRILLING CONTRACTOR: SGS Environmental Services, Inc.
FOREMAN: J Rousa
DRILLING METHOD: Geoprobe Direct Push
DRILLING EQUIPMENT: Geoprobe 7010DT
SAMPLING METHOD: 5 ft. macrocore sampler
CH2M OBSERVER: A. Harclerode
START DATE: 9/3/08
FINISH DATE: 9/3/08
NORTHING: 718217.72
EASTING: 633457.28
APPROX. DEPTH TO WATER: 10 ft. bgs 9/3/08

DEPTH (FT. BGS)	SAMPLE OR RUN DESIGNATION	SAMPLE TYPE	BLOWS PER 6 INCHES or CORE RUN (time/ft.)	RECOVERY/ PENETRATION (FT.)	RQD	SCREENING DATA PID	SCREENING DATA FID	ELEVATION (ft. MSL)	MATERIALS DESCRIPTION (SOILS: classification, secondary grain size, color, moisture, and other descriptors; ROCK: rock type, hardness, major mineral types, color, weathering, and degree of fracturing)	GRAPHICAL LOG	USCS GROUP SYMBOL	WELL CONSTRUCTION
25		D	N/A	1.5/5.0	N/A	0.1	NM		Silty CLAY, very dark grey, 7.5 YR, 3/1, moist, soft, moderate plasticity		OH	
								-20				
									Bottom of boring @ 30 ft. bgs			
30												
								-25				
35												
								-30				
40												
								-35				
45												
								-40				
50												

LEGEND:
msl = mean sea level
bgs = below ground surface
ND = not detected
NM = not measured
N/A = not applicable

SAMPLE TYPES:
D: drive
W: washed
ST: Shelby Tube
A: Auger
HA: hand auger
C: cored
RC: rotasonic core

SOIL: GRANULAR SOILS DENSITY:
0-4: very loose
5-10: loose
11-29: medium dense
30-49: dense
50+: very dense

PLASTIC SOILS DENSITY:
0-2: very soft
3-4: soft
5-8: medium soft
9-15: stiff
16-30: very stiff
>30: hard

MOISTURE:
dry
moist
wet

PROPORTIONS:
Trace: <5% Few: 16-30%
Little: 6-15% Some: 31-49%

Density designation based on blow counts for each 12" of penetration using a 140 lb. hammer w/30" drop
When blow counts were not possible, density descriptions, as included in the "Materials Description" are based upon a thumb penetration test

NOTES:
TL 12-0.5 (7.0 - 8.0): VOCs, SVOCs, PCBs, TPH Fingerprint, TAL Metals
TL 12-0.5 (17.5 - 19.5): VOCs, SVOCs, PCBs, TPH Fingerprint, TAL Metals

ROCK:
RQD (rock quality designation):
reported in % = [length of core in pieces 4" and longer/ length of run] x100

307751

BORING LOG

BORING/WELL ID: TL 12-1.5

PROJECT NAME: Quanta Resources Superfund Site
SURFACE ELEVATION: 7.4 ft. MSL
LOCATION: NE Corner of Fmr. Lever Bros.
MEASURING POINT: N/A
PROJECT NUMBER: 363725
MEASURING POINT ELEVATION: N/A
CLIENT: Honeywell Inc.
TOTAL DEPTH: 20 ft. bgs
DRILLING CONTRACTOR: SGS Environmental Services, Inc.
FOREMAN: J Rousa
DRILLING METHOD: Geoprobe Direct Push
DRILLING EQUIPMENT: Geoprobe 7010DT
SAMPLING METHOD: 5 ft. macrocore sampler
CH2M OBSERVER: A. Harclerode
START DATE: 8/29/08
FINISH DATE: 8/29/08
NORTHING: 718272.22
EASTING: 633387.18
APPROX. DEPTH TO WATER: 10.0 ft. bgs 8/29/08

DEPTH (FT. BGS)	SAMPLE OR RUN DESIGNATION	SAMPLE TYPE	BLOWS PER 6 INCHES or CORE RUN (time/ft.)	RECOVERY/ PENETRATION (FT.)	RQD	SCREENING DATA PID	SCREENING DATA FID	ELEVATION (ft. MSL)	MATERIALS DESCRIPTION (SOILS: classification, secondary grain size, color, moisture, and other descriptors; ROCK: rock type, hardness, major mineral types, color, weathering, and degree of fracturing)	USCS GROUP SYMBOL
0		D	N/A	2.8/5.0	N/A	ND	NM		Silty, gravelly SAND, trace cobbles, brown, 7.5 YR, 4/3, loose, dry (FILL)	
						0.1	NM		Crushed CONCRETE (FILL)	
							NM	5	Intermixed coarse SAND, fine GRAVEL, COAL, and BRICK, some cinders (FILL)	
							NM		Crushed CONCRETE (FILL)	
5		D	N/A	1.9/5.0	N/A	ND	NM		Sandy GRAVEL and CINDERS, black, dry to moist, medium dense (FILL)	
							NM		Crushed CONCRETE, GRAVEL/crushed ROCK, dry (FILL)	
	7.1' to 10.0' (TL12-1.5-8.5)					N/A	NM	0	Gravelly SILT, trace coal, product impacted @ 8.0 - 10 ft., moist, medium stiff (FILL)	
10		D	N/A	2.7/5.0	N/A	6.2	NM		Silty GRAVEL with CINDERS, black, some wood, obvious odor, wet, loose (FILL)	
						2.2	NM	-5	Silty CLAY, trace rounded fine gravel, moist, some organic matter, some product coating silt, soft, obvious odor	CH
15		D	N/A	1.9/5.0	N/A	0.1	NM		Silty CLAY, trace rounded fine gravel, some organic matter, moist, soft	
								-10		
									Bottom of boring @ 20 ft. bgs	
20										
								-15		
25										

GRAPHICAL LOG

WELL CONSTRUCTION

LEGEND:
msl = mean sea level
bgs = below ground surface
ND = not detected
NM = not measured
N/A = not applicable

SAMPLE TYPES:
D: drive
W: washed
ST: Shelby Tube
A: Auger
HA: hand auger
C: cored
RC: rotasonic core

SOIL: GRANULAR SOILS DENSITY:
0-4: very loose
5-10: loose
11-29: medium dense
30-49: dense
50+: very dense

PLASTIC SOILS DENSITY:
0-2: very soft
3-4: soft
5-8: medium soft
9-15: stiff
16-30: very stiff
>30: hard

MOISTURE:
dry
moist
wet

PROPORTIONS:
Trace: <5% Few: 16-30%
Little: 6-15% Some: 31-49%

Density designation based on blow counts for each 12" of penetration using a 140 lb. hammer w/30" drop
When blow counts were not possible, density descriptions, as included in the "Materials Description" are based upon a thumb penetration test

NOTES:
TL 12-1.5 (7.1 - 10.0): VOCs, SVOCs, PCBs, TPH Fingerprint, TAL Metals

ROCK:
RQD (rock quality designation):
reported in % = [length of core in pieces 4" and longer/ length of run] x100

307752

BORING LOG

BORING/WELL ID: TL 12.5-00

PROJECT NAME: Quanta Resources Superfund Site
SURFACE ELEVATION: 6.6 ft. MSL
LOCATION: NE Corner of Fmr. Lever Bros.
MEASURING POINT: N/A
PROJECT NUMBER: 363725
MEASURING POINT ELEVATION: N/A
CLIENT: Honeywell Inc.
TOTAL DEPTH: 22 ft. bgs
DRILLING CONTRACTOR: SGS Environmental Services, Inc.
FOREMAN: J Rousa
DRILLING METHOD: Geoprobe Direct Push
DRILLING EQUIPMENT: Geoprobe 7010DT
SAMPLING METHOD: 5 ft. macrocore sampler
CH2M OBSERVER: A. Harclerode
START DATE: 9/3/08
FINISH DATE: 9/3/08
NORTHING: 718223.08
EASTING: 633504.59
APPROX. DEPTH TO WATER: 6.0 ft. bgs 9/3/08

DEPTH (FT. BGS)	SAMPLE OR RUN DESIGNATION	SAMPLE TYPE	BLOWS PER 6 INCHES or CORE RUN (time/ft.)	RECOVERY/ PENETRATION (FT.)	RQD	SCREENING DATA PID	SCREENING DATA FID	ELEVATION (ft. MSL)	MATERIALS DESCRIPTION (SOILS: classification, secondary grain size, color, moisture, and other descriptors; ROCK: rock type, hardness, major mineral types, color, weathering, and degree of fracturing)	USCS GROUP SYMBOL
0		D	N/A	1.9/5.0	N/A	0.1	NM	5	Intermixed silty SAND, fine to medium sub-angular to rounded GRAVEL, trace brick and cinders, brown to dark brown towards bottom, dry, loose (FILL)	SM/GW
5		D	N/A	1.8/5.0	N/A	ND	NM		Intermixed silty SAND, fine to medium sub-angular to rounded GRAVEL, trace brick and cinders, brown to dark brown towards bottom, dry, loose (FILL)	
						NM	NM	0	Well sorted SAND with fine to coarse angular to sub-rounded GRAVEL, some cinder, wet, loose (FILL)	SP/GW
						0.1	NM		SILT, crushed ROCK, and BRICK, some cinder, black, soft (FILL)	ML
10		D	N/A	1.6/5.0	N/A	NM	NM	-5	Crushed BRICK and GRAVEL with silty SAND, reddish brown, 2YR, 4/4, wet (FILL)	SM/GW
									Intermixed silty SAND, GRAVEL, and SCHIST (some in tact, some fractured), wet, loose to medium dense (FILL)	
15	17.0' to 18.0' (TL12.5-00-17.5)	D	N/A	1.8/5.0	N/A	0.1	NM	-10	Intermixed silty SAND, GRAVEL, and competent SCHIST, wet, loose to medium dense (FILL)	
20		D	N/A	0.0/2.0	N/A	N/A	NM		SLOUGH refusal @ 22 ft. bgs	
								-15	Bottom of boring @ 22 ft. bgs	
25										

WELL CONSTRUCTION

LEGEND:
msl = mean sea level
bgs = below ground surface
ND = not detected
NM = not measured
N/A = not applicable

SAMPLE TYPES:
D: drive
W: washed
ST: Shelby Tube
A: Auger
HA: hand auger
C: cored
RC: rotasonic core

SOIL: GRANULAR SOILS DENSITY:
0-4: very loose
5-10: loose
11-29: medium dense
30-49: dense
50+: very dense

PLASTIC SOILS DENSITY:
0-2: very soft
3-4: soft
5-8: medium soft
9-15: stiff
16-30: very stiff
>30: hard

MOISTURE:
dry
moist
wet

PROPORTIONS:
Trace: <5% Few: 16-30%
Little: 6-15% Some: 31-49%

Density designation based on blow counts for each 12" of penetration using a 140 lb. hammer w/30" drop
When blow counts were not possible, density descriptions, as included in the "Materials Description" are based upon a thumb penetration test

NOTES:
TL 12.5-00 (17.0 - 18.0): VOCs, SVOCs, PCBs, TPH Fingerprint, TAL Metals

ROCK:
RQD (rock quality designation):
reported in % = [length of core in pieces 4" and longer/ length of run] x100

307753

BORING LOG

BORING/WELL ID: TL 12.5-10.5

PROJECT NAME: Quanta Resources Superfund Site
SURFACE ELEVATION: 7.2 ft. MSL
LOCATION: SE Block 93 Central
MEASURING POINT: N/A
PROJECT NUMBER: 363725
MEASURING POINT ELEVATION: N/A
CLIENT: Honeywell Inc.
TOTAL DEPTH: 30 ft. bgs
DRILLING CONTRACTOR: SGS Environmental Services, Inc.
FOREMAN: J Rousa
DRILLING METHOD: Geoprobe Direct Push
DRILLING EQUIPMENT: Geoprobe 7010DT
SAMPLING METHOD: 5 ft. macrocore sampler
CH2M OBSERVER: A. Harclerode
START DATE: 8/25/08
FINISH DATE: 8/25/08
NORTHING: 718776.99
EASTING: 632660.05
APPROX. DEPTH TO WATER: 6.0 ft. bgs 8/25/08

DEPTH (FT. BGS)	SAMPLE OR RUN DESIGNATION	SAMPLE TYPE	BLOWS PER 6 INCHES or CORE RUN (time/ft.)	RECOVERY/ PENETRATION (FT.)	RQD	SCREENING DATA PID	SCREENING DATA FID	ELEVATION (ft. MSL)	MATERIALS DESCRIPTION (SOILS: classification, secondary grain size, color, moisture, and other descriptors; ROCK: rock type, hardness, major mineral types, color, weathering, and degree of fracturing)	GRAPHICAL LOG	USCS GROUP SYMBOL	WELL CONSTRUCTION
0												0
	0.25' to 2.5' (TL12.5-10.5-1.5)	D	N/A	1.4/5.0	N/A		NM	5	Intermixed fine sub-angular GRAVEL, fine SAND, and SILT, trace brick and asphalt, very dark brown 7.5YR, 2.5/2, moist, loose/medium dense (FILL)			1, 2
							NM		Crushed ROCK and intermixed fine sub-angular GRAVEL, fine SAND, and SILT, trace brick and asphalt, very dark brown 7.5YR, 2.5/2, dry, loose/medium dense (FILL)			3, 4
5		D	N/A	3.75/5.0	N/A	0.8	NM	0	Intermixed fine to coarse sub-angular to sub-rounded GRAVEL and fine to medium sub-rounded SAND, some silt, some fibrous wood, very dark brown 7.5YR, 2.5/2 to black, dry to wet (FILL)			5, 6, 7
	7.5' to 9.5' (TL12.5-10.5-8.5)					0.8	NM		Silty CLAY, very dark brown 7.5 YR, 2.5/2 to black, dry to wet (FILL)			8
						0.8	NM					9
10		D	N/A	1.3/5.0	N/A		NM	-5	Intermixed fine to coarse sub-angular to sub-rounded GRAVEL and fine to medium sub-rounded SAND, some silt, some fibrous wood, very dark brown 7.5YR, 2.5/2 to black, dry to wet, incandescent sheen at 8 feet bgs, barely obvious product odor (FILL)			10, 11, 12
									Intermixed fine to coarse sub-angular to sub-rounded GRAVEL and fine to medium sub-rounded SAND, some silt, some fibrous wood, very dark brown 7.5YR, 2.5/2 to black, incandescent sheen @ 14.5 to 15 ft. (FILL)			13, 14
15		D	N/A	2.15/5.0	N/A		NM	-10	Clayey PEAT, native, very dark brown 7.5 YR, 2.5/2, moist, medium stiff, obvious sulfur odor		CL/PT	15, 16, 17, 18, 19
20		D	N/A	1.25/5.0	N/A		NM	-15	Clayey PEAT, native, very dark brown 7.5 YR, 2.5/2, moist, medium stiff, obvious sulfur odor			20, 21, 22, 23, 24
25												25

LEGEND:
msl = mean sea level
bgs = below ground surface
ND = not detected
NM = not measured
N/A = not applicable

SAMPLE TYPES:
D: drive
W: washed
ST: Shelby Tube
A: Auger
HA: hand auger
C: cored
RC: rotasonic core

SOIL: GRANULAR SOILS DENSITY:
0-4: very loose
5-10: loose
11-29: medium dense
30-49: dense
50+: very dense

PLASTIC SOILS DENSITY:
0-2: very soft
3-4: soft
5-8: medium soft
9-15: stiff
16-30: very stiff
>30: hard

MOISTURE:
dry
moist
wet

PROPORTIONS:
Trace: <5% Few: 16-30%
Little: 6-15% Some: 31-49%

Density designation based on blow counts for each 12" of penetration using a 140 lb. hammer w/30" drop
When blow counts were not possible, density descriptions, as included in the "Materials Description" are based upon a thumb penetration test

NOTES:
TL 12.5-10.5 (0.25 - 2.5): VOCs, SVOCs, PCBs, TAL Metals
TL 12.5-10.5 (7.5 - 9.5): VOCs, SVOCs, PCBs, TAL Metals

ROCK:
RQD (rock quality designation):
reported in % = [length of core in pieces 4" and longer/ length of run] x100

307754

BORING LOG

BORING/WELL ID: TL 12.5-10.5

PROJECT NAME: Quanta Resources Superfund Site
SURFACE ELEVATION: 7.2 ft. MSL
LOCATION: SE Block 93 Central
MEASURING POINT: N/A
PROJECT NUMBER: 363725
MEASURING POINT ELEVATION: N/A
CLIENT: Honeywell Inc.
TOTAL DEPTH: 30 ft. bgs
DRILLING CONTRACTOR: SGS Environmental Services, Inc.
FOREMAN: J Rousa
DRILLING METHOD: Geoprobe Direct Push
DRILLING EQUIPMENT: Geoprobe 7010DT
SAMPLING METHOD: 5 ft. macrocore sampler
CH2M OBSERVER: A. Harclerode
START DATE: 8/25/08
FINISH DATE: 8/25/08
NORTHING: 718776.99
EASTING: 632660.05
APPROX. DEPTH TO WATER: 6.0 ft. bgs 8/25/08

DEPTH (FT. BGS)	SAMPLE OR RUN DESIGNATION	SAMPLE TYPE	BLOWS PER 6 INCHES or CORE RUN (time/ft.)	RECOVERY/ PENETRATION (FT.)	RQD	SCREENING DATA PID	SCREENING DATA FID	ELEVATION (ft. MSL)	MATERIALS DESCRIPTION (SOILS: classification, secondary grain size, color, moisture, and other descriptors; ROCK: rock type, hardness, major mineral types, color, weathering, and degree of fracturing)	GRAPHICAL LOG	USCS GROUP SYMBOL	WELL CONSTRUCTION
25		D	N/A	1.2/5.0	N/A		NM	-20	Clayey PEAT, native, very dark brown 7.5 YR, 2.5/2, moist, medium stiff, obvious sulfur odor			
									Bottom of boring @ 30 ft. bgs			
30								-25				
35								-30				
40								-35				
45								-40				
50												

LEGEND:
msl = mean sea level
bgs = below ground surface
ND = not detected
NM = not measured
N/A = not applicable

SAMPLE TYPES:
D: drive
W: washed
ST: Shelby Tube
A: Auger
HA: hand auger
C: cored
RC: rotasonic core

SOIL: GRANULAR SOILS DENSITY:
0-4: very loose
5-10: loose
11-29: medium dense
30-49: dense
50+: very dense

PLASTIC SOILS DENSITY:
0-2: very soft
3-4: soft
5-8: medium soft
9-15: stiff
16-30: very stiff
>30: hard

MOISTURE:
dry
moist
wet

PROPORTIONS:
Trace: <5% Few: 16-30%
Little: 6-15% Some: 31-49%

Density designation based on blow counts for each 12" of penetration using a 140 lb. hammer w/30" drop
When blow counts were not possible, density descriptions, as included in the "Materials Description" are based upon a thumb penetration test

NOTES:
TL 12.5-10.5 (0.25 - 2.5): VOCs, SVOCs, PCBs, TAL Metals
TL 12.5-10.5 (7.5 - 9.5): VOCs, SVOCs, PCBs, TAL Metals

ROCK:
RQD (rock quality designation):
reported in % = [length of core in pieces 4" and longer/ length of run] x100

307755

BORING LOG

BORING/WELL ID: TL13.5-10.5

PROJECT NAME: Quanta Resources Superfund site
SURFACE ELEVATION: 8.3 ft. MSL
LOCATION: Block 93 Central
MEASURING POINT: N/A
PROJECT NUMBER: 363725
MEASURING POINT ELEVATION: N/A
CLIENT: Honeywell Inc.
TOTAL DEPTH: 35 ft. bgs
DRILLING CONTRACTOR: SGS Environmental Services, Inc.
FOREMAN: J Rousa
DRILLING METHOD: Geoprobe Direct Push
DRILLING EQUIPMENT: Geoprobe 7010DT
SAMPLING METHOD: 5 ft. macrocore sampler
CH2M OBSERVER: A. Harclerode
START DATE: 8/25/08
FINISH DATE: 8/25/08
NORTHING: 718880.28
EASTING: 632704.15
APPROX. DEPTH TO WATER: Not noted

DEPTH (FT. BGS)	SAMPLE OR RUN DESIGNATION	SAMPLE TYPE	BLOWS PER 6 INCHES or CORE RUN (time/ft.)	RECOVERY/ PENETRATION (FT.)	RQD	SCREENING DATA PID	SCREENING DATA FID	ELEVATION (ft. MSL)	MATERIALS DESCRIPTION (SOILS: classification, secondary grain size, color, moisture, and other descriptors; ROCK: rock type, hardness, major mineral types, color, weathering, and degree of fracturing)	GRAPHICAL LOG	USCS GROUP SYMBOL	WELL CONSTRUCTION
0												0
	0.5' to 2.5' (TL13.5-10.5-1.5)	D	N/A	4.0/5.0	N/A	1.0	NM		Intermixed well graded fine to coarse sub-rounded to sub-angular GRAVELl and well graded fine to coarse SAND, some silt, very dark brown, 7.5YR, 2.5/2, dry, medium/dense (FILL)			1 2
						N/A	NM	5	Crushed BRICK and crushed CONCRETE, dry (very difficult drilling) (FILL)			3 4
5		D	N/A	1.25/5.0	N/A	N/A	NM		Silty CLAY and fine angular to sub-angular GRAVEL, black, moist to wet, soft/loose to very loose, obvious odor, product present @ 6 - 10 ft. (FILL)			5 6 7
	7.5' to 9.5' (TL13.5-10.5-8.5)							0				8 9
10		D	N/A	0.0/5.0	N/A	N/A	NM		No recovery			10 11 12 13 14
								-5				
15		D	N/A	0.0/5.0	N/A	N/A	NM		No recovery			15 16 17 18 19
								-10				
20		D	N/A	0.0/5.0	N/A	N/A	NM		No recovery			20 21 22 23 24
								-15				
25												25

LEGEND:
msl = mean sea level
bgs = below ground surface
ND = not detected
NM = not measured
N/A = not applicable

SAMPLE TYPES:
D: drive
W: washed
ST: Shelby Tube
A: Auger
HA: hand auger
C: cored
RC: rotasonic core

SOIL: GRANULAR SOILS DENSITY:
0-4: very loose
5-10: loose
11-29: medium dense
30-49: dense
50+: very dense

PLASTIC SOILS DENSITY:
0-2: very soft
3-4: soft
5-8: medium soft
9-15: stiff
16-30: very stiff
>30: hard

MOISTURE:
dry
moist
wet

PROPORTIONS:
Trace: <5% Few: 16-30%
Little: 6-15% Some: 31-49%

Density designation based on blow counts for each 12" of penetration using a 140 lb. hammer w/30" drop
When blow counts were not possible, density descriptions, as included in the "Materials Description" are based upon a thumb penetration test

NOTES:
TL 13.5-10.5 (0.5 - 2.5): VOCs, SVOCs, PCBs, TAL Metals
TL 13.5-10.5 (7.5 - 9.5): VOCs, SVOCs, PCBs, TAL Metals, TPH Fingerprint

ROCK:
RQD (rock quality designation):
reported in % = [length of core in pieces 4" and longer/ length of run] x100

307756

BORING LOG

BORING/WELL ID: TL13.5-10.5

PROJECT NAME: Quanta Resources Superfund site
SURFACE ELEVATION: 8.3 ft. MSL
LOCATION: Block 93 Central
MEASURING POINT: N/A
PROJECT NUMBER: 363725
MEASURING POINT ELEVATION: N/A
CLIENT: Honeywell Inc.
TOTAL DEPTH: 35 ft. bgs
DRILLING CONTRACTOR: SGS Environmental Services, Inc.
FOREMAN: J Rousa
DRILLING METHOD: Geoprobe Direct Push
DRILLING EQUIPMENT: Geoprobe 7010DT
SAMPLING METHOD: 5 ft. macrocore sampler
CH2M OBSERVER: A. Harclerode
START DATE: 8/25/08
FINISH DATE: 8/25/08
NORTHING: 718880.28
EASTING: 632704.15
APPROX. DEPTH TO WATER: Not noted

DEPTH (FT. BGS)	SAMPLE OR RUN DESIGNATION	SAMPLE TYPE	BLOWS PER 6 INCHES or CORE RUN (time/ft.)	RECOVERY/ PENETRATION (FT.)	RQD	SCREENING DATA PID	SCREENING DATA FID	ELEVATION (ft. MSL)	MATERIALS DESCRIPTION (SOILS: classification, secondary grain size, color, moisture, and other descriptors; ROCK: rock type, hardness, major mineral types, color, weathering, and degree of fracturing)	GRAPHICAL LOG	USCS GROUP SYMBOL	WELL CONSTRUCTION
25												25
		D	N/A	1.2/5.0	N/A		NM	-20	Clayey PEAT, brown, 7.5YR, 3/2, moist, very soft, obvious sulfur odor		CL/PT	26, 27, 28, 29
30		D	N/A	2.0/5.0	N/A		NM	-25	Clayey PEAT, very dark grey, 10YR, 3/1, moist, very soft, obvious sulfur odor			30, 31, 32, 33, 34
35								-30	Bottom of boring @ 35 ft. bgs			35, 36, 37, 38, 39
40								-35				40, 41, 42, 43, 44
45								-40				45, 46, 47, 48, 49
50												50

LEGEND:
msl = mean sea level
bgs = below ground surface
ND = not detected
NM = not measured
N/A = not applicable

SAMPLE TYPES:
D: drive
W: washed
ST: Shelby Tube
A: Auger
HA: hand auger
C: cored
RC: rotasonic core

SOIL: GRANULAR SOILS DENSITY:
0-4: very loose
5-10: loose
11-29: medium dense
30-49: dense
50+: very dense

PLASTIC SOILS DENSITY:
0-2: very soft
3-4: soft
5-8: medium soft
9-15: stiff
16-30: very stiff
>30: hard

MOISTURE:
dry
moist
wet

PROPORTIONS:
Trace: <5% Few: 16-30%
Little: 6-15% Some: 31-49%

Density designation based on blow counts for each 12" of penetration using a 140 lb. hammer w/30" drop
When blow counts were not possible, density descriptions, as included in the "Materials Description" are based upon a thumb penetration test

NOTES:
TL 13.5-10.5 (0.5 - 2.5): VOCs, SVOCs, PCBs, TAL Metals
TL 13.5-10.5 (7.5 - 9.5): VOCs, SVOCs, PCBs, TAL Metals, TPH Fingerprint

ROCK:
RQD (rock quality designation):
reported in % = [length of core in pieces 4" and longer/ length of run] x100

307757

BORING LOG

BORING/WELL ID: TL 13.5-12.75

PROJECT NAME: Quanta Resources Superfund Site
SURFACE ELEVATION: 7.0 ft. MSL
LOCATION: W Edge of Block 93 Central
MEASURING POINT: N/A
PROJECT NUMBER: 363725
MEASURING POINT ELEVATION: N/A
CLIENT: Honeywell Inc.
TOTAL DEPTH: 20 ft. bgs
DRILLING CONTRACTOR: SGS Environmental Services, Inc.
FOREMAN: J. Rousa
DRILLING METHOD: Geoprobe Direct Push
DRILLING EQUIPMENT: Geoprobe 7010DT
SAMPLING METHOD: 5 ft. macrocore sampler
CH2M OBSERVER: A. Harclerode
START DATE: 8/26/08
FINISH DATE: 8/26/08
NORTHING: 718963.75
EASTING: 632475.59
APPROX. DEPTH TO WATER: 4.0 ft. bgs 8/26/28

DEPTH (FT. BGS)	SAMPLE OR RUN DESIGNATION	SAMPLE TYPE	BLOWS PER 6 INCHES or CORE RUN (time/ft.)	RECOVERY/ PENETRATION (FT.)	RQD	SCREENING DATA PID	SCREENING DATA FID	ELEVATION (ft. MSL)	MATERIALS DESCRIPTION (SOILS: classification, secondary grain size, color, moisture, and other descriptors; ROCK: rock type, hardness, major mineral types, color, weathering, and degree of fracturing)	GRAPHICAL LOG	USCS GROUP SYMBOL	WELL CONSTRUCTION
0												0
	0' to 1.0' (TL 13.5-12.75-0.5)	D	N/A	2.4/5.0	N/A	N/A	NM		Crushed ROCK and CONCRETE, brown and white, dry, medium dense (FILL)			1
						0.6	NM	5	Intermixed fine sub-angular GRAVEL, coarse SAND, SILT, some fine sand and large sub-angular gravel, very dark brown, 7.5YR, 2.5/2, and black, dry to moist with depth, medium dense to dense, trace metal pieces, slightly obvious odor near bottom (FILL)			2, 3, 4
5		D	N/A	3.4/5.0	N/A	0.2	NM		Intermixed fine sub-angular GRAVEL, coarse SAND, SILT, some fine sand, large sub-angular gravel and crushed rock, very dark brown, 7.5YR, 2.5/2, and black, dry to moist with depth, medium dense to dense, trace metals (FILL)			5, 6, 7
						0.3	NM	0	Organic CLAY, native, some silt, very dark brown, 7.5YR, 2.5/2, moist, medium stiff		CH	8
	8.0' to 9.0' (TL 13.5-12.75-8.5)					0.9	NM		Silty CLAY/CLAY, dark grey, 10YR, 4/1, moist, stiff, plastic/fat			9
10		D	N/A	5.0/5.0	N/A	0.5	NM		Silty CLAY/CLAY, dark grey, 10YR, 4/1, moist to wet with depth, stiff, plastic/fat			10, 11
						0.2	NM	-5	Sandy, lean SILT, some lenses of gravelly clay, medium, sub-angular gravel, some crushed rock, brown, 7.5YR 4/4, moist to wet, very dense/stiff		ML	12, 13, 14
15		D	N/A	3.4/5.0	N/A	ND	NM		Sandy, lean SILT, some lenses of gravelly clay, medium, sub-angular gravel, some crushed rock, brown, 7.5YR, 4/4, moist to wet, very dense/stiff			15, 16
						ND	NM	-10	Fat clay, brown, 7.5YR, 4/4, moist, very stiff		CL	17, 18, 19
20									Bottom of boring @ 20 ft. bgs			20, 21
								-15				22, 23, 24
25												25

LEGEND:
msl = mean sea level
bgs = below ground surface
ND = not detected
NM = not measured
N/A = not applicable

SAMPLE TYPES:
D: drive
W: washed
ST: Shelby Tube
A: Auger
HA: hand auger
C: cored
RC: rotasonic core

SOIL:
MOISTURE:
dry
moist
wet

GRANULAR SOILS DENSITY:
0-4: very loose
5-10: loose
11-29: medium dense
30-49: dense
50+: very dense

PLASTIC SOILS DENSITY:
0-2: very soft
3-4: soft
5-8: medium soft
9-15: stiff
16-30: very stiff
>30: hard

PROPORTIONS:
Trace: <5% Few: 16-30%
Little: 6-15% Some: 31-49%

Density designation based on blow counts for each 12" of penetration using a 140 lb. hammer w/30" drop
When blow counts were not possible, density descriptions, as included in the "Materials Description" are based upon a thumb penetration test

NOTES:
TL 13.5 - 12.75 (0.0 - 1.0): VOCs, SVOCs, PCBs, TAL Metals
TL 13.5 - 12.75 (8.0 - 9.0): VOCs, SVOCs, PCBs, TAL Metals

ROCK:
RQD (rock quality designation):
reported in % = [length of core in pieces 4" and longer/ length of run] x100

307758

BORING LOG

BORING/WELL ID: TL 14-13.25

PROJECT NAME: Quanta Resources Superfund Site
SURFACE ELEVATION: 7.2 ft. MSL
LOCATION: SW Corner of Block 93N
MEASURING POINT: N/A
PROJECT NUMBER: 363725
MEASURING POINT ELEVATION: N/A
CLIENT: Honeywell Inc.
TOTAL DEPTH: 20 ft. bgs
DRILLING CONTRACTOR: SGS Environmental Services, Inc.
FOREMAN: J Rousa
DRILLING METHOD: Geoprobe Direct Push
DRILLING EQUIPMENT: Geoprobe 7010DT
SAMPLING METHOD: 5 ft. macrocore sampler
CH2M OBSERVER: A. Harclerode
START DATE: 8/25/08
FINISH DATE: 8/25/08
NORTHING: 719059.36
EASTING: 632514.65
APPROX. DEPTH TO WATER: Not noted

DEPTH (FT. BGS)	SAMPLE OR RUN DESIGNATION	SAMPLE TYPE	BLOWS PER 6 INCHES or CORE RUN (time/ft.)	RECOVERY/ PENETRATION (FT.)	RQD	SCREENING DATA PID	SCREENING DATA FID	ELEVATION (ft. MSL)	MATERIALS DESCRIPTION (SOILS: classification, secondary grain size, color, moisture, and other descriptors; ROCK: rock type, hardness, major mineral types, color, weathering, and degree of fracturing)	USCS GROUP SYMBOL
0	0.4' to 1.5' (TL14-13.25-1.0)	D	N/A	3.5/5.0	N/A	ND	NM		Intermixed SILT, SAND, and sub-rounded GRAVEL, dark brown 7.5YR, 3/2, dry, dense (FILL)	
						0.1	NM	5	Silty GRAVEL and coarse sub-rounded GRAVEL, some brick @ 2.5 ft., very dark brown, 7.5YR, 2.5/2, moist to wet with depth, medium dense. Note: small amount of black, vitreous, tar-like, viscous product coating gravel @ 2.5 ft., 0.5 ft. thickness or less, odor present. Similar material observed @ 3 ft. but more solid vesicular compacted material (FILL)	
5		D	N/A	3.3/5.0	N/A	0.4	NM		Fine sub-rounded GRAVEL and coarse sub-rounded SAND, some coarse, sub-rounded gravel, very dark brown, 7.5YR, 2.5/2, medium dense, some looser zones, wet, incandescent sheen from 8.1 - 8.7 ft. (FILL)	
	7.5' to 9.5' (TL14-13.25-8.5)							0	Silty CLAY (native), very dark brown, 7.5YR, 2.5/2, soft, moist (FILL)	
10		D	N/A	1.4/5.0	N/A	0.2	NM		Clayey PEAT (native), very dark brown, 7.5YR, 2.5/2, soft, moist, obvious sulfur odor (FILL)	CL
							NM	-5		CL/PT
15		D	N/A	3.0/5.0	N/A		NM		Silty CLAY, trace very fine sand, brown 7.5YR, 4/2, stiff to very stiff, moist	CL
							NM	-10	Silty CLAY, brown 7.5YR, 4/4, stiff to very stiff, moist	
20									Bottom of boring @ 20 ft. bgs	
								-15		
25										

GRAPHICAL LOG

WELL CONSTRUCTION

LEGEND:
msl = mean sea level
bgs = below ground surface
ND = not detected
NM = not measured
N/A = not applicable

SAMPLE TYPES:
D: drive
W: washed
ST: Shelby Tube
A: Auger
HA: hand auger
C: cored
RC: rotasonic core

SOIL: GRANULAR SOILS DENSITY:
0-4: very loose
5-10: loose
11-29: medium dense
30-49: dense
50+: very dense

PLASTIC SOILS DENSITY:
0-2: very soft
3-4: soft
5-8: medium soft
9-15: stiff
16-30: very stiff
>30: hard

MOISTURE:
dry
moist
wet

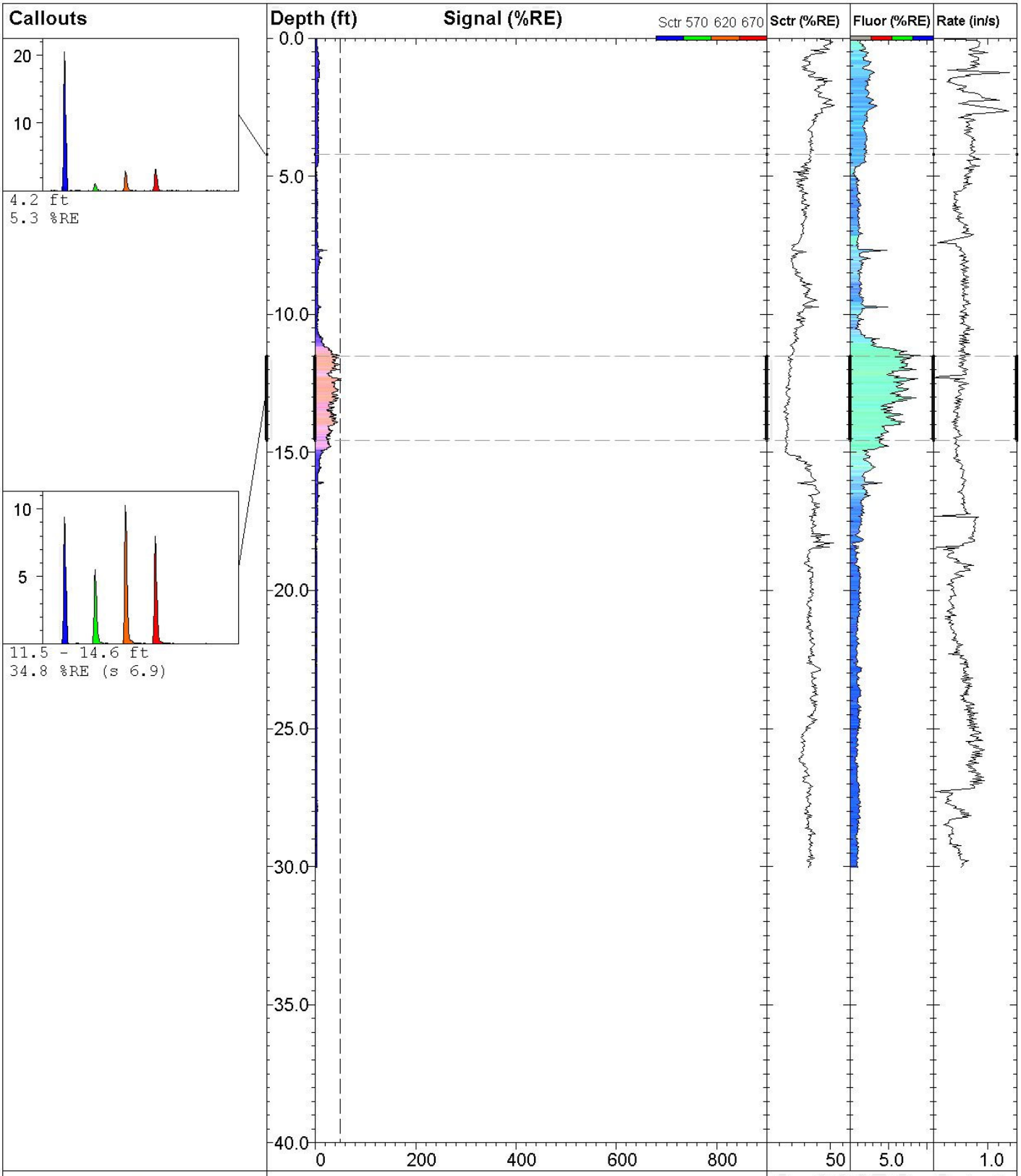
PROPORTIONS:
Trace: <5% Few: 16-30%
Little: 6-15% Some: 31-49%

Density designation based on blow counts for each 12" of penetration using a 140 lb. hammer w/30" drop
When blow counts were not possible, density descriptions, as included in the "Materials Description" are based upon a thumb penetration test

NOTES:
TL 14-13.25 (0.4 - 1.5): VOCs, SVOCs, PCBs, TAL Metals
TL 14-13.25 (7.5 - 9.5): VOCs, SVOCs, PCBs, TAL Metals

ROCK:
RQD (rock quality designation):
reported in % = [length of core in pieces 4" and longer/ length of run] x100

307759



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TL 10.5 -11.25

TarGOST By Dakota
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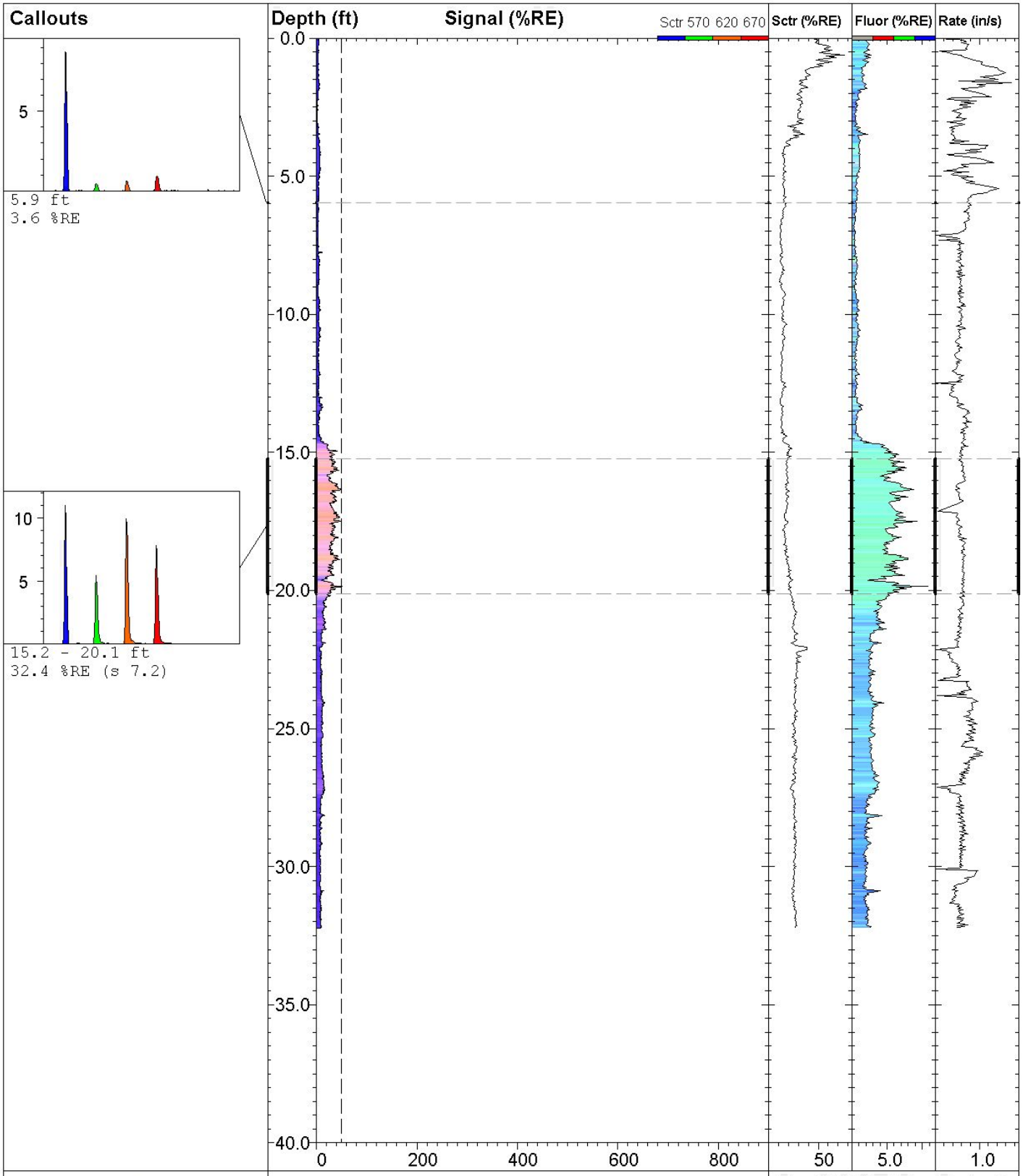
Site: **Quanta**	*Latitude / Datum:* **Unavailable / NA**	*Final depth:* **30.03 ft**
Client / Job: **CH2M HILL /**	*Longitude / Fix:* **Unavailable / NA**	*Max signal:* **51.9 %RE @ 12.33 ft**
Operator / Unit: **T. Rudolph / OST**	*Elevation:* **Unavailable**	*Date & Time:* **2008-08-20 10:14 EDT**

307760



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TL 9- 9

TarGOST By Dakota
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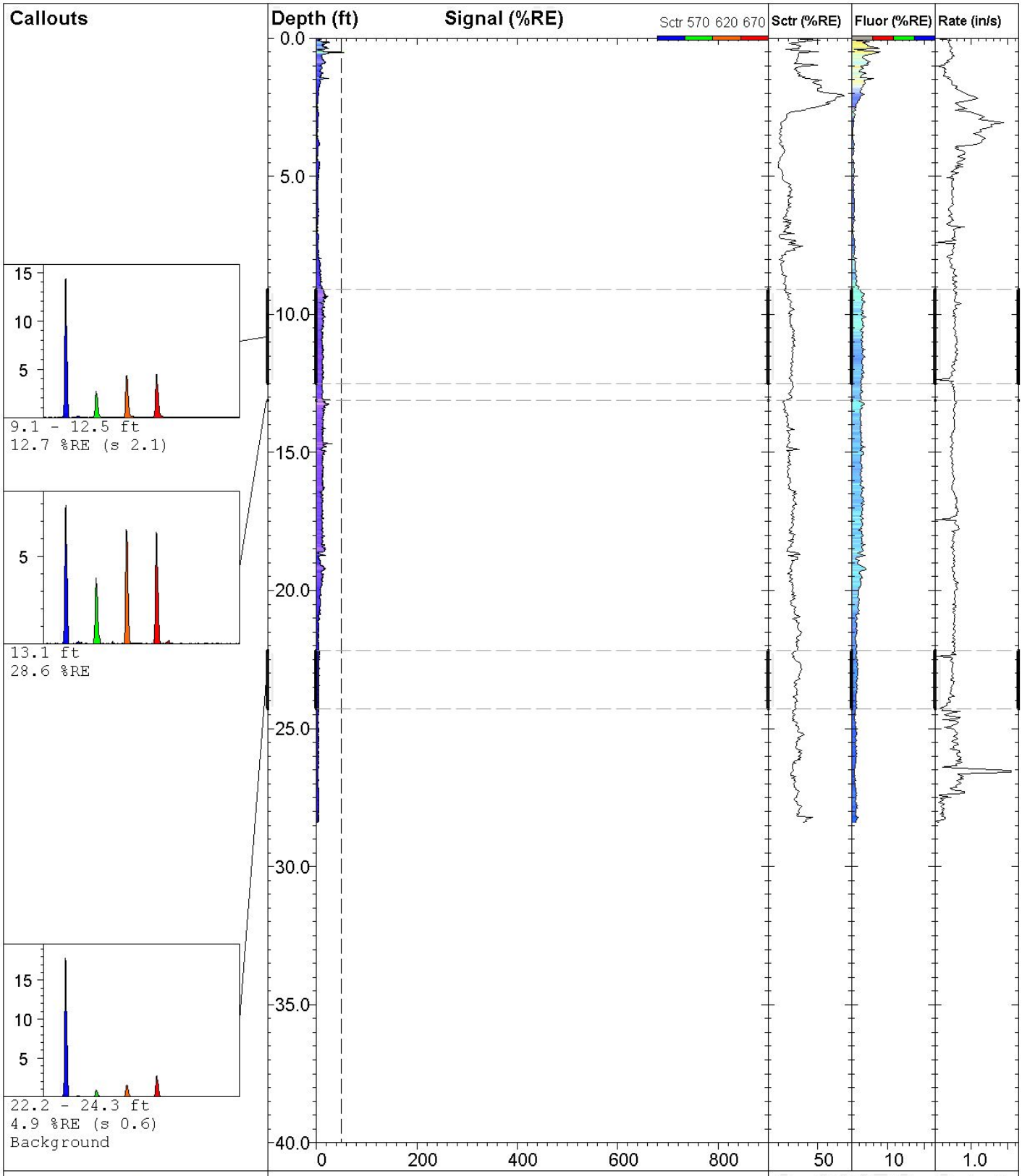
Site: **Quanta**	*Latitude / Datum:* **Unavailable / NA**	*Final depth:* **32.22 ft**
Client / Job: **CH2M HILL /**	*Longitude / Fix:* **Unavailable / NA**	*Max signal:* **52.9 %RE @ 19.86 ft**
Operator / Unit: **T. Rudolph / TG1002**	*Elevation:* **Unavailable**	*Date & Time:* **2008-08-22 08:52 EDT**

307761



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TL 14.5 -11.75

TarGOST By Dakota
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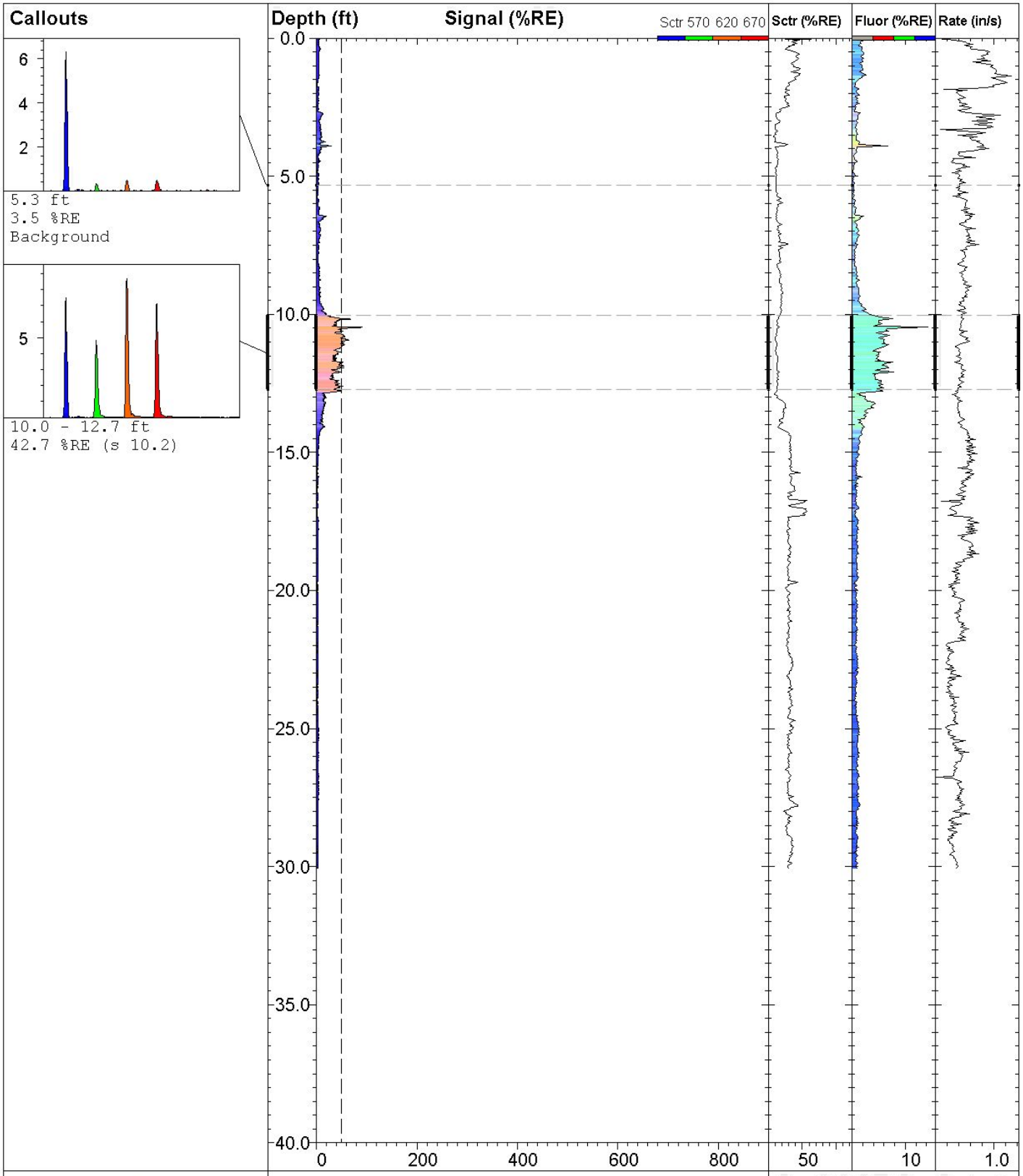
Site: **Quanta**	*Latitude / Datum:* **Unavailable / NA**	*Final depth:* **28.41 ft**
Client / Job: **CH2M HILL /**	*Longitude / Fix:* **Unavailable / NA**	*Max signal:* **55.6 %RE @ 0.51 ft**
Operator / Unit: **T. Rudolph / OST**	*Elevation:* **Unavailable**	*Date & Time:* **2008-08-19 08:35 CDT**

307762



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TL 14-13.25

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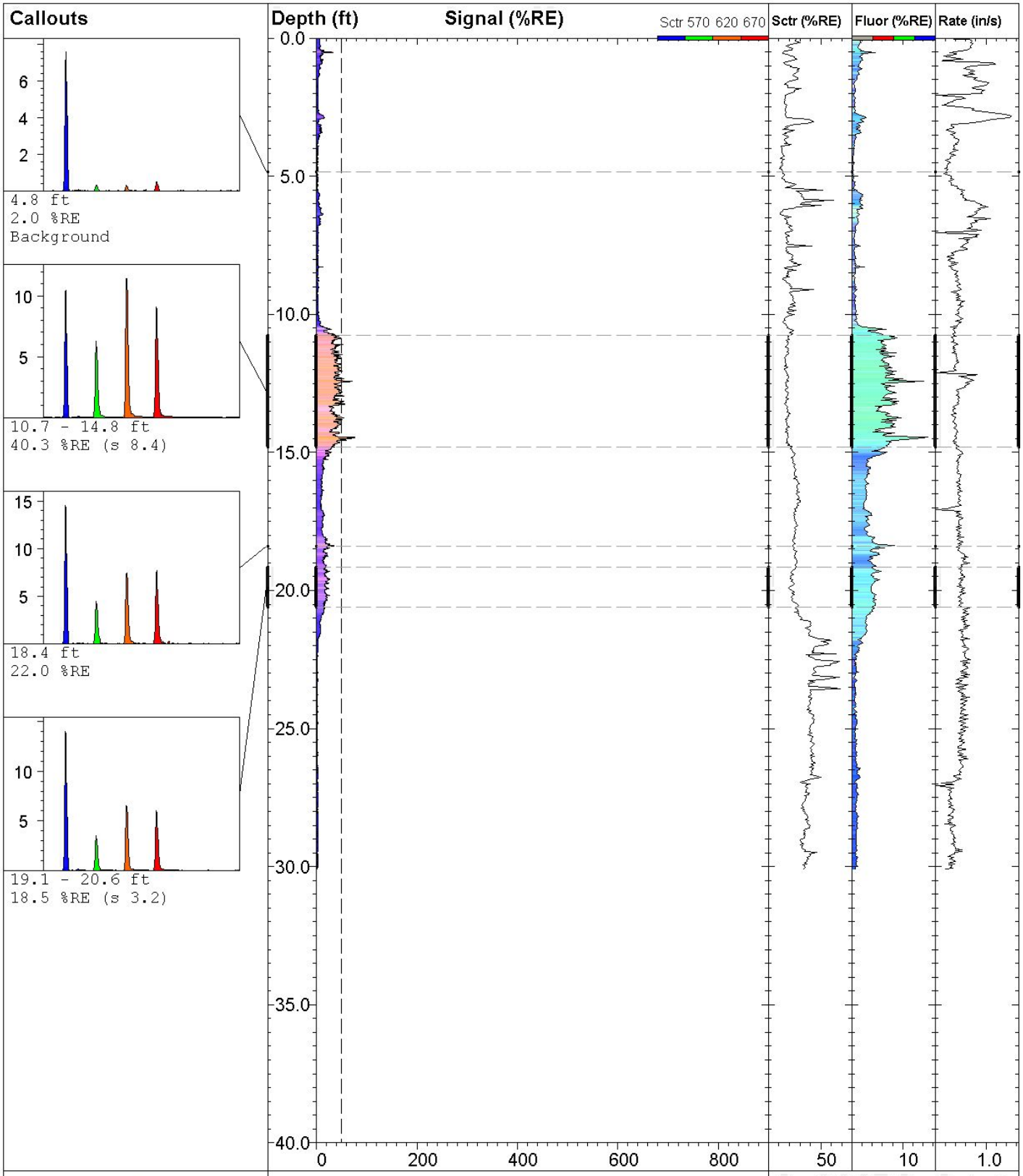
Site: **Quanta**	*Latitude / Datum:* **Unavailable / NA**	*Final depth:* **30.05 ft**
Client / Job: **CH2M HILL /**	*Longitude / Fix:* **Unavailable / NA**	*Max signal:* **91.6 %RE @ 10.47 ft**
Operator / Unit: **T. Rudolph / OST**	*Elevation:* **Unavailable**	*Date & Time:* **2008-08-19 11:04 EDT**

307763



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TL 14-12.25

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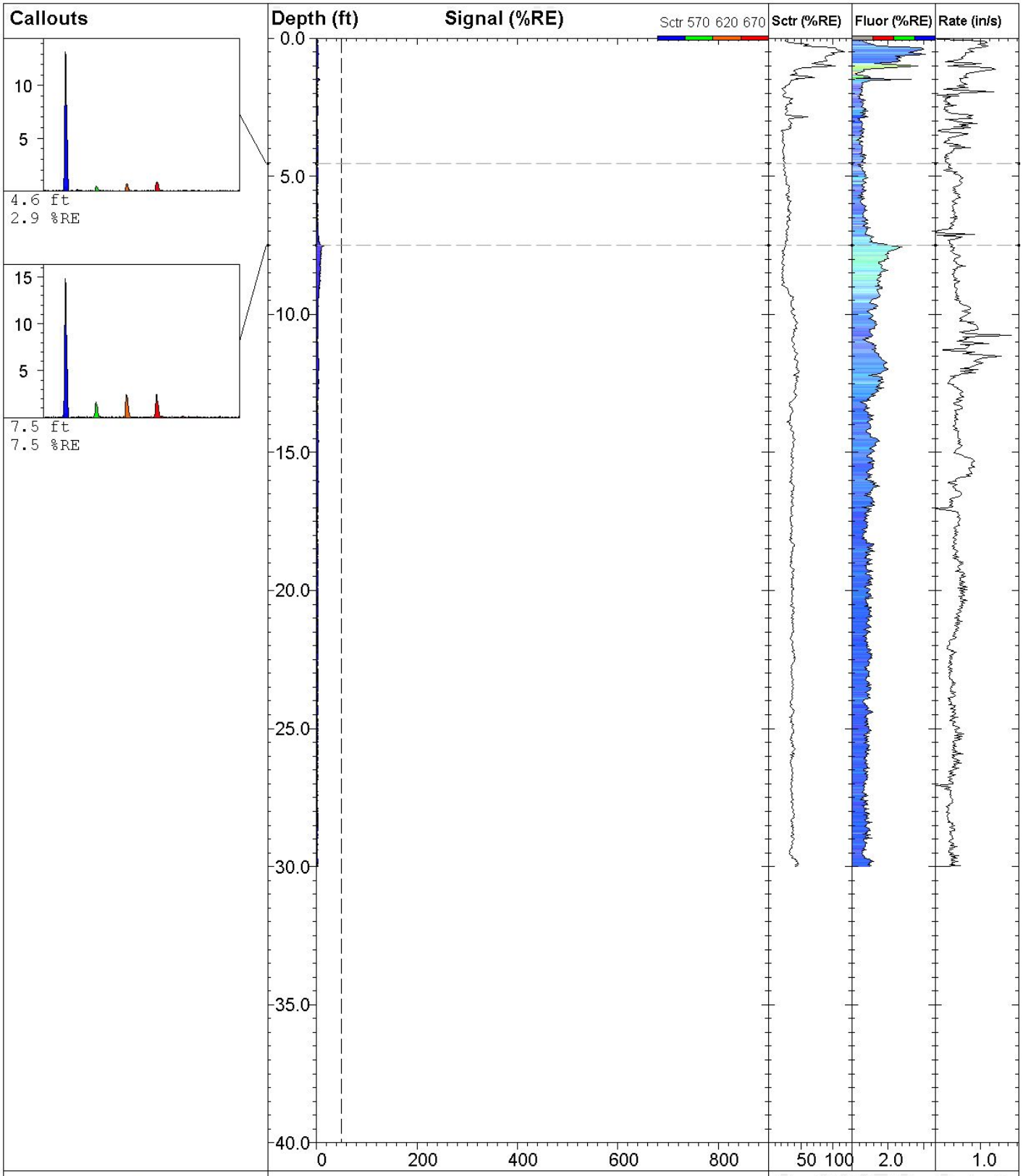
Site: **Quanta**	*Latitude / Datum:* **Unavailable / NA**	*Final depth:* **30.08 ft**
Client / Job: **CH2M HILL /**	*Longitude / Fix:* **Unavailable / NA**	*Max signal:* **78.3 %RE @ 14.46 ft**
Operator / Unit: **T. Rudolph / OST**	*Elevation:* **Unavailable**	*Date & Time:* **2008-08-19 10:15 EDT**

307764



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TL 13.5 - 12.75

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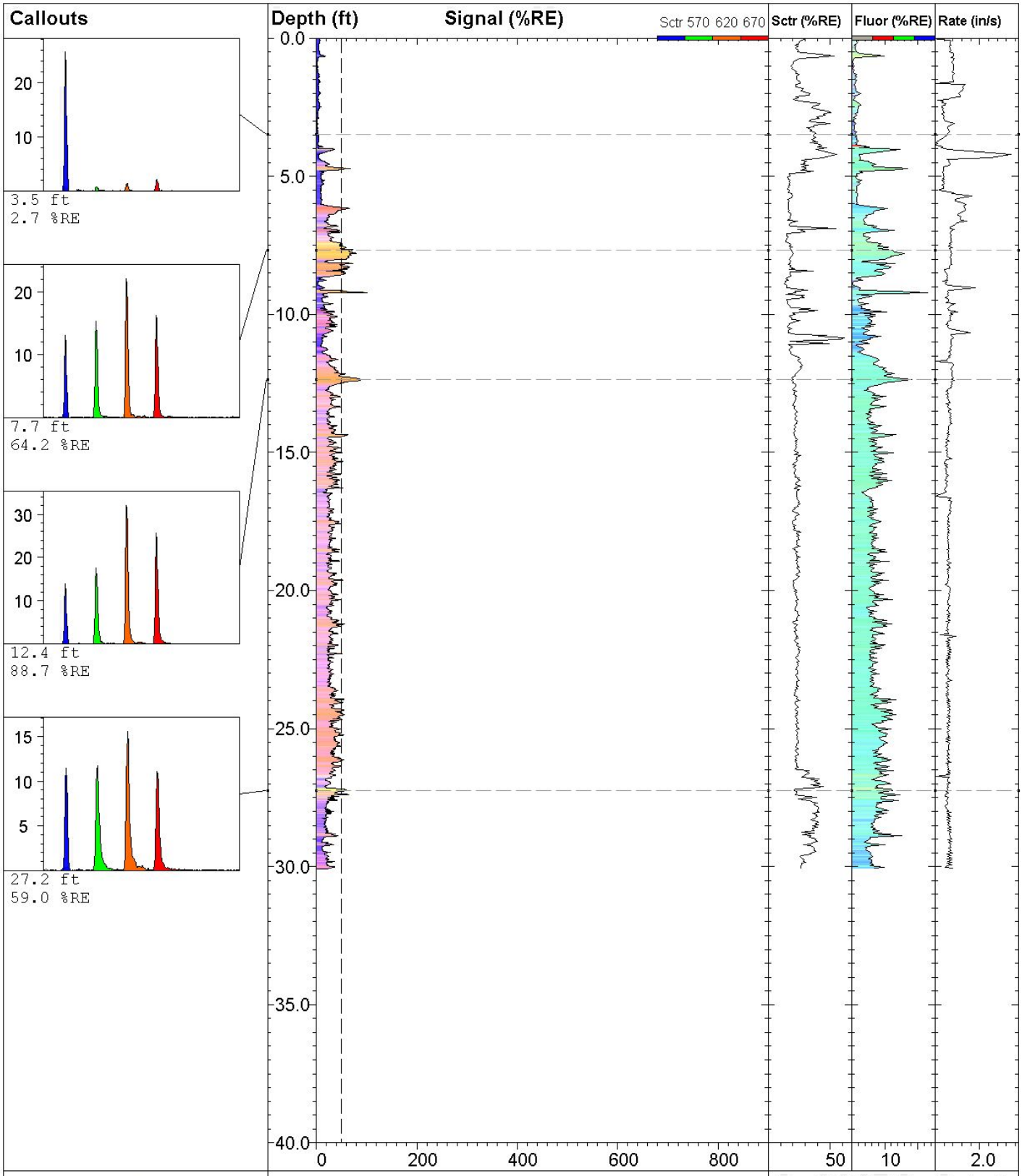
Site:	*Latitude / Datum:* **Unavailable / NA**	*Final depth:* **30.00 ft**
Client / Job: /	*Longitude / Fix:* **Unavailable / NA**	*Max signal:* **14.0 %RE @ 7.53 ft**
Operator / Unit: **/ OST**	*Elevation:* **Unavailable**	*Date & Time:* **2008-08-19 14:59 EDT**

307765



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TL 13.5 - 10.5

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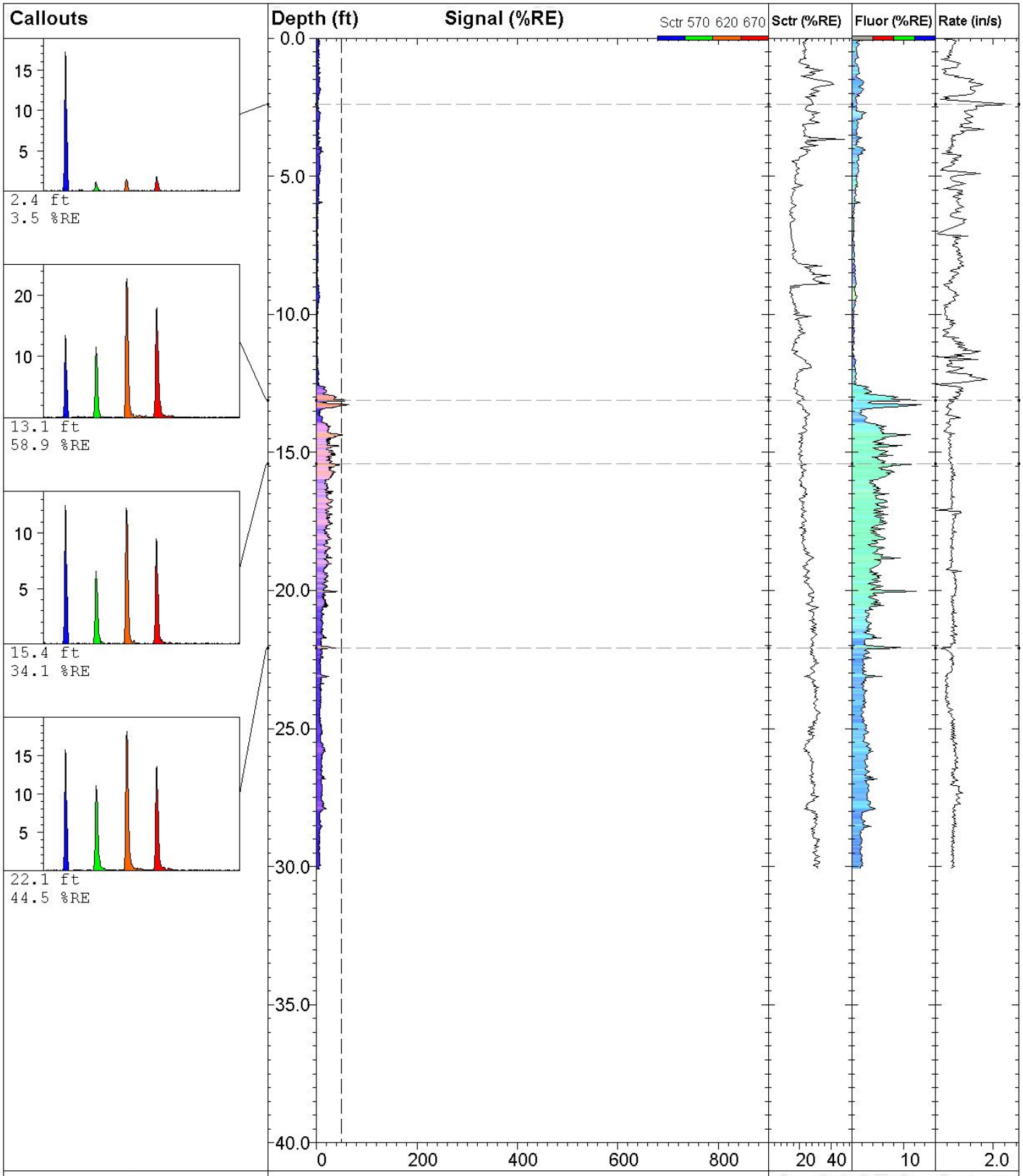
Site:	*Latitude / Datum:* **Unavailable / NA**	*Final depth:* **30.08 ft**
Client / Job: **/**	*Longitude / Fix:* **Unavailable / NA**	*Max signal:* **101.3 %RE @ 9.21 ft**
Operator / Unit: **/ OST**	*Elevation:* **Unavailable**	*Date & Time:* **2008-08-19 13:22 EDT**

307766



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TL 12.5 - 10.5

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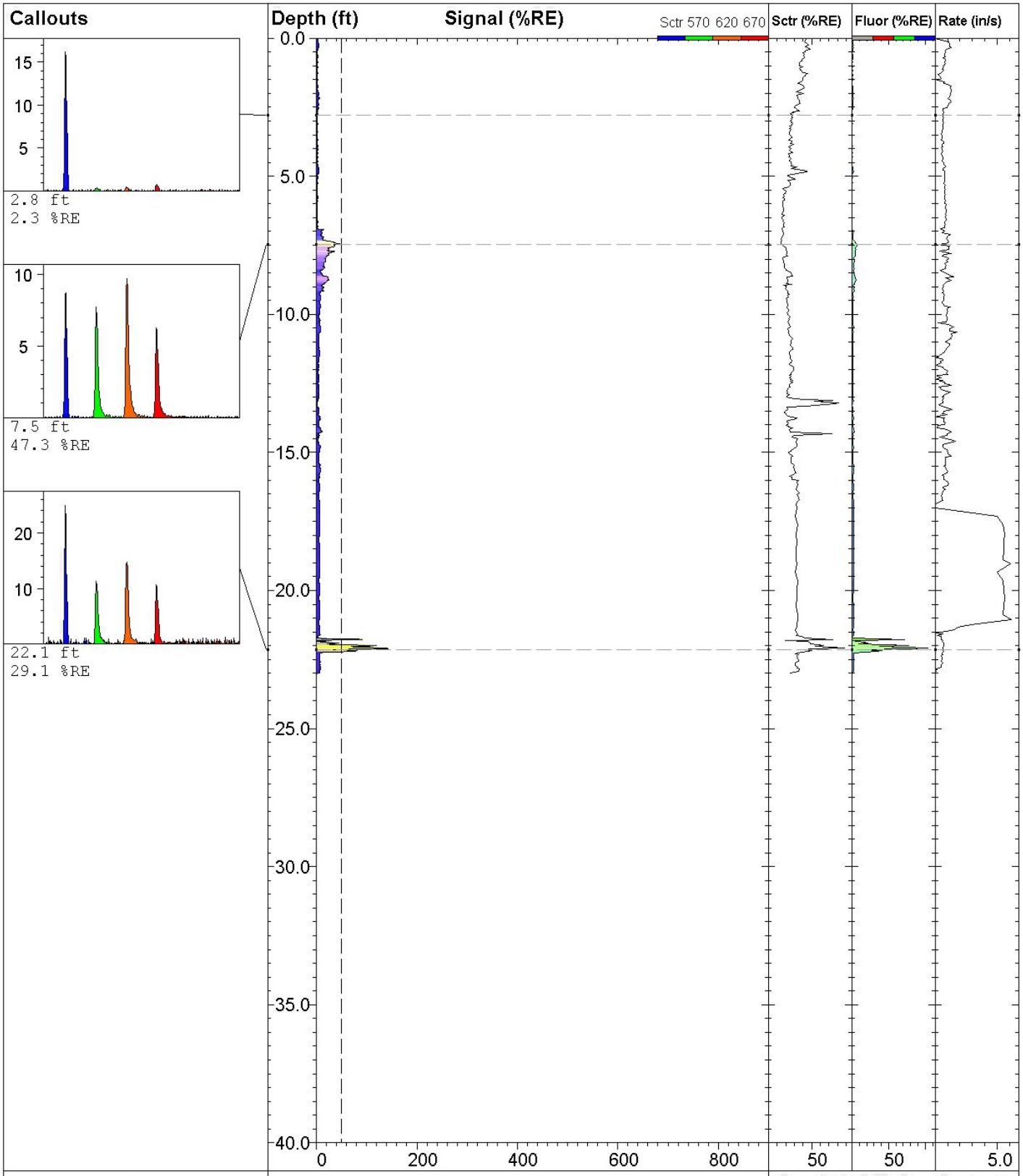
Site:	*Latitude / Datum:* **Unavailable / NA**	*Final depth:* **30.08 ft**
Client / Job: /	*Longitude / Fix:* **Unavailable / NA**	*Max signal:* **66.0 %RE @ 13.12 ft**
Operator / Unit: **/ OST**	*Elevation:* **Unavailable**	*Date & Time:* **2008-08-19 14:16 EDT**

307767



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TL 12.5 - 00

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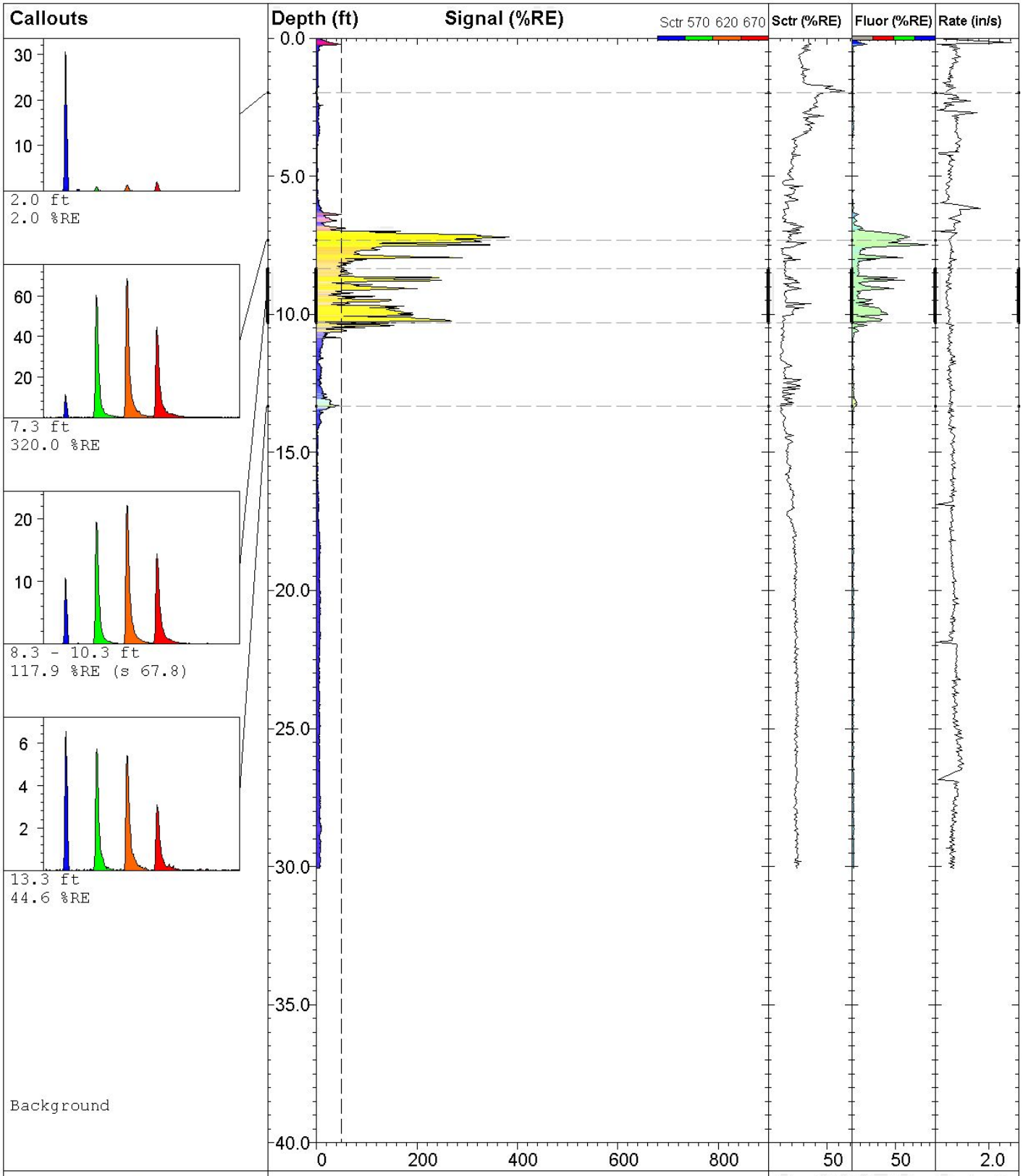
Site: **Quanta**	*Latitude / Datum:* **Unavailable / NA**	*Final depth:* **23.00 ft**
Client / Job: **CH2M HILL /**	*Longitude / Fix:* **Unavailable / NA**	*Max signal:* **146.8 %RE @ 22.10 ft**
Operator / Unit: **T. Rudolph / TG1002**	*Elevation:* **Unavailable**	*Date & Time:* **2008-08-22 12:59 EDT**

307768



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TL 12 -01.5

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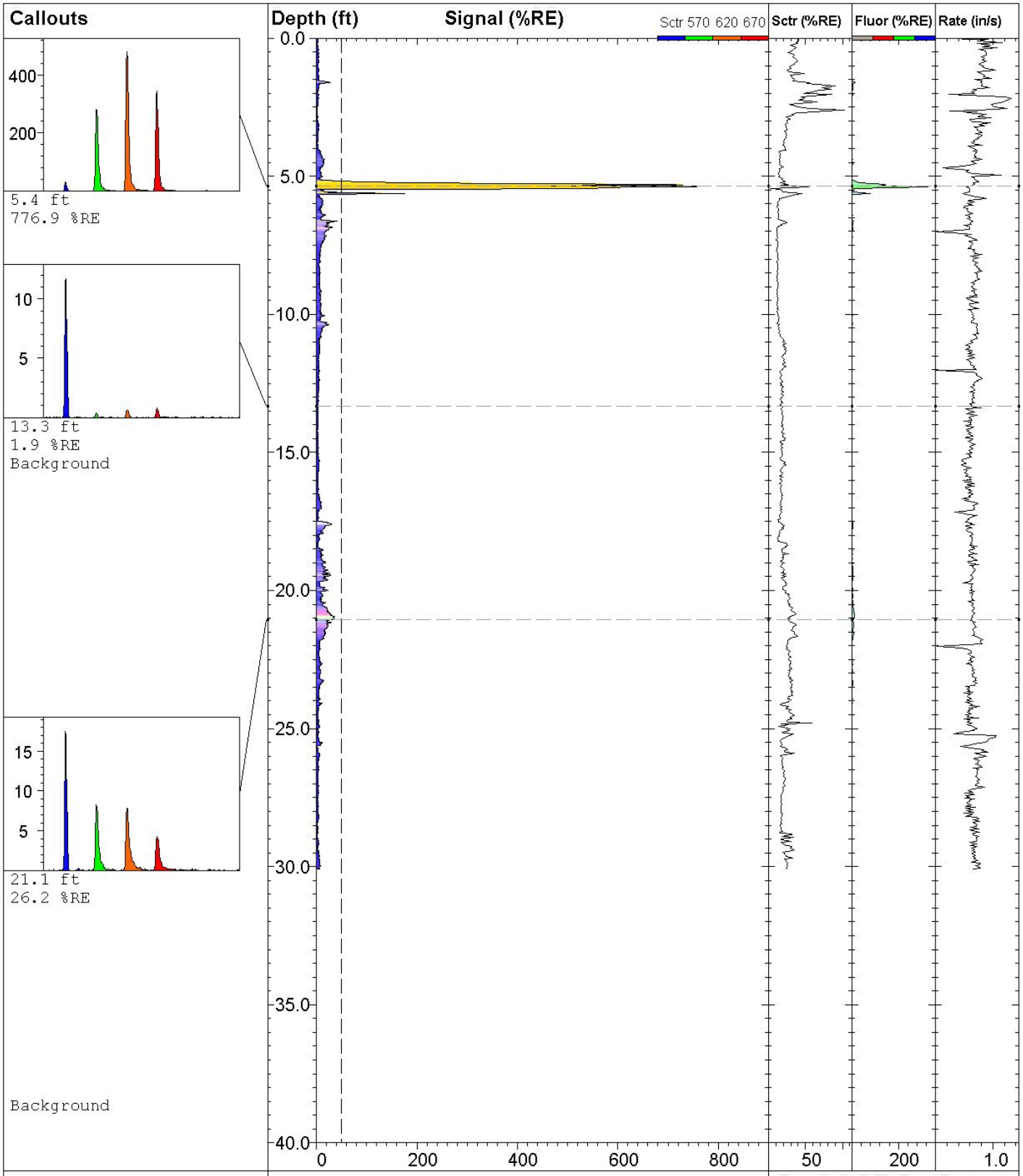
Site: **Quanta**	*Latitude / Datum:* **Unavailable / NA**	*Final depth:* **30.05 ft**
Client / Job: **CH2M HILL /**	*Longitude / Fix:* **Unavailable / NA**	*Max signal:* **385.4 %RE @ 7.20 ft**
Operator / Unit: **T. Rudolph / TG1002**	*Elevation:* **Unavailable**	*Date & Time:* **2008-08-21 12:52 EDT**

307769



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TL 12 - 00.5

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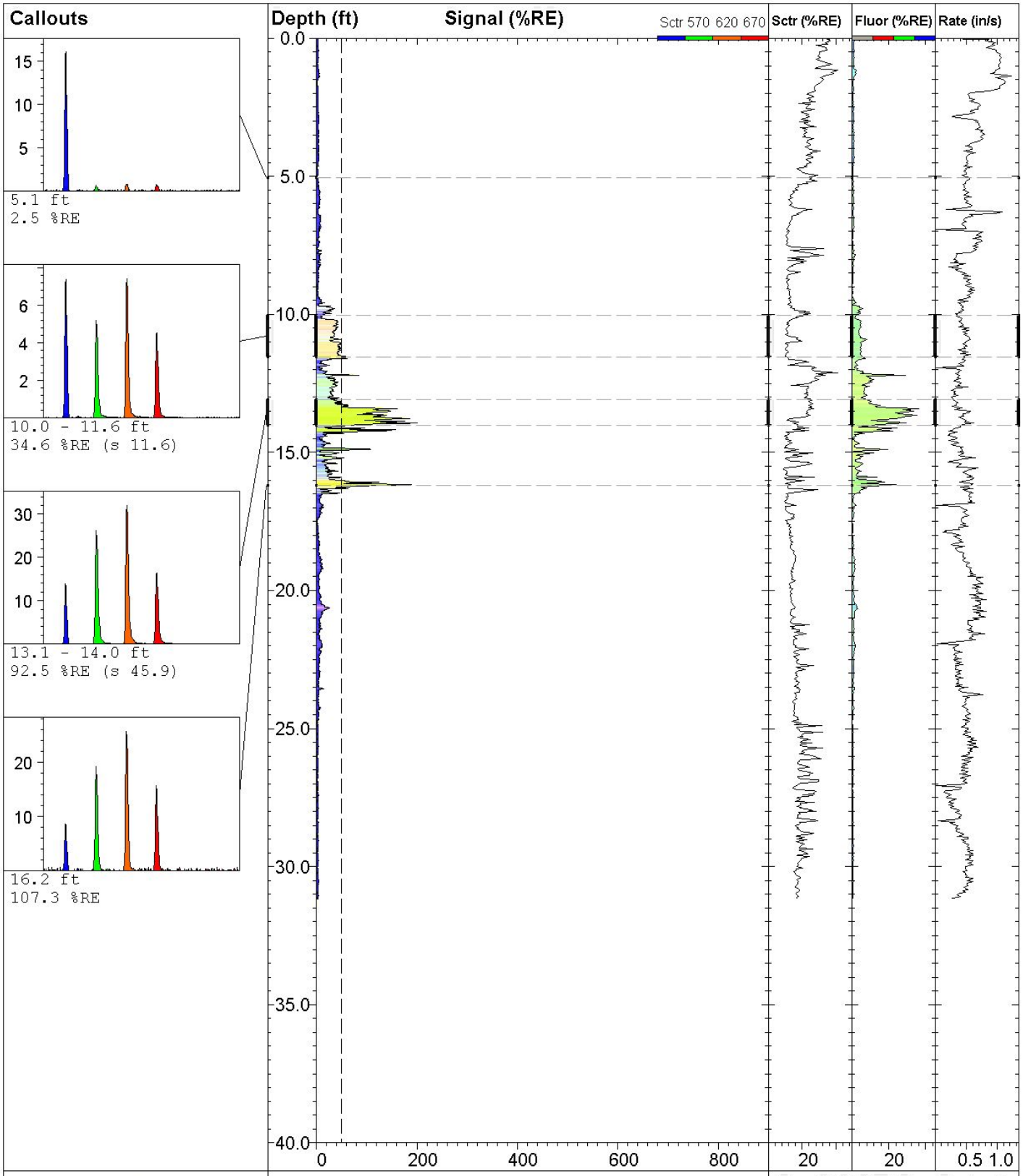
Site: **Quanta**	*Latitude / Datum:* **Unavailable / NA**	*Final depth:* **30.09 ft**
Client / Job: **CH2M HILL /**	*Longitude / Fix:* **Unavailable / NA**	*Max signal:* **776.7 %RE @ 5.37 ft**
Operator / Unit: **T. Rudolph / TG1002**	*Elevation:* **Unavailable**	*Date & Time:* **2008-08-21 12:20 EDT**

307770



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TL 11.75 - 00

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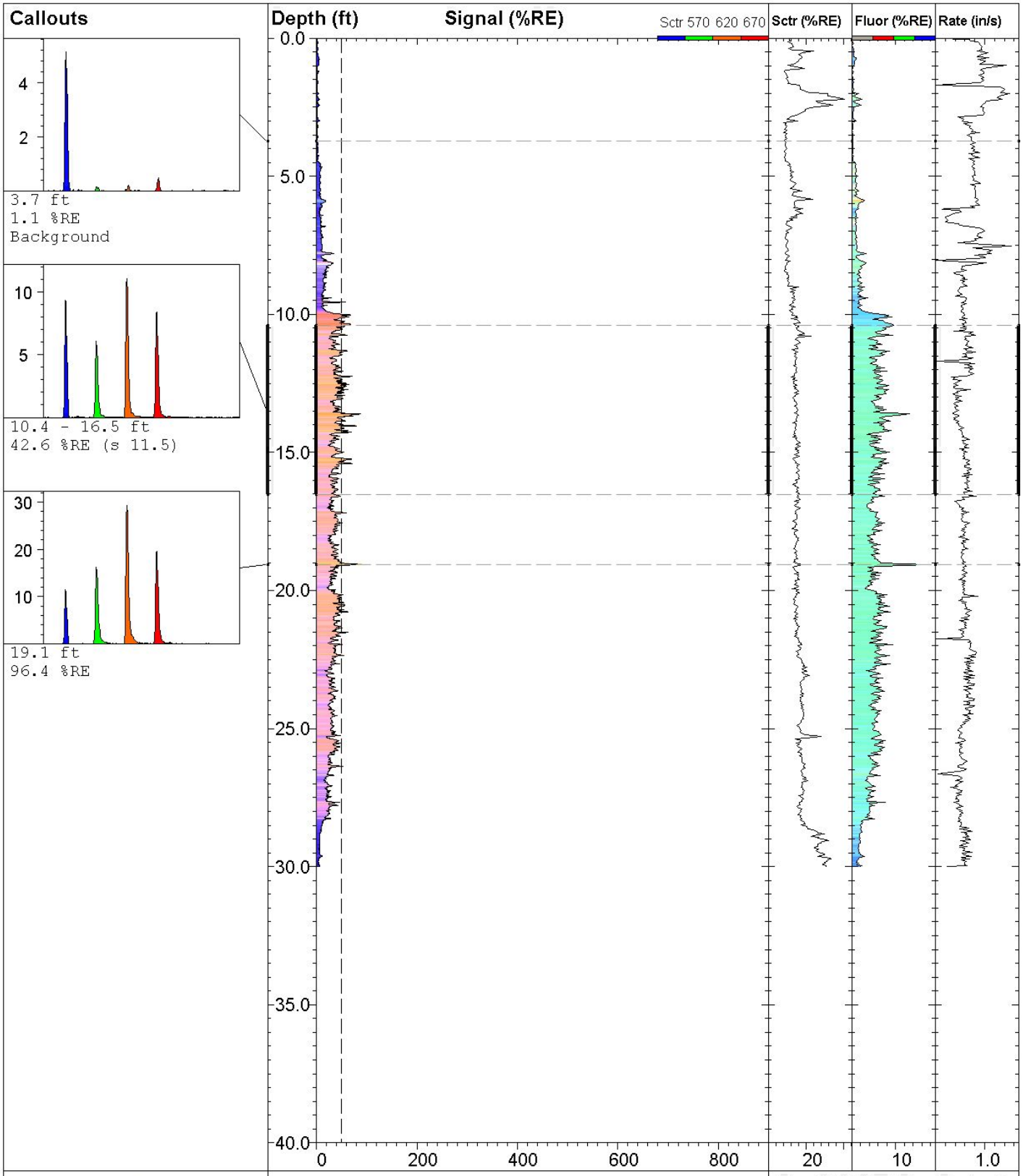
Site: **Quanta**	*Latitude / Datum:* **Unavailable / NA**	*Final depth:* **31.19 ft**
Client / Job: **CH2M HILL /**	*Longitude / Fix:* **Unavailable / NA**	*Max signal:* **205.9 %RE @ 13.94 ft**
Operator / Unit: **T. Rudolph / TG1002**	*Elevation:* **Unavailable**	*Date & Time:* **2008-08-22 09:47 EDT**

307771



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TL 11.5 -10.5

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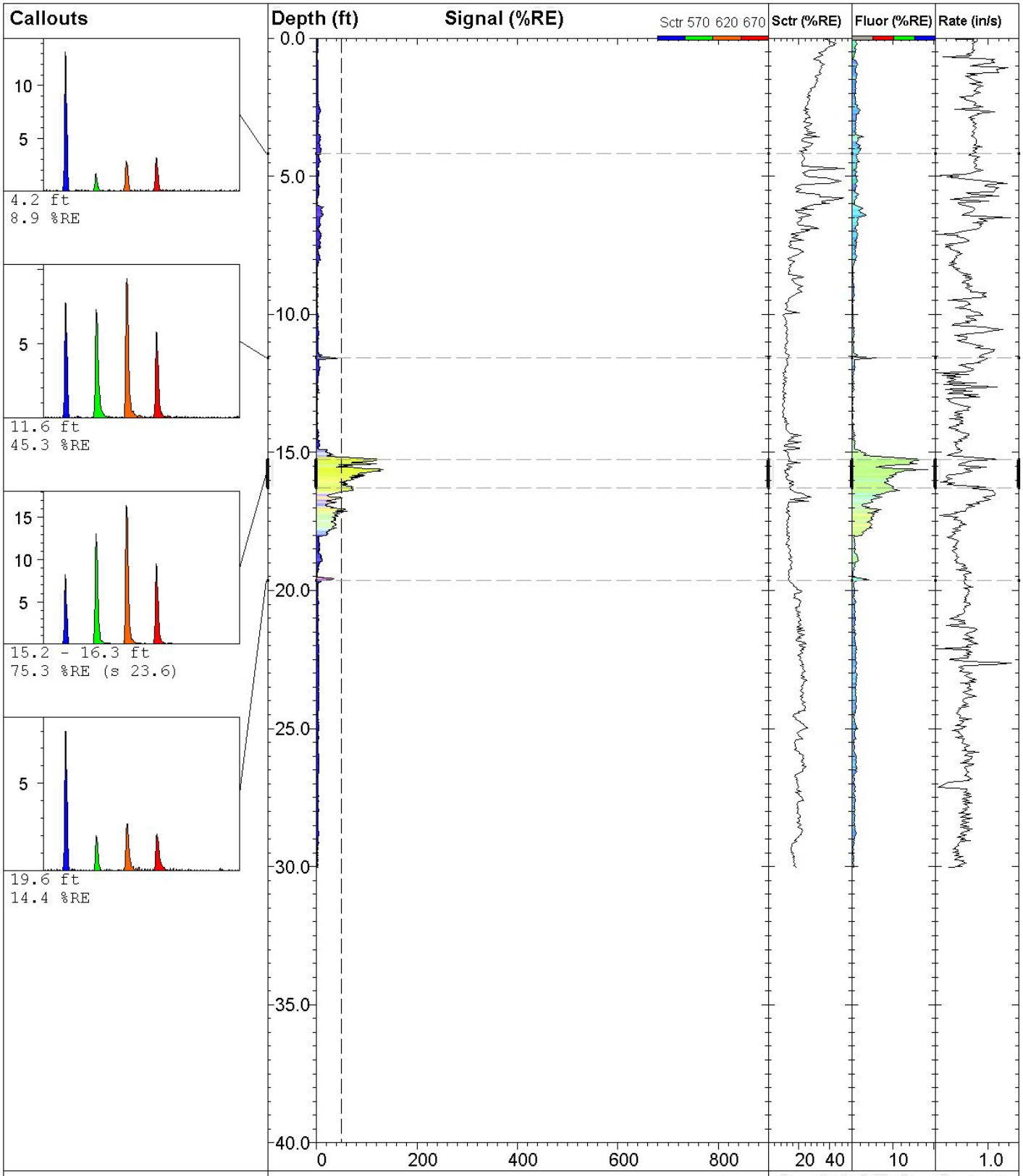
Site: **Quanta**	*Latitude / Datum:* **Unavailable / NA**	*Final depth:* **30.00 ft**
Client / Job: **CH2M HILL /**	*Longitude / Fix:* **Unavailable / NA**	*Max signal:* **96.4 %RE @ 19.06 ft**
Operator / Unit: **T. Rudolph / TG1002**	*Elevation:* **Unavailable**	*Date & Time:* **2008-08-21 07:33 EDT**

307772



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TL 11.25 - 0.0

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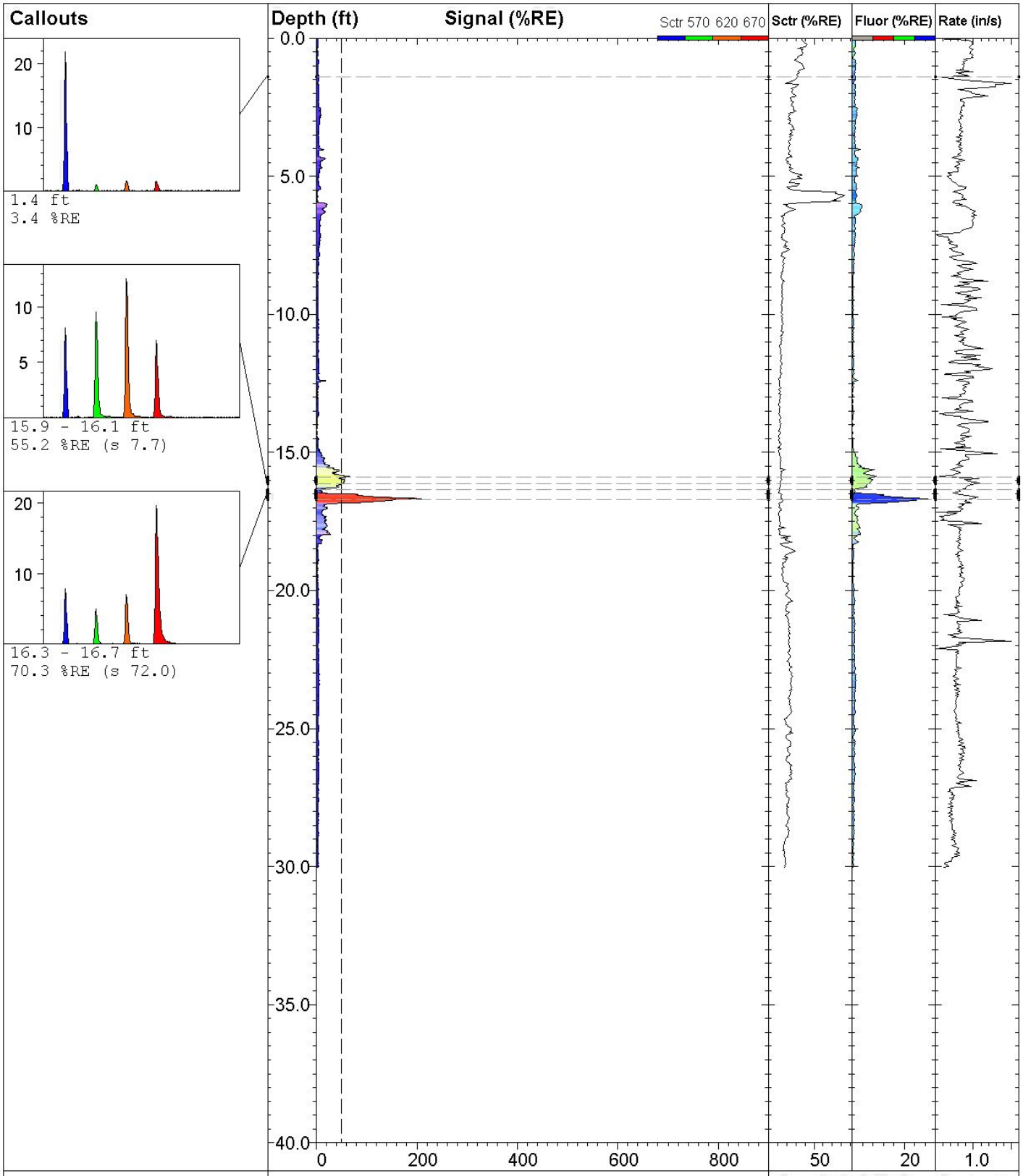
Site: **Quanta**	*Latitude / Datum:* **Unavailable / NA**	*Final depth:* **30.04 ft**
Client / Job: **CH2M HILL /**	*Longitude / Fix:* **Unavailable / NA**	*Max signal:* **133.8 %RE @ 15.61 ft**
Operator / Unit: **T. Rudolph / TG1002**	*Elevation:* **Unavailable**	*Date & Time:* **2008-08-22 11:23 EDT**

307773



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TL 11.25 - 0.0b

TarGOST By Dakota
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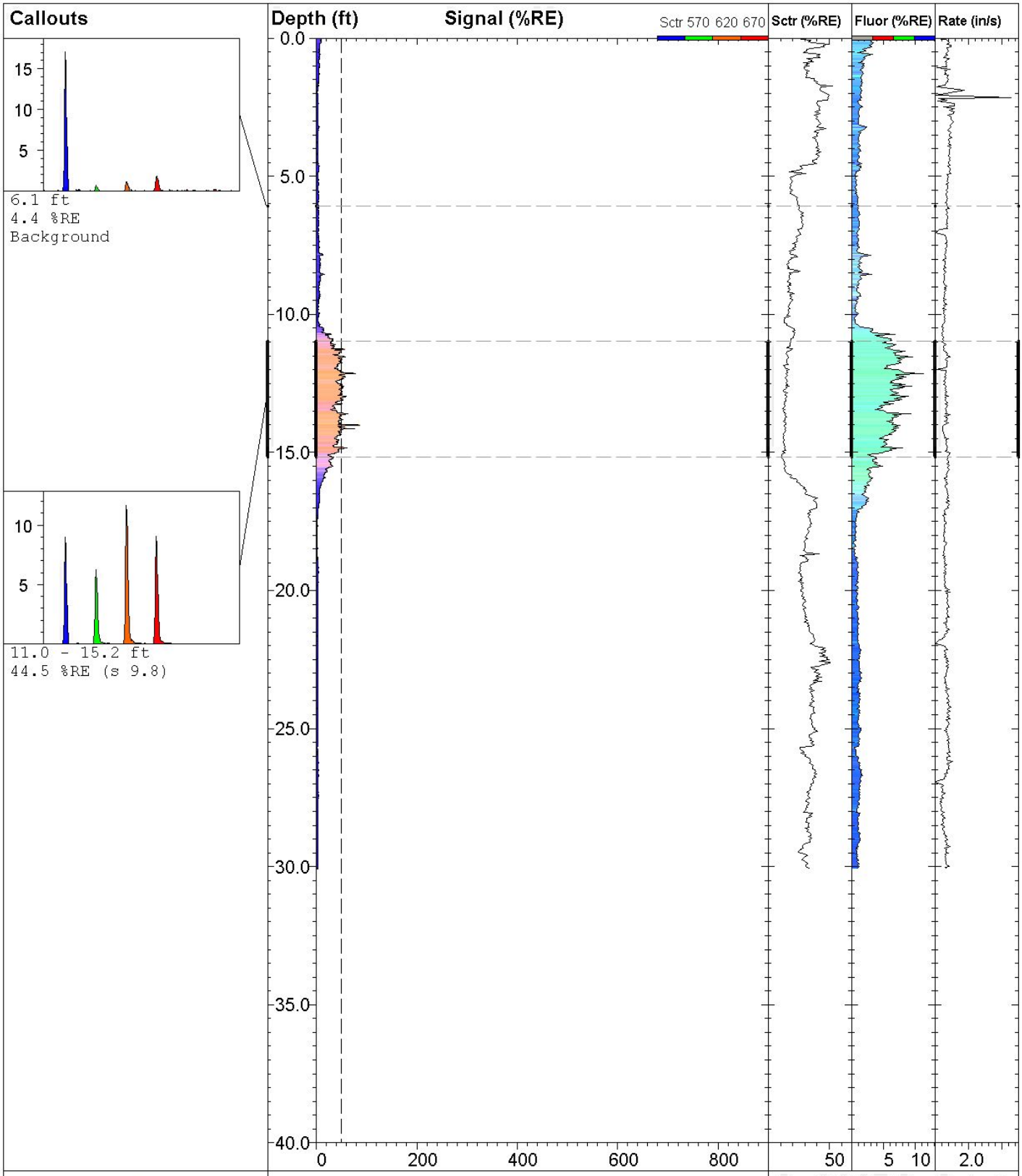
Site: **Quanta**	*Latitude / Datum:* **Unavailable / NA**	*Final depth:* **30.03 ft**
Client / Job: **CH2M HILL /**	*Longitude / Fix:* **Unavailable / NA**	*Max signal:* **209.7 %RE @ 16.67 ft**
Operator / Unit: **T. Rudolph / TG1002**	*Elevation:* **Unavailable**	*Date & Time:* **2008-08-22 11:51 EDT**

307774



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TL 11 -11.25

TarGOST By Dakota
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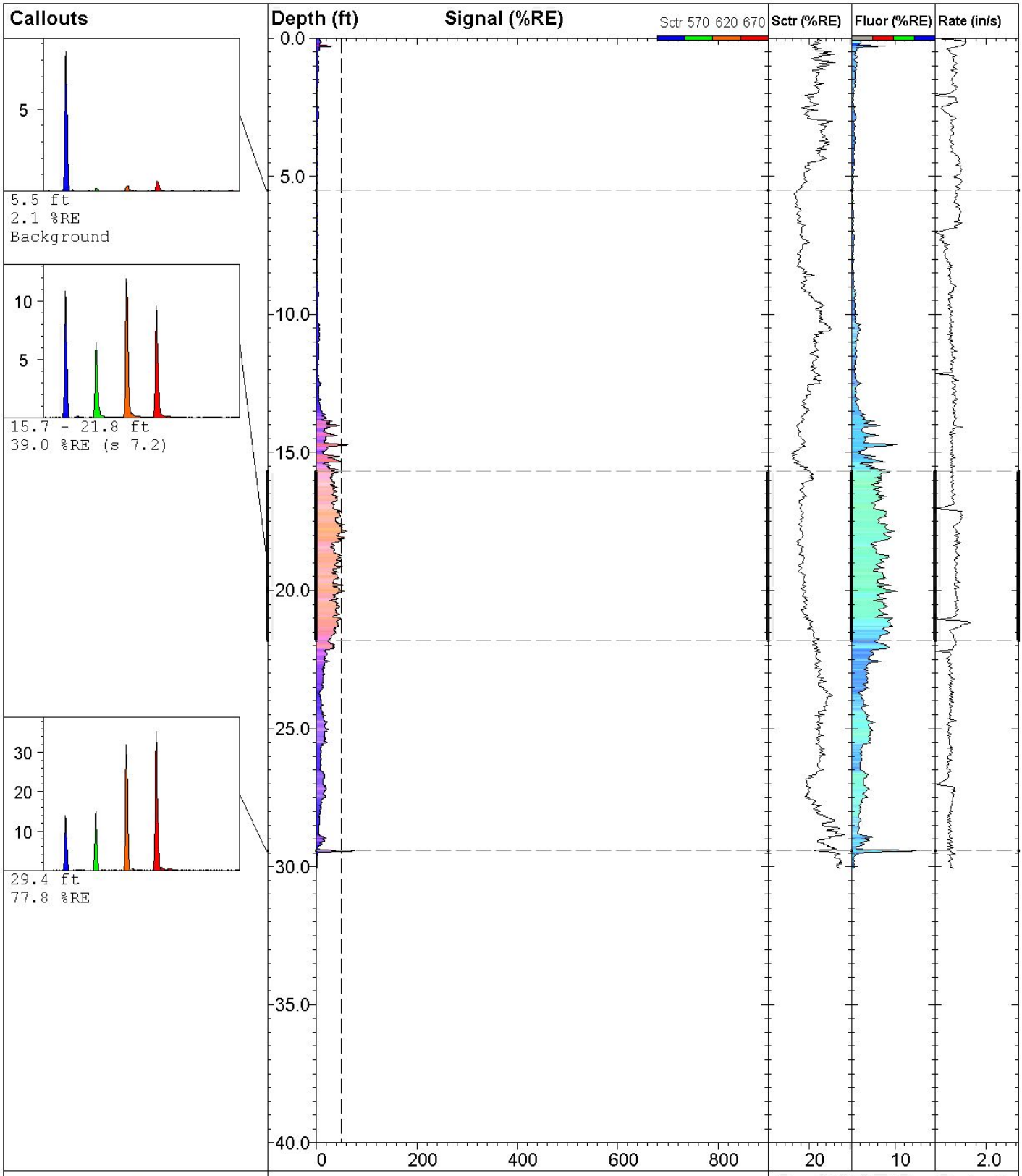
Site: **Quanta**	*Latitude / Datum:* **Unavailable / NA**	*Final depth:* **30.09 ft**
Client / Job: **CH2M HILL /**	*Longitude / Fix:* **Unavailable / NA**	*Max signal:* **87.0 %RE @ 14.01 ft**
Operator / Unit: **T. Rudolph / OST**	*Elevation:* **Unavailable**	*Date & Time:* **2008-08-20 10:59 EDT**

307775



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TL 11 -10.5

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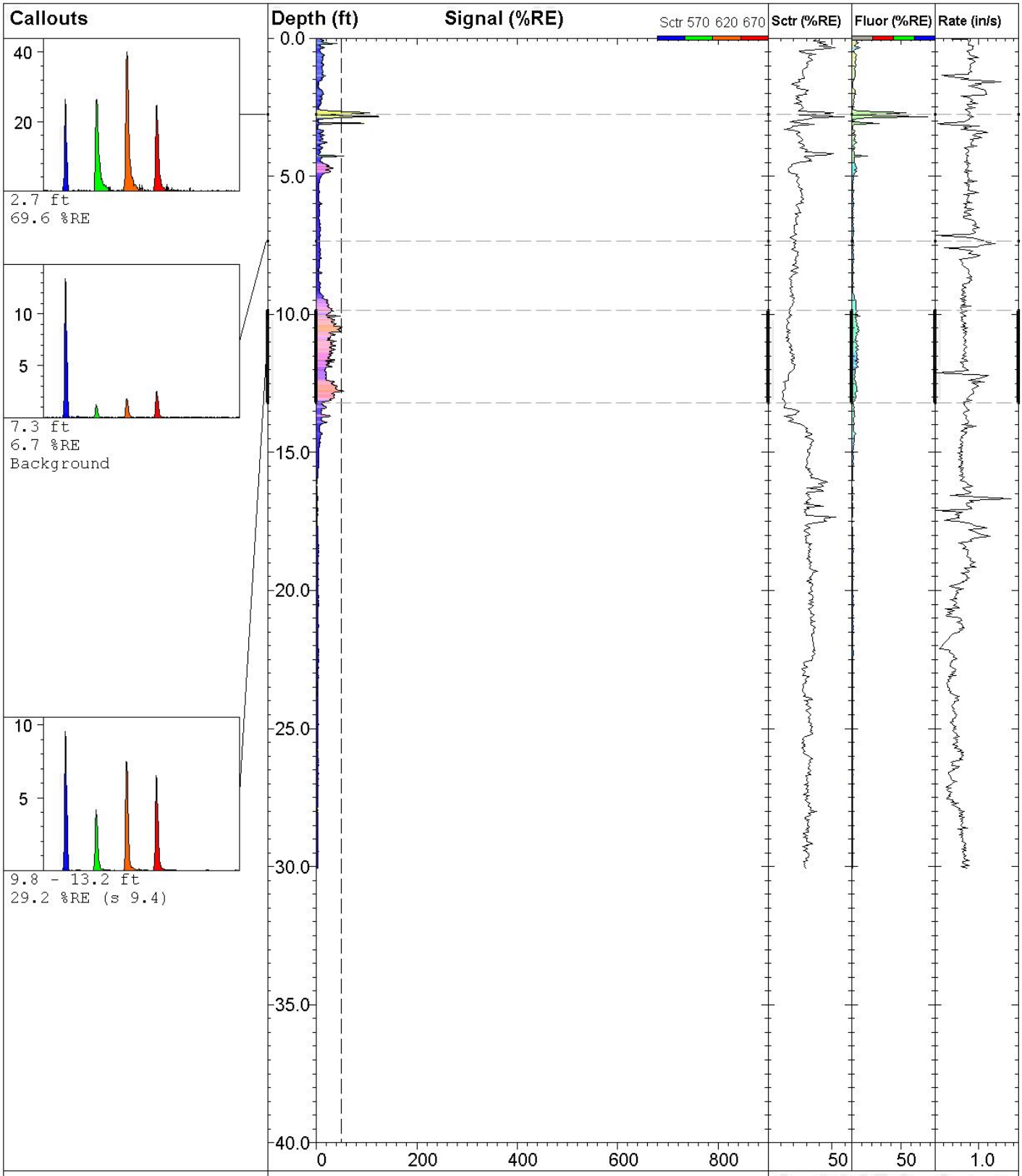
Site: **Quanta**	*Latitude / Datum:* **Unavailable / NA**	*Final depth:* **30.06 ft**
Client / Job: **CH2M HILL /**	*Longitude / Fix:* **Unavailable / NA**	*Max signal:* **77.9 %RE @ 29.43 ft**
Operator / Unit: **T. Rudolph / TG1002**	*Elevation:* **Unavailable**	*Date & Time:* **2008-08-21 08:55 EDT**

307776



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TL 11 - 11.75

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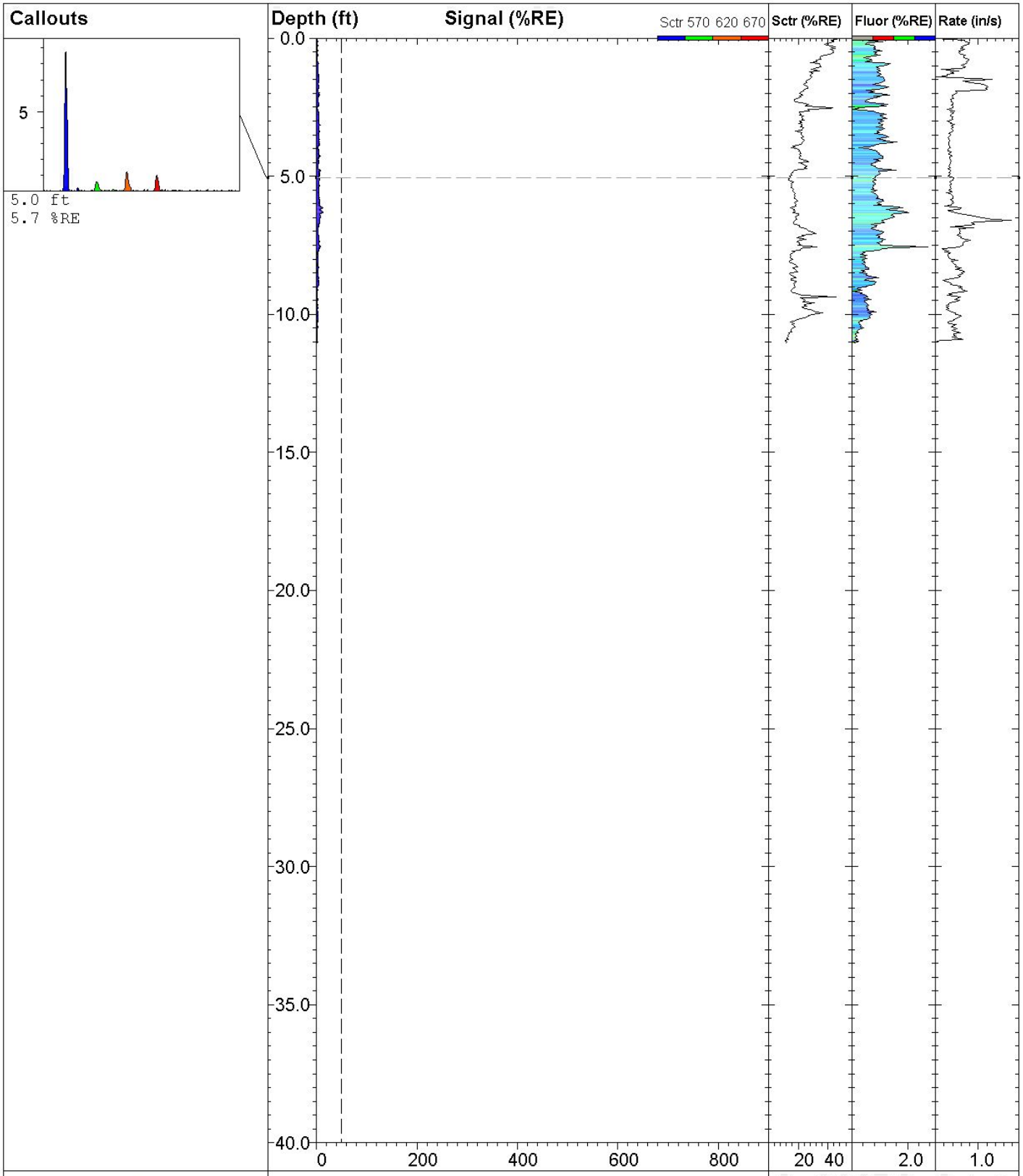
Site: **Quanta**	*Latitude / Datum:* **Unavailable / NA**	*Final depth:* **30.06 ft**
Client / Job: **CH2M HILL /**	*Longitude / Fix:* **Unavailable / NA**	*Max signal:* **129.6 %RE @ 2.84 ft**
Operator / Unit: **T. Rudolph / OST**	*Elevation:* **Unavailable**	*Date & Time:* **2008-08-20 11:28 EDT**

307777



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TL 11 - 0.0

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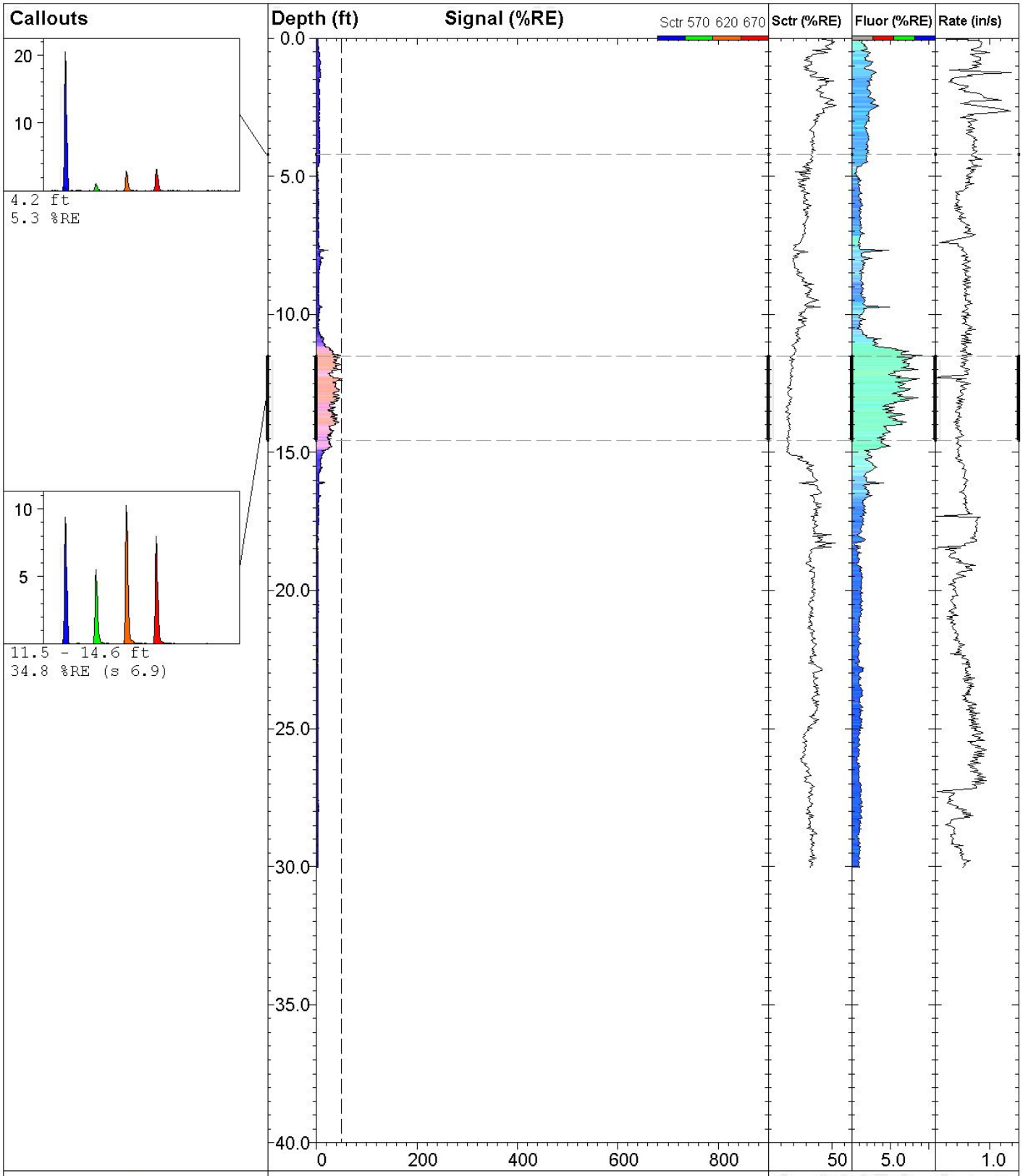
Site: **Quanta**	*Latitude / Datum:* **Unavailable / NA**	*Final depth:* **11.04 ft**
Client / Job: **CH2M HILL /**	*Longitude / Fix:* **Unavailable / NA**	*Max signal:* **13.3 %RE @ 6.30 ft**
Operator / Unit: **T. Rudolph / TG1002**	*Elevation:* **Unavailable**	*Date & Time:* **2008-08-22 10:36 EDT**

307778



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TL 10.25 -11.5

TarGOST By Dakota
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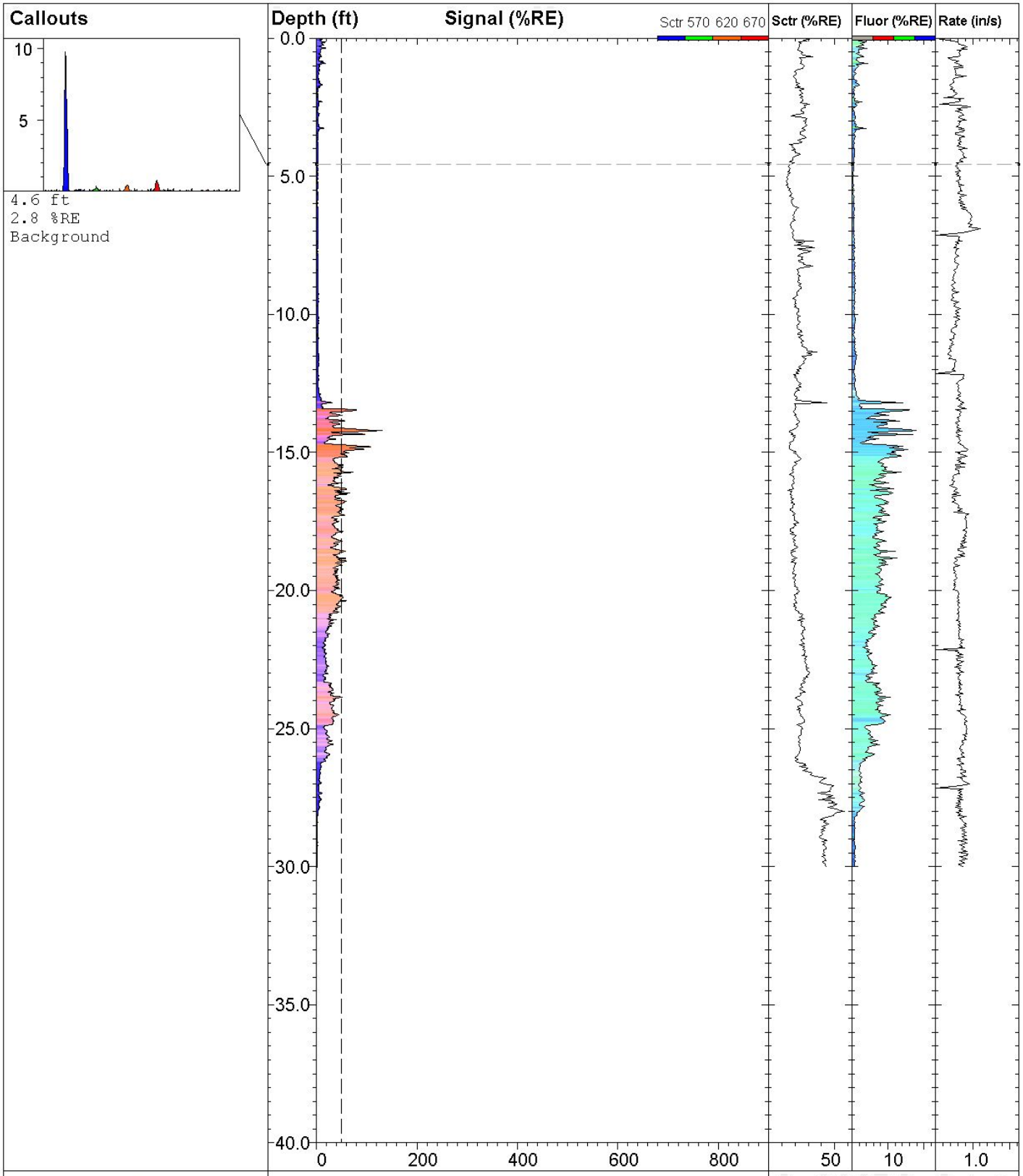
Site: **Quanta**	*Latitude / Datum:* **Unavailable / NA**	*Final depth:* **30.03 ft**
Client / Job: **CH2M HILL /**	*Longitude / Fix:* **Unavailable / NA**	*Max signal:* **51.9 %RE @ 12.33 ft**
Operator / Unit: **T. Rudolph / OST**	*Elevation:* **Unavailable**	*Date & Time:* **2008-08-20 10:14 EDT**

307779



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TL 10.5 -10.5

TarGOST By Dakota
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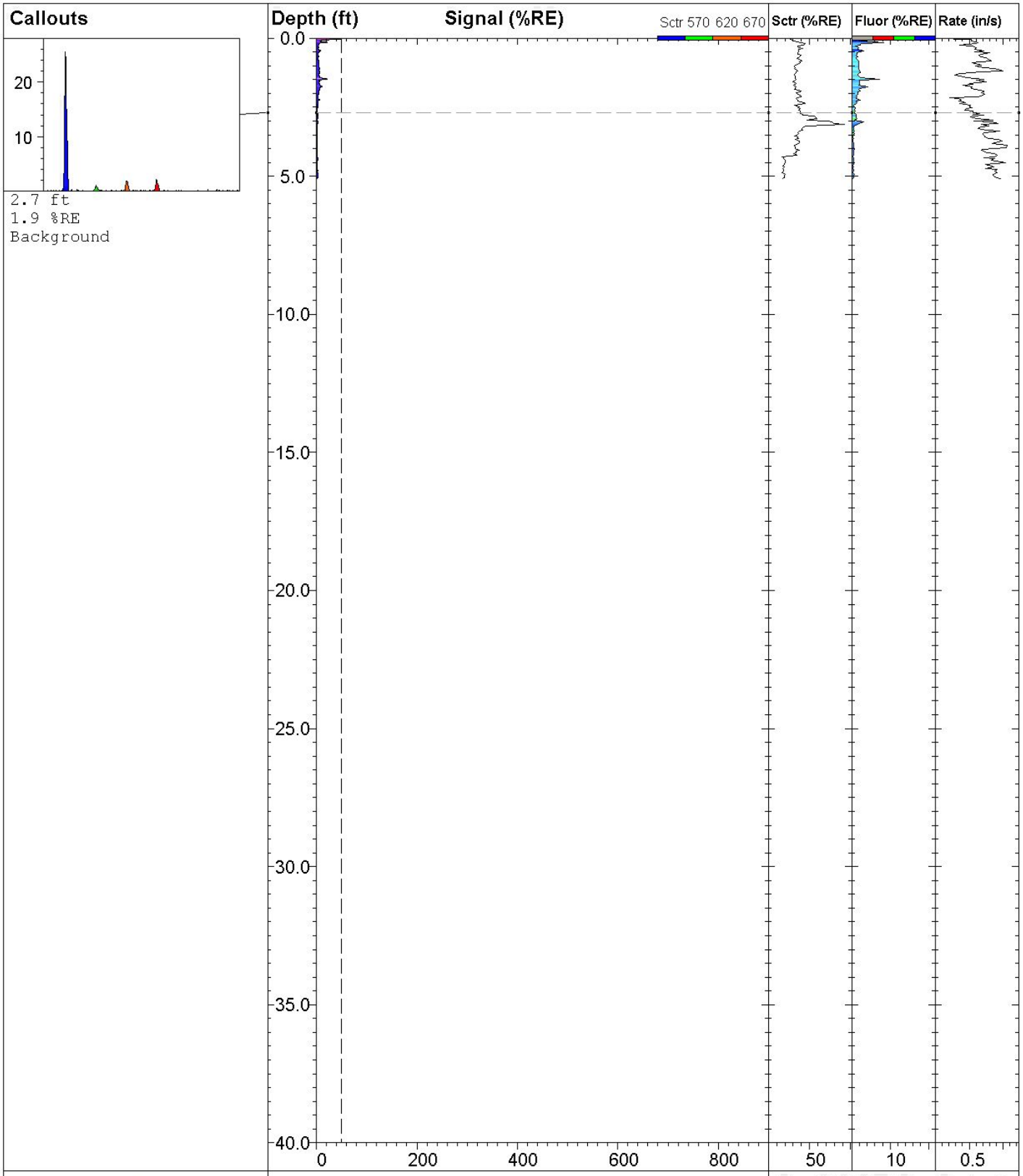
Site: **Quanta**	*Latitude / Datum:* **Unavailable / NA**	*Final depth:* **30.03 ft**
Client / Job: **CH2M HILL /**	*Longitude / Fix:* **Unavailable / NA**	*Max signal:* **131.5 %RE @ 14.20 ft**
Operator / Unit: **T. Rudolph / TG1002**	*Elevation:* **Unavailable**	*Date & Time:* **2008-08-21 09:40 EDT**

307780



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TL 10.5 - 9.5b

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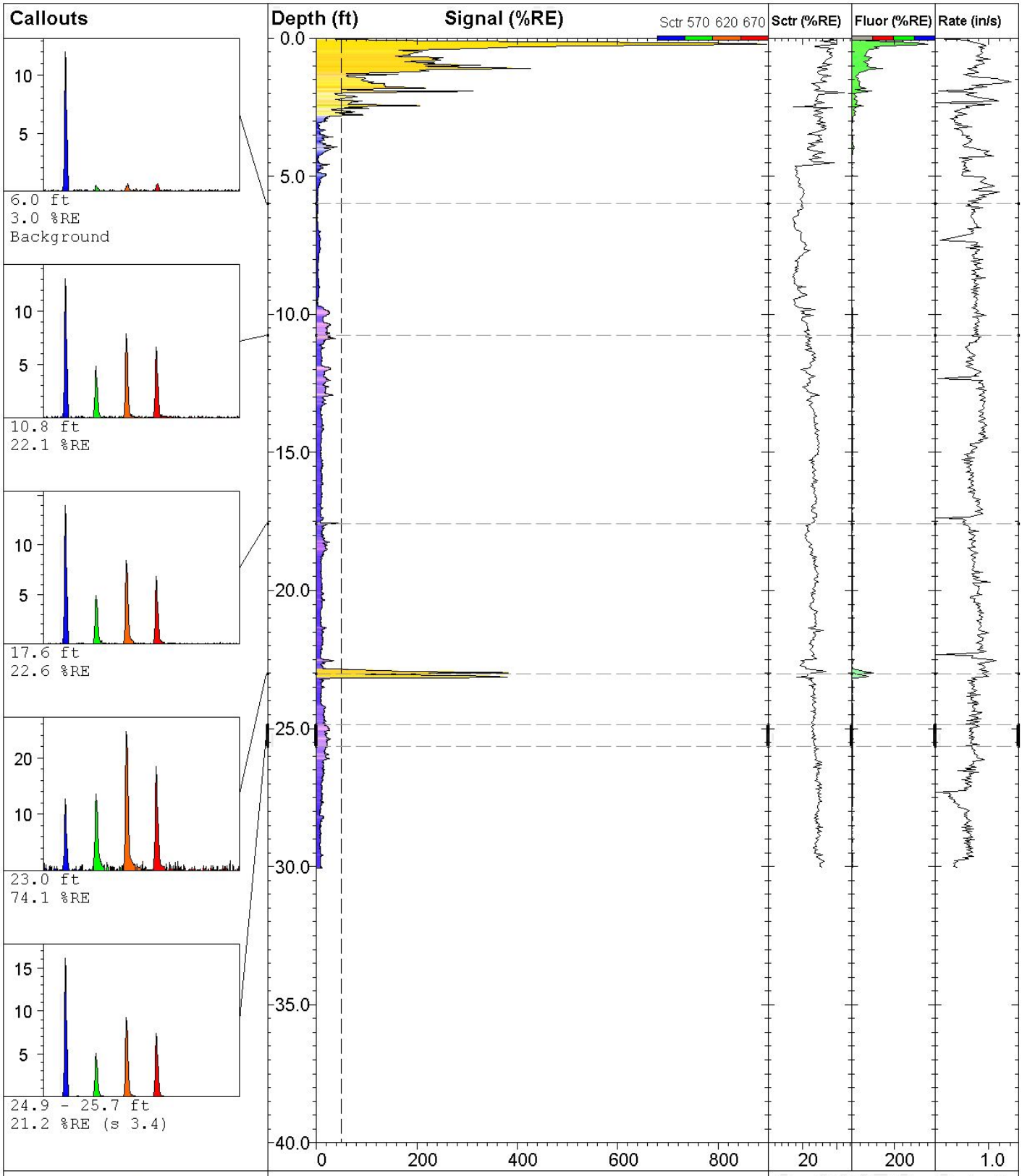
Site: **Quanta**	*Latitude / Datum:* **Unavailable / NA**	*Final depth:* **5.10 ft**
Client / Job: **CH2M HILL /**	*Longitude / Fix:* **Unavailable / NA**	*Max signal:* **97.8 %RE @ 0.00 ft**
Operator / Unit: **T. Rudolph / TG1002**	*Elevation:* **Unavailable**	*Date & Time:* **2008-08-21 15:54 EDT**

307781



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TL 10.5 - 9.5

TarGOST By Dakota
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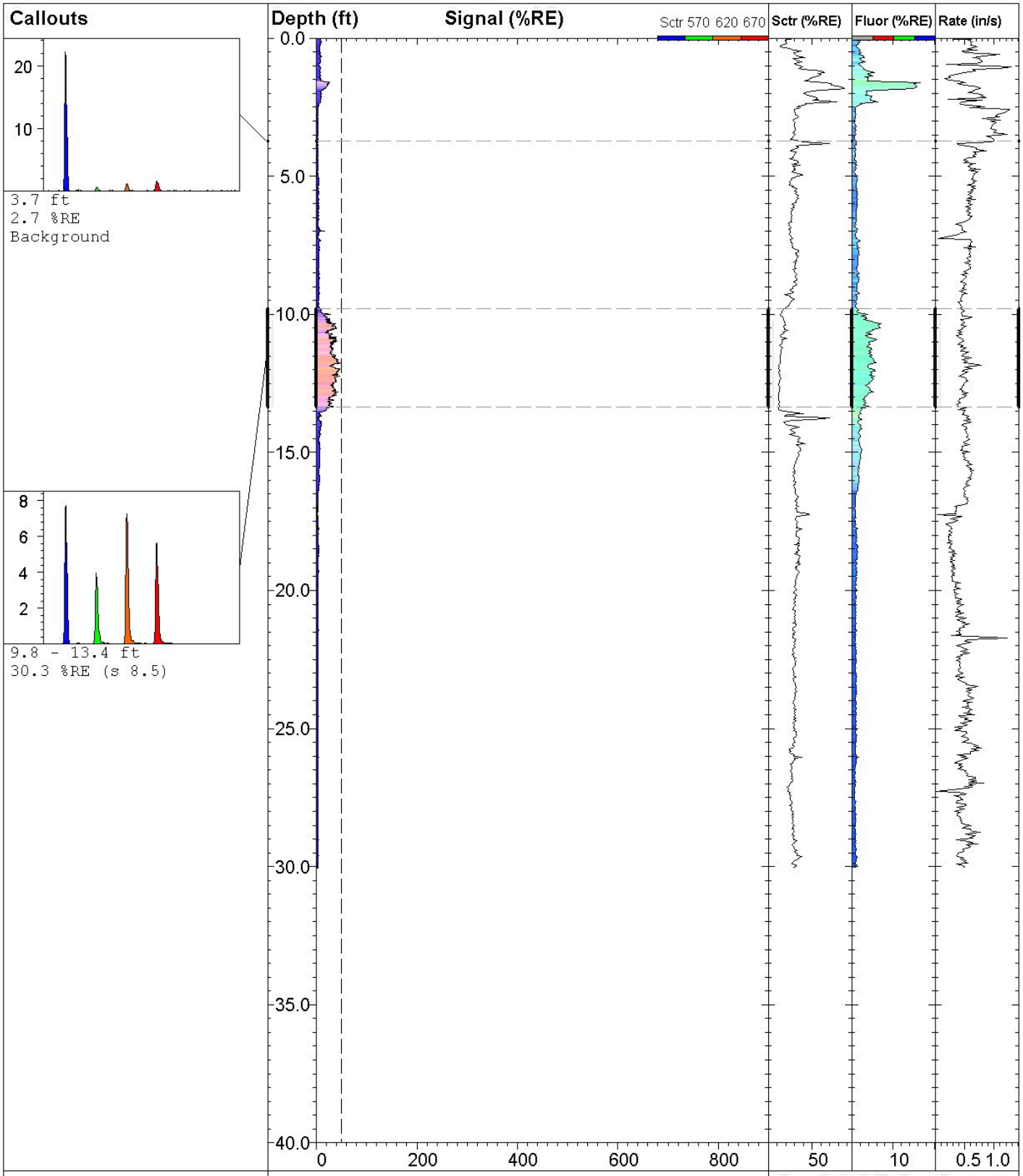
Site: **Quanta**	*Latitude / Datum:* **Unavailable / NA**	*Final depth:* **30.05 ft**
Client / Job: **CH2M HILL /**	*Longitude / Fix:* **Unavailable / NA**	*Max signal:* **904.1 %RE @ 0.22 ft**
Operator / Unit: **T. Rudolph / TG1002**	*Elevation:* **Unavailable**	*Date & Time:* **2008-08-21 15:34 EDT**

307782



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TL 10 -11.25

TarGOST By Dakota
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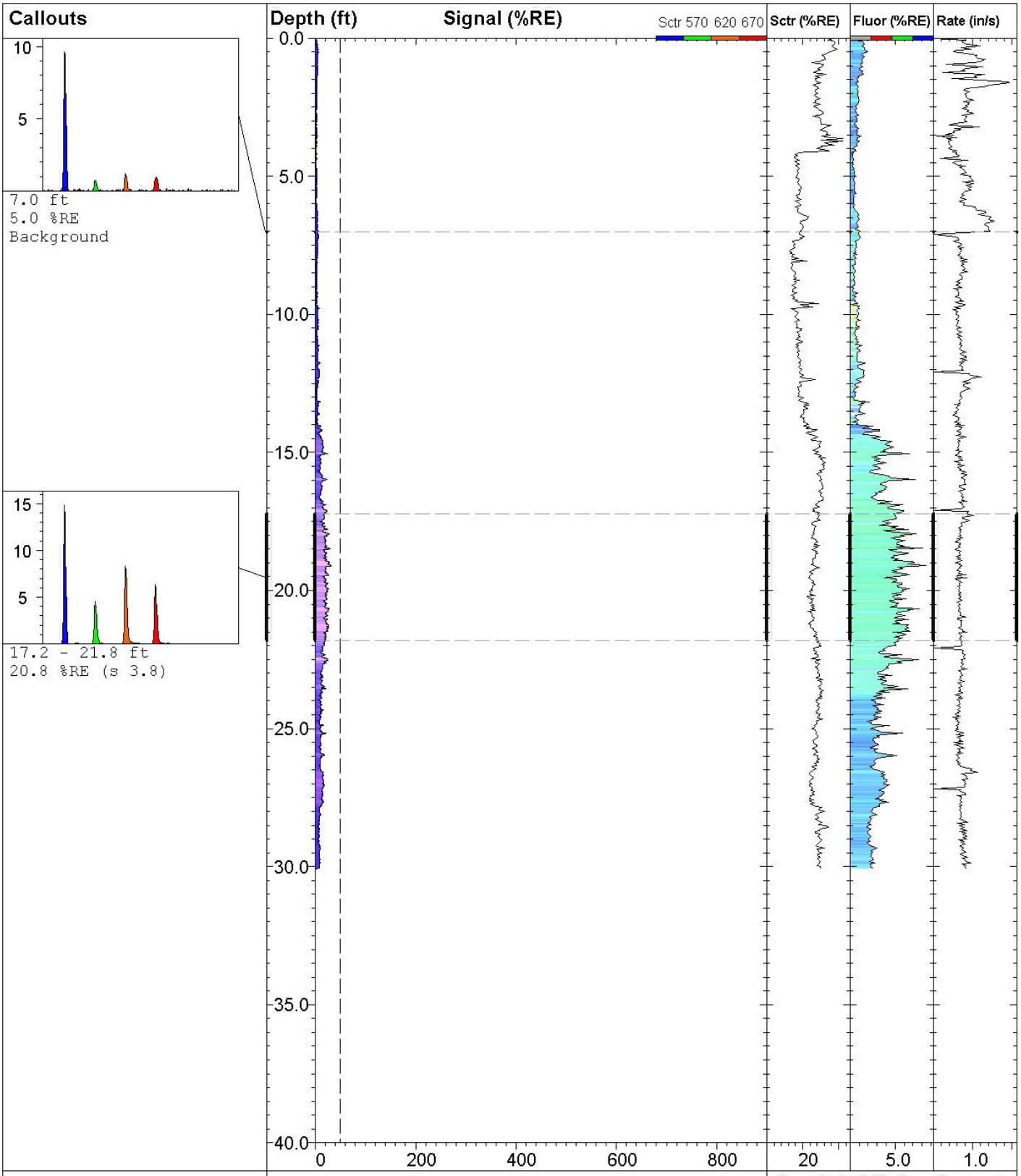
Site: **Quanta**	*Latitude / Datum:* **Unavailable / NA**	*Final depth:* **30.06 ft**
Client / Job: **CH2M HILL /**	*Longitude / Fix:* **Unavailable / NA**	*Max signal:* **47.3 %RE @ 11.77 ft**
Operator / Unit: **T. Rudolph / OST**	*Elevation:* **Unavailable**	*Date & Time:* **2008-08-20 09:35 EDT**

307783



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TL 10 -09

TarGOST By Dakota
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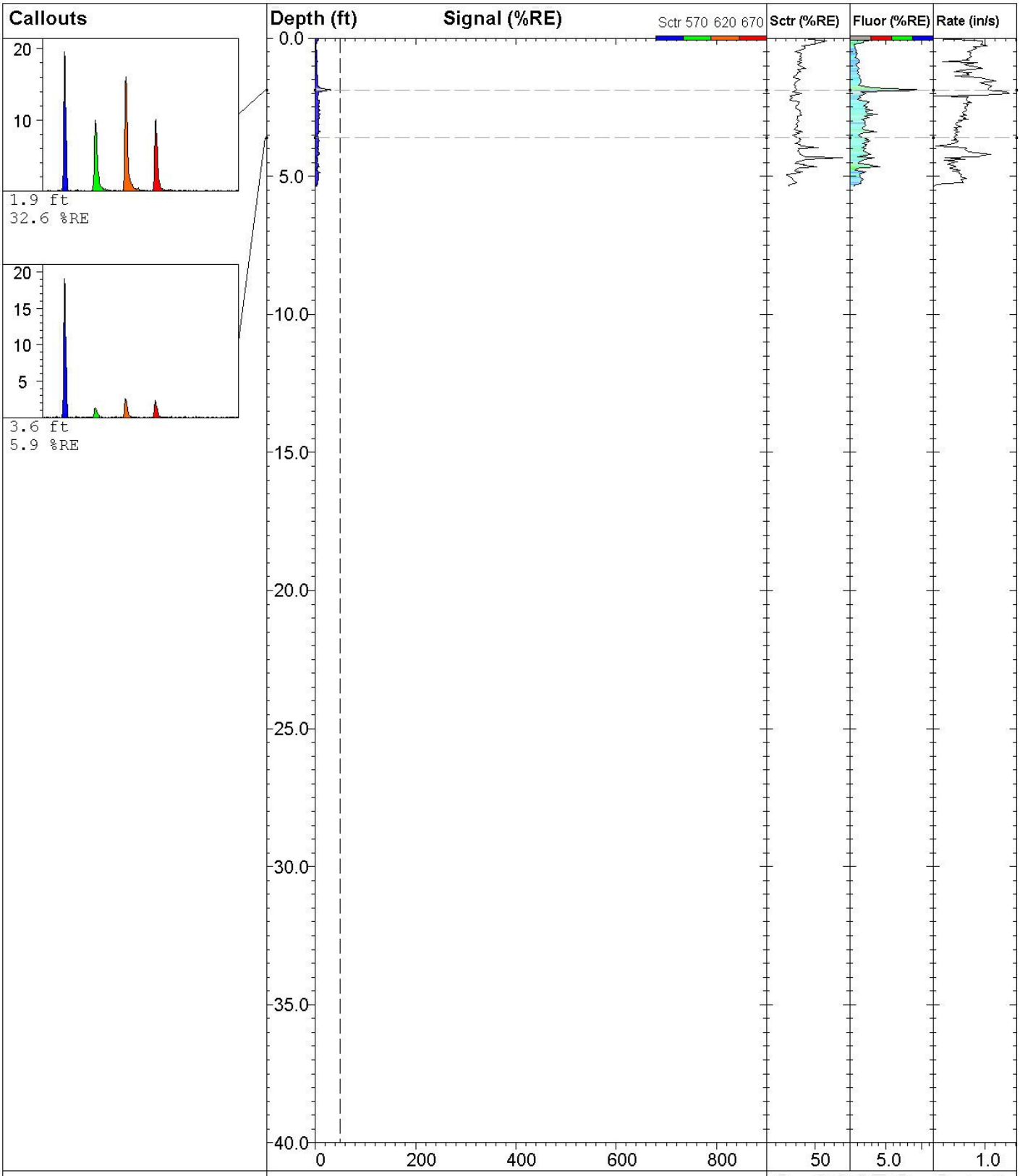
Site: **Quanta**	*Latitude / Datum:* **Unavailable / NA**	*Final depth:* **30.07 ft**
Client / Job: **CH2M HILL /**	*Longitude / Fix:* **Unavailable / NA**	*Max signal:* **31.9 %RE @ 19.11 ft**
Operator / Unit: **T. Rudolph / TG1002**	*Elevation:* **Unavailable**	*Date & Time:* **2008-08-21 15:03 EDT**

307784



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TL 10 -07.5

TarGOST By Dakota
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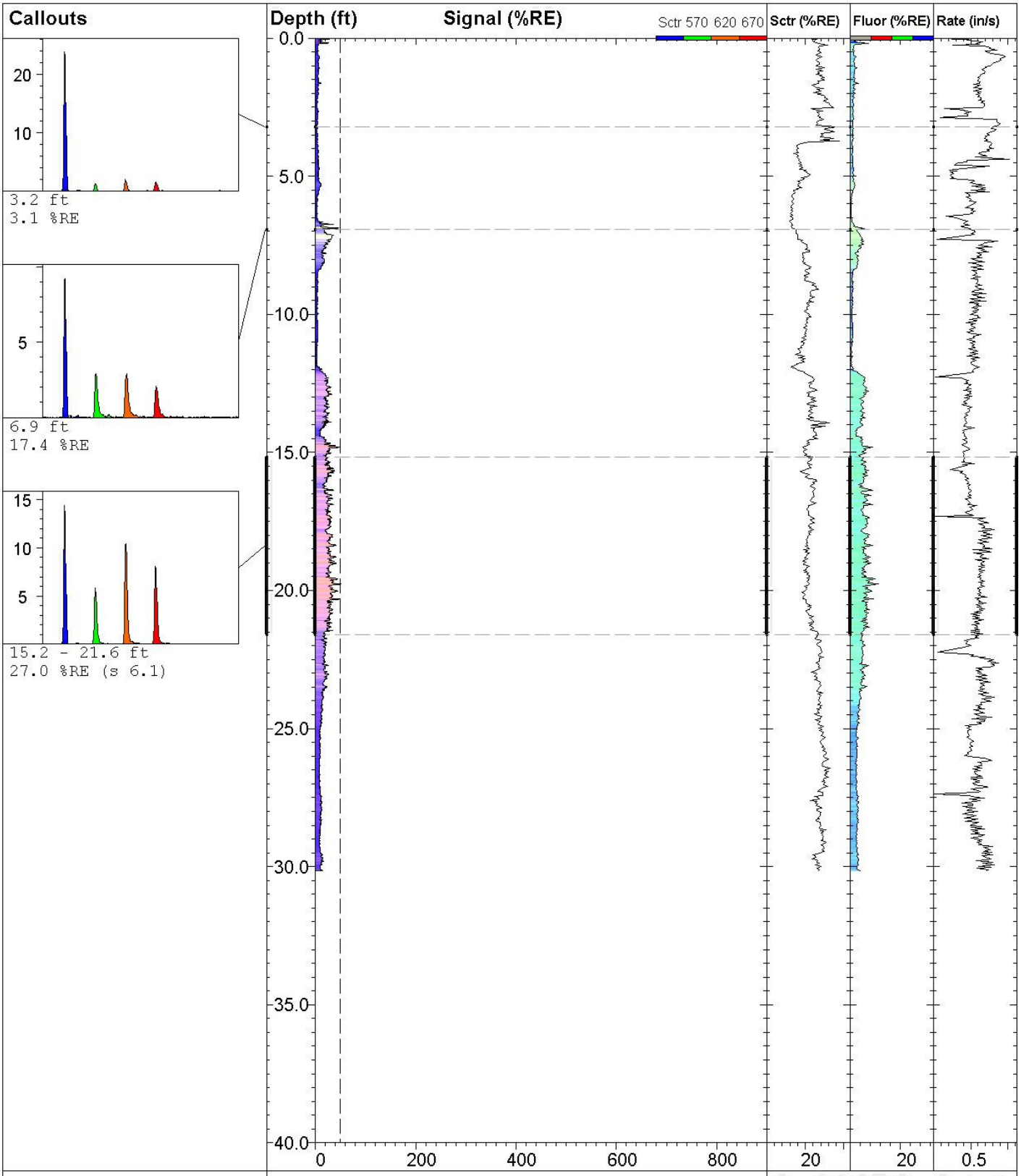
Site: **Quanta**	*Latitude / Datum:* **Unavailable / NA**	*Final depth:* **5.37 ft**
Client / Job: **CH2M HILL /**	*Longitude / Fix:* **Unavailable / NA**	*Max signal:* **32.6 %RE @ 1.88 ft**
Operator / Unit: **T. Rudolph / TG1002**	*Elevation:* **Unavailable**	*Date & Time:* **2008-08-21 14:17 EDT**

307785



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TL 10 - 9.5

TarGOST By Dakota
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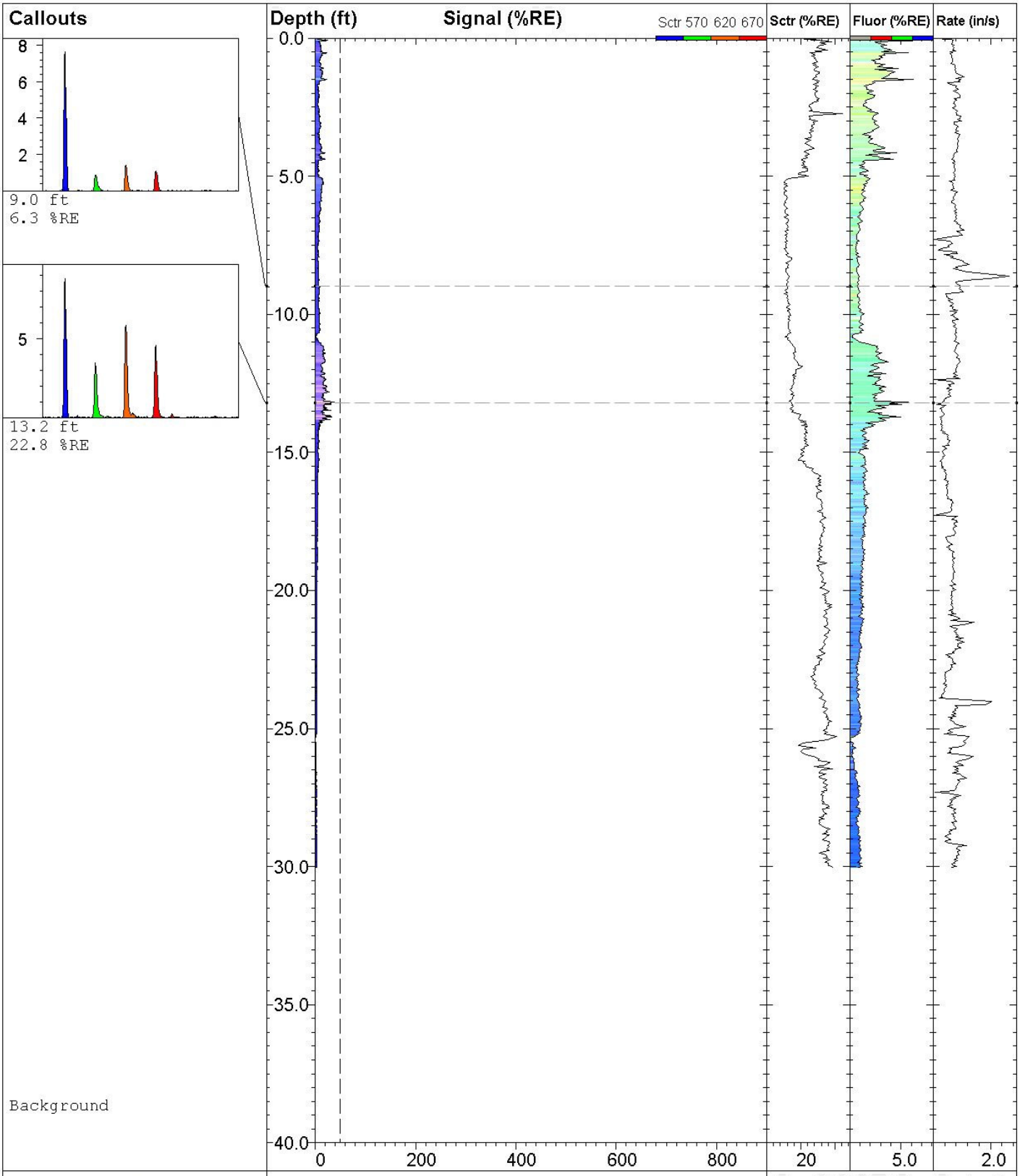
Site: **Quanta**	*Latitude / Datum:* **Unavailable / NA**	*Final depth:* **30.15 ft**
Client / Job: **CH2M HILL /**	*Longitude / Fix:* **Unavailable / NA**	*Max signal:* **148.1 %RE @ 0.00 ft**
Operator / Unit: **T. Rudolph / TG1002**	*Elevation:* **Unavailable**	*Date & Time:* **2008-08-22 07:59 EDT**

307786



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TL 10 - 06.5b

TarGOST By Dakota
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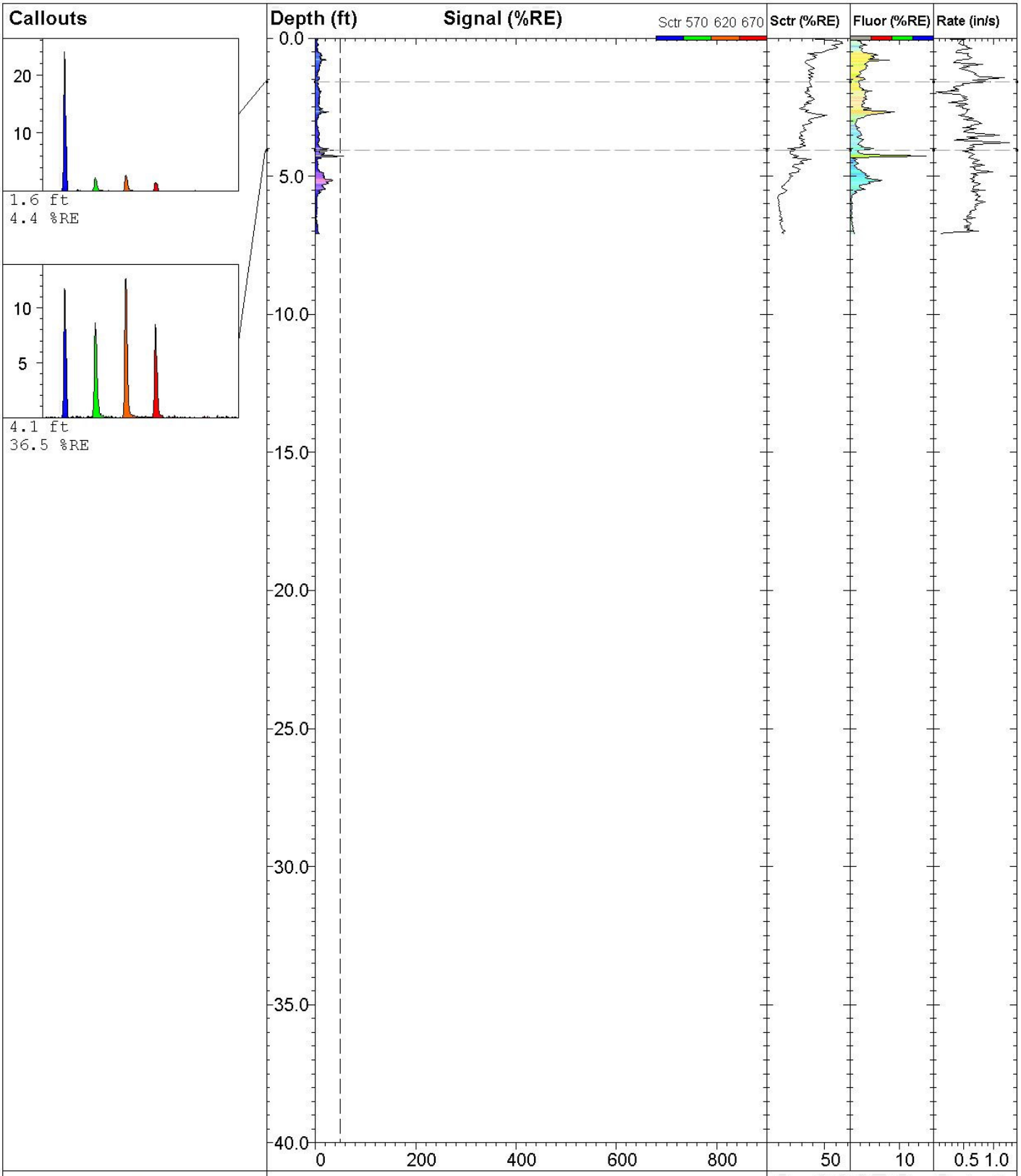
Site: **Quanta**	*Latitude / Datum:* **Unavailable / NA**	*Final depth:* **30.04 ft**
Client / Job: **CH2M HILL /**	*Longitude / Fix:* **Unavailable / NA**	*Max signal:* **39.7 %RE @ 13.18 ft**
Operator / Unit: **T. Rudolph / TG1002**	*Elevation:* **Unavailable**	*Date & Time:* **2008-08-21 13:45 EDT**

307787



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TL 10 - 06.5

TarGOST By Dakota
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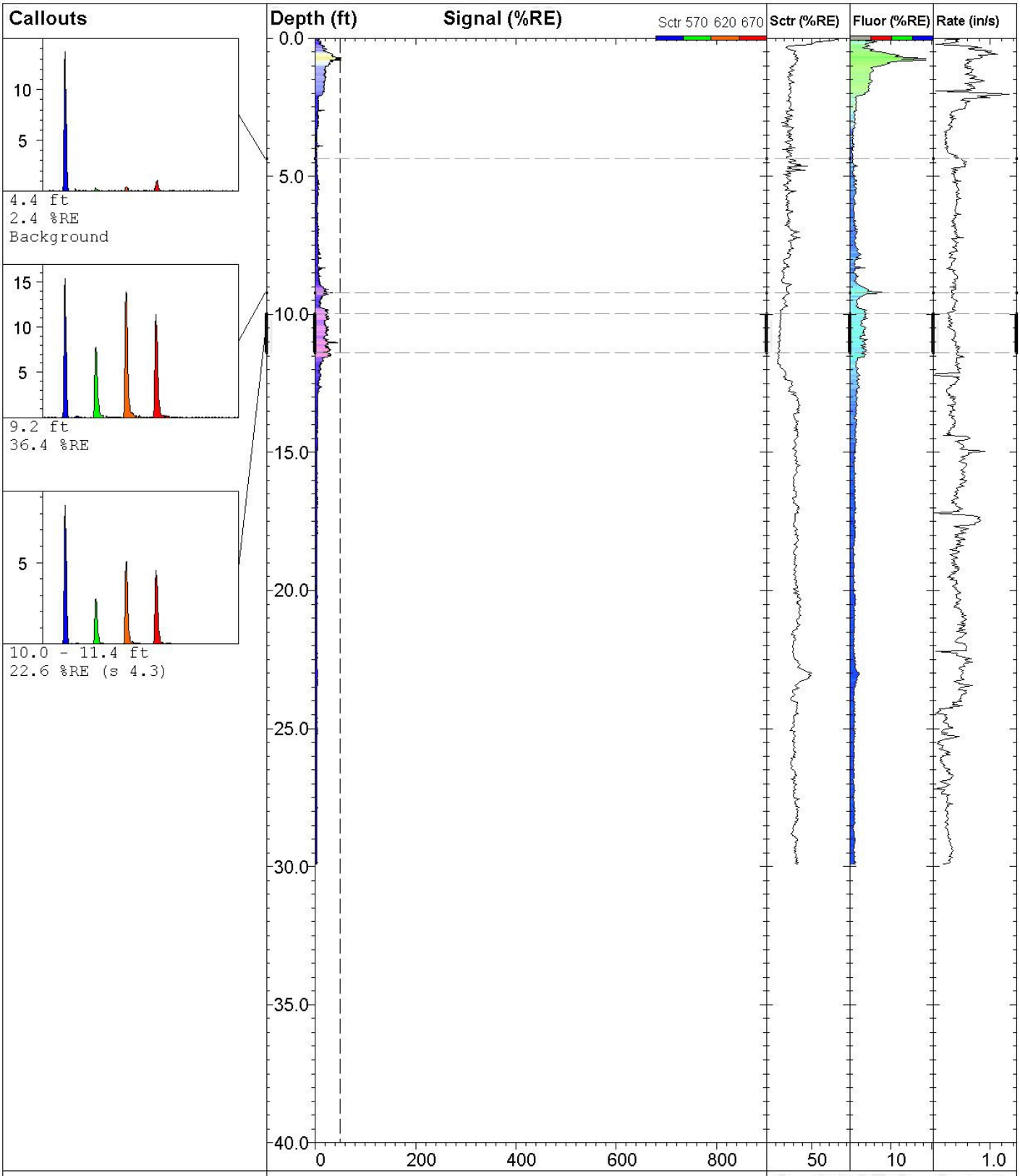
Site: **Quanta**	*Latitude / Datum:* **Unavailable / NA**	*Final depth:* **7.09 ft**
Client / Job: **CH2M HILL /**	*Longitude / Fix:* **Unavailable / NA**	*Max signal:* **56.7 %RE @ 4.27 ft**
Operator / Unit: **T. Rudolph / TG1002**	*Elevation:* **Unavailable**	*Date & Time:* **2008-08-21 13:34 EDT**

307788



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TL 09.5 -11.25

TarGOST By Dakota
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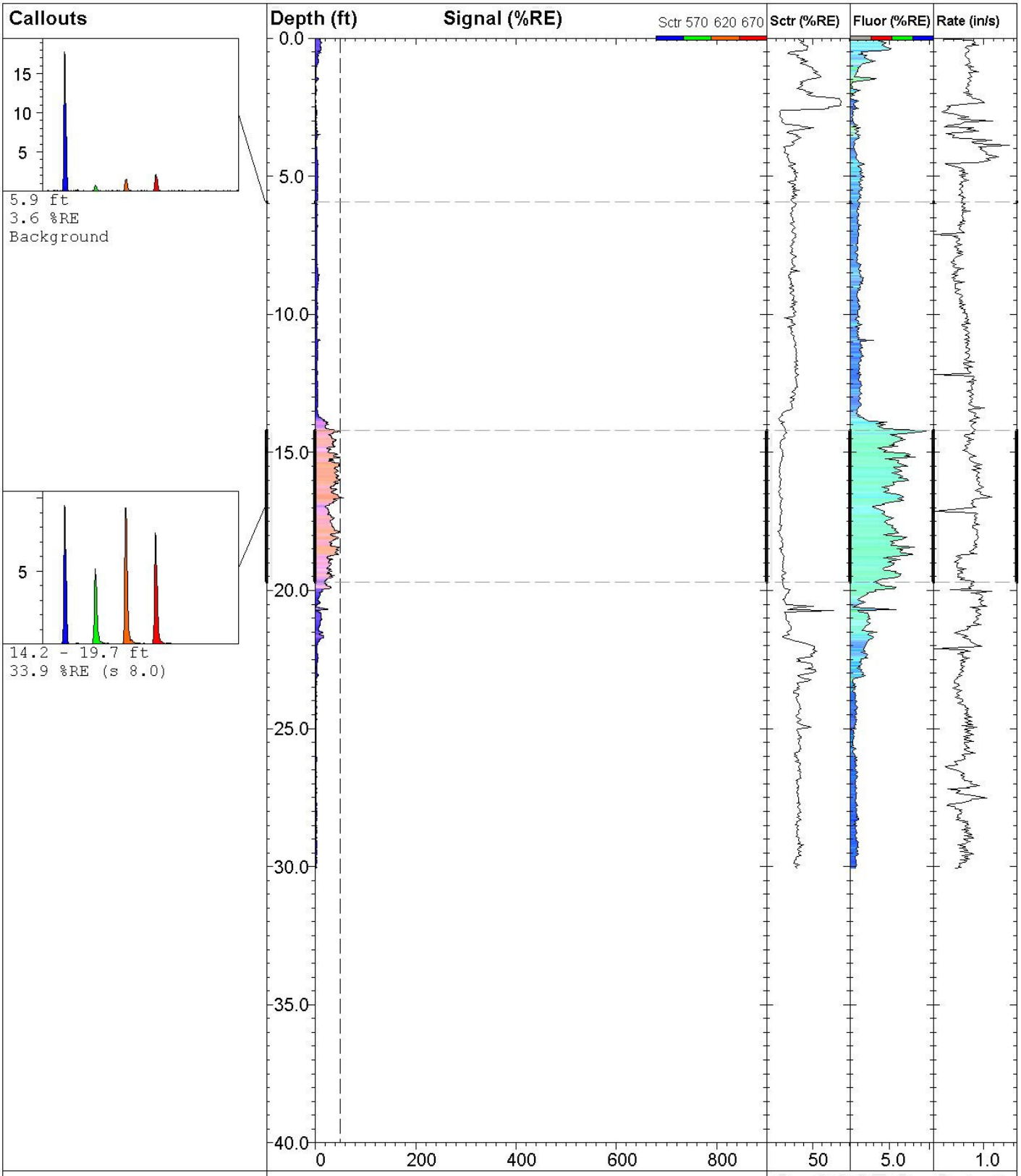
Site: **Quanta**	*Latitude / Datum:* **Unavailable / NA**	*Final depth:* **29.92 ft**
Client / Job: **CH2M HILL /**	*Longitude / Fix:* **Unavailable / NA**	*Max signal:* **53.5 %RE @ 0.79 ft**
Operator / Unit: **T. Rudolph / OST**	*Elevation:* **Unavailable**	*Date & Time:* **2008-08-20 08:03 EDT**

307789



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TL 09.5 - 10.5

TarGOST By Dakota
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Site: **Quanta**	*Latitude / Datum:* **Unavailable / NA**	*Final depth:* **30.05 ft**
Client / Job: **CH2M HILL /**	*Longitude / Fix:* **Unavailable / NA**	*Max signal:* **55.5 %RE @ 16.64 ft**
Operator / Unit: **T. Rudolph / TG1002**	*Elevation:* **Unavailable**	*Date & Time:* **2008-08-21 10:14 EDT**

307790

APPENDIX E
Soil Analytical Data for Polycyclic Aromatic Hydrocarbon Compounds (PAHs)
Quanta Resources Superfund Site, OU1
Edgewater, New Jersey

Location ID		MW-123	MW-123	MW-124	MW-124	MW-124	MW-125	MW-125	MW-126	MW-126	MW-127	MW-127	MW-127
Field Sample ID		SB-123-0.75	SB-123-4.25	SB-124-1.5	DUP-091208	SB-124-9.0	SB-125-4.75	SB-125-9.75	SB-126-4.5	SB-126-11.25	SB-127-1.75	SB-127-8.25	SB-127-9.5
Sample Date		9/11/2008	9/11/2008	9/12/2008	9/12/2008	9/12/2008	9/15/2008	9/15/2008	10/14/2008	10/14/2008	9/11/2008	9/11/2008	9/11/2008
Sample Depth Interval		0.5 - 1 FT	4 - 4.5 FT	1 - 2 FT	1 - 2 FT	8 - 10 FT	4.5 - 5 FT	9.5 - 10 FT	4.3 - 4.8 FT	11 - 11.5 FT	1.5 - 2 FT	8 - 8.5 FT	9 - 10 FT
Sample Matrix		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Constituent	**Units**												
2-Methylnaphthalene	mg/Kg	0.42 U	**1.81**	**0.16 J**	**0.123 J**	0.095 U	**0.293**	**0.0621 J**	**0.0754**	**252**	0.39 U	**0.182 J**	**0.433 J**
Acenaphthene	mg/Kg	0.21 U	**5.02**	**1.18**	**0.867**	0.047 U	**0.709**	**0.425**	**0.407**	**124**	0.2 U	**1.18**	**0.233 J**
Acenaphthylene	mg/Kg	0.21 U	0.24 U	0.2 U	0.21 U	0.047 U	**0.627**	**0.608**	**0.0809**	0.26 U	0.2 U	**0.121 J**	0.3 U
Anthracene	mg/Kg	0.21 U	0.24 U	**1.88**	**1.15**	0.047 U	**3.01**	**2.27**	**1.51**	**38.1**	0.2 U	0.24 U	0.3 U
Benzo(a)anthracene	mg/Kg	**0.188 J**	0.24 U	**7.85**	**3.97**	0.047 U	**5.95**	**8.72**	**1.8**	**10.2**	**0.345**	**0.853**	0.3 U
Benzo(a)pyrene	mg/Kg	**0.253**	0.24 U	**6.85**	**3.77**	**0.0329 J**	**5.18**	**9.6**	**1.75**	**6.83**	**0.435**	**1.04**	0.3 U
Benzo(b)fluoranthene	mg/Kg	**0.651**	0.24 U	**10**	**5.46**	**0.0357 J**	**4.84**	**7.09**	**1.51**	**5.85**	**0.768**	**0.95**	0.3 U
Benzo(g,h,i)perylene	mg/Kg	**0.247**	0.24 U	**4.8**	**2.72**	**0.0244 J**	**3.49**	**6.27**	**0.831**	**3.37**	**0.45**	**0.739**	0.3 U
Benzo(k)fluoranthene	mg/Kg	**0.111 J**	0.24 U	**3.56**	**1.64**	0.047 U	**2.43**	**2.5**	**1.51**	**4.79**	**0.225**	**0.769**	0.3 U
Chrysene	mg/Kg	**0.198 J**	0.24 U	**7.66**	**4.01**	0.047 U	**5.28**	**7.9**	**1.86**	**9.46**	**0.452**	**1.07**	0.3 U
Dibenzo(a,h)anthracene	mg/Kg	0.21 U	0.24 U	**1.46**	**0.782**	0.047 U	**1.21**	**2.05**	**0.311**	**1.04**	**0.133 J**	**0.247**	0.3 U
Fluoranthene	mg/Kg	**0.33**	0.24 U	**16.9**	**8.3**	**0.0398 J**	**15.9**	**17.9**	**4.22**	**59.2**	**0.689**	**2.29**	0.3 U
Fluorene	mg/Kg	0.21 U	**3.13**	**0.772**	**0.479**	0.047 U	**1.15**	**0.448**	**0.372**	**100**	0.2 U	0.24 U	0.3 U
Indeno(1,2,3-cd)pyrene	mg/Kg	**0.179 J**	0.24 U	**4.67**	**2.44**	**0.019 J**	**3.37**	**5.9**	**0.85**	**3.27**	**0.308**	**0.648**	0.3 U
Naphthalene	mg/Kg	0.21 U	**18.7**	**0.227**	**0.168 J**	0.047 U	**0.306**	**0.135**	**0.229**	**5360**	0.2 U	**1.28**	**3.83**
Phenanthrene	mg/Kg	**0.267**	**0.501**	**13.3**	**7.72**	**0.0257 J**	**12.3**	**7.01**	**2.87**	**194**	**0.29**	0.24 U	0.3 U
Pyrene	mg/Kg	**0.262**	0.24 U	**12.3**	**6.27**	**0.0441 J**	**10.8**	**13.5**	**3.14**	**39**	**0.585**	**2.41**	0.3 U

Detected concentrations are marked as shaded and bold.
FT - Feet
J - Estimated Concentration
mg/Kg - milligrams per kilogram
U - Not Detected

APPENDIX E
Soil Analytical Data for Polycyclic Aromatic Hydrocarbon Compounds (PAHs)
Quanta Resources Superfund Site, OU1
Edgewater, New Jersey

Location ID		MW-128	MW-128	MW-129	MW-129	MW-129	MW-136	MW-136	MW-136	PZ-7D	SB-39	SB-39	SB-40
Field Sample ID		SB-128-1.8-022409	SB-128-3.8-022409	SB-129-1.8-022409	SB-129-7.5-022409	DUP-022409	SB-136-1.0	SB-136-8.5	SB-136-21.5	SB-PZ7-16.25	SB-39-1.0-022409	SB-39-5.3-022409	SB-40-1.0
Sample Date		2/24/2009	2/24/2009	2/24/2009	2/24/2009	2/24/2009	9/10/2008	9/10/2008	9/10/2008	9/19/2008	2/24/2009	2/24/2009	8/26/2008
Sample Depth Interval		1.5 - 2 FT	3.6 - 4 FT	1.6 - 2 FT	7 - 8 FT	7 - 8 FT	0.5 - 1 FT	8.5 - 9.5 FT	21 - 22 FT	16 - 16.5 FT	0.8 - 1.2 FT	5 - 5.5 FT	0 - 1.5 FT
Sample Matrix		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Constituent	**Units**												
2-Methylnaphthalene	mg/Kg	**26**	**1030**	**18.5**	0.081 U	0.084 U	**0.175 J**	4.9 U	**1000**	**9.51**	0.077 U	**0.0188 J**	**0.458 J**
Acenaphthene	mg/Kg	**99.2**	**1020**	**33.1**	**0.048**	0.042 U	**0.547**	**10.4**	**879**	**4.94**	**0.0207 J**	**0.218**	**3.39**
Acenaphthylene	mg/Kg	**26.6**	**122**	**1.72**	0.041 U	0.042 U	**1.77**	**1.04 J**	**45.8**	**0.288**	0.038 U	**0.422**	**2.01**
Anthracene	mg/Kg	**1010**	**1630**	**54**	**0.62 J**	0.042 UJ	**1.75**	**18.4**	**613**	**0.374**	**0.0561**	**1.5**	**5.21**
Benzo(a)anthracene	mg/Kg	**520**	**1380**	**40.9**	**0.285 J**	0.042 UJ	**9.36**	**29**	**391**	**0.197**	**0.215**	**3.09**	**20.6**
Benzo(a)pyrene	mg/Kg	**431**	**838**	**32.1**	**0.237**	0.042 U	**16.1**	**30.5**	**254**	**0.142**	**0.22**	**2.93**	**26**
Benzo(b)fluoranthene	mg/Kg	**391**	**721**	**25.4**	**0.218**	0.042 U	**11.5**	**23.5**	**209**	**0.108**	**0.208**	**2.74**	**24.5**
Benzo(g,h,i)perylene	mg/Kg	**137**	**313**	**14.8**	**0.0997**	0.042 U	**13.9**	**19.9**	**123**	**0.0795**	**0.144**	**1.87**	**26.4**
Benzo(k)fluoranthene	mg/Kg	**353**	**676**	**20.2**	**0.202**	0.042 U	**9.99**	**23.6**	**179**	**0.114**	**0.173**	**1.8**	**13.4**
Chrysene	mg/Kg	**459**	**1100**	**40**	**0.26 J**	0.042 UJ	**9.75**	**31.2**	**381**	**0.115**	**0.233**	**2.74**	**23.5**
Dibenzo(a,h)anthracene	mg/Kg	**86.6**	**152**	**6.12**	**0.0442**	0.042 U	**4.25**	**6.56**	**38.8**	**0.0279 J**	**0.051**	**0.536**	**7.19**
Fluoranthene	mg/Kg	**1270**	**4030**	**120**	**0.617 J**	0.042 UJ	**12**	**73.9**	**1640**	**0.51**	**0.441**	**8.64**	**25.1**
Fluorene	mg/Kg	**143**	**1550**	**43.7**	**0.0757**	0.042 U	**0.314**	**9.61**	**1080**	**4.23**	0.038 U	**0.285**	**1.7**
Indeno(1,2,3-cd)pyrene	mg/Kg	**167**	**348**	**14.3**	**0.0994**	0.042 U	**12.4**	**17.7**	**110**	**0.0686**	**0.127**	**1.7**	**20.5**
Naphthalene	mg/Kg	**17.1**	**1900**	**12.9**	0.041 U	0.042 U	**0.392**	**2.25 J**	**2880**	**43.9**	**0.0176 J**	**0.0256 J**	**0.508**
Phenanthrene	mg/Kg	**480**	**4990**	**187**	**0.247**	0.042 U	**3.94**	**67.3**	**3370**	**5.45**	**0.263**	**3.63**	**16.4**
Pyrene	mg/Kg	**1050**	**2930**	**100**	**0.492**	0.042 U	**10.7**	**71.4**	**1330**	**0.442**	**0.389**	**7.8**	**28.1**

Detected concentrations are marked as shaded and bold.
FT - Feet
J - Estimated Concentration
mg/Kg - milligrams per kilogram
U - Not Detected

APPENDIX E
Soil Analytical Data for Polycyclic Aromatic Hydrocarbon Compounds (PAHs)
Quanta Resources Superfund Site, OU1
Edgewater, New Jersey

Location ID		SB-40	SB-42	SB-42	SB-43	SB-43	SB-44	SB-44	SB-47	SB-47	SB-48	SB-49	SB-49
Field Sample ID		SB-40-4.0	SB-42-1.0	SB-42-9.0	SB-43-0.5	SB-43-3.5	SB-44-1.0	SB-44-8.0	SB-47-1.5	SB-47-3.2	SB-48-6.0	SB-49-4.5	SB-49-9.5
Sample Date		8/26/2008	8/26/2008	8/26/2008	8/26/2008	8/26/2008	9/4/2008	9/4/2008	8/27/2008	8/27/2008	8/27/2008	9/2/2008	9/2/2008
Sample Depth Interval		3.8 - 5 FT	0 - 1.5 FT	8.5 - 10 FT	0 - 1 FT	3 - 4 FT	0.5 - 1.5 FT	7 - 9 FT	1 - 2 FT	2.7 - 3.7 FT	5 - 7 FT	4 - 5 FT	9 - 10 FT
Sample Matrix		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Constituent	**Units**												
2-Methylnaphthalene	mg/Kg	**2.25 J**	2.1 U	**20.6**	0.073 U	**0.182 J**	**0.0178 J**	**582**	1 U	0.089 U	**0.0513 J**	**3.51 J**	**531**
Acenaphthene	mg/Kg	**20.7 J**	1 U	**257**	**0.0299 J**	**0.905**	0.034 U	**546**	**2.07**	0.045 U	**0.185**	**13.2**	**788**
Acenaphthylene	mg/Kg	**2.27 J**	1 U	**10.8**	0.036 U	**0.475**	0.034 U	**17.5**	**0.343 J**	0.045 U	0.042 U	**16.3**	**97.9**
Anthracene	mg/Kg	**17**	1 U	**144**	**0.0216 J**	**1.6**	**0.0329 J**	**271**	**1.63**	**0.0269 J**	**0.269**	**43.3**	**2350**
Benzo(a)anthracene	mg/Kg	**30.3**	1 U	**98.4**	**0.127**	**7.47**	**0.0679**	**169**	**8.89**	**0.125**	**0.706**	**83.2**	**632**
Benzo(a)pyrene	mg/Kg	**30.4**	1 U	**62.5**	**0.199**	**9.97**	**0.0644**	**108**	**11.7**	**0.135**	**0.738**	**74.9**	**409**
Benzo(b)fluoranthene	mg/Kg	**21.7**	1 U	**44.8**	**0.144**	**7.77**	**0.0736**	**78.4**	**9.22**	**0.0899**	**0.741**	**114**	**537**
Benzo(g,h,i)perylene	mg/Kg	**16.4**	1 U	**23.5**	**0.16**	**6.41**	**0.0701**	**63.2**	**8.07**	**0.094**	**0.521**	**62.3**	**174**
Benzo(k)fluoranthene	mg/Kg	**23.4**	1 U	**50.7**	**0.116**	**7.15**	**0.0781**	**95.5**	**8.77**	**0.0931**	**0.639**	**35.1**	**120**
Chrysene	mg/Kg	**30**	1 U	**88.9**	**0.152**	**7.89**	**0.0835**	**161**	**9.81**	**0.139**	**0.866**	**81.5**	**574**
Dibenzo(a,h)anthracene	mg/Kg	**11.1 J**	1 U	**8.42**	**0.0496**	**2.22**	**0.0219 J**	**23.4**	**3.08**	**0.0349 J**	**0.213**	**18**	**53.9**
Fluoranthene	mg/Kg	**79.3**	1 U	**340**	**0.174**	**13.9**	**0.123**	**727**	**14.8**	**0.203**	**2.28**	**143**	**1910**
Fluorene	mg/Kg	**12.8 J**	1 U	**299**	0.036 U	**0.481**	0.034 U	**542**	**0.566**	0.045 U	**0.109**	**14.8**	**1120**
Indeno(1,2,3-cd)pyrene	mg/Kg	**15.1**	1 U	**21.2**	**0.126**	**5.92**	**0.057**	**55.7**	**7.48**	**0.0768**	**0.508**	**57.6**	**168**
Naphthalene	mg/Kg	**3.36 J**	1 U	**21.7**	0.036 U	**0.32**	**0.027 J**	**1780**	0.52 U	**0.0551**	**0.179**	**6.9**	**1220**
Phenanthrene	mg/Kg	**25.8**	1 U	**723**	**0.0709**	**4.94**	**0.113**	**1650**	**7.88**	**0.0671**	**2.18**	**85.1**	**2990**
Pyrene	mg/Kg	**65.6**	1 U	**280**	**0.178**	**12.4**	**0.123**	**525**	**12.3**	**0.204**	**1.45**	**140**	**1570**

Detected concentrations are marked as shaded and bold.
FT - Feet
J - Estimated Concentration
mg/Kg - milligrams per kilogram
U - Not Detected

APPENDIX E
Soil Analytical Data for Polycyclic Aromatic Hydrocarbon Compounds (PAHs)
Quanta Resources Superfund Site, OU1
Edgewater, New Jersey

Location ID		SB-50	SB-50	SB-51	SB-51	SB-52	SB-52	SS-58	SB-58	SB-58	SB-58	TL08.5-10.5	TL08.5-10.5	TL09.5-10.5
Field Sample ID		SB-50-3.0	SB-50-11.25	SB-51-3.5	SB-51-18	SB-52-3.0	SB-52-6.0	SS-58-0.1	SB-58-3.7	SB-58-9.5	SB-58-11.7	TL 8.5-10.5-0.5	TL 8.5-10.5-13*	TL 9.5-10.5-1.5
Sample Date		9/2/2008	10/16/2008	9/2/2008	9/2/2008	2/24/2009	2/24/2009	10/15/2008	2/25/2009	2/25/2009	2/25/2009	8/28/2008	8/28/2008	8/28/2008
Sample Depth Interval		2.5 - 3.5 FT	11 - 11.5 FT	3 - 4 FT	17.5 - 18.5 FT	2 - 4 FT	5.7 - 6.3 FT	0.1 - 0.2 FT	3.5 - 4 FT	9.3 - 9.7 FT	11.3 - 12 FT	0 - 1 FT	12 - 14 FT	1 - 2 FT
Sample Matrix		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Constituent	**Units**													
2-Methylnaphthalene	mg/Kg	0.44 U	**1080**	0.073 U	0.46 U	**0.0308 J**	**0.19**	**0.279**	0.077 U	**0.0855**	**0.151**	0.41 U	1.1 U	**0.115 J**
Acenaphthene	mg/Kg	0.22 U	**672**	**0.0232 J**	**0.166 J**	**0.0707**	**0.859**	**1.66**	**0.0376 J**	**0.217**	**0.286**	**0.696**	0.56 U	**0.901**
Acenaphthylene	mg/Kg	0.22 U	0.34 U	**0.0381**	0.23 U	**0.121**	**0.62**	**1.09**	**0.0621**	**0.341**	**0.245**	**0.0957 J**	0.56 U	**0.131 J**
Anthracene	mg/Kg	0.22 U	**312**	**0.0522**	**0.123 J**	**0.285**	**2.58**	**3.72**	**0.127**	**0.413**	**0.874**	**0.637**	0.56 U	**1.34**
Benzo(a)anthracene	mg/Kg	0.22 U	**114**	**0.181**	0.23 U	**0.84**	**5.71**	**17.7**	**0.805**	**1.5**	**2.2**	**3.35**	0.56 U	**4.74**
Benzo(a)pyrene	mg/Kg	**0.286**	**62**	**0.24**	0.23 U	**0.915**	**5.34**	**19**	**0.806 J**	**1.9 J**	**2.67 J**	**4.82**	0.56 U	**5.17**
Benzo(b)fluoranthene	mg/Kg	**0.395**	**53.3**	**0.308**	0.23 U	**0.765**	**4.56**	**16.2**	**1.03 J**	**2.08 J**	**3.22 J**	**5.49**	0.56 U	**4.19**
Benzo(g,h,i)perylene	mg/Kg	**0.237**	**33.7**	**0.199**	0.23 U	**0.598**	**3.33**	**12.3**	**0.31 J**	**0.753 J**	**0.953 J**	**3.8**	0.56 U	**3.92**
Benzo(k)fluoranthene	mg/Kg	**0.14 J**	**45.5**	**0.0913**	0.23 U	**0.741**	**2.99**	**16**	**1.01 J**	**1.67 J**	**3.63 J**	**3.19**	0.56 U	**3.71**
Chrysene	mg/Kg	**0.324**	**101**	**0.207**	0.23 U	**0.866**	**6.06**	**18.7**	**0.829**	**1.44**	**2.48**	**3.95**	0.56 U	**4.71**
Dibenzo(a,h)anthracene	mg/Kg	0.22 U	**17.2**	**0.0464**	0.23 U	**0.249**	**1.51**	**1.6**	**0.122 J**	**0.239 J**	**0.403 J**	**1.49**	0.56 U	**1.38**
Fluoranthene	mg/Kg	**0.501**	**568**	**0.333**	**0.118 J**	**1.51**	**14.2**	**36.9**	**1.45**	**2.52**	**3.86**	**7.07**	0.56 U	**8.02**
Fluorene	mg/Kg	0.22 U	**553**	0.036 U	**0.405**	**0.0708**	**0.957**	**1.56**	**0.028 J**	**0.208**	**0.259**	**0.436**	0.56 U	**0.444**
Indeno(1,2,3-cd)pyrene	mg/Kg	**0.185 J**	**32.1**	**0.159**	0.23 U	**0.543**	**3.17**	**11.3**	**0.338 J**	**0.744 J**	**1.07 J**	**3.79**	0.56 U	**3.52**
Naphthalene	mg/Kg	0.22 U	**2110**	**0.0238 J**	**0.939**	**0.0408**	**0.351**	**0.489**	0.039 U	**0.196**	**0.505**	**0.225**	0.56 U	**0.148 J**
Phenanthrene	mg/Kg	**0.271**	**1260**	**0.142**	**0.743**	**0.748**	**7.43**	**21**	**0.429**	**1.08**	**2.2**	**2.43**	0.56 U	**4.78**
Pyrene	mg/Kg	**0.469**	**389**	**0.322**	0.23 U	**1.34**	**13.1**	**32**	**1.82**	**3.19**	**4.62**	**5.99**	0.56 U	**8.25**

Detected concentrations are marked as shaded and bold.
FT - Feet
J - Estimated Concentration
mg/Kg - milligrams per kilogram
U - Not Detected

APPENDIX E
Soil Analytical Data for Polycyclic Aromatic Hydrocarbon Compounds (PAHs)
Quanta Resources Superfund Site, OU1
Edgewater, New Jersey

Location ID		TL09.5-10.5	TL09.5-10.5	TL09.5-11.25	TL09.5-11.25	TL09-09	TL09-09	TL09-09	TL10.5-09.5	TL10.5-09.5	TL10.5-09.5	TL10.5-09.5	TL10.5-10.5	TL10.5-10.5
Field Sample ID		TL 9.5-10.5-3.5	TL 9.5-10.5-16.5	TL 9.5-11.25-0.5	TL 9.5-11.25-7.5	TL09-09-1.0	TL09-09-4.5	TL09-09-19.5	TL10.5-9.5-1.0	DUP-082908	TL10.5-9.5-9.5	TL10.5-9.5-23.5	TL 10.5-10.5-0.5	TL 10.5-10.5-4.0
Sample Date		8/28/2008	8/28/2008	8/28/2008	8/28/2008	8/29/2008	8/29/2008	8/29/2008	8/29/2008	8/29/2008	8/29/2008	8/29/2008	8/27/2008	8/27/2008
Sample Depth Interval		3 - 4 FT	16 - 17 FT	0 - 1 FT	5 - 10 FT	0.5 - 1.5 FT	4 - 5 FT	19.3 - 20 FT	0 - 1.5 FT	0 - 1.5 FT	9 - 10 FT	23 - 24 FT	0 - 1 FT	3.5 - 4.5 FT
Sample Matrix		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Constituent	**Units**													
2-Methylnaphthalene	mg/Kg	0.47 U	1.3 U	0.4 U	0.47 U	1 U	**0.169 J**	0.16 U	**0.0821**	**0.157**	**0.0481 J**	0.12 U	**8.73 J**	**1.35**
Acenaphthene	mg/Kg	**0.452**	**1.82**	**0.386**	**0.123 J**	0.51 U	**8.29**	0.078 U	**0.624 J**	**1.1 J**	**0.071**	0.062 U	**70.3**	**7.28**
Acenaphthylene	mg/Kg	**0.18 J**	0.63 U	**0.435**	**0.14 J**	0.51 U	**5.21**	0.078 U	**0.428**	**0.541**	**0.226**	0.062 U	10 U	**1.39**
Anthracene	mg/Kg	**0.782**	**3.69**	**0.987**	**0.359**	0.51 U	**18.9**	0.078 U	**1.13 J**	**2.61 J**	**0.156**	0.062 U	**69.4**	**6.46**
Benzo(a)anthracene	mg/Kg	**5.15**	**0.964**	**3.54**	**1.88**	0.51 U	**59.7**	0.078 U	**3.26 J**	**6.03 J**	**0.726**	0.062 U	**205**	**25.4**
Benzo(a)pyrene	mg/Kg	**5.24**	**0.606 J**	**3.77**	**1.96**	0.51 U	**59.6**	0.078 U	**3.9 J**	**6.72 J**	**1.51**	0.062 U	**255**	**34.5**
Benzo(b)fluoranthene	mg/Kg	**5.54**	**0.46 J**	**4.44**	**2**	0.51 U	**46.8**	0.078 U	**2.91 J**	**5.38 J**	**1**	0.062 U	**200**	**26**
Benzo(g,h,i)perylene	mg/Kg	**3.78**	**0.361 J**	**2.77**	**1.54**	0.51 U	**31.8**	0.078 U	**3.19**	**4.04**	**1.07**	0.062 U	**140**	**21.3**
Benzo(k)fluoranthene	mg/Kg	**3.85**	**0.508 J**	**2.31**	**1.33**	0.51 U	**37.8**	0.078 U	**2.72 J**	**4.92 J**	**0.727**	0.062 U	**163**	**20.4**
Chrysene	mg/Kg	**5.34**	**1.04**	**4.04**	**2.07**	**0.409 J**	**57.9**	0.078 U	**3.37 J**	**6.09 J**	**0.82**	0.062 U	**211**	**26.9**
Dibenzo(a,h)anthracene	mg/Kg	**1.41**	0.63 U	**1.03**	**0.56**	0.51 U	**9.76**	0.078 U	**1.29**	**1.65**	**0.302**	0.062 U	**46.2**	**7.77**
Fluoranthene	mg/Kg	**7.45**	**3.49**	**9.51**	**3.41**	0.51 U	**169**	0.078 U	**5.68 J**	**11.9 J**	**1.14**	0.062 U	**349**	**38.4**
Fluorene	mg/Kg	**0.219 J**	**0.457 J**	**0.351**	0.23 U	0.51 U	**2.19**	0.078 U	**0.335 J**	**0.898 J**	**0.0427 J**	0.062 U	**29.6**	**2.3**
Indeno(1,2,3-cd)pyrene	mg/Kg	**3.71**	**0.339 J**	**2.64**	**1.39**	0.51 U	**30.1**	0.078 U	**3.04**	**3.85**	**0.894**	0.062 U	**135**	**20.9**
Naphthalene	mg/Kg	**0.127 J**	0.63 U	**0.15 J**	0.23 U	0.51 U	**0.292**	0.078 U	**0.0946**	**0.164**	**0.164**	0.062 U	**20.3**	**2.18**
Phenanthrene	mg/Kg	**2.88**	**0.677**	**3.12**	**1.41**	**0.256 J**	**11.6**	0.078 U	**3.44 J**	**7.87 J**	**0.176**	0.062 U	**220**	**18.6**
Pyrene	mg/Kg	**7.71**	**2.7**	**7.96**	**3.13**	0.51 U	**130**	0.078 U	**5 J**	**9.92 J**	**1.36**	0.062 U	**284**	**34.2**

Detected concentrations are marked as shaded and bold.
FT - Feet
J - Estimated Concentration
mg/Kg - milligrams per kilogram
U - Not Detected

APPENDIX E
Soil Analytical Data for Polycyclic Aromatic Hydrocarbon Compounds (PAHs)
Quanta Resources Superfund Site, OU1
Edgewater, New Jersey

Location ID		TL10.5-10.5	TL10.5-10.5	TL10.5-11.25	TL10.5-11.25	TL10.5-11.25	TL10-09.5	TL10-09.5	TL11.25-00	TL11.75-00	TL11-11.75	TL12.5-00	TL12.5-10.5	TL12.5-10.5
Field Sample ID		TL 10.5-10.5-14.5	DUP-082708	TL 10.5-11.25-0.5	TL 10.5-11.25-8.5	TL 10.5-11.25-12	TL 10-9.5-7.5	DUP-090408	TL 11.25-00-17.5	TL 11.75-00-13.5	TL 11-11.75-11	TL 12.5-00-17.5	TL 12.5-10.5-1.5	TL 12.5-10.5-8.5
Sample Date		8/27/2008	8/27/2008	8/28/2008	8/28/2008	8/28/2008	9/4/2008	9/4/2008	9/4/2008	9/3/2008	8/27/2008	9/3/2008	8/25/2008	8/25/2008
Sample Depth Interval		14 - 15 FT	14 - 15 FT	0 - 1 FT	8 - 9 FT	11 - 12 FT	6.5 - 8.5 FT	6.5 - 8.5 FT	16.5 - 18.5 FT	13 - 14 FT	10 - 12 FT	17 - 18 FT	0.25 - 2.5 FT	7.5 - 9.5 FT
Sample Matrix		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Constituent	**Units**													
2-Methylnaphthalene	mg/Kg	**1850**	**1240**	0.41 U	0.12 U	0.7 U	**0.0335 J**	**0.0628 J**	**0.038 J**	0.71 U	**0.0583 J**	0.43 U	**3.85**	**2.3**
Acenaphthene	mg/Kg	**1710**	**1290**	0.21 U	0.058 U	0.35 U	**0.0919**	**0.155**	**0.127**	0.35 U	0.094 U	0.22 U	**5.62**	**11.7**
Acenaphthylene	mg/Kg	**60.6**	**52.4**	0.21 U	0.058 U	0.35 U	**0.0682**	**0.117**	**0.0373 J**	0.35 U	0.094 U	0.22 U	**0.979**	**1.95**
Anthracene	mg/Kg	**1010**	**702**	**0.113 J**	**0.0293 J**	0.35 U	**0.165**	**0.262**	**0.149**	0.35 U	0.094 U	0.22 U	**5.61**	**21.6**
Benzo(a)anthracene	mg/Kg	**526**	**400**	**0.391**	**0.0914**	0.35 U	**0.309**	**0.494**	**0.182**	0.35 U	**0.0591 J**	0.22 U	**9.18**	**31.9**
Benzo(a)pyrene	mg/Kg	**346**	**267**	**0.372**	**0.0929**	0.35 U	**0.292 J**	**0.476 J**	**0.122**	0.35 U	**0.055 J**	0.22 U	**10.4**	**33.8**
Benzo(b)fluoranthene	mg/Kg	**288**	**186**	**0.381**	**0.0699**	0.35 U	**0.249 J**	**0.467 J**	**0.129**	0.35 U	0.094 U	0.22 U	**7.82**	**23.8**
Benzo(g,h,i)perylene	mg/Kg	**153**	**113**	**0.296**	**0.0735**	0.35 U	**0.147**	**0.229**	0.069 U	0.35 U	**0.0464 J**	0.22 U	**6.39**	**20.1**
Benzo(k)fluoranthene	mg/Kg	**232 J**	**112 J**	**0.318**	**0.0645**	0.35 U	**0.252**	**0.378**	**0.124**	0.35 U	**0.0482 J**	0.22 U	**7.11**	**24.6**
Chrysene	mg/Kg	**481**	**368**	**0.438**	**0.093**	0.35 U	**0.356**	**0.558**	**0.207**	0.35 U	**0.0586 J**	0.22 U	**9.38**	**31.2**
Dibenzo(a,h)anthracene	mg/Kg	**57.3**	**38.1**	**0.103 J**	0.058 U	0.35 U	**0.0508**	**0.0792**	0.069 U	0.35 U	0.094 U	0.22 U	**2.27**	**7.57**
Fluoranthene	mg/Kg	**2260**	**1740**	**0.932**	**0.166**	0.35 U	**0.57 J**	**0.985 J**	**0.494**	0.35 U	**0.144**	0.22 U	**20.7**	**67.4**
Fluorene	mg/Kg	**1620**	**1140**	0.21 U	0.058 U	0.35 U	**0.0664 J**	0.051 UJ	**0.0933**	0.35 U	0.094 U	0.22 U	**6.13**	**15.2**
Indeno(1,2,3-cd)pyrene	mg/Kg	**144**	**110**	**0.268**	**0.0608**	0.35 U	**0.131**	**0.21**	0.069 U	0.35 U	0.094 U	0.22 U	**5.94**	**18.6**
Naphthalene	mg/Kg	**5080**	**3410**	0.21 U	**0.0445 J**	0.35 U	**0.131**	**0.195**	**0.115**	0.35 U	**0.412**	0.22 U	**9.11**	**7.24**
Phenanthrene	mg/Kg	**4490**	**3380**	**0.681**	**0.1**	0.35 U	**0.372 J**	**0.644 J**	**0.563**	0.35 U	**0.0585 J**	0.22 U	**23.2**	**28.5**
Pyrene	mg/Kg	**1570**	**1190**	**0.809**	**0.189**	0.35 U	**0.499**	**0.714**	**0.409**	0.35 U	**0.134**	0.22 U	**16.2**	**50.8**

Detected concentrations are marked as shaded and bold.
FT - Feet
J - Estimated Concentration
mg/Kg - milligrams per kilogram
U - Not Detected

APPENDIX E
Soil Analytical Data for Polycyclic Aromatic Hydrocarbon Compounds (PAHs)
Quanta Resources Superfund Site, OU1
Edgewater, New Jersey

Location ID		TL12-00.5	TL12-00.5	TL12-01.5	TL13.5-10.5	TL13.5-10.5	TL13.5-12.75	TL13.5-12.75	TL14-13.25	TL14-13.25
Field Sample ID		TL 12-0.5-7.5	TL 12-0.5-18.5	TL12-1.5-8.5	TL 13.5-10.5-1.5	TL 13.5-10.5-8.5	TL 13.5-12.75-0.5	TL 13.5-12.75-8.5	TL 14-13.25-1.0	TL 14-13.25-8.5
Sample Date		9/3/2008	9/3/2008	8/29/2008	8/25/2008	8/25/2008	8/26/2008	8/26/2008	8/25/2008	8/25/2008
Sample Depth Interval		7 - 8 FT	17.5 - 19.5 FT	7.1 - 10 FT	0.5 - 2.5 FT	7.5 - 9.5 FT	0 - 1 FT	8 - 9 FT	0.4 - 1.5 FT	7.5 - 9.5 FT
Sample Matrix		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Constituent	**Units**									
2-Methylnaphthalene	mg/Kg	0.68 U	**156**	0.5 U	**0.487**	**1020**	**0.107**	0.17 U	2 U	**65.5**
Acenaphthene	mg/Kg	**0.372**	**89**	**0.359**	**0.786**	**605**	**1.48**	0.087 U	**1.43**	**243**
Acenaphthylene	mg/Kg	0.34 U	**7.44**	0.25 U	**0.793**	**30.4**	**0.0785**	0.087 U	**3.95**	**4.59**
Anthracene	mg/Kg	**0.607**	**82.2**	**0.379**	**2.05**	**396**	**3.06**	0.087 U	**8.26**	**299**
Benzo(a)anthracene	mg/Kg	**0.785**	**55.6**	**0.432**	**5.35**	**107**	**9.75**	**0.253**	**10.5**	**68**
Benzo(a)pyrene	mg/Kg	**0.888**	**40.5**	**0.38**	**6.49**	**67.1**	**10.9**	**0.317**	**12.5**	**52.6**
Benzo(b)fluoranthene	mg/Kg	**1.3**	**51.5**	**0.326**	**5.07**	**47.5**	**8.91**	**0.23**	**8.93**	**43.8**
Benzo(g,h,i)perylene	mg/Kg	**0.546**	**18.7**	**0.312**	**4.43**	**27.9**	**6.59**	**0.253**	**11.4**	**23.3**
Benzo(k)fluoranthene	mg/Kg	**0.393**	**10.9**	**0.264**	**4.87**	**57**	**8.21**	**0.208**	**8.71**	**48.4**
Chrysene	mg/Kg	**1.08**	**51.7**	**0.696**	**5.6**	**104**	**9.87**	**0.29**	**11.5**	**86.1**
Dibenzo(a,h)anthracene	mg/Kg	0.34 U	**5.92**	0.25 U	**1.53**	**8.83**	**2.13**	**0.0768 J**	**2.41**	**7.06**
Fluoranthene	mg/Kg	**2.71**	**157**	**1.1**	**11.1**	**560**	**23.4**	**0.322**	**23.1**	**384**
Fluorene	mg/Kg	**0.363**	**90.4**	0.25 U	**0.868**	**632**	**0.975**	0.087 U	**2.13**	**240**
Indeno(1,2,3-cd)pyrene	mg/Kg	**0.445**	**17.5**	**0.22 J**	**3.99**	**27.2**	**6.23**	**0.19**	**7.96**	**21.5**
Naphthalene	mg/Kg	**0.444**	**265**	0.25 U	**1.84**	**5720**	0.035 U	**0.101**	**0.527 J**	**136**
Phenanthrene	mg/Kg	**2.23**	**310**	0.25 U	**5.65**	**1300**	**11**	**0.126**	**14.1**	**582**
Pyrene	mg/Kg	**2.14**	**128**	**1.29**	**8.65**	**332**	**18.1**	**0.383**	**21.2**	**294**

Detected concentrations are marked as shaded and bold.
FT - Feet
J - Estimated Concentration
mg/Kg - milligrams per kilogram
U - Not Detected

APPENDIX F

Soil Analytical Data for Non-PAH Semi-Volatile Organic Compounds (SVOCs)

Quanta Resources Superfund Site, OU1

Edgewater, New Jersey

Location ID		MW-123	MW-123	MW-124	MW-124	MW-124	MW-125	MW-125	MW-126	MW-126	MW-127	MW-127	MW-127
Field Sample ID		SB-123-0.75	SB-123-4.25	SB-124-1.5	DUP-091208	SB-124-9.0	SB-125-4.75	SB-125-9.75	SB-126-4.5	SB-126-11.25	SB-127-1.75	SB-127-8.25	SB-127-9.5
Sample Date		9/11/2008	9/11/2008	9/12/2008	9/12/2008	9/12/2008	9/15/2008	9/15/2008	10/14/2008	10/14/2008	9/11/2008	9/11/2008	9/11/2008
Sample Depth Interval		0.5 - 1 FT	4 - 4.5 FT	1 - 2 FT	1 - 2 FT	8 - 10 FT	4.5 - 5 FT	9.5 - 10 FT	4.3 - 4.8 FT	11 - 11.5 FT	1.5 - 2 FT	8 - 8.5 FT	9 - 10 FT
Sample Matrix		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Constituent	**Units**												
1,2,4-Trichlorobenzene	mg/Kg	0.0044 U	0.0067 U	0.0062 U	0.008 U	0.0091 U	0.0046 U	0.0051 U	0.0055 U	39 U	0.0059 U	0.37 U	0.0079 U
1,2-Dichlorobenzene	mg/Kg	0.0044 U	0.0067 U	0.0062 U	0.008 U	0.0091 U	0.0046 U	0.0051 U	0.0055 U	39 U	0.0059 U	0.37 U	0.0079 U
1,3-Dichlorobenzene	mg/Kg	0.0044 U	0.0067 U	0.0062 U	0.008 U	0.0091 U	0.0046 U	0.0051 U	0.0055 U	39 U	0.0059 U	0.37 U	0.0079 U
1,4-Dichlorobenzene	mg/Kg	0.0044 U	0.0067 U	0.0062 U	0.008 U	0.0091 U	0.0046 U	0.0051 U	0.0055 U	39 U	0.0059 U	0.37 U	0.0079 U
2,4,5-Trichlorophenol	mg/Kg	1 U	1.2 U	1 U	1 U	0.24 U	0.18 U	0.19 U	0.18 U	1.3 U	0.98 U	1.2 U	1.5 U
2,4,6-Trichlorophenol	mg/Kg	1 U	1.2 U	1 U	1 U	0.24 U	0.18 U	0.19 U	0.18 U	1.3 U	0.98 U	1.2 U	1.5 U
2,4-Dichlorophenol	mg/Kg	1 U	1.2 U	1 U	1 U	0.24 U	0.18 U	0.19 U	0.18 U	1.3 U	0.98 U	1.2 U	1.5 U
2,4-Dimethylphenol	mg/Kg	1 U	1.2 U	1 U	1 U	0.24 U	0.18 U	0.19 U	0.18 U	1.3 U	0.98 U	1.2 U	1.5 U
2,4-Dinitrophenol	mg/Kg	4.2 U	4.9 UJ	4 U	4.1 U	0.95 U	0.73 U	0.76 U	0.72 U	5.3 U	3.9 U	4.9 UJ	6.1 UJ
2,4-Dinitrotoluene	mg/Kg	0.42 U	0.49 U	0.4 U	0.41 U	0.095 U	0.073 U	0.076 U	0.072 U	0.53 U	0.39 U	0.49 U	0.61 U
2,6-Dinitrotoluene	mg/Kg	0.42 U	0.49 U	0.4 U	0.41 U	0.095 U	0.073 U	0.076 U	0.072 U	0.53 U	0.39 U	0.49 U	0.61 U
2-Chloronaphthalene	mg/Kg	0.42 U	0.49 U	0.4 U	0.41 U	0.095 U	0.073 U	0.076 U	0.072 U	0.53 U	0.39 U	0.49 U	0.61 U
2-Chlorophenol	mg/Kg	1 U	1.2 U	1 U	1 U	0.24 U	0.18 U	0.19 U	0.18 U	1.3 U	0.98 U	1.2 U	1.5 U
2-Methylphenol	mg/Kg	0.42 U	0.49 U	0.4 U	0.41 U	0.095 U	0.073 U	0.076 U	0.072 U	0.53 U	0.39 U	0.49 U	0.61 U
2-Nitroaniline	mg/Kg	1 U	1.2 U	1 U	1 U	0.24 U	0.18 U	0.19 U	0.18 U	1.3 U	0.98 U	1.2 U	1.5 U
2-Nitrophenol	mg/Kg	1 U	1.2 U	1 U	1 U	0.24 U	0.18 U	0.19 U	0.18 U	1.3 U	0.98 U	1.2 U	1.5 U
3&4-Methylphenol	mg/Kg	0.42 U	0.49 U	0.4 U	0.41 U	0.095 U	0.073 U	0.076 U	0.072 U	0.53 U	0.39 U	0.49 U	0.61 U
3,3-Dichlorobenzidine	mg/Kg	1 U	1.2 U	1 U	1 U	0.24 U	0.18 U	0.19 U	0.18 U	1.3 U	0.98 U	1.2 U	1.5 U
3-Nitroaniline	mg/Kg	1 U	1.2 U	1 U	1 U	0.24 U	0.18 U	0.19 U	0.18 U	1.3 U	0.98 U	1.2 U	1.5 U
4,6-Dinitro-2-methylphenol	mg/Kg	4.2 U	4.9 U	4 U	4.1 U	0.95 U	0.73 U	0.76 U	0.72 U	5.3 U	3.9 U	4.9 U	6.1 U
4-Bromophenyl phenyl ether	mg/Kg	0.42 U	0.49 U	0.4 U	0.41 U	0.095 U	0.073 U	0.076 U	0.072 U	0.53 U	0.39 U	0.49 U	0.61 U
4-Chloro-3-methyl phenol	mg/Kg	1 U	1.2 U	1 U	1 U	0.24 U	0.18 U	0.19 U	0.18 U	1.3 U	0.98 U	1.2 U	1.5 U
4-Chloroaniline	mg/Kg	1 U	1.2 U	1 U	1 U	0.24 U	0.18 U	0.19 U	0.18 U	1.3 U	0.98 U	1.2 U	1.5 U
4-Chlorophenyl phenyl ether	mg/Kg	0.42 U	0.49 U	0.4 U	0.41 U	0.095 U	0.073 U	0.076 U	0.072 U	0.53 U	0.39 U	0.49 U	0.61 U
4-Nitroaniline	mg/Kg	1 U	1.2 U	1 U	1 U	0.24 U	0.18 U	0.19 U	0.18 U	1.3 U	0.98 U	1.2 U	1.5 U
4-Nitrophenol	mg/Kg	2.1 U	4.9 UJ	4 U	4.1 U	0.95 U	0.36 U	0.38 U	0.36 U	2.6 U	2 U	4.9 UJ	6.1 UJ
Acetophenone	mg/Kg	1 U	1.2 U	1 U	1 U	0.24 U	0.18 U	0.19 U	0.18 U	1.3 U	0.98 U	1.2 U	1.5 U
Atrazine	mg/Kg	1 U	1.2 UJ	1 UJ	1 UJ	0.24 UJ	0.18 U	0.19 U	0.18 U	1.3 U	0.98 U	1.2 UJ	1.5 UJ
Benzaldehyde	mg/Kg	*	1.2 U	1 UJ	1 UJ	0.24 UJ	0.18 U	0.19 U	0.18 U	1.3 U	*	1.2 U	1.5 U
Biphenyl	mg/Kg	0.42 U	**0.231 J**	0.4 U	0.41 U	0.095 U	**0.106**	**0.031 J**	**0.0405 J**	**70.9**	0.39 U	0.49 U	0.61 U
bis(2-Chloroethoxy)methane	mg/Kg	0.42 U	0.49 U	0.4 U	0.41 U	0.095 U	0.073 U	0.076 U	0.072 U	0.53 U	0.39 U	0.49 U	0.61 U
bis(2-Chloroethyl)ether	mg/Kg	0.42 U	0.49 U	0.4 U	0.41 U	0.095 U	0.073 U	0.076 U	0.072 U	0.53 U	0.39 U	0.49 U	0.61 U
bis(2-Chloroisopropyl)ether	mg/Kg	0.42 U	0.49 U	0.4 U	0.41 U	0.095 U	0.073 U	0.076 U	0.072 U	0.53 U	0.39 U	0.49 U	0.61 U
bis(2-Ethylhexyl)phthalate	mg/Kg	0.42 U	0.49 U	**0.291 J**	0.41 U	**0.0808 J**	0.073 U	0.076 U	0.072 U	0.53 U	0.39 U	0.49 U	0.61 U
Butylbenzylphthalate	mg/Kg	0.42 U	0.49 U	0.4 U	0.41 U	0.095 U	0.073 U	0.076 U	0.072 U	0.53 U	0.39 U	0.49 U	0.61 U
Caprolactam	mg/Kg	0.42 U	0.49 U	0.4 U	0.41 U	0.095 U	0.073 U	0.076 U	0.072 U	0.53 U	0.39 U	0.49 U	0.61 U
Carbazole	mg/Kg	0.42 U	**2.53**	**3.62**	**1.44**	0.095 U	**0.513**	**0.25**	**0.387**	**6.72**	0.39 U	0.49 U	0.61 U
Dibenzofuran	mg/Kg	0.42 U	**2.37**	**0.848**	**0.592**	0.095 U	**0.759**	**0.269**	**0.269**	**126**	0.39 U	0.49 U	0.61 U
Diethylphthalate	mg/Kg	0.42 U	0.49 U	0.4 U	0.41 U	0.095 U	0.073 U	0.076 U	0.072 U	0.53 U	0.39 U	0.49 U	0.61 U
Dimethylphthalate	mg/Kg	0.42 U	0.49 U	0.4 U	0.41 U	0.095 U	0.073 U	0.076 U	0.072 U	0.53 U	0.39 U	0.49 U	0.61 U
Di-n-butyl phthalate	mg/Kg	0.42 U	0.49 U	0.4 U	0.41 U	0.095 U	0.073 U	0.076 U	0.072 U	0.53 U	0.39 U	0.49 U	0.61 U
Di-n-octyl phthalate	mg/Kg	0.42 U	0.49 U	0.4 U	0.41 U	0.095 U	0.073 U	0.076 U	0.072 U	0.53 U	0.39 U	0.49 U	0.61 U
Hexachlorobenzene	mg/Kg	0.42 U	0.49 U	0.4 U	0.41 U	0.095 U	0.073 U	0.076 U	0.072 U	0.53 U	0.39 U	0.49 U	0.61 U
Hexachlorobutadiene	mg/Kg	0.42 U	0.49 U	0.4 U	0.41 U	0.095 U	0.073 U	0.076 U	0.072 U	0.53 U	0.39 U	0.49 U	0.61 U
Hexachlorocyclopentadiene	mg/Kg	4.2 U	4.9 U	4 U	4.1 U	0.95 U	0.73 U	0.76 U	0.72 U	5.3 U	3.9 U	4.9 U	6.1 U
Hexachloroethane	mg/Kg	1 U	1.2 U	1 U	1 U	0.24 U	0.18 U	0.19 U	0.18 U	1.3 U	0.98 U	1.2 U	1.5 U
Isophorone	mg/Kg	0.42 U	0.49 U	0.4 U	0.41 U	0.095 U	0.073 U	0.076 U	0.072 U	0.53 U	0.39 U	0.49 U	0.61 U
Nitrobenzene	mg/Kg	0.42 U	0.49 U	0.4 U	0.41 U	0.095 U	0.073 U	0.076 U	0.072 U	0.53 U	0.39 U	0.49 U	0.61 U
N-Nitroso-di-n-propylamine	mg/Kg	0.42 U	0.49 U	0.4 U	0.41 U	0.095 U	0.073 U	0.076 U	0.072 U	0.53 U	0.39 U	0.49 U	0.61 U
N-Nitroso-di-phenylamine	mg/Kg	1 U	1.2 U	1 U	1 U	0.24 U	0.18 U	0.19 U	0.18 U	1.3 U	0.98 U	1.2 U	1.5 U
Pentachlorophenol	mg/Kg	2.1 U	2.4 U	2 U	2.1 U	0.47 U	0.36 U	0.38 U	0.36 U	2.6 U	2 U	2.4 U	3 U
Phenol	mg/Kg	0.42 U	0.49 U	0.4 U	0.41 U	0.095 U	0.073 U	0.076 U	0.072 U	0.53 U	0.39 U	0.49 U	0.61 U

Detected concentrations are marked as shaded and bold.

FT - Feet

J - Estimated

mg/Kg - milligrams per kilogram

U - Not Detected

* - Rejected

APPENDIX F
Soil Analytical Data for Non-PAH Semi-Volatile Organic Compounds (SVOCs)
Quanta Resources Superfund Site, OU1
Edgewater, New Jersey

Location ID		MW-128	MW-128	MW-129	MW-129	MW-129	MW-136	MW-136	MW-136	PZ-7D	SB-39	SB-39	SB-40
Field Sample ID		SB-128-1.8-022409	SB-128-3.8-022409	SB-129-1.8-022409	SB-129-7.5-022409	DUP-022409	SB-136-1.0	SB-136-8.5	SB-136-21.5	SB-PZ7-16.25	SB-39-1.0-022409	SB-39-5.3-022409	SB-40-1.0
Sample Date		2/24/2009	2/24/2009	2/24/2009	2/24/2009	2/24/2009	9/10/2008	9/10/2008	9/10/2008	9/19/2008	2/24/2009	2/24/2009	8/26/2008
Sample Depth Interval		1.5 - 2 FT	3.6 - 4 FT	1.6 - 2 FT	7 - 8 FT	7 - 8 FT	0.5 - 1 FT	8.5 - 9.5 FT	21 - 22 FT	16 - 16.5 FT	0.8 - 1.2 FT	5 - 5.5 FT	0 - 1.5 FT
Sample Matrix		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Constituent	**Units**												
1,2,4-Trichlorobenzene	mg/Kg	0.0065 U	37 U	0.0071 U	0.0063 U	0.0062 U	0.0058 U	0.0056 U	13 U	0.65 U	0.0045 U	0.0056 U	0.0054 U
1,2-Dichlorobenzene	mg/Kg	0.0065 U	37 U	0.0071 U	0.0063 U	0.0062 U	0.0058 U	0.0056 U	13 U	0.65 U	0.0045 U	0.0056 U	0.0054 U
1,3-Dichlorobenzene	mg/Kg	0.0065 U	37 U	0.0071 U	0.0063 U	0.0062 U	0.0058 U	0.0056 U	13 U	0.65 U	0.0045 U	0.0056 U	0.0054 U
1,4-Dichlorobenzene	mg/Kg	0.0065 U	37 U	0.0071 U	0.0063 U	0.0062 U	0.0058 U	0.0056 U	13 U	0.65 U	0.0045 U	0.0056 U	0.0054 U
2,4,5-Trichlorophenol	mg/Kg	0.37 U	2 U	0.19 U	0.2 U	0.21 U	1.1 U	12 U	16 U	0.27 U	0.19 U	0.2 U	1.1 U
2,4,6-Trichlorophenol	mg/Kg	0.37 U	2 U	0.19 U	0.2 U	0.21 U	1.1 U	12 U	16 U	0.27 U	0.19 U	0.2 U	1.1 U
2,4-Dichlorophenol	mg/Kg	**0.716**	**5.13**	0.19 U	0.2 U	0.21 U	1.1 U	12 U	16 U	0.27 U	0.19 U	0.2 U	1.1 U
2,4-Dimethylphenol	mg/Kg	**2.98**	**1.47 J**	**0.0855 J**	0.2 U	0.21 U	1.1 U	12 U	16 U	**0.327**	0.19 U	0.2 U	1.1 U
2,4-Dinitrophenol	mg/Kg	1.5 U	8.1 U	0.76 U	0.81 U	0.84 U	4.3 U	49 UJ	65 UJ	1.1 U	0.77 U	0.81 U	4.6 U
2,4-Dinitrotoluene	mg/Kg	0.15 U	0.81 U	0.076 U	0.081 U	0.084 U	0.43 U	4.9 U	6.5 U	0.11 U	0.077 U	0.081 U	0.46 U
2,6-Dinitrotoluene	mg/Kg	0.15 U	0.81 U	0.076 U	0.081 U	0.084 U	0.43 U	4.9 U	6.5 U	0.11 U	0.077 U	0.081 U	0.46 U
2-Chloronaphthalene	mg/Kg	0.15 U	0.81 U	0.076 U	0.081 U	0.084 U	0.43 U	4.9 U	6.5 U	0.11 U	0.077 U	0.081 U	0.46 U
2-Chlorophenol	mg/Kg	0.37 U	2 U	0.19 U	0.2 U	0.21 U	1.1 U	12 U	16 U	0.27 U	0.19 U	0.2 U	1.1 U
2-Methylphenol	mg/Kg	**0.418**	0.81 U	0.076 U	0.081 U	0.084 U	0.43 U	4.9 U	6.5 U	0.11 U	0.077 U	0.081 U	0.46 U
2-Nitroaniline	mg/Kg	0.37 U	2 U	0.19 U	0.2 U	0.21 U	1.1 U	12 U	16 U	0.27 U	0.19 U	0.2 U	1.1 U
2-Nitrophenol	mg/Kg	0.37 U	2 U	0.19 U	0.2 U	0.21 U	1.1 U	12 U	16 U	0.27 U	0.19 U	0.2 U	1.1 U
3&4-Methylphenol	mg/Kg	**2.05**	**1.38**	0.076 U	0.081 U	0.084 U	0.43 U	4.9 U	6.5 U	0.11 U	0.077 U	0.081 U	0.46 U
3,3-Dichlorobenzidine	mg/Kg	0.37 U	2 U	0.19 U	0.2 U	0.21 U	1.1 U	12 U	16 U	0.27 U	0.19 U	0.2 U	1.1 U
3-Nitroaniline	mg/Kg	0.37 U	2 U	0.19 U	0.2 U	0.21 U	1.1 U	12 U	16 U	0.27 U	0.19 U	0.2 U	1.1 U
4,6-Dinitro-2-methylphenol	mg/Kg	1.5 U	8.1 U	0.76 U	0.81 U	0.84 U	4.3 U	49 U	65 U	1.1 U	0.77 U	0.81 U	4.6 U
4-Bromophenyl phenyl ether	mg/Kg	0.15 U	0.81 U	0.076 U	0.081 U	0.084 U	0.43 U	4.9 U	6.5 U	0.11 U	0.077 U	0.081 U	0.46 U
4-Chloro-3-methyl phenol	mg/Kg	**6.64**	**6.14**	0.19 U	0.2 U	0.21 U	1.1 U	12 U	16 U	0.27 U	0.19 U	0.2 U	1.1 U
4-Chloroaniline	mg/Kg	0.37 U	2 U	0.19 U	0.2 U	0.21 U	1.1 U	12 U	16 U	0.27 U	0.19 U	0.2 U	1.1 U
4-Chlorophenyl phenyl ether	mg/Kg	0.15 U	0.81 U	0.076 U	0.081 U	0.084 U	0.43 U	4.9 U	6.5 U	0.11 U	0.077 U	0.081 U	0.46 U
4-Nitroaniline	mg/Kg	0.37 U	2 U	0.19 U	0.2 U	0.21 U	1.1 U	12 U	16 U	0.27 U	0.19 U	0.2 U	1.1 U
4-Nitrophenol	mg/Kg	0.74 U	4 U	0.38 U	0.41 U	0.42 U	2.2 U	49 UJ	32 UJ	0.55 U	0.38 U	0.4 U	4.6 U
Acetophenone	mg/Kg	0.37 U	2 U	0.19 U	0.2 U	0.21 U	1.1 U	12 U	16 U	0.27 U	0.19 U	0.2 U	1.1 U
Atrazine	mg/Kg	0.37 U	2 U	0.19 U	0.2 U	0.21 U	1.1 U	12 UJ	16 UJ	0.27 U	0.19 U	0.2 U	1.1 U
Benzaldehyde	mg/Kg	0.37 U	2 U	0.19 U	0.2 U	0.21 U	*	12 U	16 U	*	0.19 U	0.2 U	1.1 U
Biphenyl	mg/Kg	**6.18**	**190**	**3.11**	0.081 U	0.084 U	0.43 U	4.9 U	**208**	**1.51**	0.077 U	0.081 U	0.46 U
bis(2-Chloroethoxy)methane	mg/Kg	0.15 U	0.81 U	0.076 U	0.081 U	0.084 U	0.43 U	4.9 U	6.5 U	0.11 U	0.077 U	0.081 U	0.46 U
bis(2-Chloroethyl)ether	mg/Kg	0.15 U	0.81 U	0.076 U	0.081 U	0.084 U	0.43 U	4.9 U	6.5 U	0.11 U	0.077 U	0.081 U	0.46 U
bis(2-Chloroisopropyl)ether	mg/Kg	0.15 U	0.81 U	0.076 U	0.081 U	0.084 U	0.43 U	4.9 U	6.5 U	0.11 U	0.077 U	0.081 U	0.46 U
bis(2-Ethylhexyl)phthalate	mg/Kg	**0.193 J**	0.81 U	**0.253**	0.081 U	0.084 U	**0.266 J**	4.9 U	6.5 U	0.11 U	0.077 U	0.081 U	**0.728**
Butylbenzylphthalate	mg/Kg	0.15 U	0.81 U	0.076 U	0.081 U	0.084 U	0.43 U	4.9 U	6.5 U	0.11 U	0.077 U	0.081 U	0.46 U
Caprolactam	mg/Kg	0.15 U	0.81 U	0.076 U	0.081 U	0.084 U	0.43 U	4.9 U	6.5 U	0.11 U	0.077 U	0.081 U	0.46 U
Carbazole	mg/Kg	**315**	**554**	**17.2**	**0.214**	0.084 U	**0.387 J**	**1.16 J**	**172**	**4.62**	**0.0222 J**	**0.274**	**1.53**
Dibenzofuran	mg/Kg	**50**	**998**	**22**	**0.0285 J**	0.084 U	**0.221 J**	**4.24 J**	**621**	**5.11**	0.077 U	**0.095**	**0.874**
Diethylphthalate	mg/Kg	0.15 U	0.81 U	0.076 U	0.081 U	0.084 U	0.43 U	4.9 U	6.5 U	0.11 U	0.077 U	0.081 U	0.46 U
Dimethylphthalate	mg/Kg	0.15 U	0.81 U	0.076 U	0.081 U	0.084 U	0.43 U	4.9 U	6.5 U	0.11 U	0.077 U	0.081 U	0.46 U
Di-n-butyl phthalate	mg/Kg	**11.9**	**15.1**	0.076 U	0.081 U	0.084 U	0.43 U	4.9 U	6.5 U	0.11 U	0.077 U	0.081 U	0.46 U
Di-n-octyl phthalate	mg/Kg	0.15 U	0.81 U	0.076 U	0.081 U	0.084 U	0.43 U	4.9 U	6.5 U	0.11 U	0.077 U	0.081 U	0.46 U
Hexachlorobenzene	mg/Kg	0.15 U	0.81 U	0.076 U	0.081 U	0.084 U	0.43 U	4.9 U	6.5 U	0.11 U	0.077 U	0.081 U	0.46 U
Hexachlorobutadiene	mg/Kg	0.074 U	0.4 U	0.038 U	0.041 U	0.042 U	0.43 U	4.9 U	6.5 U	0.11 U	0.038 U	0.04 U	0.46 U
Hexachlorocyclopentadiene	mg/Kg	1.5 UJ	8.1 UJ	0.76 UJ	0.81 UJ	0.84 UJ	4.3 U	49 U	65 U	1.1 U	0.77 UJ	0.81 UJ	4.6 U
Hexachloroethane	mg/Kg	0.37 U	2 U	0.19 U	0.2 U	0.21 U	1.1 U	12 U	16 U	0.27 U	0.19 U	0.2 U	1.1 U
Isophorone	mg/Kg	0.15 U	0.81 U	0.076 U	0.081 U	0.084 U	0.43 U	4.9 U	6.5 U	0.11 U	0.077 U	0.081 U	0.46 U
Nitrobenzene	mg/Kg	0.15 U	0.81 U	0.076 U	0.081 U	0.084 U	0.43 U	4.9 U	6.5 U	0.11 U	0.077 U	0.081 U	0.46 U
N-Nitroso-di-n-propylamine	mg/Kg	0.15 U	0.81 U	0.076 U	0.081 U	0.084 U	0.43 U	4.9 U	6.5 U	0.11 U	0.077 U	0.081 U	0.46 U
N-Nitroso-di-phenylamine	mg/Kg	0.37 U	2 U	0.19 U	0.2 U	0.21 U	1.1 U	12 U	16 U	0.27 U	0.19 U	0.2 U	1.1 U
Pentachlorophenol	mg/Kg	0.74 U	4 U	0.38 U	0.41 U	0.42 U	2.2 U	24 U	32 UJ	0.55 U	0.38 U	0.4 U	2.3 U
Phenol	mg/Kg	**0.782**	0.81 U	0.076 U	0.081 U	0.084 U	0.43 U	4.9 U	6.5 U	0.11 U	0.077 U	0.081 U	0.46 U

Detected concentrations are marked as shaded and bold.
FT - Feet
J - Estimated
mg/Kg - milligrams per kilogram
U - Not Detected
* - Rejected

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APPENDIX F
Soil Analytical Data for Non-PAH Semi-Volatile Organic Compounds (SVOCs)
Quanta Resources Superfund Site, OU1
Edgewater, New Jersey

Location ID		SB-40	SB-42	SB-42	SB-43	SB-43	SB-44	SB-44	SB-47	SB-47	SB-48	SB-49	SB-49
Field Sample ID		SB-40-4.0	SB-42-1.0	SB-42-9.0	SB-43-0.5	SB-43-3.5	SB-44-1.0	SB-44-8.0	SB-47-1.5	SB-47-3.2	SB-48-6.0	SB-49-4.5	SB-49-9.5
Sample Date		8/26/2008	8/26/2008	8/26/2008	8/26/2008	8/26/2008	9/4/2008	9/4/2008	8/27/2008	8/27/2008	8/27/2008	9/2/2008	9/2/2008
Sample Depth Interval		3.8 - 5 FT	0 - 1.5 FT	8.5 - 10 FT	0 - 1 FT	3 - 4 FT	0.5 - 1.5 FT	7 - 9 FT	1 - 2 FT	2.7 - 3.7 FT	5 - 7 FT	4 - 5 FT	9 - 10 FT
Sample Matrix		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Constituent	**Units**												
1,2,4-Trichlorobenzene	mg/Kg	0.51 U	0.0063 U	4.2 U	0.0072 UJ	0.0076 U	0.0086 U	11 U	0.0063 U	0.0091 U	0.0079 U	1.9 U	6.5 U
1,2-Dichlorobenzene	mg/Kg	0.51 U	0.0063 U	4.2 U	0.0072 UJ	0.0076 U	0.0086 U	11 U	0.0063 U	0.0091 U	0.0079 U	1.9 U	6.5 U
1,3-Dichlorobenzene	mg/Kg	0.51 U	0.0063 U	4.2 U	0.0072 UJ	0.0076 U	0.0086 U	11 U	0.0063 U	0.0091 U	0.0079 U	1.9 U	6.5 U
1,4-Dichlorobenzene	mg/Kg	0.51 U	0.0063 U	4.2 U	0.0072 UJ	0.0076 U	0.0086 U	11 U	0.0063 U	0.0091 U	0.0079 U	1.9 U	6.5 U
2,4,5-Trichlorophenol	mg/Kg	1.3 U	5.2 U	1.2 U	0.18 U	1.3 U	0.17 U	1.6 U	2.6 U	0.22 U	0.21 U	13 U	12 U
2,4,6-Trichlorophenol	mg/Kg	1.3 U	5.2 U	1.2 U	0.18 U	1.3 U	0.17 U	1.6 U	2.6 U	0.22 U	0.21 U	13 U	12 U
2,4-Dichlorophenol	mg/Kg	1.3 U	5.2 U	1.2 U	0.18 U	1.3 U	0.17 U	1.6 U	2.6 U	0.22 U	0.21 U	13 U	12 U
2,4-Dimethylphenol	mg/Kg	1.3 U	5.2 U	1.2 U	0.18 U	1.3 U	0.17 U	1.6 U	2.6 U	0.22 U	0.21 U	13 U	**4.43 J**
2,4-Dinitrophenol	mg/Kg	5.2 U	21 U	4.8 U	0.73 U	5.4 U	0.69 U	6.3 U	10 U	0.89 U	0.84 U	50 U	46 U
2,4-Dinitrotoluene	mg/Kg	0.52 U	2.1 U	0.48 U	0.073 U	0.54 U	0.069 U	0.63 U	1 U	0.089 U	0.084 U	5 U	4.6 U
2,6-Dinitrotoluene	mg/Kg	0.52 U	2.1 U	0.48 U	0.073 U	0.54 U	0.069 U	0.63 U	1 U	0.089 U	0.084 U	5 U	4.6 U
2-Chloronaphthalene	mg/Kg	0.52 U	2.1 U	0.48 U	0.073 U	0.54 U	0.069 U	0.63 U	1 U	0.089 U	0.084 U	5 U	4.6 U
2-Chlorophenol	mg/Kg	1.3 U	5.2 U	1.2 U	0.18 U	1.3 U	0.17 U	1.6 U	2.6 U	0.22 U	0.21 U	13 U	12 U
2-Methylphenol	mg/Kg	0.52 U	2.1 U	0.48 U	0.073 U	0.54 U	0.069 U	0.63 U	1 U	0.089 U	0.084 U	5 U	**2.74 J**
2-Nitroaniline	mg/Kg	1.3 U	5.2 U	1.2 U	0.18 U	1.3 U	0.17 U	1.6 U	2.6 U	0.22 U	0.21 U	13 U	12 U
2-Nitrophenol	mg/Kg	1.3 U	5.2 U	1.2 U	0.18 U	1.3 U	0.17 U	1.6 U	2.6 U	0.22 U	0.21 U	13 U	12 U
3&4-Methylphenol	mg/Kg	0.52 U	2.1 U	0.48 U	0.073 U	0.54 U	0.069 U	0.63 U	1 U	0.089 U	0.084 U	5 U	4.6 U
3,3-Dichlorobenzidine	mg/Kg	1.3 U	5.2 U	1.2 U	0.18 U	1.3 U	0.17 U	1.6 U	2.6 U	0.22 U	0.21 U	13 U	12 U
3-Nitroaniline	mg/Kg	1.3 U	5.2 U	1.2 U	0.18 U	1.3 U	0.17 U	1.6 U	2.6 U	0.22 U	0.21 U	13 U	12 U
4,6-Dinitro-2-methylphenol	mg/Kg	5.2 U	21 U	4.8 U	0.73 U	5.4 U	0.69 U	6.3 U	10 U	0.89 U	0.84 U	50 U	46 U
4-Bromophenyl phenyl ether	mg/Kg	0.52 U	2.1 U	0.48 U	0.073 U	0.54 U	0.069 U	0.63 U	1 U	0.089 U	0.084 U	5 U	4.6 U
4-Chloro-3-methyl phenol	mg/Kg	1.3 U	5.2 U	1.2 U	0.18 U	1.3 U	0.17 U	1.6 U	2.6 U	0.22 U	0.21 U	13 U	12 U
4-Chloroaniline	mg/Kg	1.3 U	5.2 U	1.2 U	0.18 U	1.3 U	0.17 U	1.6 U	2.6 U	0.22 U	0.21 U	13 U	12 U
4-Chlorophenyl phenyl ether	mg/Kg	0.52 U	2.1 U	0.48 U	0.073 U	0.54 U	0.069 U	0.63 U	1 U	0.089 U	0.084 U	5 U	4.6 U
4-Nitroaniline	mg/Kg	1.3 U	5.2 U	1.2 U	0.18 U	1.3 U	0.17 U	1.6 U	2.6 U	0.22 U	0.21 U	13 U	12 U
4-Nitrophenol	mg/Kg	5.2 U	21 U	4.8 U	0.73 U	5.4 U	0.69 U	6.3 U	10 U	0.89 U	0.84 U	50 U	46 U
Acetophenone	mg/Kg	1.1 U	5.2 U	1.2 U	0.18 U	1.3 U	0.17 U	1.6 U	2.6 U	0.22 U	0.21 U	13 U	12 U
Atrazine	mg/Kg	1.3 U	5.2 U	1.2 U	0.18 U	1.3 U	0.17 UJ	1.6 UJ	2.6 U	0.22 U	0.21 U	13 U	12 U
Benzaldehyde	mg/Kg	1.3 U	5.2 U	1.2 U	0.18 U	1.3 U	0.17 U	1.6 U	2.6 U	0.22 U	0.21 U	13 UJ	12 UJ
Biphenyl	mg/Kg	**1.06 J**	2.1 U	**0.516**	0.073 U	0.54 U	0.069 U	**133**	1 U	0.089 U	0.084 U	5 U	**91.8**
bis(2-Chloroethoxy)methane	mg/Kg	0.52 U	2.1 U	0.48 U	0.073 U	0.54 U	0.069 U	0.63 U	1 U	0.089 U	0.084 U	5 U	4.6 U
bis(2-Chloroethyl)ether	mg/Kg	0.52 U	2.1 U	0.48 U	0.073 U	0.54 U	0.069 U	0.63 U	1 U	0.089 U	0.084 U	5 U	4.6 U
bis(2-Chloroisopropyl)ether	mg/Kg	0.52 U	2.1 U	0.48 U	0.073 U	0.54 U	0.069 U	0.63 U	1 U	0.089 U	0.084 U	5 U	4.6 U
bis(2-Ethylhexyl)phthalate	mg/Kg	0.52 U	2.1 U	0.48 U	**0.0498 J**	0.54 U	**0.211**	0.63 U	1 U	**0.137**	**0.65**	**13.8**	**31.9**
Butylbenzylphthalate	mg/Kg	0.52 U	2.1 U	0.48 U	0.073 U	0.54 U	0.069 U	0.63 U	1 U	0.089 U	0.084 U	5 U	4.6 U
Caprolactam	mg/Kg	0.52 U	2.1 U	0.48 U	0.073 U	0.54 U	0.069 U	0.63 U	1 U	0.089 U	0.084 U	5 U	4.6 U
Carbazole	mg/Kg	**3.83 J**	2.1 U	**5.02**	0.073 U	**0.448 J**	0.069 U	**85.1**	**1.1**	0.089 U	**0.333**	**8.81**	**808**
Dibenzofuran	mg/Kg	**10.8 J**	2.1 U	**189**	0.073 U	**0.226 J**	0.069 U	**418**	**0.302 J**	0.089 U	**0.187**	**6.01**	**630**
Diethylphthalate	mg/Kg	0.52 U	2.1 U	0.48 U	0.073 U	0.54 U	0.069 U	0.63 U	1 U	0.089 U	0.084 U	5 U	4.6 U
Dimethylphthalate	mg/Kg	0.52 U	2.1 U	0.48 U	0.073 U	0.54 U	0.069 U	0.63 U	1 U	0.089 U	0.084 U	5 U	4.6 U
Di-n-butyl phthalate	mg/Kg	0.52 U	2.1 U	0.48 U	0.073 U	0.54 U	0.069 U	0.63 U	1 U	0.089 U	0.084 U	5 U	4.6 U
Di-n-octyl phthalate	mg/Kg	0.52 U	2.1 U	0.48 U	0.073 U	0.54 U	0.069 U	0.63 U	1 U	0.089 U	0.084 U	5 U	4.6 U
Hexachlorobenzene	mg/Kg	0.52 U	2.1 U	0.48 U	0.073 U	0.54 U	0.069 U	0.63 U	1 U	0.089 U	0.084 U	5 U	4.6 U
Hexachlorobutadiene	mg/Kg	0.52 U	2.1 U	0.48 U	0.073 U	0.54 U	0.069 U	0.63 U	1 U	0.089 U	0.084 U	5 U	4.6 U
Hexachlorocyclopentadiene	mg/Kg	5.2 U	21 U	4.8 U	0.73 U	5.4 U	0.69 U	6.3 U	10 U	0.89 U	0.84 U	50 U	46 U
Hexachloroethane	mg/Kg	1.3 U	5.2 U	1.2 U	0.18 U	1.3 U	0.17 U	1.6 U	2.6 U	0.22 U	0.21 U	13 U	12 U
Isophorone	mg/Kg	0.52 U	2.1 U	0.48 U	0.073 U	0.54 U	0.069 U	0.63 U	1 U	0.089 U	0.084 U	5 U	4.6 U
Nitrobenzene	mg/Kg	0.52 U	2.1 U	0.48 U	0.073 U	0.54 U	0.069 U	0.63 U	1 U	0.089 U	0.084 U	5 U	4.6 U
N-Nitroso-di-n-propylamine	mg/Kg	0.52 U	2.1 U	0.48 U	0.073 U	0.54 U	0.069 U	0.63 U	1 U	0.089 U	0.084 U	5 U	4.6 U
N-Nitroso-di-phenylamine	mg/Kg	1.3 U	5.2 U	1.2 U	0.18 U	1.3 U	0.17 U	1.6 U	2.6 U	0.22 U	0.21 U	13 U	12 U
Pentachlorophenol	mg/Kg	2.6 U	10 U	2.4 U	0.36 U	2.7 U	0.34 U	3.2 U	5.2 U	0.45 U	0.42 U	25 U	23 U
Phenol	mg/Kg	0.52 U	2.1 U	0.48 U	0.073 U	0.54 U	0.069 U	0.63 U	1 U	0.089 U	0.084 U	5 U	4.6 U

Detected concentrations are marked as shaded and bold.
FT - Feet
J - Estimated
mg/Kg - milligrams per kilogram
U - Not Detected
* - Rejected

APPENDIX F
Soil Analytical Data for Non-PAH Semi-Volatile Organic Compounds (SVOCs)
Quanta Resources Superfund Site, OU1
Edgewater, New Jersey

Location ID		SB-50	SB-50	SB-51	SB-51	SB-52	SB-52	SS-58	SB-58	SB-58	SB-58	TL08.5-10.5	TL08.5-10.5
Field Sample ID		SB-50-3.0	SB-50-11.25	SB-51-3.5	SB-51-18	SB-52-3.0	SB-52-6.0	SS-58-0.1	SB-58-3.7	SB-58-9.5	SB-58-11.7	TL 8.5-10.5-0.5	TL 8.5-10.5-13*
Sample Date		9/2/2008	10/16/2008	9/2/2008	9/2/2008	2/24/2009	2/24/2009	10/15/2008	2/25/2009	2/25/2009	2/25/2009	8/28/2008	8/28/2008
Sample Depth Interval		2.5 - 3.5 FT	11 - 11.5 FT	3 - 4 FT	17.5 - 18.5 FT	2 - 4 FT	5.7 - 6.3 FT	0.1 - 0.2 FT	3.5 - 4 FT	9.3 - 9.7 FT	11.3 - 12 FT	0 - 1 FT	12 - 14 FT
Sample Matrix		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Constituent	**Units**												
1,2,4-Trichlorobenzene	mg/Kg	0.0064 U	84 U	0.0054 U	0.38 U	0.0048 U	0.0056 U	0.0055 U	0.0062 U	0.0061 U	0.0072 U	0.0064 U	0.025 U
1,2-Dichlorobenzene	mg/Kg	0.0064 U	84 U	0.0054 U	0.38 U	0.0048 U	0.0056 U	0.0055 U	0.0062 U	0.0061 U	0.0072 U	0.0064 U	0.025 U
1,3-Dichlorobenzene	mg/Kg	0.0064 U	84 U	0.0054 U	0.38 U	0.0048 U	0.0056 U	0.0055 U	0.0062 U	0.0061 U	0.0072 U	0.0064 U	0.025 U
1,4-Dichlorobenzene	mg/Kg	0.0064 U	84 U	0.0054 U	0.38 U	0.0048 U	0.0056 U	0.0055 U	0.0062 U	0.0061 U	0.0072 U	0.0064 U	0.025 U
2,4,5-Trichlorophenol	mg/Kg	1.1 U	1.7 U	0.18 U	1.2 U	0.18 U	0.18 U	0.19 U	0.19 U	0.21 U	0.2 U	1 U	2.8 U
2,4,6-Trichlorophenol	mg/Kg	1.1 U	1.7 U	0.18 U	1.2 U	0.18 U	0.18 U	0.19 U	0.19 U	0.21 U	0.2 U	1 U	2.8 U
2,4-Dichlorophenol	mg/Kg	1.1 U	1.7 U	0.18 U	1.2 U	0.18 U	0.18 U	0.19 U	0.19 U	0.21 U	0.2 U	1 U	2.8 U
2,4-Dimethylphenol	mg/Kg	1.1 U	1.7 U	0.18 U	1.2 U	0.18 U	0.18 U	0.19 U	0.19 U	0.21 U	0.2 U	1 U	2.8 U
2,4-Dinitrophenol	mg/Kg	4.4 U	6.8 U	*	4.6 U	0.72 U	0.72 U	0.78 U	0.77 U	0.84 U	0.81 U	4.1 U	11 U
2,4-Dinitrotoluene	mg/Kg	0.44 U	0.68 U	0.073 U	0.46 U	0.072 U	0.072 U	0.078 U	0.077 U	0.084 U	0.081 U	0.41 U	1.1 U
2,6-Dinitrotoluene	mg/Kg	0.44 U	0.68 U	0.073 U	0.46 U	0.072 U	0.072 U	0.078 U	0.077 U	0.084 U	0.081 U	0.41 U	1.1 U
2-Chloronaphthalene	mg/Kg	0.44 U	0.68 U	0.073 U	0.46 U	0.072 U	0.072 U	0.078 U	0.077 U	0.084 U	0.081 U	0.41 U	1.1 U
2-Chlorophenol	mg/Kg	1.1 U	1.7 U	0.18 U	1.2 U	0.18 U	0.18 U	0.19 U	0.19 U	0.21 U	0.2 U	1 U	2.8 U
2-Methylphenol	mg/Kg	0.44 U	0.68 U	0.073 U	0.46 U	0.072 U	0.072 U	0.078 U	0.077 U	0.084 U	0.081 U	0.41 U	1.1 U
2-Nitroaniline	mg/Kg	1.1 U	1.7 U	0.18 U	1.2 U	0.18 U	0.18 U	0.19 U	0.19 U	0.21 U	0.2 U	1 U	2.8 U
2-Nitrophenol	mg/Kg	1.1 U	1.7 U	0.18 U	1.2 U	0.18 U	0.18 U	0.19 U	0.19 U	0.21 U	0.2 U	1 U	2.8 U
3&4-Methylphenol	mg/Kg	0.44 U	0.68 U	0.073 U	0.46 U	0.072 U	0.072 U	0.078 U	0.077 U	0.084 U	0.081 U	0.41 U	1.1 U
3,3-Dichlorobenzidine	mg/Kg	1.1 U	1.7 U	0.18 U	1.2 U	0.18 U	0.18 U	0.19 U	0.19 U	0.21 U	0.2 U	1 U	2.8 U
3-Nitroaniline	mg/Kg	1.1 U	1.7 U	0.18 U	1.2 U	0.18 U	0.18 U	0.19 U	0.19 U	0.21 U	0.2 U	1 U	2.8 U
4,6-Dinitro-2-methylphenol	mg/Kg	4.4 U	6.8 U	0.73 U	4.6 U	0.72 U	0.72 U	0.78 U	0.77 U	0.84 U	0.81 U	4.1 U	11 U
4-Bromophenyl phenyl ether	mg/Kg	0.44 U	0.68 U	0.073 U	0.46 U	0.072 U	0.072 U	0.078 U	0.077 U	0.084 U	0.081 U	0.41 U	1.1 U
4-Chloro-3-methyl phenol	mg/Kg	1.1 U	1.7 U	0.18 U	1.2 U	0.18 U	0.18 U	0.19 U	0.19 U	0.21 U	0.2 U	1 U	2.8 U
4-Chloroaniline	mg/Kg	1.1 U	1.7 U	0.18 U	1.2 U	0.18 U	0.18 U	0.19 U	0.19 U	0.21 U	0.2 U	1 U	2.8 U
4-Chlorophenyl phenyl ether	mg/Kg	0.44 U	0.68 U	0.073 U	0.46 U	0.072 U	0.072 U	0.078 U	0.077 U	0.084 U	0.081 U	0.41 U	1.1 U
4-Nitroaniline	mg/Kg	1.1 U	1.7 U	0.18 U	1.2 U	0.18 U	0.18 U	0.19 U	0.19 U	0.21 U	0.2 U	1 U	2.8 U
4-Nitrophenol	mg/Kg	4.4 U	3.4 U	0.73 U	4.6 U	0.36 U	0.36 U	0.39 U	0.39 U	0.42 U	0.41 U	4.1 U	11 U
Acetophenone	mg/Kg	1.1 U	1.7 U	0.18 U	1.2 U	0.18 U	0.18 U	0.19 U	0.19 U	0.21 U	0.2 U	1 U	2.8 U
Atrazine	mg/Kg	1.1 U	1.7 U	0.18 U	1.2 U	0.18 U	0.18 U	0.19 U	0.19 U	0.21 U	0.2 U	1 UJ	2.8 UJ
Benzaldehyde	mg/Kg	1.1 UJ	1.7 U	0.18 UJ	1.2 UJ	0.18 U	0.18 U	0.19 U	0.19 U	0.21 U	0.2 U	1 UJ	2.8 UJ
Biphenyl	mg/Kg	0.44 U	**186**	0.073 U	0.46 U	0.072 U	**0.0522 J**	**0.0948**	0.077 U	0.084 U	0.081 U	0.41 U	1.1 U
bis(2-Chloroethoxy)methane	mg/Kg	0.44 U	0.68 U	0.073 U	0.46 U	0.072 U	0.072 U	0.078 U	0.077 U	0.084 U	0.081 U	0.41 U	1.1 U
bis(2-Chloroethyl)ether	mg/Kg	0.44 U	0.68 U	0.073 U	0.46 U	0.072 U	0.072 U	0.078 U	0.077 U	0.084 U	0.081 U	0.41 U	1.1 U
bis(2-Chloroisopropyl)ether	mg/Kg	0.44 U	0.68 U	0.073 U	0.46 U	0.072 U	0.072 U	0.078 U	0.077 U	0.084 U	0.081 U	0.41 U	1.1 U
bis(2-Ethylhexyl)phthalate	mg/Kg	**0.304 J**	0.68 U	**0.07 J**	**0.275 J**	0.072 U	0.072 U	**0.33**	0.077 U	**0.0783 J**	**0.159**	**0.4 J**	1.1 U
Butylbenzylphthalate	mg/Kg	0.44 U	0.68 U	0.073 U	0.46 U	0.072 U	0.072 U	0.078 U	**0.04 J**	**0.0846**	0.081 U	0.41 U	1.1 U
Caprolactam	mg/Kg	0.44 U	0.68 U	0.073 U	0.46 U	0.072 U	0.072 U	0.078 U	0.077 U	0.084 U	0.081 U	0.41 U	1.1 U
Carbazole	mg/Kg	0.44 U	**125**	**0.0183 J**	**0.809**	**0.0675 J**	**1.05**	**1.34**	**0.0426 J**	**0.104**	**0.197**	**0.341 J**	1.1 U
Dibenzofuran	mg/Kg	0.44 U	**483**	0.073 U	**0.29 J**	**0.0404 J**	**0.409**	**0.768**	**0.0206 J**	**0.128**	**0.293**	**0.274 J**	1.1 U
Diethylphthalate	mg/Kg	0.44 U	0.68 U	0.073 U	0.46 U	0.072 U	0.072 U	0.078 U	0.077 U	0.084 U	0.081 U	0.41 U	1.1 U
Dimethylphthalate	mg/Kg	0.44 U	0.68 U	0.073 U	0.46 U	0.072 U	0.072 U	0.078 U	0.077 U	0.084 U	0.081 U	0.41 U	1.1 U
Di-n-butyl phthalate	mg/Kg	0.44 U	0.68 U	0.073 U	0.46 U	0.072 U	0.072 U	0.078 U	0.077 U	0.084 U	0.081 U	0.41 U	1.1 U
Di-n-octyl phthalate	mg/Kg	0.44 U	0.68 U	0.073 U	0.46 U	0.072 U	0.072 U	0.078 U	0.077 UJ	0.084 UJ	0.081 UJ	0.41 U	1.1 U
Hexachlorobenzene	mg/Kg	0.44 U	0.68 U	0.073 U	0.46 U	0.072 U	0.072 U	0.078 U	0.077 U	0.084 U	0.081 U	0.41 U	1.1 U
Hexachlorobutadiene	mg/Kg	0.44 U	0.68 U	0.073 U	0.46 U	0.036 U	0.036 U	0.078 U	0.039 U	0.042 U	0.041 U	0.41 U	1.1 U
Hexachlorocyclopentadiene	mg/Kg	4.4 U	6.8 U	0.73 U	4.6 U	0.72 UJ	0.72 UJ	0.78 U	0.77 U	0.84 U	0.81 U	4.1 U	11 U
Hexachloroethane	mg/Kg	1.1 U	1.7 U	0.18 U	1.2 U	0.18 U	0.18 U	0.19 U	0.19 U	0.21 U	0.2 U	1 U	2.8 U
Isophorone	mg/Kg	0.44 U	0.68 U	0.073 U	0.46 U	0.072 U	0.072 U	0.078 U	0.077 U	0.084 U	0.081 U	0.41 U	1.1 U
Nitrobenzene	mg/Kg	0.44 U	0.68 U	0.073 U	0.46 U	0.072 U	0.072 U	0.078 U	0.077 U	0.084 U	0.081 U	0.41 U	1.1 U
N-Nitroso-di-n-propylamine	mg/Kg	0.44 U	0.68 U	0.073 U	0.46 U	0.072 U	0.072 U	0.078 U	0.077 U	0.084 U	0.081 U	0.41 U	1.1 U
N-Nitroso-di-phenylamine	mg/Kg	1.1 U	1.7 U	0.18 U	1.2 U	0.18 U	0.18 U	0.19 U	0.19 U	0.21 U	0.2 U	1 U	2.8 U
Pentachlorophenol	mg/Kg	2.2 U	3.4 U	0.36 U	2.3 U	0.36 U	0.36 U	0.39 U	0.39 U	0.42 U	0.41 U	2.1 U	5.6 U
Phenol	mg/Kg	0.44 U	0.68 U	0.073 U	0.46 U	0.072 U	0.072 U	0.078 U	0.077 U	0.084 U	0.081 U	0.41 U	1.1 U

Detected concentrations are marked as shaded and bold.
FT - Feet
J - Estimated
mg/Kg - milligrams per kilogram
U - Not Detected
* - Rejected

APPENDIX F
Soil Analytical Data for Non-PAH Semi-Volatile Organic Compounds (SVOCs)
Quanta Resources Superfund Site, OU1
Edgewater, New Jersey

Location ID		TL09.5-10.5	TL09.5-10.5	TL09.5-10.5	TL09.5-11.25	TL09.5-11.25	TL09-09	TL09-09	TL09-09	TL10.5-09.5	TL10.5-09.5	TL10.5-09.5	TL10.5-09.5
Field Sample ID		TL 9.5-10.5-1.5	TL 9.5-10.5-3.5	TL 9.5-10.5-16.5	TL 9.5-11.25-0.5	TL 9.5-11.25-7.5	TL09-09-1.0	TL09-09-4.5	TL09-09-19.5	TL10.5-9.5-1.0	DUP-082908	TL10.5-9.5-9.5	TL10.5-9.5-23.5
Sample Date		8/28/2008	8/28/2008	8/28/2008	8/28/2008	8/28/2008	8/29/2008	8/29/2008	8/29/2008	8/29/2008	8/29/2008	8/29/2008	8/29/2008
Sample Depth Interval		1 - 2 FT	3 - 4 FT	16 - 17 FT	0 - 1 FT	5 - 10 FT	0.5 - 1.5 FT	4 - 5 FT	19.3 - 20 FT	0 - 1.5 FT	0 - 1.5 FT	9 - 10 FT	23 - 24 FT
Sample Matrix		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Constituent	**Units**												
1,2,4-Trichlorobenzene	mg/Kg	0.007 U	0.0063 U	0.025 U	0.0058 U	0.0059 U	0.0066 U	0.0058 U	0.017 U	0.0062 U	0.0059 U	0.01 U	0.013 U
1,2-Dichlorobenzene	mg/Kg	0.007 U	0.0063 U	0.025 U	0.0058 U	0.0059 U	0.0066 U	0.0058 U	0.017 U	0.0062 U	0.0059 U	0.01 U	0.013 U
1,3-Dichlorobenzene	mg/Kg	0.007 U	0.0063 U	0.025 U	0.0058 U	0.0059 U	0.0066 U	0.0058 U	0.017 U	0.0062 U	0.0059 U	0.01 U	0.013 U
1,4-Dichlorobenzene	mg/Kg	0.007 U	0.0063 U	0.025 U	0.0058 U	0.0059 U	0.0066 U	0.0058 U	0.017 U	0.0062 U	0.0059 U	0.01 U	0.013 U
2,4,5-Trichlorophenol	mg/Kg	1 U	1.2 U	3.1 U	1 U	1.2 U	2.6 U	1.2 U	0.39 U	0.18 U	0.18 U	0.29 U	0.31 U
2,4,6-Trichlorophenol	mg/Kg	1 U	1.2 U	3.1 U	1 U	1.2 U	2.6 U	1.2 U	0.39 U	0.18 U	0.18 U	0.29 U	0.31 U
2,4-Dichlorophenol	mg/Kg	1 U	1.2 U	3.1 U	1 U	1.2 U	2.6 U	1.2 U	0.39 U	0.18 U	0.18 U	0.29 U	0.31 U
2,4-Dimethylphenol	mg/Kg	1 U	1.2 U	3.1 U	1 U	1.2 U	2.6 U	1.2 U	0.39 U	0.18 U	0.18 U	0.29 U	0.31 U
2,4-Dinitrophenol	mg/Kg	4.2 U	4.7 U	13 U	4 U	4.7 U	10 U	4.7 U	1.6 U	0.71 U	0.7 U	1.2 U	1.2 U
2,4-Dinitrotoluene	mg/Kg	0.42 U	0.47 U	1.3 U	0.4 U	0.47 U	1 U	0.47 U	0.16 U	0.071 U	0.07 U	0.12 U	0.12 U
2,6-Dinitrotoluene	mg/Kg	0.42 U	0.47 U	1.3 U	0.4 U	0.47 U	1 U	0.47 U	0.16 U	0.071 U	0.07 U	0.12 U	0.12 U
2-Chloronaphthalene	mg/Kg	0.42 U	0.47 U	1.3 U	0.4 U	0.47 U	1 U	0.47 U	0.16 U	0.071 U	0.07 U	0.12 U	0.12 U
2-Chlorophenol	mg/Kg	1 U	1.2 U	3.1 U	1 U	1.2 U	2.6 U	1.2 U	0.39 U	0.18 U	0.18 U	0.29 U	0.31 U
2-Methylphenol	mg/Kg	0.42 U	0.47 U	1.3 U	0.4 U	0.47 U	1 U	0.47 U	0.16 U	0.071 U	0.07 U	0.12 U	0.12 U
2-Nitroaniline	mg/Kg	1 U	1.2 U	3.1 U	1 U	1.2 U	2.6 U	1.2 U	0.39 U	0.18 U	0.18 U	0.29 U	0.31 U
2-Nitrophenol	mg/Kg	1 U	1.2 U	3.1 U	1 U	1.2 U	2.6 U	1.2 U	0.39 U	0.18 U	0.18 U	0.29 U	0.31 U
3&4-Methylphenol	mg/Kg	0.42 U	0.47 U	1.3 U	0.4 U	0.47 U	1 U	0.47 U	0.16 U	0.071 U	0.07 U	0.12 U	0.12 U
3,3-Dichlorobenzidine	mg/Kg	1 U	1.2 U	3.1 U	1 U	1.2 U	2.6 U	1.2 U	0.39 U	0.18 U	0.18 U	0.29 U	0.31 U
3-Nitroaniline	mg/Kg	1 U	1.2 U	3.1 U	1 U	1.2 U	2.6 U	1.2 U	0.39 U	0.18 U	0.18 U	0.29 U	0.31 U
4,6-Dinitro-2-methylphenol	mg/Kg	4.2 U	4.7 U	13 U	4 U	4.7 U	10 U	4.7 U	1.6 U	0.71 U	0.7 U	1.2 U	1.2 U
4-Bromophenyl phenyl ether	mg/Kg	0.42 U	0.47 U	1.3 U	0.4 U	0.47 U	1 U	0.47 U	0.16 U	0.071 U	0.07 U	0.12 U	0.12 U
4-Chloro-3-methyl phenol	mg/Kg	1 U	1.2 U	3.1 U	1 U	1.2 U	2.6 U	1.2 U	0.39 U	0.18 U	0.18 U	0.29 U	0.31 U
4-Chloroaniline	mg/Kg	1 U	1.2 U	3.1 U	1 U	1.2 U	2.6 U	1.2 U	0.39 U	0.18 U	0.18 U	0.29 U	0.31 U
4-Chlorophenyl phenyl ether	mg/Kg	0.42 U	0.47 U	1.3 U	0.4 U	0.47 U	1 U	0.47 U	0.16 U	0.071 U	0.07 U	0.12 U	0.12 U
4-Nitroaniline	mg/Kg	1 U	1.2 U	3.1 U	1 U	1.2 U	2.6 U	1.2 U	0.39 U	0.18 U	0.18 U	0.29 U	0.31 U
4-Nitrophenol	mg/Kg	4.2 U	4.7 U	13 U	4 U	4.7 U	10 U	4.7 U	1.6 U	0.71 U	0.7 U	1.2 U	1.2 U
Acetophenone	mg/Kg	1 U	1.2 U	3.1 U	1 U	1.2 U	2.6 U	1.2 U	0.39 U	0.18 U	0.18 U	0.29 U	0.31 U
Atrazine	mg/Kg	1 UJ	1.2 UJ	3.1 UJ	1 UJ	1.2 UJ	2.6 U	1.2 U	0.39 U	0.18 U	0.18 U	0.29 U	0.31 U
Benzaldehyde	mg/Kg	1 UJ	1.2 UJ	3.1 UJ	1 UJ	1.2 UJ	2.6 U	1.2 U	0.39 U	0.18 U	0.18 U	0.29 U	0.31 U
Biphenyl	mg/Kg	0.42 U	0.47 U	1.3 U	0.4 U	0.47 U	1 U	0.47 U	0.16 U	**0.0187 J**	**0.0447 J**	0.12 U	0.12 U
bis(2-Chloroethoxy)methane	mg/Kg	0.42 U	0.47 U	1.3 U	0.4 U	0.47 U	1 U	0.47 U	0.16 U	0.071 U	0.07 U	0.12 U	0.12 U
bis(2-Chloroethyl)ether	mg/Kg	0.42 U	0.47 U	1.3 U	0.4 U	0.47 U	1 U	0.47 U	0.16 U	0.071 U	0.07 U	0.12 U	0.12 U
bis(2-Chloroisopropyl)ether	mg/Kg	0.42 U	0.47 U	1.3 U	0.4 U	0.47 U	1 U	0.47 U	0.16 U	0.071 U	0.07 U	0.12 U	0.12 U
bis(2-Ethylhexyl)phthalate	mg/Kg	**0.335 J**	**0.267 J**	1.3 U	0.4 U	**1.39**	1 U	0.47 U	0.16 U	**0.229 J**	**0.13 J**	0.12 U	**0.0897 J**
Butylbenzylphthalate	mg/Kg	0.42 U	0.47 U	1.3 U	0.4 U	0.47 U	1 U	0.47 U	0.16 U	**0.391 J**	0.07 UJ	0.12 U	0.12 U
Caprolactam	mg/Kg	0.42 U	0.47 U	1.3 U	0.4 U	0.47 U	1 U	0.47 U	0.16 U	0.071 U	0.07 U	0.12 U	0.12 U
Carbazole	mg/Kg	**0.467**	**0.324 J**	**0.591 J**	**0.303 J**	**0.119 J**	1 U	**1.16**	0.16 U	**0.323 J**	**0.688 J**	0.12 U	0.12 U
Dibenzofuran	mg/Kg	**0.223 J**	**0.174 J**	**1.22 J**	**0.183 J**	0.47 U	1 U	**1.79**	0.16 U	**0.153 J**	**0.42 J**	**0.0281 J**	0.12 U
Diethylphthalate	mg/Kg	0.42 U	0.47 U	1.3 U	0.4 U	0.47 U	1 U	0.47 U	0.16 U	0.071 U	0.07 U	0.12 U	0.12 U
Dimethylphthalate	mg/Kg	0.42 U	0.47 U	1.3 U	0.4 U	0.47 U	1 U	0.47 U	0.16 U	0.071 U	0.07 U	0.12 U	0.12 U
Di-n-butyl phthalate	mg/Kg	0.42 U	0.47 U	1.3 U	0.4 U	0.47 U	1 U	0.47 U	0.16 U	0.071 U	0.07 U	0.12 U	0.12 U
Di-n-octyl phthalate	mg/Kg	0.42 U	0.47 U	1.3 U	0.4 U	0.47 U	1 U	0.47 U	0.16 U	0.071 U	0.07 U	0.12 U	0.12 U
Hexachlorobenzene	mg/Kg	0.42 U	0.47 U	1.3 U	0.4 U	0.47 U	1 U	0.47 U	0.16 U	0.071 U	0.07 U	0.12 U	0.12 U
Hexachlorobutadiene	mg/Kg	0.42 U	0.47 U	1.3 U	0.4 U	0.47 U	1 U	0.47 U	0.16 U	0.071 U	0.07 U	0.12 U	0.12 U
Hexachlorocyclopentadiene	mg/Kg	4.2 U	4.7 U	13 U	4 U	4.7 U	10 U	4.7 U	1.6 U	0.71 U	0.7 U	1.2 U	1.2 U
Hexachloroethane	mg/Kg	1 U	1.2 U	3.1 U	1 U	1.2 U	2.6 U	1.2 U	0.39 U	0.18 U	0.18 U	0.29 U	0.31 U
Isophorone	mg/Kg	0.42 U	0.47 U	1.3 U	0.4 U	0.47 U	1 U	0.47 U	0.16 U	0.071 U	0.07 U	0.12 U	0.12 U
Nitrobenzene	mg/Kg	0.42 U	0.47 U	1.3 U	0.4 U	0.47 U	1 U	0.47 U	0.16 U	0.071 U	0.07 U	0.12 U	0.12 U
N-Nitroso-di-n-propylamine	mg/Kg	0.42 U	0.47 U	1.3 U	0.4 U	0.47 U	1 U	0.47 U	0.16 U	0.071 U	0.07 U	0.12 U	0.12 U
N-Nitroso-di-phenylamine	mg/Kg	1 U	1.2 U	3.1 U	1 U	1.2 U	2.6 U	1.2 U	0.39 U	0.18 U	0.18 U	0.29 U	0.31 U
Pentachlorophenol	mg/Kg	2.1 U	2.4 U	6.3 U	2 U	2.3 U	5.1 U	2.3 U	0.78 U	0.35 U	0.35 U	0.59 U	0.62 U
Phenol	mg/Kg	0.42 U	0.47 U	1.3 U	0.4 U	0.47 U	1 U	0.47 U	0.16 U	0.071 U	0.07 U	0.12 U	0.12 U

Detected concentrations are marked as shaded and bold.
FT - Feet
J - Estimated
mg/Kg - milligrams per kilogram
U - Not Detected
* - Rejected

APPENDIX F
Soil Analytical Data for Non-PAH Semi-Volatile Organic Compounds (SVOCs)
Quanta Resources Superfund Site, OU1
Edgewater, New Jersey

Location ID		TL10.5-10.5	TL10.5-10.5	TL10.5-10.5	TL10.5-10.5	TL10.5-11.25	TL10.5-11.25	TL10.5-11.25	TL10-09.5	TL10-09.5	TL11.25-00	TL11.75-00	TL11-11.75
Field Sample ID		TL 10.5-10.5-0.5	TL 10.5-10.5-4.0	TL 10.5-10.5-14.5	DUP-082708	TL 10.5-11.25-0.5	TL 10.5-11.25-8.5	TL 10.5-11.25-12	TL 10-9.5-7.5	DUP-090408	TL 11.25-00-17.5	TL 11.75-00-13.5	TL 11-11.75-11
Sample Date		8/27/2008	8/27/2008	8/27/2008	8/27/2008	8/28/2008	8/28/2008	8/28/2008	9/4/2008	9/4/2008	9/4/2008	9/3/2008	8/27/2008
Sample Depth Interval		0 - 1 FT	3.5 - 4.5 FT	14 - 15 FT	14 - 15 FT	0 - 1 FT	8 - 9 FT	11 - 12 FT	6.5 - 8.5 FT	6.5 - 8.5 FT	16.5 - 18.5 FT	13 - 14 FT	10 - 12 FT
Sample Matrix		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Constituent	**Units**												
1,2,4-Trichlorobenzene	mg/Kg	0.0083 U	0.0057 U	27 U	35 U	0.0051 U	0.011 U	0.015 U	0.0089 U	0.8 U	9.9 U	19 U	0.021 UJ
1,2-Dichlorobenzene	mg/Kg	0.0083 U	0.0057 U	27 U	35 U	0.0051 U	0.011 U	0.015 U	0.0089 U	0.8 U	9.9 U	19 U	0.021 U
1,3-Dichlorobenzene	mg/Kg	0.0083 U	0.0057 U	27 U	35 U	0.0051 U	0.011 U	0.015 U	0.0089 U	0.8 U	9.9 U	19 U	0.021 U
1,4-Dichlorobenzene	mg/Kg	0.0083 U	0.0057 U	27 U	35 U	0.0051 U	0.011 U	0.015 U	0.0089 U	0.8 U	9.9 U	19 U	0.021 U
2,4,5-Trichlorophenol	mg/Kg	51 U	1.1 U	7.2 U	7.3 U	1 U	0.29 U	1.8 U	0.24 U	0.26 U	0.35 U	1.8 U	0.47 U
2,4,6-Trichlorophenol	mg/Kg	51 U	1.1 U	7.2 U	7.3 U	1 U	0.29 U	1.8 U	0.24 U	0.26 U	0.35 U	1.8 U	0.47 U
2,4-Dichlorophenol	mg/Kg	51 U	1.1 U	7.2 U	7.3 U	1 U	0.29 U	1.8 U	0.24 U	0.26 U	0.35 U	1.8 U	0.47 U
2,4-Dimethylphenol	mg/Kg	51 U	1.1 U	7.2 U	7.3 U	1 U	0.29 U	1.8 U	0.24 U	0.26 U	**0.103 J**	1.8 U	0.47 U
2,4-Dinitrophenol	mg/Kg	200 U	4.5 U	29 U	29 U	4.1 U	1.2 U	7 U	0.95 U	1 U	1.4 U	7.1 U	1.9 U
2,4-Dinitrotoluene	mg/Kg	20 U	0.45 U	2.9 U	2.9 U	0.41 U	0.12 U	0.7 U	0.095 U	0.1 U	0.14 U	0.71 U	0.19 U
2,6-Dinitrotoluene	mg/Kg	20 U	0.45 U	2.9 U	2.9 U	0.41 U	0.12 U	0.7 U	0.095 U	0.1 U	0.14 U	0.71 U	0.19 U
2-Chloronaphthalene	mg/Kg	20 U	0.45 U	2.9 U	2.9 U	0.41 U	0.12 U	0.7 U	0.095 U	0.1 U	0.14 U	0.71 U	0.19 U
2-Chlorophenol	mg/Kg	51 U	1.1 U	7.2 U	7.3 U	1 U	0.29 U	1.8 U	0.24 U	0.26 U	0.35 U	1.8 U	0.47 U
2-Methylphenol	mg/Kg	20 U	0.45 U	2.9 U	2.9 U	0.41 U	0.12 U	0.7 U	0.095 U	0.1 U	0.14 U	0.71 U	0.19 U
2-Nitroaniline	mg/Kg	51 U	1.1 U	7.2 U	7.3 U	1 U	0.29 U	1.8 U	0.24 U	0.26 U	0.35 U	1.8 U	0.47 U
2-Nitrophenol	mg/Kg	51 U	1.1 U	7.2 U	7.3 U	1 U	0.29 U	1.8 U	0.24 U	0.26 U	0.35 U	1.8 U	0.47 U
3&4-Methylphenol	mg/Kg	20 U	0.45 U	2.9 U	2.9 U	0.41 U	0.12 U	0.7 U	0.095 U	0.1 U	0.14 U	**0.672 J**	0.19 U
3,3-Dichlorobenzidine	mg/Kg	51 U	1.1 U	7.2 U	7.3 U	1 U	0.29 U	1.8 U	0.24 U	0.26 U	*	1.8 U	0.47 U
3-Nitroaniline	mg/Kg	51 U	1.1 U	7.2 U	7.3 U	1 U	0.29 U	1.8 U	0.24 U	0.26 U	0.35 U	1.8 U	0.47 U
4,6-Dinitro-2-methylphenol	mg/Kg	200 U	4.5 U	29 U	29 U	4.1 U	1.2 U	7 U	0.95 U	1 U	1.4 U	7.1 U	1.9 U
4-Bromophenyl phenyl ether	mg/Kg	20 U	0.45 U	2.9 U	2.9 U	0.41 U	0.12 U	0.7 U	0.095 U	0.1 U	0.14 U	0.71 U	0.19 U
4-Chloro-3-methyl phenol	mg/Kg	51 U	1.1 U	7.2 U	7.3 U	1 U	0.29 U	1.8 U	0.24 U	0.26 U	0.35 U	1.8 U	0.47 U
4-Chloroaniline	mg/Kg	51 U	1.1 U	7.2 U	7.3 U	1 U	0.29 U	1.8 U	0.24 U	0.26 U	0.35 U	1.8 U	0.47 U
4-Chlorophenyl phenyl ether	mg/Kg	20 U	0.45 U	2.9 U	2.9 U	0.41 U	0.12 U	0.7 U	0.095 U	0.1 U	0.14 U	0.71 U	0.19 U
4-Nitroaniline	mg/Kg	51 U	1.1 U	7.2 U	7.3 U	1 U	0.29 U	1.8 U	0.24 U	0.26 U	0.35 U	1.8 U	0.47 U
4-Nitrophenol	mg/Kg	200 U	4.5 U	29 U	29 U	4.1 U	1.2 U	7 U	0.95 U	1 U	1.4 U	7.1 U	1.9 U
Acetophenone	mg/Kg	51 U	1.1 U	7.2 U	7.3 U	1 U	0.29 U	1.8 U	0.24 U	0.26 U	0.35 U	1.8 U	0.47 U
Atrazine	mg/Kg	51 U	1.1 U	7.2 U	7.3 U	1 UJ	0.29 UJ	1.8 UJ	0.24 UJ	0.26 UJ	0.35 UJ	1.8 U	0.47 U
Benzaldehyde	mg/Kg	51 U	1.1 U	7.2 U	7.3 U	1 UJ	0.29 UJ	1.8 UJ	0.24 U	0.26 U	0.35 U	1.8 UJ	0.47 U
Biphenyl	mg/Kg	20 U	**0.236 J**	**417**	**282**	0.41 U	0.12 U	0.7 U	0.095 U	0.1 U	0.14 U	0.71 U	0.19 U
bis(2-Chloroethoxy)methane	mg/Kg	20 U	0.45 U	2.9 U	2.9 U	0.41 U	0.12 U	0.7 U	0.095 U	0.1 U	0.14 U	0.71 U	0.19 U
bis(2-Chloroethyl)ether	mg/Kg	20 U	0.45 U	2.9 U	2.9 U	0.41 U	0.12 U	0.7 U	0.095 U	0.1 U	0.14 U	0.71 U	0.19 U
bis(2-Chloroisopropyl)ether	mg/Kg	20 U	0.45 U	2.9 U	2.9 U	0.41 U	0.12 U	0.7 U	0.095 U	0.1 U	0.14 U	0.71 U	0.19 U
bis(2-Ethylhexyl)phthalate	mg/Kg	20 U	0.45 U	2.9 U	2.9 U	**0.59**	**0.313**	0.7 U	**0.0657 J**	**0.0885 J**	0.14 U	0.71 U	0.19 U
Butylbenzylphthalate	mg/Kg	20 U	0.45 U	2.9 U	2.9 U	0.41 U	0.12 U	0.7 U	0.095 U	0.1 U	0.14 U	0.71 U	0.19 U
Caprolactam	mg/Kg	20 U	0.45 U	2.9 U	2.9 U	0.41 U	0.12 U	0.7 U	0.095 U	0.1 U	0.14 U	0.71 U	0.19 U
Carbazole	mg/Kg	**29.6**	**2.42**	**303**	**200**	**0.0997 J**	0.12 U	0.7 U	0.095 U	0.1 U	**0.0545 J**	0.71 U	0.19 U
Dibenzofuran	mg/Kg	**14.4 J**	**1.27**	**1310**	**966**	0.41 U	0.12 U	0.7 U	0.095 U	**0.0582 J**	**0.0468 J**	0.71 U	0.19 U
Diethylphthalate	mg/Kg	20 U	0.45 U	2.9 U	2.9 U	0.41 U	0.12 U	0.7 U	0.095 U	0.1 U	0.14 U	0.71 U	0.19 U
Dimethylphthalate	mg/Kg	20 U	0.45 U	2.9 U	2.9 U	0.41 U	0.12 U	0.7 U	0.095 U	0.1 U	0.14 U	0.71 U	0.19 U
Di-n-butyl phthalate	mg/Kg	20 U	0.45 U	2.9 U	2.9 U	0.41 U	0.12 U	0.7 U	0.095 U	0.1 U	0.14 U	0.71 U	0.19 U
Di-n-octyl phthalate	mg/Kg	20 U	0.45 U	2.9 U	2.9 U	0.41 U	0.12 U	0.7 U	0.095 U	0.1 U	0.14 U	0.71 U	0.19 U
Hexachlorobenzene	mg/Kg	20 U	0.45 U	2.9 U	2.9 U	0.41 U	0.12 U	0.7 U	0.095 U	0.1 U	0.14 U	0.71 U	0.19 U
Hexachlorobutadiene	mg/Kg	20 U	0.45 U	2.9 U	2.9 U	0.41 U	0.12 U	0.7 U	0.095 U	0.1 U	0.14 U	0.71 U	0.19 U
Hexachlorocyclopentadiene	mg/Kg	200 U	4.5 U	29 U	29 U	4.1 U	1.2 U	7 U	0.95 U	1 U	1.4 U	7.1 U	1.9 U
Hexachloroethane	mg/Kg	51 U	1.1 U	7.2 U	7.3 U	1 U	0.29 U	1.8 U	0.24 U	0.26 U	0.35 U	1.8 U	0.47 U
Isophorone	mg/Kg	20 U	0.45 U	2.9 U	2.9 U	0.41 U	0.12 U	0.7 U	0.095 U	0.1 U	0.14 U	0.71 U	0.19 U
Nitrobenzene	mg/Kg	20 U	0.45 U	2.9 U	2.9 U	0.41 U	0.12 U	0.7 U	0.095 U	0.1 U	0.14 U	0.71 U	0.19 U
N-Nitroso-di-n-propylamine	mg/Kg	20 U	0.45 U	2.9 U	2.9 U	0.41 U	0.12 U	0.7 U	0.095 U	0.1 U	0.14 U	0.71 U	0.19 U
N-Nitroso-di-phenylamine	mg/Kg	51 U	1.1 U	7.2 U	7.3 U	1 U	0.29 U	1.8 U	0.24 U	0.26 U	0.35 U	1.8 U	0.47 U
Pentachlorophenol	mg/Kg	100 U	2.2 U	14 U	15 U	2.1 U	0.58 U	3.5 U	0.47 U	0.51 U	0.69 U	3.5 U	0.94 U
Phenol	mg/Kg	20 U	0.45 U	2.9 U	2.9 U	0.41 U	0.12 U	0.7 U	0.095 U	0.1 U	0.14 U	0.71 U	0.19 U

Detected concentrations are marked as shaded and bold.
FT - Feet
J - Estimated
mg/Kg - milligrams per kilogram
U - Not Detected
* - Rejected

APPENDIX F
Soil Analytical Data for Non-PAH Semi-Volatile Organic Compounds (SVOCs)
Quanta Resources Superfund Site, OU1
Edgewater, New Jersey

Location ID		TL12.5-00	TL12.5-10.5	TL12.5-10.5	TL12-00.5	TL12-00.5	TL12-01.5	TL13.5-10.5	TL13.5-10.5	TL13.5-12.75	TL13.5-12.75	TL14-13.25	TL14-13.25
Field Sample ID		TL 12.5-00-17.5	TL 12.5-10.5-1.5	TL 12.5-10.5-8.5	TL 12-0.5-7.5	TL 12-0.5-18.5	TL12-1.5-8.5	TL 13.5-10.5-1.5	TL 13.5-10.5-8.5	TL 13.5-12.75-0.5	TL 13.5-12.75-8.5	TL 14-13.25-1.0	TL 14-13.25-8.5
Sample Date		9/3/2008	8/25/2008	8/25/2008	9/3/2008	9/3/2008	8/29/2008	8/25/2008	8/25/2008	8/26/2008	8/26/2008	8/25/2008	8/25/2008
Sample Depth Interval		17 - 18 FT	0.25 - 2.5 FT	7.5 - 9.5 FT	7 - 8 FT	17.5 - 19.5 FT	7.1 - 10 FT	0.5 - 2.5 FT	7.5 - 9.5 FT	0 - 1 FT	8 - 9 FT	0.4 - 1.5 FT	7.5 - 9.5 FT
Sample Matrix		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Constituent	**Units**												
1,2,4-Trichlorobenzene	mg/Kg	0.0058 U	0.0058 U	0.0064 U	0.012 U	3.6 U	0.43 U	0.0056 U	9.8 U	0.0065 U	0.023 U	0.005 U	0.0097 U
1,2-Dichlorobenzene	mg/Kg	0.0058 U	0.0058 U	0.0064 U	0.012 U	3.6 U	0.43 U	0.0056 U	9.8 U	0.0065 U	0.023 U	0.005 U	0.0097 U
1,3-Dichlorobenzene	mg/Kg	0.0058 U	0.0058 U	0.0064 U	0.012 U	3.6 U	0.43 U	0.0056 U	9.8 U	0.0065 U	0.023 U	0.005 U	0.0097 U
1,4-Dichlorobenzene	mg/Kg	0.0058 U	0.0058 U	0.0064 U	0.012 U	3.6 U	0.43 U	0.0056 U	9.8 U	0.0065 U	0.023 U	0.005 U	0.0097 U
2,4,5-Trichlorophenol	mg/Kg	1.1 U	1.1 U	1.2 U	1.7 U	1.6 U	1.3 U	1.1 U	9.4 U	*	0.43 U	5 U	1.4 U
2,4,6-Trichlorophenol	mg/Kg	1.1 U	1.1 U	1.2 U	1.7 U	1.6 U	1.3 U	1.1 U	9.4 U	*	0.43 U	5 U	1.4 U
2,4-Dichlorophenol	mg/Kg	1.1 U	1.1 U	1.2 U	1.7 U	1.6 U	1.3 U	1.1 U	9.4 U	*	0.43 U	5 U	1.4 U
2,4-Dimethylphenol	mg/Kg	1.1 U	1.1 U	1.2 U	1.7 U	1.6 U	1.3 U	1.1 U	**6.82 J**	0.17 UJ	0.43 U	5 U	**1.58**
2,4-Dinitrophenol	mg/Kg	4.3 U	4.6 U	4.9 U	6.8 U	6.5 U	5 U	4.5 U	38 U	*	1.7 U	20 U	5.4 U
2,4-Dinitrotoluene	mg/Kg	0.43 U	0.46 U	0.49 U	0.68 U	0.65 U	0.5 U	0.45 U	3.8 U	0.069 U	0.17 U	2 U	0.54 U
2,6-Dinitrotoluene	mg/Kg	0.43 U	0.46 U	0.49 U	0.68 U	0.65 U	0.5 U	0.45 U	3.8 U	0.069 U	0.17 U	2 U	0.54 U
2-Chloronaphthalene	mg/Kg	0.43 U	0.46 U	0.49 U	0.68 U	0.65 U	0.5 U	0.45 U	3.8 U	0.069 U	0.17 U	2 U	0.54 U
2-Chlorophenol	mg/Kg	1.1 U	1.1 U	1.2 U	1.7 U	1.6 U	1.3 U	1.1 U	9.4 U	0.17 UJ	0.43 U	5 U	1.4 U
2-Methylphenol	mg/Kg	0.43 U	0.46 U	0.49 U	0.68 U	0.65 U	0.5 U	0.45 U	3.8 U	0.069 UJ	0.17 U	2 U	0.54 U
2-Nitroaniline	mg/Kg	1.1 U	1.1 U	1.2 U	1.7 U	1.6 U	1.3 U	1.1 U	9.4 U	0.17 U	0.43 U	5 U	1.4 U
2-Nitrophenol	mg/Kg	1.1 U	1.1 U	1.2 U	1.7 U	1.6 U	1.3 U	1.1 U	9.4 U	*	0.43 U	5 U	1.4 U
3&4-Methylphenol	mg/Kg	0.43 U	0.46 U	0.49 U	0.68 U	0.65 U	0.5 U	0.45 U	3.8 U	0.069 UJ	0.17 U	2 U	**1.09**
3,3-Dichlorobenzidine	mg/Kg	1.1 U	1.1 U	1.2 U	1.7 U	1.6 U	1.3 U	1.1 U	9.4 U	0.17 U	0.43 U	5 U	1.4 U
3-Nitroaniline	mg/Kg	1.1 U	1.1 U	1.2 U	1.7 U	1.6 U	1.3 U	1.1 U	9.4 U	0.17 U	0.43 U	5 U	1.4 U
4,6-Dinitro-2-methylphenol	mg/Kg	4.3 U	4.6 U	4.9 U	6.8 U	6.5 U	5 U	4.5 U	38 U	*	1.7 U	20 U	5.4 U
4-Bromophenyl phenyl ether	mg/Kg	0.43 U	0.46 U	0.49 U	0.68 U	0.65 U	0.5 U	0.45 U	3.8 U	0.069 U	0.17 U	2 U	0.54 U
4-Chloro-3-methyl phenol	mg/Kg	1.1 U	1.1 U	1.2 U	1.7 U	1.6 U	1.3 U	1.1 U	9.4 U	0.17 UJ	0.43 U	5 U	1.4 U
4-Chloroaniline	mg/Kg	1.1 U	1.1 U	1.2 U	1.7 U	1.6 U	1.3 U	1.1 U	9.4 U	0.17 U	0.43 U	5 U	1.4 U
4-Chlorophenyl phenyl ether	mg/Kg	0.43 U	0.46 U	0.49 U	0.68 U	0.65 U	0.5 U	0.45 U	3.8 U	0.069 U	0.17 U	2 U	0.54 U
4-Nitroaniline	mg/Kg	1.1 U	1.1 U	1.2 U	1.7 U	1.6 U	1.3 U	1.1 U	9.4 U	0.17 U	0.43 U	5 U	1.4 U
4-Nitrophenol	mg/Kg	4.3 U	4.6 U	4.9 U	6.8 U	6.5 U	5 U	4.5 U	38 U	*	1.7 U	20 U	5.4 U
Acetophenone	mg/Kg	1.1 U	1.1 U	1.2 U	1.7 U	1.6 U	1.3 U	1.1 U	9.4 U	0.17 U	0.43 U	5 U	1.4 U
Atrazine	mg/Kg	1.1 U	1.1 U	1.2 U	1.7 U	1.6 U	1.3 U	1.1 U	9.4 U	0.17 U	0.43 U	5 U	1.4 U
Benzaldehyde	mg/Kg	1.1 UJ	*	*	1.7 UJ	1.6 UJ	1.3 U	*	*	0.17 U	0.43 U	*	*
Biphenyl	mg/Kg	0.43 U	**0.882**	**0.404 J**	0.68 U	**21**	0.5 U	0.45 U	**169**	**0.0401 J**	0.17 U	2 U	**0.512 J**
bis(2-Chloroethoxy)methane	mg/Kg	0.43 U	0.46 U	0.49 U	0.68 U	0.65 U	0.5 U	0.45 U	3.8 U	0.069 U	0.17 U	2 U	0.54 U
bis(2-Chloroethyl)ether	mg/Kg	0.43 U	0.46 U	0.49 U	0.68 U	0.65 U	0.5 U	0.45 U	3.8 U	0.069 U	0.17 U	2 U	0.54 U
bis(2-Chloroisopropyl)ether	mg/Kg	0.43 U	0.46 U	0.49 U	0.68 U	0.65 U	0.5 U	0.45 U	3.8 U	0.069 U	0.17 U	2 U	0.54 U
bis(2-Ethylhexyl)phthalate	mg/Kg	0.43 U	0.46 U	0.49 U	**0.557 J**	0.65 U	0.5 U	0.45 U	3.8 U	**0.0552 J**	**0.149 J**	2 U	0.54 U
Butylbenzylphthalate	mg/Kg	0.43 U	0.46 U	0.49 U	0.68 U	0.65 U	0.5 U	0.45 U	3.8 U	0.069 U	0.17 U	2 U	0.54 U
Caprolactam	mg/Kg	0.43 U	0.46 U	0.49 U	0.68 U	0.65 U	0.5 U	0.45 U	3.8 U	0.069 U	0.17 U	2 U	0.54 U
Carbazole	mg/Kg	0.43 U	**2.19**	**2.14**	**0.187 J**	**6.4**	0.5 U	**0.51**	**202**	**1.21**	0.17 U	**1.44 J**	**50.2**
Dibenzofuran	mg/Kg	0.43 U	**3.69**	**5.12**	0.68 U	**44.8**	0.5 U	**0.503**	**491**	**0.419**	0.17 U	**0.968 J**	**170**
Diethylphthalate	mg/Kg	0.43 U	0.46 U	0.49 U	0.68 U	0.65 U	0.5 U	0.45 U	3.8 U	0.069 U	0.17 U	2 U	0.54 U
Dimethylphthalate	mg/Kg	0.43 U	0.46 U	0.49 U	0.68 U	0.65 U	0.5 U	0.45 U	3.8 U	0.069 U	0.17 U	2 U	0.54 U
Di-n-butyl phthalate	mg/Kg	0.43 U	0.46 U	0.49 U	0.68 U	0.65 U	0.5 U	0.45 U	3.8 U	0.069 U	0.17 U	2 U	0.54 U
Di-n-octyl phthalate	mg/Kg	0.43 U	0.46 U	0.49 U	0.68 U	0.65 U	0.5 U	0.45 U	3.8 U	0.069 U	0.17 U	2 U	0.54 U
Hexachlorobenzene	mg/Kg	0.43 U	0.46 U	0.49 U	0.68 U	0.65 U	0.5 U	0.45 U	3.8 U	0.069 U	0.17 U	2 U	0.54 U
Hexachlorobutadiene	mg/Kg	0.43 U	0.46 U	0.49 U	0.68 U	0.65 U	0.5 U	0.45 U	3.8 U	0.069 U	0.17 U	2 U	0.54 U
Hexachlorocyclopentadiene	mg/Kg	4.3 U	4.6 U	4.9 U	6.8 U	6.5 U	5 U	4.5 U	38 U	0.69 U	1.7 U	20 U	5.4 U
Hexachloroethane	mg/Kg	1.1 U	1.1 U	1.2 U	1.7 U	1.6 U	1.3 U	1.1 U	9.4 U	0.17 U	0.43 U	5 U	1.4 U
Isophorone	mg/Kg	0.43 U	0.46 U	0.49 U	0.68 U	0.65 U	0.5 U	0.45 U	3.8 U	0.069 U	0.17 U	2 U	0.54 U
Nitrobenzene	mg/Kg	0.43 U	0.46 U	0.49 U	0.68 U	0.65 U	0.5 U	0.45 U	3.8 U	0.069 U	0.17 U	2 U	0.54 U
N-Nitroso-di-n-propylamine	mg/Kg	0.43 U	0.46 U	0.49 U	0.68 U	0.65 U	0.5 U	0.45 U	3.8 U	0.069 U	0.17 U	2 U	0.54 U
N-Nitroso-di-phenylamine	mg/Kg	1.1 U	1.1 U	1.2 U	1.7 U	1.6 U	1.3 U	1.1 U	9.4 U	0.17 U	0.43 U	5 U	1.4 U
Pentachlorophenol	mg/Kg	2.2 U	2.3 U	2.5 U	3.4 U	3.3 U	2.5 U	2.3 U	19 U	*	0.87 U	10 U	2.7 U
Phenol	mg/Kg	0.43 U	0.46 U	0.49 U	0.68 U	0.65 U	0.5 U	0.45 U	3.8 U	0.069 UJ	0.17 U	2 U	0.54 U

Detected concentrations are marked as shaded and bold.
FT - Feet
J - Estimated
mg/Kg - milligrams per kilogram
U - Not Detected
* - Rejected

APPENDIX G
Soil Analytical Data for Volatile Organic Compounds (VOCs)
Quanta Resources Superfund Site, OU1
Edgewater, New Jersey

Location ID		MW-123	MW-123	MW-124	MW-124	MW-124	MW-125	MW-125	MW-126	MW-126	MW-127	MW-127
Field Sample ID		SB-123-0.75	SB-123-4.25	SB-124-1.5	DUP-091208	SB-124-9.0	SB-125-4.75	SB-125-9.75	SB-126-4.5	SB-126-11.25	SB-127-1.75	SB-127-8.25
Sample Date		9/11/2008	9/11/2008	9/12/2008	9/12/2008	9/12/2008	9/15/2008	9/15/2008	10/14/2008	10/14/2008	9/11/2008	9/11/2008
Sample Depth Interval		0.5 - 1 FT	4 - 4.5 FT	1 - 2 FT	1 - 2 FT	8 - 10 FT	4.5 - 5 FT	9.5 - 10 FT	4.3 - 4.8 FT	11 - 11.5 FT	1.5 - 2 FT	8 - 8.5 FT
Sample Matrix		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Constituent	**Units**											
1,1,1-Trichloroethane	mg/Kg	0.0044 U	0.0067 U	0.0062 U	0.008 U	0.0091 U	0.0046 U	0.0051 U	0.0055 U	39 U	0.0059 U	0.37 U
1,1,2,2-Tetrachloroethane	mg/Kg	0.0044 U	0.0067 U	0.0062 U	0.008 U	0.0091 U	0.0046 U	0.0051 U	0.0055 U	39 U	0.0059 U	0.37 U
1,1,2-Trichloroethane	mg/Kg	0.0044 U	0.0067 U	0.0062 U	0.008 U	0.0091 U	0.0046 U	0.0051 U	0.0055 U	39 U	0.0059 U	0.37 U
1,1-Dichloroethane	mg/Kg	0.0044 U	**0.00069 J**	0.0062 U	0.008 U	0.0091 U	0.0046 U	0.0051 U	0.0055 U	39 U	0.0059 U	0.37 U
1,1-Dichloroethene	mg/Kg	0.0044 U	0.0067 U	0.0062 U	0.008 U	0.0091 U	0.0046 U	0.0051 U	0.0055 U	39 U	0.0059 U	0.37 U
1,2,4-Trimethylbenzene	mg/Kg	0.0044 U	0.0067 U	0.0062 U	0.008 U	0.0091 U	**0.0018 J**	0.0051 U	0.0055 U	**4.11 J**	0.0059 U	0.37 U
1,2-Dibromo-3-chloropropane	mg/Kg	0.0087 U	0.013 U	0.012 U	0.016 U	0.018 U	0.0093 U	0.01 U	0.011 U	78 U	0.012 U	0.74 U
1,2-Dibromoethane	mg/Kg	0.00087 U	0.0013 U	0.0012 U	0.0016 U	0.0018 U	0.00093 U	0.001 U	0.0011 U	7.8 U	0.0012 U	0.074 U
1,2-Dichloroethane	mg/Kg	0.00087 U	0.0013 U	0.0012 U	0.0016 U	0.0018 U	0.00093 U	0.001 U	0.0011 U	7.8 U	0.0012 U	0.074 U
1,2-Dichloroethene, cis-	mg/Kg	0.0044 U	0.0067 U	0.0062 U	0.008 U	0.0091 U	0.0046 U	0.0051 U	0.0055 U	39 U	0.0059 U	0.37 U
1,2-Dichloroethene, trans-	mg/Kg	0.0044 U	0.0067 U	0.0062 U	0.008 U	0.0091 U	0.0046 U	0.0051 U	0.0055 U	39 U	0.0059 U	0.37 U
1,2-Dichloropropane	mg/Kg	0.0044 U	0.0067 U	0.0062 U	0.008 U	0.0091 U	0.0046 U	0.0051 U	0.0055 U	39 U	0.0059 U	0.37 U
1,3,5-Trimethylbenzene	mg/Kg	0.0044 U	0.0067 U	0.0062 U	0.008 U	0.0091 U	**0.0014 J**	0.0051 U	0.0055 U	39 U	0.0059 U	0.37 U
1,3-Dichloropropene, cis-	mg/Kg	0.0044 U	0.0067 U	0.0062 U	0.008 U	0.0091 U	0.0046 U	0.0051 U	0.0055 U	39 U	0.0059 U	0.37 U
1,3-Dichloropropene, trans-	mg/Kg	0.0044 U	0.0067 U	0.0062 U	0.008 U	0.0091 U	0.0046 U	0.0051 U	0.0055 U	39 U	0.0059 U	0.37 U
2-Butanone (MEK)	mg/Kg	0.0087 U	0.013 U	0.012 U	0.016 U	0.018 U	0.0093 U	0.01 U	0.011 U	78 U	0.012 U	0.74 U
2-Hexanone	mg/Kg	0.0044 U	0.0067 U	0.0062 U	0.008 U	0.0091 U	0.0046 U	0.0051 U	0.0055 U	39 U	0.0059 U	0.37 U
4-Methyl-2-pentanone (MIBK)	mg/Kg	0.0044 U	0.0067 U	0.0062 U	0.008 U	0.0091 U	0.0046 U	0.0051 U	0.0055 U	39 U	0.0059 U	0.37 U
Acetone	mg/Kg	0.0087 U	**0.0434 J**	**0.0279**	**0.0441**	0.018 U	0.0093 U	0.01 U	**0.0273 J**	78 U	0.012 U	0.74 U
Acrolein	mg/Kg	0.044 U	0.067 U	0.062 U	0.08 U	0.091 U	0.046 U	0.051 U	0.055 U	390 U	0.059 U	3.7 U
Benzene	mg/Kg	0.00087 U	**0.0188**	0.0012 U	0.0016 U	0.0018 U	0.00093 U	0.001 U	0.0011 U	7.8 U	0.0012 U	**0.0836**
Bromodichloromethane	mg/Kg	0.0044 U	0.0067 U	0.0062 U	0.008 U	0.0091 U	0.0046 U	0.0051 U	0.0055 U	39 U	0.0059 U	0.37 U
Bromoform	mg/Kg	0.0044 U	0.0067 U	0.0062 U	0.008 U	0.0091 U	0.0046 U	0.0051 U	0.0055 U	39 U	0.0059 U	0.37 U
Bromomethane	mg/Kg	0.0044 U	0.0067 U	0.0062 U	0.008 U	0.0091 U	0.0046 U	0.0051 U	0.0055 U	39 U	0.0059 U	0.37 U
Carbon disulfide	mg/Kg	0.0044 U	**0.0021 J**	0.0062 U	0.008 U	0.0091 U	0.0046 U	0.0051 U	0.0055 U	39 U	0.0059 U	**0.0582 J**
Carbon tetrachloride	mg/Kg	0.0044 U	0.0067 U	0.0062 U	0.008 U	0.0091 U	0.0046 U	0.0051 U	0.0055 U	39 U	0.0059 U	0.37 U
Chlorobenzene	mg/Kg	0.0044 U	0.0067 U	0.0062 U	0.008 U	0.0091 U	0.0046 U	0.0051 U	0.0055 U	39 U	0.0059 U	**0.0911 J**
Chloroethane	mg/Kg	0.0044 U	0.0067 U	0.0062 U	0.008 U	0.0091 U	0.0046 U	0.0051 U	0.0055 U	39 U	0.0059 U	0.37 U
Chloroform	mg/Kg	0.0044 U	0.0067 U	0.0062 U	0.008 U	0.0091 U	0.0046 U	0.0051 U	0.0055 U	39 U	0.0059 U	0.37 U
Chloromethane	mg/Kg	0.0044 U	0.0067 U	0.0062 U	0.008 U	0.0091 U	0.0046 U	0.0051 U	0.0055 U	39 U	0.0059 U	0.37 U
Cyclohexane	mg/Kg	0.0044 U	0.0067 U	0.0062 U	0.008 U	0.0091 U	0.0046 U	0.0051 U	0.0055 U	39 U	0.0059 U	0.37 U
Dibromochloromethane	mg/Kg	0.0044 U	0.0067 U	0.0062 U	0.008 U	0.0091 U	0.0046 U	0.0051 U	0.0055 U	39 U	0.0059 U	0.37 U
Dichlorodifluoromethane	mg/Kg	0.0044 U	0.0067 U	0.0062 U	0.008 U	0.0091 U	0.0046 U	0.0051 U	0.0055 U	39 U	0.0059 U	0.37 U
Ethylbenzene	mg/Kg	0.00087 U	0.0013 U	0.0012 U	0.0016 U	0.0018 U	0.00093 U	0.001 U	0.0011 U	7.8 U	0.0012 U	0.074 U
Freon 113	mg/Kg	0.0044 U	0.0067 U	0.0062 U	0.008 U	0.0091 U	0.0046 U	0.0051 U	0.0055 U	39 U	0.0059 U	0.37 U
Isopropylbenzene	mg/Kg	0.0044 U	0.0067 U	0.0062 U	0.008 U	0.0091 U	0.0046 U	0.0051 U	0.0055 U	39 U	0.0059 U	0.37 U
Methyl Acetate	mg/Kg	0.0044 U	0.0067 U	0.0062 U	0.008 U	0.0091 U	0.0046 U	0.0051 U	0.0055 U	39 U	0.0059 U	0.37 U
Methylcyclohexane	mg/Kg	0.0044 U	**0.0067**	0.0062 U	0.008 U	0.0091 U	0.0046 U	0.0051 U	0.0055 U	39 U	0.0059 U	0.37 U
Methylene chloride	mg/Kg	0.0044 U	0.0067 U	0.0062 U	0.008 U	0.0091 U	0.0015 U	0.0012 U	0.0027 U	39 U	0.0059 U	0.37 U
Methyl-tert butyl ether (MTBE)	mg/Kg	0.00087 U	0.0013 U	0.0012 U	0.0016 U	0.0018 U	0.00093 U	0.001 U	0.0011 U	7.8 U	0.0012 U	0.074 U
Propylbenzene, n-	mg/Kg	0.0044 U	0.0067 U	0.0062 U	0.008 U	0.0091 U	0.0046 U	0.0051 U	0.0055 U	39 U	0.0059 U	0.37 U
Styrene	mg/Kg	0.0044 U	0.0067 U	0.0062 U	0.008 U	0.0091 U	0.0046 U	0.0051 U	0.0055 U	39 U	0.0059 U	0.37 U
Tetrachloroethene	mg/Kg	0.0044 U	0.0067 U	0.0062 U	0.008 U	0.0091 U	0.0046 U	0.0051 U	0.0055 U	39 U	0.0059 U	0.37 U
Toluene	mg/Kg	**0.00055 J**	**0.0026**	0.0012 U	**0.00062 J**	0.0018 U	0.00093 U	0.001 U	0.0011 U	7.8 U	**0.00054 J**	**0.0489 J**
Trichloroethene	mg/Kg	0.0044 U	0.0067 U	0.0062 U	0.008 U	0.0091 U	0.0046 U	0.0051 U	0.0055 U	39 U	0.0059 U	0.37 U
Trichlorofluoromethane	mg/Kg	0.0044 U	0.0067 U	0.0062 U	0.008 U	0.0091 U	0.0046 U	0.0051 U	0.0055 U	39 U	0.0059 U	0.37 U
Vinyl chloride	mg/Kg	0.0044 U	0.0067 U	0.0062 U	0.008 U	0.0091 U	0.0046 U	0.0051 U	0.0055 U	39 U	0.0059 U	0.37 U
Xylene, o-	mg/Kg	0.00087 U	0.0013 U	0.0012 U	0.0016 U	0.0018 U	0.00093 U	0.001 U	0.0011 U	7.8 U	0.0012 U	0.074 U
Xylenes, m/p-	mg/Kg	0.0017 U	0.0027 U	0.0025 U	0.0032 U	0.0036 U	0.0019 U	0.002 U	0.0022 U	16 U	0.0024 U	**0.072 J**
Xylenes, Total	mg/Kg	0.0017 U	0.0027 U	0.0025 U	0.0032 U	0.0036 U	0.0019 U	0.002 U	0.0022 U	16 U	0.0024 U	**0.072 J**

Detected concentrations are marked as shaded and bold.
FT - Feet
J - Estimated
mg/Kg - milligrams per kilogram
U - Not Detected

APPENDIX G
Soil Analytical Data for Volatile Organic Compounds (VOCs)
Quanta Resources Superfund Site, OU1
Edgewater, New Jersey

Location ID		MW-127	MW-128	MW-128	MW-129	MW-129	MW-129	MW-136	MW-136	MW-136	PZ-7D	SB-39
Field Sample ID		SB-127-9.5	SB-128-1.8-022409	SB-128-3.8-022409	SB-129-1.8-022409	SB-129-7.5-022409	DUP-022409	SB-136-1.0	SB-136-8.5	SB-136-21.5	SB-PZ7-16.25	SB-39-1.0-022409
Sample Date		9/11/2008	2/24/2009	2/24/2009	2/24/2009	2/24/2009	2/24/2009	9/10/2008	9/10/2008	9/10/2008	9/19/2008	2/24/2009
Sample Depth Interval		9 - 10 FT	1.5 - 2 FT	3.6 - 4 FT	1.6 - 2 FT	7 - 8 FT	7 - 8 FT	0.5 - 1 FT	8.5 - 9.5 FT	21 - 22 FT	16 - 16.5 FT	0.8 - 1.2 FT
Sample Matrix		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Constituent	**Units**											
1,1,1-Trichloroethane	mg/Kg	0.0079 U	0.0065 U	37 U	0.0071 U	0.0063 U	0.0062 U	0.0058 U	0.0056 U	13 U	0.65 U	0.0045 U
1,1,2,2-Tetrachloroethane	mg/Kg	0.0079 U	0.0065 U	37 U	0.0071 U	0.0063 U	0.0062 U	0.0058 U	0.0056 U	13 U	0.65 U	0.0045 U
1,1,2-Trichloroethane	mg/Kg	0.0079 U	0.0065 U	37 U	0.0071 U	0.0063 U	0.0062 U	0.0058 U	0.0056 U	13 U	0.65 U	0.0045 U
1,1-Dichloroethane	mg/Kg	0.0079 U	0.0065 U	37 U	0.0071 U	0.0063 U	0.0062 U	0.0058 U	0.0056 U	13 U	0.65 U	0.0045 U
1,1-Dichloroethene	mg/Kg	0.0079 U	0.0065 U	37 U	0.0071 U	0.0063 U	0.0062 U	0.0058 U	0.0056 U	13 U	0.65 U	0.0045 U
1,2,4-Trimethylbenzene	mg/Kg	0.0079 U	**0.0078**	**65.9**	**0.0085**	0.0063 U	0.0062 U	0.0058 U	0.0056 U	**34.7**	**1.46**	0.0045 U
1,2-Dibromo-3-chloropropane	mg/Kg	0.016 U	0.013 U	74 U	0.014 U	0.013 U	0.012 U	0.012 U	0.011 U	25 U	1.3 U	0.009 U
1,2-Dibromoethane	mg/Kg	0.0016 U	0.0013 U	7.4 U	0.0014 U	0.0013 U	0.0012 U	0.0012 U	0.0011 U	2.5 U	0.13 U	0.0009 U
1,2-Dichloroethane	mg/Kg	0.0016 U	0.0013 U	7.4 U	0.0014 U	0.0013 U	0.0012 U	0.0012 U	0.0011 U	2.5 U	0.13 U	0.0009 U
1,2-Dichloroethene, cis-	mg/Kg	0.0079 U	0.0065 U	37 U	0.0071 U	0.0063 U	0.0062 U	0.0058 U	0.0056 U	13 U	0.65 U	0.0045 U
1,2-Dichloroethene, trans-	mg/Kg	0.0079 U	0.0065 U	37 U	0.0071 U	0.0063 U	0.0062 U	0.0058 U	0.0056 U	13 U	0.65 U	0.0045 U
1,2-Dichloropropane	mg/Kg	0.0079 U	0.0065 U	37 U	0.0071 U	0.0063 U	0.0062 U	0.0058 U	0.0056 U	13 U	0.65 U	0.0045 U
1,3,5-Trimethylbenzene	mg/Kg	0.0079 U	**0.0056 J**	**32.4 J**	**0.0048 J**	0.0063 U	0.0062 U	0.0058 U	0.0056 U	**14.1**	**0.603 J**	0.0045 U
1,3-Dichloropropene, cis-	mg/Kg	0.0079 U	0.0065 U	37 U	0.0071 U	0.0063 U	0.0062 U	0.0058 U	0.0056 U	13 U	0.65 U	0.0045 U
1,3-Dichloropropene, trans-	mg/Kg	0.0079 U	0.0065 U	37 U	0.0071 U	0.0063 U	0.0062 U	0.0058 U	0.0056 U	13 U	0.65 U	0.0045 U
2-Butanone (MEK)	mg/Kg	0.016 U	**0.0131**	74 U	0.014 U	0.013 U	0.012 U	0.012 U	0.011 U	25 U	1.3 U	0.009 U
2-Hexanone	mg/Kg	0.0079 U	0.0065 U	37 U	0.0071 U	0.0063 U	0.0062 U	0.0058 U	0.0056 U	13 U	0.65 U	0.0045 U
4-Methyl-2-pentanone (MIBK)	mg/Kg	0.0079 U	0.0065 U	37 U	0.0071 U	0.0063 U	0.0062 U	0.0058 U	0.0056 U	13 U	0.65 U	0.0045 U
Acetone	mg/Kg	**0.0169 J**	**0.0868**	74 U	**0.0054 J**	0.013 U	0.012 U	**0.058 J**	**0.0705 J**	25 U	1.3 U	0.009 U
Acrolein	mg/Kg	0.079 U	0.065 U	370 U	0.071 U	0.063 U	0.062 U	0.058 U	0.056 U	130 U	6.5 U	0.045 U
Benzene	mg/Kg	0.0016 U	**0.0043**	7.4 U	0.0014 U	0.0013 U	0.0012 U	0.0012 U	0.0011 U	**0.973 J**	**0.951**	0.0009 U
Bromodichloromethane	mg/Kg	0.0079 U	0.0065 U	37 U	0.0071 U	0.0063 U	0.0062 U	0.0058 U	0.0056 U	13 U	0.65 U	0.0045 U
Bromoform	mg/Kg	0.0079 U	0.0065 U	37 U	0.0071 U	0.0063 U	0.0062 U	0.0058 U	0.0056 U	13 U	0.65 U	0.0045 U
Bromomethane	mg/Kg	0.0079 U	0.0065 U	37 U	0.0071 U	0.0063 U	0.0062 U	0.0058 U	0.0056 U	13 U	0.65 U	0.0045 U
Carbon disulfide	mg/Kg	**0.0078 J**	0.0065 U	37 U	0.0071 U	0.0063 U	0.0062 U	**0.0014 J**	**0.00086 J**	13 U	**0.0806 J**	0.0045 U
Carbon tetrachloride	mg/Kg	0.0079 U	0.0065 U	37 U	0.0071 U	0.0063 U	0.0062 U	0.0058 U	0.0056 U	13 U	0.65 U	0.0045 U
Chlorobenzene	mg/Kg	0.0079 U	0.0065 U	37 U	0.0071 U	0.0063 U	0.0062 U	0.0058 U	0.0056 U	13 U	0.65 U	0.0045 U
Chloroethane	mg/Kg	0.0079 U	0.0065 U	37 U	0.0071 U	0.0063 U	0.0062 U	0.0058 U	0.0056 U	13 U	0.65 U	0.0045 U
Chloroform	mg/Kg	0.0079 U	0.0065 U	37 U	0.0071 U	0.0063 U	0.0062 U	0.0058 U	0.0056 U	13 U	0.65 U	0.0045 U
Chloromethane	mg/Kg	0.0079 U	0.0065 U	37 U	0.0071 U	0.0063 U	0.0062 U	0.0058 U	0.0056 U	13 U	0.65 U	0.0045 U
Cyclohexane	mg/Kg	0.0079 U	0.0065 U	37 U	0.0071 U	0.0063 U	0.0062 U	0.0058 U	0.0056 U	13 U	0.65 U	0.0045 U
Dibromochloromethane	mg/Kg	0.0079 U	0.0065 U	37 U	0.0071 U	0.0063 U	0.0062 U	0.0058 U	0.0056 U	13 U	0.65 U	0.0045 U
Dichlorodifluoromethane	mg/Kg	0.0079 U	0.0065 U	37 U	0.0071 U	0.0063 U	0.0062 U	0.0058 U	0.0056 U	13 U	0.65 U	0.0045 U
Ethylbenzene	mg/Kg	0.0016 U	**0.005**	**18.9**	**0.0011 J**	0.0013 U	0.0012 U	0.0012 U	0.0011 U	**20.4**	**1.15**	0.0009 U
Freon 113	mg/Kg	0.0079 U	0.0065 U	37 U	0.0071 U	0.0063 U	0.0062 U	0.0058 U	0.0056 U	13 U	0.65 U	0.0045 U
Isopropylbenzene	mg/Kg	0.0079 U	0.0065 U	**3.64 J**	0.0071 U	0.0063 U	0.0062 U	0.0058 U	0.0056 U	**5.41 J**	**0.213 J**	0.0045 U
Methyl Acetate	mg/Kg	0.0079 U	**0.0076**	37 U	0.0071 U	0.0063 U	0.0062 U	0.0058 U	0.0056 U	13 U	**0.282 J**	0.0045 U
Methylcyclohexane	mg/Kg	0.0079 U	**0.00077 J**	37 U	0.0071 U	0.0063 U	0.0062 U	0.0058 U	0.0056 U	13 U	0.65 U	0.0045 U
Methylene chloride	mg/Kg	0.0079 U	0.0065 U	37 U	0.0071 U	0.0063 U	0.0062 U	0.0058 U	**0.012**	13 U	0.65 U	0.0045 U
Methyl-tert butyl ether (MTBE)	mg/Kg	0.0016 U	0.0013 U	7.4 U	0.0014 U	0.0013 U	0.0012 U	0.0012 U	0.0011 U	2.5 U	0.13 U	0.0009 U
Propylbenzene, n-	mg/Kg	0.0079 U	0.0065 U	37 U	0.0071 U	0.0063 U	0.0062 U	0.0058 U	0.0056 U	**2.15 J**	0.65 U	0.0045 U
Styrene	mg/Kg	0.0079 U	**0.00068 J**	37 U	**0.00042 J**	0.0063 U	0.0062 U	0.0058 U	0.0056 U	13 U	0.65 U	0.0045 U
Tetrachloroethene	mg/Kg	0.0079 U	0.0065 U	37 U	**0.00087 J**	0.0063 U	0.0062 U	0.0058 U	0.0056 U	13 U	0.65 U	0.0045 U
Toluene	mg/Kg	0.0016 U	**0.0043**	**5.94 J**	**0.00095 J**	**0.0015**	0.0012 U	0.0012 U	0.0011 U	**1.21 J**	**0.415**	0.0009 U
Trichloroethene	mg/Kg	0.0079 U	0.0065 U	37 U	**0.013**	**0.00056 J**	**0.00072 J**	0.0058 U	0.0056 U	13 U	0.65 U	0.0045 U
Trichlorofluoromethane	mg/Kg	0.0079 U	0.0065 U	37 U	0.0071 U	0.0063 U	0.0062 U	0.0058 U	0.0056 U	13 U	0.65 U	0.0045 U
Vinyl chloride	mg/Kg	0.0079 U	0.0065 U	37 U	0.0071 U	0.0063 U	0.0062 U	0.0058 U	0.0056 U	13 U	0.65 U	0.0045 U
Xylene, o-	mg/Kg	0.0016 U	**0.0194**	**42.3**	**0.0049**	0.0013 U	0.0012 U	0.0012 U	0.0011 U	**11.3**	**0.756**	0.0009 U
Xylenes, m/p-	mg/Kg	0.0032 U	**0.038**	**112**	**0.0075**	0.0025 U	0.0025 U	0.0023 U	0.0022 U	**22.8**	**1.84**	0.0018 U
Xylenes, Total	mg/Kg	0.0032 U	**0.0574**	**154**	**0.0124**	0.0025 U	0.0025 U	0.0023 U	0.0022 U	**34.1**	**2.59**	0.0018 U

Detected concentrations are marked as shaded and bold.
FT - Feet
J - Estimated
mg/Kg - milligrams per kilogram
U - Not Detected

APPENDIX G
Soil Analytical Data for Volatile Organic Compounds (VOCs)
Quanta Resources Superfund Site, OU1
Edgewater, New Jersey

Location ID		SB-39	SB-40	SB-40	SB-42	SB-42	SB-43	SB-43	SB-44	SB-44	SB-47	SB-47
Field Sample ID		SB-39-5.3-022409	SB-40-1.0	SB-40-4.0	SB-42-1.0	SB-42-9.0	SB-43-0.5	SB-43-3.5	SB-44-1.0	SB-44-8.0	SB-47-1.5	SB-47-3.2
Sample Date		2/24/2009	8/26/2008	8/26/2008	8/26/2008	8/26/2008	8/26/2008	8/26/2008	9/4/2008	9/4/2008	8/27/2008	8/27/2008
Sample Depth Interval		5 - 5.5 FT	0 - 1.5 FT	3.8 - 5 FT	0 - 1.5 FT	8.5 - 10 FT	0 - 1 FT	3 - 4 FT	0.5 - 1.5 FT	7 - 9 FT	1 - 2 FT	2.7 - 3.7 FT
Sample Matrix		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Constituent	**Units**											
1,1,1-Trichloroethane	mg/Kg	0.0056 U	0.0054 U	0.51 U	0.0063 U	4.2 U	0.0072 UJ	0.0076 U	0.0086 U	11 U	0.0063 U	0.0091 U
1,1,2,2-Tetrachloroethane	mg/Kg	0.0056 U	0.0054 U	0.51 U	0.0063 U	4.2 U	0.0072 UJ	0.0076 U	0.0086 U	11 U	0.0063 U	0.0091 U
1,1,2-Trichloroethane	mg/Kg	0.0056 U	0.0054 U	0.51 U	0.0063 U	4.2 U	0.0072 UJ	0.0076 U	0.0086 U	11 U	0.0063 U	0.0091 U
1,1-Dichloroethane	mg/Kg	0.0056 U	0.0054 U	0.51 U	0.0063 U	4.2 U	0.0072 UJ	0.0076 U	0.0086 U	11 U	0.0063 U	0.0091 U
1,1-Dichloroethene	mg/Kg	0.0056 U	0.0054 U	0.51 U	0.0063 U	4.2 U	0.0072 UJ	0.0076 U	0.0086 U	11 U	0.0063 U	0.0091 U
1,2,4-Trimethylbenzene	mg/Kg	0.0056 U	0.0054 U	**0.153 J**	0.0063 U	**6.37**	0.0072 UJ	0.0076 U	0.0086 U	**86.5**	0.0063 U	0.0091 U
1,2-Dibromo-3-chloropropane	mg/Kg	0.011 U	0.011 U	1 U	0.013 U	8.3 U	0.014 UJ	0.015 U	0.017 U	22 U	0.013 U	0.018 U
1,2-Dibromoethane	mg/Kg	0.0011 U	0.0011 U	0.1 U	0.0013 U	0.83 U	0.0014 UJ	0.0015 U	0.0017 U	2.2 U	0.0013 U	0.0018 U
1,2-Dichloroethane	mg/Kg	0.0011 U	0.0011 U	0.1 U	0.0013 U	0.83 U	0.0014 UJ	0.0015 U	0.0017 U	2.2 U	0.0013 U	0.0018 U
1,2-Dichloroethene, cis-	mg/Kg	0.0056 U	0.0054 U	0.51 U	0.0063 U	4.2 U	0.0072 UJ	0.0076 U	0.0086 U	11 U	0.0063 U	0.0091 U
1,2-Dichloroethene, trans-	mg/Kg	0.0056 U	0.0054 U	0.51 U	0.0063 U	4.2 U	0.0072 UJ	0.0076 U	0.0086 U	11 U	0.0063 U	0.0091 U
1,2-Dichloropropane	mg/Kg	0.0056 U	0.0054 U	0.51 U	0.0063 U	4.2 U	0.0072 UJ	0.0076 U	0.0086 U	11 U	0.0063 U	0.0091 U
1,3,5-Trimethylbenzene	mg/Kg	0.0056 U	0.0054 U	0.51 U	0.0063 U	**7.22**	0.0072 UJ	0.0076 U	0.0086 U	**33.8**	0.0063 U	0.0091 U
1,3-Dichloropropene, cis-	mg/Kg	0.0056 U	0.0054 U	0.51 U	0.0063 U	4.2 U	0.0072 UJ	0.0076 U	0.0086 U	11 U	0.0063 U	0.0091 U
1,3-Dichloropropene, trans-	mg/Kg	0.0056 U	0.0054 U	0.51 U	0.0063 U	4.2 U	0.0072 UJ	0.0076 U	0.0086 U	11 U	0.0063 U	0.0091 U
2-Butanone (MEK)	mg/Kg	0.011 U	0.011 U	1 U	0.013 U	8.3 U	0.014 UJ	0.015 U	0.017 U	22 U	0.013 U	0.018 U
2-Hexanone	mg/Kg	0.0056 U	0.0054 U	0.51 U	0.0063 U	4.2 U	0.0072 UJ	0.0076 U	0.0086 U	11 U	0.0063 U	0.0091 U
4-Methyl-2-pentanone (MIBK)	mg/Kg	0.0056 U	0.0054 U	0.51 U	0.0063 U	4.2 U	0.0072 UJ	0.0076 U	0.0086 U	11 U	0.0063 U	0.0091 U
Acetone	mg/Kg	0.011 U	0.011 U	**0.598 J**	0.013 U	8.3 U	0.014 UJ	0.015 UJ	0.017 U	22 U	0.013 U	0.018 UJ
Acrolein	mg/Kg	0.056 U	0.054 U	5.1 U	0.063 U	42 U	0.072 UJ	0.076 U	0.086 U	110 U	0.063 U	0.091 U
Benzene	mg/Kg	0.0011 U	0.0011 U	**0.0959 J**	0.0013 U	**0.779 J**	0.0014 UJ	0.0015 U	0.0017 U	**1.64 J**	0.0013 U	0.0018 U
Bromodichloromethane	mg/Kg	0.0056 U	0.0054 U	0.51 U	0.0063 U	4.2 U	0.0072 UJ	0.0076 U	0.0086 U	11 U	0.0063 U	0.0091 U
Bromoform	mg/Kg	0.0056 U	0.0054 U	0.51 U	0.0063 U	4.2 U	0.0072 UJ	0.0076 U	0.0086 U	11 U	0.0063 U	0.0091 U
Bromomethane	mg/Kg	0.0056 U	0.0054 U	0.51 U	0.0063 U	4.2 U	0.0072 UJ	0.0076 U	0.0086 U	11 U	0.0063 U	0.0091 U
Carbon disulfide	mg/Kg	0.0056 U	0.0054 U	**0.0689 J**	0.0063 U	4.2 U	0.0072 UJ	0.0076 U	**0.0012 J**	11 U	0.0063 U	0.0091 U
Carbon tetrachloride	mg/Kg	0.0056 U	0.0054 U	0.51 U	0.0063 U	4.2 U	0.0072 UJ	0.0076 U	0.0086 U	11 U	0.0063 U	0.0091 U
Chlorobenzene	mg/Kg	0.0056 U	0.0054 U	0.51 U	0.0063 U	4.2 U	0.0072 UJ	0.0076 U	0.0086 U	11 U	0.0063 U	0.0091 U
Chloroethane	mg/Kg	0.0056 U	0.0054 U	0.51 U	0.0063 U	4.2 U	0.0072 UJ	0.0076 U	0.0086 U	11 U	0.0063 U	0.0091 U
Chloroform	mg/Kg	0.0056 U	0.0054 U	0.51 U	0.0063 U	4.2 U	0.0072 UJ	0.0076 U	0.0086 U	11 U	0.0063 U	0.0091 U
Chloromethane	mg/Kg	0.0056 U	0.0054 U	0.51 U	0.0063 U	4.2 U	0.0072 UJ	0.0076 U	0.0086 U	11 U	0.0063 U	0.0091 U
Cyclohexane	mg/Kg	0.0056 U	0.0054 U	0.51 U	0.0063 U	4.2 U	0.0072 UJ	0.0076 U	0.0086 U	11 U	0.0063 U	0.0091 U
Dibromochloromethane	mg/Kg	0.0056 U	0.0054 U	0.51 U	0.0063 U	4.2 U	0.0072 UJ	0.0076 U	0.0086 U	11 U	0.0063 U	0.0091 U
Dichlorodifluoromethane	mg/Kg	0.0056 U	0.0054 U	0.51 U	0.0063 U	4.2 U	0.0072 UJ	0.0076 U	0.0086 U	11 U	0.0063 U	0.0091 U
Ethylbenzene	mg/Kg	0.0011 U	0.0011 U	**0.108**	0.0013 U	**5.99**	0.0014 UJ	0.0015 U	0.0017 U	**52.2**	0.0013 U	0.0018 U
Freon 113	mg/Kg	0.0056 U	0.0054 U	0.51 U	0.0063 U	4.2 U	0.0072 UJ	0.0076 U	0.0086 U	11 U	0.0063 U	0.0091 U
Isopropylbenzene	mg/Kg	0.0056 U	0.0054 U	**0.0625 J**	0.0063 U	**9.92**	0.0072 UJ	0.0076 U	0.0086 U	**14.1**	0.0063 U	0.0091 U
Methyl Acetate	mg/Kg	0.0056 U	0.0054 U	**0.581**	0.0063 U	4.2 U	0.0072 UJ	0.0076 U	0.0086 U	11 U	0.0063 U	0.0091 U
Methylcyclohexane	mg/Kg	0.0056 U	0.0054 U	0.51 U	0.0063 U	**0.392 J**	0.0072 UJ	0.0076 U	0.0086 U	**2.99 J**	0.0063 U	0.0091 U
Methylene chloride	mg/Kg	0.0056 U	0.0054 U	0.51 U	0.0063 U	4.2 U	0.0072 UJ	0.0076 U	0.0086 U	11 U	0.0063 U	0.0091 U
Methyl-tert butyl ether (MTBE)	mg/Kg	0.0011 U	0.0011 U	0.1 U	0.0013 U	0.83 U	0.0014 UJ	0.0015 U	0.0017 U	2.2 U	0.0013 U	0.0018 U
Propylbenzene, n-	mg/Kg	0.0056 U	0.0054 U	**0.205 J**	0.0063 U	**6.82**	0.0072 UJ	0.0076 U	0.0086 U	**5.08 J**	0.0063 U	0.0091 U
Styrene	mg/Kg	0.0056 U	0.0054 U	0.51 U	0.0063 U	4.2 U	0.0072 UJ	0.0076 U	0.0086 U	11 U	0.0063 U	0.0091 U
Tetrachloroethene	mg/Kg	0.0056 U	0.0054 U	0.51 U	0.0063 U	4.2 U	0.0072 UJ	0.0076 U	0.0086 U	11 U	0.0063 U	0.0091 U
Toluene	mg/Kg	0.0011 U	0.0011 U	**0.122**	0.0013 U	**0.45 J**	0.0014 UJ	0.0015 U	0.0017 U	**1.26 J**	0.0013 U	0.0018 U
Trichloroethene	mg/Kg	0.0056 U	0.0054 U	0.51 U	0.0063 U	4.2 U	0.0072 UJ	0.0076 U	0.0086 U	11 U	0.0063 U	0.0091 U
Trichlorofluoromethane	mg/Kg	0.0056 U	0.0054 U	0.51 U	0.0063 U	4.2 U	0.0072 UJ	0.0076 U	0.0086 U	11 U	0.0063 U	0.0091 U
Vinyl chloride	mg/Kg	0.0056 U	0.0054 U	0.51 U	0.0063 U	4.2 U	0.0072 UJ	0.0076 U	0.0086 U	11 U	0.0063 U	0.0091 U
Xylene, o-	mg/Kg	0.0011 U	0.0011 U	**0.0545 J**	0.0013 U	**1.77**	0.0014 UJ	0.0015 U	0.0017 U	**29.2**	0.0013 U	0.0018 U
Xylenes, m/p-	mg/Kg	**0.00043 J**	0.0022 U	**0.199 J**	0.0025 U	**0.94 J**	0.0029 UJ	0.003 U	0.0034 U	**49.3**	0.0025 U	0.0036 U
Xylenes, Total	mg/Kg	**0.00061 J**	0.0022 U	**0.254**	0.0025 U	**2.71**	0.0029 UJ	0.003 U	0.0034 U	**78.6**	0.0025 U	0.0036 U

Detected concentrations are marked as shaded and bold.
FT - Feet
J - Estimated
mg/Kg - milligrams per kilogram
U - Not Detected

APPENDIX G
Soil Analytical Data for Volatile Organic Compounds (VOCs)
Quanta Resources Superfund Site, OU1
Edgewater, New Jersey

Location ID		SB-48	SB-49	SB-49	SB-50	SB-50	SB-51	SB-51	SB-52	SB-52	SS-58	SB-58
Field Sample ID		SB-48-6.0	SB-49-4.5	SB-49-9.5	SB-50-3.0	SB-50-11.25	SB-51-3.5	SB-51-18	SB-52-3.0	SB-52-6.0	SS-58-0.1	SB-58-3.7
Sample Date		8/27/2008	9/2/2008	9/2/2008	9/2/2008	10/16/2008	9/2/2008	9/2/2008	2/24/2009	2/24/2009	10/15/2008	2/25/2009
Sample Depth Interval		5 - 7 FT	4 - 5 FT	9 - 10 FT	2.5 - 3.5 FT	11 - 11.5 FT	3 - 4 FT	17.5 - 18.5 FT	2 - 4 FT	5.7 - 6.3 FT	0.1 - 0.2 FT	3.5 - 4 FT
Sample Matrix		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Constituent	**Units**											
1,1,1-Trichloroethane	mg/Kg	0.0079 U	1.9 U	6.5 U	0.0064 U	84 U	0.0054 U	0.38 U	0.0048 U	0.0056 U	0.0055 U	0.0062 U
1,1,2,2-Tetrachloroethane	mg/Kg	0.0079 U	1.9 U	6.5 U	0.0064 U	84 U	0.0054 U	0.38 U	0.0048 U	0.0056 U	0.0055 U	0.0062 U
1,1,2-Trichloroethane	mg/Kg	0.0079 U	1.9 U	6.5 U	0.0064 U	84 U	0.0054 U	0.38 U	0.0048 U	0.0056 U	0.0055 U	0.0062 U
1,1-Dichloroethane	mg/Kg	0.0079 U	1.9 U	6.5 U	0.0064 U	84 U	0.0054 U	0.38 U	0.0048 U	0.0056 U	0.0055 U	0.0062 U
1,1-Dichloroethene	mg/Kg	0.0079 U	1.9 U	6.5 U	0.0064 U	84 U	0.0054 U	0.38 U	0.0048 U	0.0056 U	0.0055 U	0.0062 U
1,2,4-Trimethylbenzene	mg/Kg	**0.0083**	1.9 U	**47.1**	0.0064 U	**44.2 J**	0.0054 U	0.38 U	0.0048 U	0.0056 U	0.0055 U	0.0062 U
1,2-Dibromo-3-chloropropane	mg/Kg	0.016 U	3.8 U	13 U	0.013 U	170 U	0.011 U	0.75 U	0.0097 U	0.011 U	0.011 U	0.012 U
1,2-Dibromoethane	mg/Kg	0.0016 U	0.38 U	1.3 U	0.0013 U	17 U	0.0011 U	0.075 U	0.00097 U	0.0011 U	0.0011 U	0.0012 U
1,2-Dichloroethane	mg/Kg	0.0016 U	0.38 U	1.3 U	0.0013 U	17 U	0.0011 U	0.075 U	0.00097 U	0.0011 U	0.0011 U	0.0012 U
1,2-Dichloroethene, cis-	mg/Kg	0.0079 U	1.9 U	6.5 U	0.0064 U	84 U	0.0054 U	0.38 U	0.0048 U	0.0056 U	0.0055 U	0.0062 U
1,2-Dichloroethene, trans-	mg/Kg	0.0079 U	1.9 U	6.5 U	0.0064 U	84 U	0.0054 U	0.38 U	0.0048 U	0.0056 U	0.0055 U	0.0062 U
1,2-Dichloropropane	mg/Kg	0.0079 U	1.9 U	6.5 U	0.0064 U	84 U	0.0054 U	0.38 U	0.0048 U	0.0056 U	0.0055 U	0.0062 U
1,3,5-Trimethylbenzene	mg/Kg	**0.0025 J**	1.9 U	**17.7**	0.0064 U	**16.2 J**	0.0054 U	0.38 U	0.0048 U	0.0056 U	0.0055 U	0.0062 U
1,3-Dichloropropene, cis-	mg/Kg	0.0079 U	1.9 U	6.5 U	0.0064 U	84 U	0.0054 U	0.38 U	0.0048 U	0.0056 U	0.0055 U	0.0062 U
1,3-Dichloropropene, trans-	mg/Kg	0.0079 U	1.9 U	6.5 U	0.0064 U	84 U	0.0054 U	0.38 U	0.0048 U	0.0056 U	0.0055 U	0.0062 U
2-Butanone (MEK)	mg/Kg	0.016 U	3.8 U	13 U	0.013 U	170 U	0.011 U	0.75 U	0.0097 U	0.011 U	0.011 U	0.012 U
2-Hexanone	mg/Kg	0.0079 U	1.9 U	6.5 U	0.0064 U	84 U	0.0054 U	0.38 U	0.0048 U	0.0056 U	0.0055 U	0.0062 U
4-Methyl-2-pentanone (MIBK)	mg/Kg	0.0079 U	1.9 U	6.5 U	0.0064 U	84 U	0.0054 U	0.38 U	0.0048 U	0.0056 U	0.0055 U	0.0062 U
Acetone	mg/Kg	0.016 UJ	3.8 U	13 U	**0.0068 J**	170 U	**0.0098 J**	0.75 U	0.0097 U	**0.0168**	**0.0062 J**	**0.121 J**
Acrolein	mg/Kg	0.079 U	19 U	65 U	0.064 U	840 U	0.054 U	3.8 U	0.048 U	0.056 U	0.055 U	0.062 U
Benzene	mg/Kg	0.0016 U	**0.715**	**8.1**	0.0013 U	17 U	0.0011 U	**0.034 J**	0.00097 U	**0.0018**	0.0011 U	0.0012 U
Bromodichloromethane	mg/Kg	0.0079 U	1.9 U	6.5 U	0.0064 U	84 U	0.0054 U	0.38 U	0.0048 U	0.0056 U	0.0055 U	0.0062 U
Bromoform	mg/Kg	0.0079 U	1.9 U	6.5 U	0.0064 U	84 U	0.0054 U	0.38 U	0.0048 U	0.0056 U	0.0055 U	0.0062 U
Bromomethane	mg/Kg	0.0079 U	1.9 U	6.5 U	0.0064 U	84 U	0.0054 U	0.38 U	0.0048 U	0.0056 U	0.0055 U	0.0062 U
Carbon disulfide	mg/Kg	0.0079 U	1.9 UJ	6.5 UJ	0.0064 U	84 U	0.0054 U	0.38 U	0.0048 U	0.0016 J	0.0055 U	0.0062 U
Carbon tetrachloride	mg/Kg	0.0079 U	1.9 U	6.5 U	0.0064 U	84 U	0.0054 U	0.38 U	0.0048 U	0.0056 U	0.0055 U	0.0062 U
Chlorobenzene	mg/Kg	0.0079 U	1.9 U	6.5 U	0.0064 U	84 U	0.0054 U	0.38 U	0.0048 U	0.0056 U	0.0055 U	0.0062 U
Chloroethane	mg/Kg	0.0079 U	1.9 U	6.5 U	0.0064 U	84 U	0.0054 U	0.38 U	0.0048 U	0.0056 U	0.0055 U	0.0062 U
Chloroform	mg/Kg	0.0079 U	1.9 U	6.5 U	0.0064 U	84 U	0.0054 U	0.38 U	0.0048 U	0.0056 U	0.0055 U	0.0062 U
Chloromethane	mg/Kg	0.0079 U	1.9 U	6.5 U	0.0064 U	84 U	0.0054 U	0.38 U	0.0048 U	0.0056 U	0.0055 U	0.0062 U
Cyclohexane	mg/Kg	0.0079 U	1.9 U	6.5 U	0.0064 U	84 U	0.0054 U	0.38 U	0.0048 U	0.0056 U	0.0055 U	0.0062 U
Dibromochloromethane	mg/Kg	0.0079 U	1.9 U	6.5 U	0.0064 U	84 U	0.0054 U	0.38 U	0.0048 U	0.0056 U	0.0055 U	0.0062 U
Dichlorodifluoromethane	mg/Kg	0.0079 U	1.9 U	6.5 U	0.0064 U	84 U	0.0054 U	0.38 U	0.0048 U	0.0056 U	0.0055 U	0.0062 U
Ethylbenzene	mg/Kg	0.0016 U	**0.348 J**	**56.4**	0.0013 U	**27.6**	0.0011 U	**0.0353 J**	0.00097 U	0.0011 U	0.0011 U	0.0012 U
Freon 113	mg/Kg	0.0079 U	1.9 U	6.5 U	0.0064 U	84 U	0.0054 U	0.38 U	0.0048 U	0.0056 U	0.0055 U	0.0062 U
Isopropylbenzene	mg/Kg	0.0079 U	1.9 U	**13**	0.0064 U	**23.9 J**	0.0054 U	0.38 U	0.0048 U	0.0056 U	0.0055 U	0.0062 U
Methyl Acetate	mg/Kg	0.0079 U	1.9 U	6.5 U	0.0064 U	84 U	0.0054 U	0.38 U	0.0048 U	0.0056 U	0.0055 U	0.0062 U
Methylcyclohexane	mg/Kg	0.0079 U	1.9 U	6.5 U	0.0064 U	84 U	0.0054 U	0.38 U	0.0048 U	0.0056 U	0.0055 U	0.0062 U
Methylene chloride	mg/Kg	0.0079 U	1.9 U	6.5 U	0.0064 U	84 U	0.0054 U	0.38 U	0.0048 U	0.0056 U	0.0055 U	0.0062 U
Methyl-tert butyl ether (MTBE)	mg/Kg	0.0016 U	0.38 U	1.3 U	0.0013 U	17 U	0.0011 U	0.075 U	0.00097 U	0.0011 U	0.0011 U	0.0012 U
Propylbenzene, n-	mg/Kg	0.0079 U	1.9 U	**3.29 J**	0.0064 U	84 U	0.0054 U	0.38 U	0.0048 U	0.0056 U	0.0055 U	0.0062 U
Styrene	mg/Kg	0.0079 U	1.9 U	6.5 U	0.0064 U	84 U	0.0054 U	0.38 U	0.0048 U	0.0056 U	0.0055 U	0.0062 U
Tetrachloroethene	mg/Kg	0.0079 U	1.9 U	6.5 U	0.0064 U	84 U	0.0054 U	0.38 U	0.0048 U	0.0056 U	0.0055 U	0.0062 U
Toluene	mg/Kg	0.0016 U	**1.26**	**12.1**	0.0013 U	**7.83 J**	0.0011 U	0.075 U	0.00097 U	**0.0012**	0.0011 U	0.0012 U
Trichloroethene	mg/Kg	0.0079 U	1.9 U	6.5 U	0.0064 U	84 U	0.0054 U	0.38 U	0.0048 U	0.0056 U	0.0055 U	0.0062 U
Trichlorofluoromethane	mg/Kg	0.0079 U	1.9 U	6.5 U	0.0064 U	84 U	0.0054 U	0.38 U	0.0048 U	0.0056 U	0.0055 U	0.0062 U
Vinyl chloride	mg/Kg	0.0079 U	1.9 U	6.5 U	0.0064 U	84 U	0.0054 U	0.38 U	0.0048 U	0.0056 U	0.0055 U	0.0062 U
Xylene, o-	mg/Kg	0.0016 U	**0.143 J**	**44.1**	0.0013 U	**10.1 J**	0.0011 U	0.075 U	0.00097 U	0.0011 U	0.0011 U	0.0012 U
Xylenes, m/p-	mg/Kg	0.0031 U	**0.635 J**	**91.6**	0.0026 U	**29.2 J**	0.0021 U	0.15 U	0.0019 U	0.0022 U	0.0022 U	0.0025 U
Xylenes, Total	mg/Kg	0.0031 U	**0.778**	**136**	0.0026 U	**39.3**	0.0021 U	0.15 U	0.0019 U	0.0022 U	0.0022 U	0.0025 U

Detected concentrations are marked as shaded and bold.
FT - Feet
J - Estimated
mg/Kg - milligrams per kilogram
U - Not Detected

APPENDIX G
Soil Analytical Data for Volatile Organic Compounds (VOCs)
Quanta Resources Superfund Site, OU1
Edgewater, New Jersey

Location ID		SB-58	SB-58	TL08.5-10.5	TL08.5-10.5	TL09.5-10.5	TL09.5-10.5	TL09.5-10.5	TL09.5-11.25	TL09.5-11.25	TL09-09	TL09-09
Field Sample ID		SB-58-9.5	SB-58-11.7	TL 8.5-10.5-0.5	TL 8.5-10.5-13*	TL 9.5-10.5-1.5	TL 9.5-10.5-3.5	TL 9.5-10.5-16.5	TL 9.5-11.25-0.5	TL 9.5-11.25-7.5	TL09-09-1.0	TL09-09-4.5
Sample Date		2/25/2009	2/25/2009	8/28/2008	8/28/2008	8/28/2008	8/28/2008	8/28/2008	8/28/2008	8/28/2008	8/29/2008	8/29/2008
Sample Depth Interval		9.3 - 9.7 FT	11.3 - 12 FT	0 - 1 FT	12 - 14 FT	1 - 2 FT	3 - 4 FT	16 - 17 FT	0 - 1 FT	5 - 10 FT	0.5 - 1.5 FT	4 - 5 FT
Sample Matrix		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Constituent	**Units**											
1,1,1-Trichloroethane	mg/Kg	0.0061 U	0.0072 U	0.0064 U	0.025 U	0.007 U	0.0063 U	0.025 U	0.0058 U	0.0059 U	0.0066 U	0.0058 U
1,1,2,2-Tetrachloroethane	mg/Kg	0.0061 U	0.0072 U	0.0064 U	0.025 U	0.007 U	0.0063 U	0.025 U	0.0058 U	0.0059 U	0.0066 U	0.0058 U
1,1,2-Trichloroethane	mg/Kg	0.0061 U	0.0072 U	0.0064 U	0.025 U	0.007 U	0.0063 U	0.025 U	0.0058 U	0.0059 U	0.0066 U	0.0058 U
1,1-Dichloroethane	mg/Kg	0.0061 U	0.0072 U	0.0064 U	0.025 U	0.007 U	0.0063 U	0.025 U	0.0058 U	0.0059 U	0.0066 U	0.0058 U
1,1-Dichloroethene	mg/Kg	0.0061 U	0.0072 U	0.0064 U	0.025 U	0.007 U	0.0063 U	0.025 U	0.0058 U	0.0059 U	0.0066 U	0.0058 U
1,2,4-Trimethylbenzene	mg/Kg	0.0061 U	0.0072 U	**0.238**	0.025 U	0.007 U	0.0063 U	0.025 U	0.0058 U	0.0059 U	0.0066 U	0.0058 U
1,2-Dibromo-3-chloropropane	mg/Kg	0.012 U	0.014 U	0.013 U	0.05 U	0.014 U	0.013 U	0.049 U	0.012 U	0.012 U	0.013 U	0.012 U
1,2-Dibromoethane	mg/Kg	0.0012 U	0.0014 U	0.0013 U	0.005 U	0.0014 U	0.0013 U	0.0049 U	0.0012 U	0.0012 U	0.0013 U	0.0012 U
1,2-Dichloroethane	mg/Kg	0.0012 U	0.0014 U	0.0013 U	0.005 U	0.0014 U	0.0013 U	0.0049 U	0.0012 U	0.0012 U	0.0013 U	0.0012 U
1,2-Dichloroethene, cis-	mg/Kg	0.0061 U	0.0072 U	0.0064 U	0.025 U	0.007 U	0.0063 U	0.025 U	0.0058 U	0.0059 U	0.0066 U	0.0058 U
1,2-Dichloroethene, trans-	mg/Kg	0.0061 U	0.0072 U	0.0064 U	0.025 U	0.007 U	0.0063 U	0.025 U	0.0058 U	0.0059 U	0.0066 U	0.0058 U
1,2-Dichloropropane	mg/Kg	0.0061 U	0.0072 U	0.0064 U	0.025 U	0.007 U	0.0063 U	0.025 U	0.0058 U	0.0059 U	0.0066 U	0.0058 U
1,3,5-Trimethylbenzene	mg/Kg	6.1 U	0.0072 U	**0.151**	0.025 U	0.007 U	0.0063 U	0.025 U	0.0058 U	0.0059 U	0.0066 U	0.0058 U
1,3-Dichloropropene, cis-	mg/Kg	0.0061 U	0.0072 U	0.0064 U	0.025 U	0.007 U	0.0063 U	0.025 U	0.0058 U	0.0059 U	0.0066 U	0.0058 U
1,3-Dichloropropene, trans-	mg/Kg	0.0061 U	0.0072 U	0.0064 U	0.025 U	0.007 U	0.0063 U	0.025 U	0.0058 U	0.0059 U	0.0066 U	0.0058 U
2-Butanone (MEK)	mg/Kg	0.012 UJ	0.014 UJ	0.013 U	0.05 U	0.014 U	0.013 U	0.049 U	0.012 U	0.012 U	0.013 U	**0.0199 J**
2-Hexanone	mg/Kg	0.0061 U	0.0072 U	0.0064 U	0.025 U	0.007 U	0.0063 U	0.025 U	0.0058 U	0.0059 U	0.0066 U	0.0058 U
4-Methyl-2-pentanone (MIBK)	mg/Kg	0.0061 U	0.0072 U	0.0064 U	0.025 U	0.007 U	0.0063 U	0.025 U	0.0058 U	0.0059 U	0.0066 U	0.0058 U
Acetone	mg/Kg	**0.0422**	**0.0394**	0.013 U	**0.0633**	**0.0077 J**	0.013 U	**0.0612**	0.012 U	0.012 U	0.013 U	**0.0453**
Acrolein	mg/Kg	0.061 U	0.072 U	0.064 U	0.25 U	0.07 U	0.063 U	0.25 U	0.058 U	0.059 U	0.066 UJ	0.058 UJ
Benzene	mg/Kg	**0.0023**	**0.0014**	0.0013 U	0.005 U	0.0014 U	0.0013 U	0.0049 U	0.0012 U	0.0012 U	0.0013 U	0.0012 U
Bromodichloromethane	mg/Kg	0.0061 U	0.0072 U	0.0064 U	0.025 U	0.007 U	0.0063 U	0.025 U	0.0058 U	0.0059 U	0.0066 U	0.0058 U
Bromoform	mg/Kg	0.0061 U	0.0072 U	0.0064 U	0.025 U	0.007 U	0.0063 U	0.025 U	0.0058 U	0.0059 U	0.0066 U	0.0058 U
Bromomethane	mg/Kg	0.0061 U	0.0072 U	0.0064 U	0.025 U	0.007 U	0.0063 U	0.025 U	0.0058 U	0.0059 U	0.0066 U	0.0058 U
Carbon disulfide	mg/Kg	0.0061 U	0.0072 U	0.0064 U	**0.0083 J**	0.007 U	0.0063 U	**0.0114 J**	0.0058 U	0.0059 U	0.0066 U	0.0058 U
Carbon tetrachloride	mg/Kg	0.0061 U	0.0072 U	0.0064 U	0.025 U	0.007 U	0.0063 U	0.025 U	0.0058 U	0.0059 U	0.0066 U	0.0058 U
Chlorobenzene	mg/Kg	0.0061 U	0.0072 U	0.0064 U	0.025 U	0.007 U	0.0063 U	0.025 U	0.0058 U	0.0059 U	0.0066 U	0.0058 U
Chloroethane	mg/Kg	0.0061 U	0.0072 U	0.0064 U	0.025 U	0.007 U	0.0063 U	0.025 U	0.0058 U	0.0059 U	0.0066 U	0.0058 U
Chloroform	mg/Kg	0.0061 U	0.0072 U	0.0064 U	0.025 U	0.007 U	0.0063 U	0.025 U	0.0058 U	0.0059 U	0.0066 U	0.0058 U
Chloromethane	mg/Kg	0.0061 U	0.0072 U	0.0064 U	0.025 U	0.007 U	0.0063 U	0.025 U	0.0058 U	0.0059 U	0.0066 U	0.0058 U
Cyclohexane	mg/Kg	0.0061 U	0.0072 U	0.0064 U	0.025 U	**0.007 NJ**	**0.0063 NJ**	0.025 U	0.0058 U	0.0059 U	0.0066 U	0.0058 U
Dibromochloromethane	mg/Kg	0.0061 U	0.0072 U	0.0064 U	0.025 U	0.007 U	0.0063 U	0.025 U	0.0058 U	0.0059 U	0.0066 U	0.0058 U
Dichlorodifluoromethane	mg/Kg	0.0061 U	0.0072 U	0.0064 U	0.025 U	0.007 U	0.0063 U	0.025 U	0.0058 U	0.0059 U	0.0066 U	0.0058 U
Ethylbenzene	mg/Kg	0.0012 U	0.0014 U	0.0013 U	0.005 U	0.0014 U	0.0013 U	0.0049 U	0.0012 U	0.0012 U	0.0013 U	0.0012 U
Freon 113	mg/Kg	0.0061 U	0.0072 U	0.0064 U	0.025 U	0.007 U	0.0063 U	0.025 U	0.0058 U	0.0059 U	0.0066 U	0.0058 U
Isopropylbenzene	mg/Kg	0.0061 U	0.0072 U	**0.016**	0.025 U	0.007 U	0.0063 U	0.025 U	0.0058 U	0.0059 U	0.0066 U	0.0058 U
Methyl Acetate	mg/Kg	0.0061 U	0.0072 U	0.0064 U	0.025 U	0.007 U	0.0063 U	0.025 U	0.0058 U	0.0059 U	0.0066 U	0.0058 U
Methylcyclohexane	mg/Kg	0.0061 U	0.0072 U	0.0064 U	0.025 U	0.007 U	0.0063 U	0.025 U	0.0058 U	0.0059 U	0.0066 U	0.0058 U
Methylene chloride	mg/Kg	0.0061 U	0.0072 U	0.0064 U	0.025 U	0.007 U	0.0063 U	0.025 U	0.0058 U	0.0059 U	0.0066 U	0.0058 U
Methyl-tert butyl ether (MTBE)	mg/Kg	0.0012 U	0.0014 U	0.0013 U	0.005 U	0.0014 U	0.0013 U	0.0049 U	0.0012 U	0.0012 U	0.0013 U	0.0012 U
Propylbenzene, n-	mg/Kg	6.1 U	0.0072 U	**0.0276**	0.025 U	0.007 U	0.0063 U	0.025 U	0.0058 U	0.0059 U	0.0066 U	0.0058 U
Styrene	mg/Kg	0.0061 U	0.0072 U	0.0064 U	0.025 U	0.007 U	0.0063 U	0.025 U	0.0058 U	0.0059 U	0.0066 U	0.0058 U
Tetrachloroethene	mg/Kg	0.0061 U	0.0072 U	0.0064 U	0.025 U	0.007 U	0.0063 U	0.025 U	0.0058 U	0.0059 U	0.0066 U	0.0058 U
Toluene	mg/Kg	0.0012 U	**0.0027**	0.0013 U	0.005 U	0.0014 U	0.0013 U	0.0049 U	0.0012 U	0.0012 U	0.0013 U	0.0012 U
Trichloroethene	mg/Kg	0.0061 U	0.0072 U	0.0064 U	0.025 U	0.007 U	0.0063 U	0.025 U	0.0058 U	0.0059 U	0.0066 U	0.0058 U
Trichlorofluoromethane	mg/Kg	0.0061 U	0.0072 U	0.0064 U	0.025 U	0.007 U	0.0063 U	0.025 U	0.0058 U	0.0059 U	0.0066 U	0.0058 U
Vinyl chloride	mg/Kg	0.0061 U	0.0072 U	0.0064 U	0.025 U	0.007 U	0.0063 U	0.025 U	0.0058 U	0.0059 U	0.0066 U	0.0058 U
Xylene, o-	mg/Kg	0.0012 U	0.0014 U	**0.0246**	0.005 U	0.0014 U	0.0013 U	0.0049 U	0.0012 U	0.0012 U	**0.00066 J**	0.0012 U
Xylenes, m/p-	mg/Kg	0.0024 U	0.0029 U	0.0026 U	0.0099 U	0.0028 U	0.0025 U	0.0099 U	0.0023 U	0.0023 U	**0.00089 J**	0.0023 U
Xylenes, Total	mg/Kg	0.0024 U	0.0029 U	**0.0246**	0.0099 U	0.0028 U	0.0025 U	0.0099 U	0.0023 U	0.0023 U	**0.0016 J**	0.0023 U

Detected concentrations are marked as shaded and bold.
FT - Feet
J - Estimated
mg/Kg - milligrams per kilogram
U - Not Detected

APPENDIX G
Soil Analytical Data for Volatile Organic Compounds (VOCs)
Quanta Resources Superfund Site, OU1
Edgewater, New Jersey

Location ID		TL09-09	TL10.5-09.5	TL10.5-09.5	TL10.5-09.5	TL10.5-09.5	TL10.5-10.5	TL10.5-10.5	TL10.5-10.5	TL10.5-10.5	TL10.5-11.25	TL10.5-11.25
Field Sample ID		TL09-09-19.5	TL10.5-9.5-1.0	DUP-082908	TL10.5-9.5-9.5	TL10.5-9.5-23.5	TL 10.5-10.5-0.5	TL 10.5-10.5-4.0	TL 10.5-10.5-14.5	DUP-082708	TL 10.5-11.25-0.5	TL 10.5-11.25-8.5
Sample Date		8/29/2008	8/29/2008	8/29/2008	8/29/2008	8/29/2008	8/27/2008	8/27/2008	8/27/2008	8/27/2008	8/28/2008	8/28/2008
Sample Depth Interval		19.3 - 20 FT	0 - 1.5 FT	0 - 1.5 FT	9 - 10 FT	23 - 24 FT	0 - 1 FT	3.5 - 4.5 FT	14 - 15 FT	14 - 15 FT	0 - 1 FT	8 - 9 FT
Sample Matrix		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Constituent	**Units**											
1,1,1-Trichloroethane	mg/Kg	0.017 U	0.0062 U	0.0059 U	0.01 U	0.013 U	0.0083 U	0.0057 U	27 U	35 U	0.0051 U	0.011 U
1,1,2,2-Tetrachloroethane	mg/Kg	0.017 U	0.0062 U	0.0059 U	0.01 U	0.013 U	0.0083 U	0.0057 U	27 U	35 U	0.0051 U	0.011 U
1,1,2-Trichloroethane	mg/Kg	0.017 U	0.0062 U	0.0059 U	0.01 U	0.013 U	0.0083 U	0.0057 U	27 U	35 U	0.0051 U	0.011 U
1,1-Dichloroethane	mg/Kg	0.017 U	0.0062 U	0.0059 U	0.01 U	0.013 U	0.0083 U	0.0057 U	27 U	35 U	0.0051 U	0.011 U
1,1-Dichloroethene	mg/Kg	0.017 U	0.0062 U	0.0059 U	0.01 U	0.013 U	0.0083 U	0.0057 U	27 U	35 U	0.0051 U	0.011 U
1,2,4-Trimethylbenzene	mg/Kg	0.017 U	0.0062 U	0.0059 U	0.01 U	0.013 U	0.0083 U	0.0057 U	**157**	**128**	**0.0015 J**	0.011 U
1,2-Dibromo-3-chloropropane	mg/Kg	0.035 U	0.012 U	0.012 U	0.02 U	0.025 U	0.017 U	0.011 U	54 U	70 U	0.01 U	0.021 U
1,2-Dibromoethane	mg/Kg	0.0035 U	0.0012 U	0.0012 U	0.002 U	0.0025 U	0.0017 U	0.0011 U	5.4 U	7 U	0.001 U	0.0021 U
1,2-Dichloroethane	mg/Kg	0.0035 U	0.0012 U	0.0012 U	0.002 U	0.0025 U	0.0017 U	0.0011 U	5.4 U	7 U	0.001 U	0.0021 U
1,2-Dichloroethene, cis-	mg/Kg	0.017 U	0.0062 U	0.0059 U	0.01 U	0.013 U	0.0083 U	0.0057 U	27 U	35 U	0.0051 U	**0.0059 J**
1,2-Dichloroethene, trans-	mg/Kg	0.017 U	0.0062 U	0.0059 U	0.01 U	0.013 U	0.0083 U	0.0057 U	27 U	35 U	0.0051 U	0.011 U
1,2-Dichloropropane	mg/Kg	0.017 U	0.0062 U	0.0059 U	0.01 U	0.013 U	0.0083 U	0.0057 U	27 U	35 U	0.0051 U	0.011 U
1,3,5-Trimethylbenzene	mg/Kg	0.017 U	0.0062 U	0.0059 U	0.01 U	0.013 U	0.0083 U	0.0057 U	**61.5**	**50.2**	0.0051 U	0.011 U
1,3-Dichloropropene, cis-	mg/Kg	0.017 U	0.0062 U	0.0059 U	0.01 U	0.013 U	0.0083 U	0.0057 U	27 U	35 U	0.0051 U	0.011 U
1,3-Dichloropropene, trans-	mg/Kg	0.017 U	0.0062 U	0.0059 U	0.01 U	0.013 U	0.0083 U	0.0057 U	27 U	35 U	0.0051 U	0.011 U
2-Butanone (MEK)	mg/Kg	0.035 U	0.012 U	0.012 U	0.02 U	0.025 U	0.017 U	0.011 U	54 U	70 U	0.01 U	0.021 U
2-Hexanone	mg/Kg	0.017 U	0.0062 U	0.0059 U	0.01 U	0.013 U	0.0083 U	0.0057 U	27 U	35 U	0.0051 U	0.011 U
4-Methyl-2-pentanone (MIBK)	mg/Kg	0.017 U	0.0062 U	0.0059 U	0.01 U	0.013 U	0.0083 U	0.0057 U	27 U	35 U	0.0051 U	0.011 U
Acetone	mg/Kg	0.035 U	**0.0121 J**	0.012 UJ	**0.0102 J**	0.025 U	0.017 U	0.011 UJ	54 U	70 U	0.01 U	0.021 U
Acrolein	mg/Kg	0.17 UJ	0.062 U	0.059 U	0.1 U	0.13 U	0.083 U	0.057 U	270 U	350 U	0.051 U	0.11 U
Benzene	mg/Kg	0.0035 U	0.0012 U	0.0012 U	0.002 U	0.0025 U	0.0017 U	0.0011 U	**3.13 J**	**2.76 J**	0.001 U	0.0021 U
Bromodichloromethane	mg/Kg	0.017 U	0.0062 U	0.0059 U	0.01 U	0.013 U	0.0083 U	0.0057 U	27 U	35 U	0.0051 U	0.011 U
Bromoform	mg/Kg	0.017 U	0.0062 U	0.0059 U	0.01 U	0.013 U	0.0083 U	0.0057 U	27 U	35 U	0.0051 U	0.011 U
Bromomethane	mg/Kg	0.017 U	0.0062 U	0.0059 U	0.01 U	0.013 U	0.0083 U	0.0057 U	27 U	35 U	0.0051 U	0.011 U
Carbon disulfide	mg/Kg	**0.0037 J**	0.0062 U	0.0059 U	0.01 U	**0.0068 J**	0.0083 U	0.0057 U	27 U	35 U	0.0051 U	0.011 U
Carbon tetrachloride	mg/Kg	0.017 U	0.0062 U	0.0059 U	0.01 U	0.013 U	0.0083 U	0.0057 U	27 U	35 U	0.0051 U	0.011 U
Chlorobenzene	mg/Kg	0.017 U	0.0062 U	0.0059 U	0.01 U	0.013 U	0.0083 U	0.0057 U	27 U	35 U	0.0051 U	0.011 U
Chloroethane	mg/Kg	0.017 U	0.0062 U	0.0059 U	0.01 U	0.013 U	0.0083 U	0.0057 U	27 U	35 U	0.0051 U	0.011 U
Chloroform	mg/Kg	0.017 U	0.0062 U	0.0059 U	0.01 U	0.013 U	0.0083 U	0.0057 U	27 U	35 U	0.0051 U	0.011 U
Chloromethane	mg/Kg	0.017 U	0.0062 U	0.0059 U	0.01 U	0.013 U	0.0083 U	0.0057 U	27 U	35 U	0.0051 U	0.011 U
Cyclohexane	mg/Kg	0.017 U	0.0062 U	0.0059 U	0.01 U	0.013 U	0.0083 U	0.0057 U	27 U	35 U	0.0051 U	0.011 U
Dibromochloromethane	mg/Kg	0.017 U	0.0062 U	0.0059 U	0.01 U	0.013 U	0.0083 U	0.0057 U	27 U	35 U	0.0051 U	0.011 U
Dichlorodifluoromethane	mg/Kg	0.017 U	0.0062 U	0.0059 U	0.01 U	0.013 U	0.0083 U	0.0057 U	27 U	35 U	0.0051 U	0.011 U
Ethylbenzene	mg/Kg	0.0035 U	0.0012 U	0.0012 U	0.002 U	0.0025 U	**0.0013 J**	0.0011 U	**104**	**84.2**	0.001 U	0.0021 U
Freon 113	mg/Kg	0.017 U	0.0062 U	0.0059 U	0.01 U	0.013 U	0.0083 U	0.0057 U	27 U	35 U	0.0051 U	0.011 U
Isopropylbenzene	mg/Kg	0.017 U	0.0062 U	0.0059 U	0.01 U	0.013 U	0.0083 U	0.0057 U	**24.9 J**	**20.1 J**	0.0051 U	0.011 U
Methyl Acetate	mg/Kg	0.017 U	0.0062 U	0.0059 U	0.01 U	0.013 U	0.0083 U	0.0057 U	27 U	35 U	0.0051 U	0.011 U
Methylcyclohexane	mg/Kg	0.017 U	0.0062 U	0.0059 U	0.01 U	0.013 U	0.0083 U	0.0057 U	27 U	35 U	0.0051 U	0.011 U
Methylene chloride	mg/Kg	0.017 U	0.0062 U	0.0059 U	0.01 U	0.013 U	**0.0265**	0.0057 U	27 U	35 U	0.0051 U	0.011 U
Methyl-tert butyl ether (MTBE)	mg/Kg	0.0035 U	0.0012 U	0.0012 U	0.002 U	0.0025 U	0.0017 U	0.0011 U	5.4 U	7 U	0.001 U	0.0021 U
Propylbenzene, n-	mg/Kg	0.017 U	0.0062 U	0.0059 U	0.01 U	0.013 U	0.0083 U	0.0057 U	**10.7 J**	**8.23 J**	0.0051 U	0.011 U
Styrene	mg/Kg	0.017 U	0.0062 U	0.0059 U	0.01 U	0.013 U	0.0083 U	0.0057 U	27 U	35 U	0.0051 U	0.011 U
Tetrachloroethene	mg/Kg	0.017 U	0.0062 U	0.0059 U	0.01 U	0.013 U	0.0083 U	0.0057 U	27 U	35 U	0.0051 U	0.011 U
Toluene	mg/Kg	0.0035 U	0.0012 U	0.0012 U	0.002 U	0.0025 U	**0.00075 J**	0.0011 U	**14.4**	**12.2**	0.001 U	0.0021 U
Trichloroethene	mg/Kg	0.017 U	0.0062 U	0.0059 U	0.01 U	0.013 U	0.0083 U	0.0057 U	27 U	35 U	0.0051 U	0.011 U
Trichlorofluoromethane	mg/Kg	0.017 U	0.0062 U	0.0059 U	0.01 U	0.013 U	0.0083 U	0.0057 U	27 U	35 U	0.0051 U	0.011 U
Vinyl chloride	mg/Kg	0.017 U	0.0062 U	0.0059 U	0.01 U	0.013 U	0.0083 U	0.0057 U	27 U	35 U	0.0051 U	**0.26**
Xylene, o-	mg/Kg	0.0035 U	0.0012 U	0.0012 U	0.002 U	0.0025 U	**0.0011 J**	0.0011 U	**60.1**	**47.2**	0.001 U	0.0021 U
Xylenes, m/p-	mg/Kg	0.0069 U	0.0025 U	0.0024 U	0.004 U	0.0051 U	**0.0027 J**	0.0023 U	**114**	**90.9**	0.002 U	0.0043 U
Xylenes, Total	mg/Kg	0.0069 U	0.0025 U	0.0024 U	0.004 U	0.0051 U	**0.0038**	0.0023 U	**174**	**138**	0.002 U	0.0043 U

Detected concentrations are marked as shaded and bold.
FT - Feet
J - Estimated
mg/Kg - milligrams per kilogram
U - Not Detected

APPENDIX G
Soil Analytical Data for Volatile Organic Compounds (VOCs)
Quanta Resources Superfund Site, OU1
Edgewater, New Jersey

Location ID		TL10.5-11.25	TL10-09.5	TL10-09.5	TL11.25-00	TL11.75-00	TL11-11.75	TL12.5-00	TL12.5-10.5	TL12.5-10.5	TL12-00.5	TL12-00.5
Field Sample ID		TL 10.5-11.25-12	TL 10-9.5-7.5	DUP-090408	TL 11.25-00-17.5	TL 11.75-00-13.5	TL 11-11.75-11	TL 12.5-00-17.5	TL 12.5-10.5-1.5	TL 12.5-10.5-8.5	TL 12-0.5-7.5	TL 12-0.5-18.5
Sample Date		8/28/2008	9/4/2008	9/4/2008	9/4/2008	9/3/2008	8/27/2008	9/3/2008	8/25/2008	8/25/2008	9/3/2008	9/3/2008
Sample Depth Interval		11 - 12 FT	6.5 - 8.5 FT	6.5 - 8.5 FT	16.5 - 18.5 FT	13 - 14 FT	10 - 12 FT	17 - 18 FT	0.25 - 2.5 FT	7.5 - 9.5 FT	7 - 8 FT	17.5 - 19.5 FT
Sample Matrix		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Constituent	**Units**											
1,1,1-Trichloroethane	mg/Kg	0.015 U	0.0089 U	0.8 U	9.9 U	19 U	0.021 U	0.0058 U	0.0058 U	0.0064 U	0.012 U	3.6 U
1,1,2,2-Tetrachloroethane	mg/Kg	0.015 U	0.0089 U	0.8 U	9.9 U	19 U	0.021 U	0.0058 U	0.0058 U	0.0064 U	0.012 U	3.6 U
1,1,2-Trichloroethane	mg/Kg	0.015 U	0.0089 U	0.8 U	9.9 U	19 U	0.021 U	0.0058 U	0.0058 U	0.0064 U	0.012 U	3.6 U
1,1-Dichloroethane	mg/Kg	0.015 U	0.0089 U	0.8 U	9.9 U	19 U	0.021 U	0.0058 U	0.0058 U	0.0064 U	0.012 U	3.6 U
1,1-Dichloroethene	mg/Kg	0.015 U	0.0089 U	0.8 U	9.9 U	19 U	0.021 U	0.0058 U	0.0058 U	0.0064 U	0.012 U	3.6 U
1,2,4-Trimethylbenzene	mg/Kg	0.015 U	0.0089 U	0.8 U	**15.4**	**27.1**	0.021 U	0.0058 U	0.0058 U	0.0064 U	**0.002 J**	**36.8**
1,2-Dibromo-3-chloropropane	mg/Kg	0.03 U	0.018 U	1.6 U	20 U	37 U	0.042 U	0.012 U	0.012 U	0.013 U	0.024 U	7.1 U
1,2-Dibromoethane	mg/Kg	0.003 U	0.0018 U	0.16 U	2 U	3.7 U	0.0042 U	0.0012 U	0.0012 U	0.0013 U	0.0024 U	0.71 U
1,2-Dichloroethane	mg/Kg	0.003 U	0.0018 U	0.16 U	2 U	3.7 U	0.0042 U	0.0012 U	0.0012 U	0.0013 U	0.0024 U	0.71 U
1,2-Dichloroethene, cis-	mg/Kg	0.015 U	0.0089 U	0.8 U	9.9 U	19 U	0.021 U	0.0058 U	0.0058 U	0.0064 U	0.012 U	3.6 U
1,2-Dichloroethene, trans-	mg/Kg	0.015 U	0.0089 U	0.8 U	9.9 U	19 U	0.021 U	0.0058 U	0.0058 U	0.0064 U	0.012 U	3.6 U
1,2-Dichloropropane	mg/Kg	0.015 U	0.0089 U	0.8 U	9.9 U	19 U	0.021 U	0.0058 U	0.0058 U	0.0064 U	0.012 U	3.6 U
1,3,5-Trimethylbenzene	mg/Kg	0.015 U	0.0089 U	0.8 U	**7.54 J**	**36.5**	0.021 U	0.0058 U	0.0058 U	0.0064 U	**0.0029 J**	**14.6**
1,3-Dichloropropene, cis-	mg/Kg	0.015 U	0.0089 U	0.8 U	9.9 U	19 U	0.021 U	0.0058 U	0.0058 U	0.0064 U	0.012 U	3.6 U
1,3-Dichloropropene, trans-	mg/Kg	0.015 U	0.0089 U	0.8 U	9.9 U	19 U	0.021 U	0.0058 U	0.0058 U	0.0064 U	0.012 U	3.6 U
2-Butanone (MEK)	mg/Kg	0.03 U	0.018 U	1.6 U	20 U	37 U	0.042 U	0.012 U	0.012 U	0.013 U	0.024 U	7.1 U
2-Hexanone	mg/Kg	0.015 U	0.0089 U	0.8 U	9.9 U	19 U	0.021 U	0.0058 U	0.0058 U	0.0064 U	0.012 U	3.6 U
4-Methyl-2-pentanone (MIBK)	mg/Kg	0.015 U	0.0089 U	0.8 U	9.9 U	19 U	0.021 U	0.0058 U	0.0058 U	0.0064 U	0.012 U	3.6 U
Acetone	mg/Kg	**0.0387**	0.018 U	1.6 UJ	20 UJ	37 U	**0.121**	0.012 U	0.012 U	0.013 UJ	**0.0731 J**	7.1 U
Acrolein	mg/Kg	0.15 U	0.089 U	8 U	99 U	190 U	0.21 U	0.058 U	0.058 U	0.064 U	0.12 U	36 U
Benzene	mg/Kg	0.003 U	0.0018 U	0.16 U	**11.8**	**5.98**	0.0042 U	0.0012 U	0.0012 U	**0.0053**	**0.0082**	**1.28**
Bromodichloromethane	mg/Kg	0.015 U	0.0089 U	0.8 U	9.9 U	19 U	0.021 U	0.0058 U	0.0058 U	0.0064 U	0.012 U	3.6 U
Bromoform	mg/Kg	0.015 U	0.0089 U	0.8 U	9.9 U	19 U	0.021 U	0.0058 U	0.0058 U	0.0064 U	0.012 U	3.6 U
Bromomethane	mg/Kg	0.015 U	0.0089 U	0.8 U	9.9 U	19 U	0.021 U	0.0058 U	0.0058 U	0.0064 U	0.012 U	3.6 U
Carbon disulfide	mg/Kg	**0.0264**	**0.0031 J**	0.8 U	9.9 U	19 UJ	0.021 U	**0.0027 J**	0.0058 U	0.0064 U	0.012 U	**0.857 J**
Carbon tetrachloride	mg/Kg	0.015 U	0.0089 U	0.8 U	9.9 U	19 U	0.021 U	0.0058 U	0.0058 U	0.0064 U	0.012 U	3.6 U
Chlorobenzene	mg/Kg	0.015 U	0.0089 U	0.8 U	9.9 U	19 U	0.021 U	0.0058 U	0.0058 U	0.0064 U	0.012 U	3.6 U
Chloroethane	mg/Kg	0.015 U	0.0089 U	0.8 U	9.9 U	19 U	0.021 U	0.0058 U	0.0058 U	0.0064 U	0.012 U	3.6 U
Chloroform	mg/Kg	0.015 U	0.0089 U	0.8 U	9.9 U	19 U	0.021 U	0.0058 U	0.0058 U	0.0064 U	0.012 U	3.6 U
Chloromethane	mg/Kg	0.015 U	0.0089 U	0.8 U	9.9 U	19 U	0.021 U	0.0058 U	0.0058 U	0.0064 U	0.012 U	3.6 U
Cyclohexane	mg/Kg	0.015 U	0.0089 U	0.8 U	**20.8**	**27.5**	0.021 U	0.0058 U	0.0058 U	0.0064 U	**0.0068 J**	**4.77**
Dibromochloromethane	mg/Kg	0.015 U	0.0089 U	0.8 U	9.9 U	19 U	0.021 U	0.0058 U	0.0058 U	0.0064 U	0.012 U	3.6 U
Dichlorodifluoromethane	mg/Kg	0.015 U	0.0089 U	0.8 U	9.9 U	19 U	0.021 U	0.0058 U	0.0058 U	0.0064 U	0.012 U	3.6 U
Ethylbenzene	mg/Kg	**0.0023 J**	0.0018 U	0.16 U	**11.8**	**20.3**	**0.0025 J**	0.0012 U	0.0012 U	**0.0013**	**0.0437**	**16.4**
Freon 113	mg/Kg	0.015 U	0.0089 U	0.8 U	9.9 U	19 U	0.021 U	0.0058 U	0.0058 U	0.0064 U	0.012 U	3.6 U
Isopropylbenzene	mg/Kg	0.015 U	0.0089 U	0.8 U	**6.3 J**	**9 J**	0.021 U	0.0058 U	0.0058 U	**0.001 J**	**0.0121**	**6.71**
Methyl Acetate	mg/Kg	0.015 U	0.0089 U	0.8 U	9.9 U	19 U	0.021 U	0.0058 U	0.0058 U	0.0064 U	0.012 U	3.6 U
Methylcyclohexane	mg/Kg	0.015 U	0.0089 U	0.8 U	**201**	**442**	0.021 U	0.0058 U	0.0058 U	**0.109 J**	**0.294**	**30.7**
Methylene chloride	mg/Kg	0.015 U	0.0089 U	0.8 U	9.9 U	19 U	**2.81 J**	0.0058 U	0.0058 U	0.0064 U	0.012 U	3.6 U
Methyl-tert butyl ether (MTBE)	mg/Kg	0.003 U	0.0018 U	0.16 U	2 U	3.7 U	0.0042 U	0.0012 U	0.0012 U	0.0013 U	0.0024 U	0.71 U
Propylbenzene, n-	mg/Kg	0.015 U	0.0089 U	0.8 U	**2.33 J**	**5.65 J**	0.021 U	0.0058 U	0.0058 U	0.0064 U	**0.0021 J**	**3.4 J**
Styrene	mg/Kg	0.015 U	0.0089 U	0.8 U	9.9 U	19 U	0.021 U	0.0058 U	0.0058 U	0.0064 U	0.012 U	3.6 U
Tetrachloroethene	mg/Kg	0.015 U	0.0089 U	0.8 U	9.9 U	19 U	0.021 U	0.0058 U	0.0058 U	0.0064 U	0.012 U	3.6 U
Toluene	mg/Kg	**0.0026 J**	0.0018 U	0.16 U	2 U	**68.7**	0.0042 U	0.0012 U	0.0012 U	**0.0025**	**0.002 J**	**1.29**
Trichloroethene	mg/Kg	0.015 U	0.0089 U	0.8 U	9.9 U	19 U	0.021 U	0.0058 U	0.0058 U	0.0064 U	0.012 U	3.6 U
Trichlorofluoromethane	mg/Kg	0.015 U	0.0089 U	0.8 U	9.9 U	19 U	0.021 U	0.0058 U	0.0058 U	0.0064 U	0.012 U	3.6 U
Vinyl chloride	mg/Kg	**0.0082 J**	0.0089 U	0.8 U	9.9 U	19 U	0.021 U	0.0058 U	0.0058 U	0.0064 U	0.012 U	3.6 U
Xylene, o-	mg/Kg	0.003 U	0.0018 U	0.16 U	**1.33 J**	**36.1**	0.0042 U	0.0012 U	0.0012 U	**0.00072 J**	**0.0021 J**	**13.7**
Xylenes, m/p-	mg/Kg	0.006 U	0.0036 U	0.32 U	**28.7**	**159**	0.0083 U	0.0023 U	0.0023 U	**0.0018 J**	**0.131**	**33.4**
Xylenes, Total	mg/Kg	0.006 U	0.0036 U	0.32 U	**30**	**195**	0.0083 U	0.0023 U	0.0023 U	**0.0025 J**	**0.133**	**47.1**

Detected concentrations are marked as shaded and bold.
FT - Feet
J - Estimated
mg/Kg - milligrams per kilogram
U - Not Detected

APPENDIX G
Soil Analytical Data for Volatile Organic Compounds (VOCs)
Quanta Resources Superfund Site, OU1
Edgewater, New Jersey

Location ID		TL12-01.5	TL13.5-10.5	TL13.5-10.5	TL13.5-12.75	TL13.5-12.75	TL14-13.25	TL14-13.25
Field Sample ID		TL12-1.5-8.5	TL 13.5-10.5-1.5	TL 13.5-10.5-8.5	TL 13.5-12.75-0.5	TL 13.5-12.75-8.5	TL 14-13.25-1.0	TL 14-13.25-8.5
Sample Date		8/29/2008	8/25/2008	8/25/2008	8/26/2008	8/26/2008	8/25/2008	8/25/2008
Sample Depth Interval		7.1 - 10 FT	0.5 - 2.5 FT	7.5 - 9.5 FT	0 - 1 FT	8 - 9 FT	0.4 - 1.5 FT	7.5 - 9.5 FT
Sample Matrix		Soil	Soil	Soil	Soil	Soil	Soil	Soil
Constituent	**Units**							
1,1,1-Trichloroethane	mg/Kg	0.43 U	0.0056 U	9.8 U	0.0065 U	0.023 U	0.005 U	0.0097 U
1,1,2,2-Tetrachloroethane	mg/Kg	0.43 U	0.0056 U	9.8 U	0.0065 U	0.023 U	0.005 U	0.0097 U
1,1,2-Trichloroethane	mg/Kg	0.43 U	0.0056 U	9.8 U	0.0065 U	0.023 U	0.005 U	0.0097 U
1,1-Dichloroethane	mg/Kg	0.43 U	0.0056 U	9.8 U	0.0065 U	0.023 U	0.005 U	0.0097 U
1,1-Dichloroethene	mg/Kg	0.43 U	0.0056 U	9.8 U	0.0065 U	0.023 U	0.005 U	0.0097 U
1,2,4-Trimethylbenzene	mg/Kg	**0.0299 J**	0.0056 U	**115**	0.0065 U	0.023 U	0.005 U	**0.0322**
1,2-Dibromo-3-chloropropane	mg/Kg	0.87 U	0.011 U	20 U	0.013 U	0.047 U	0.01 U	0.019 U
1,2-Dibromoethane	mg/Kg	0.087 U	0.0011 U	2 U	0.0013 U	0.0047 U	0.001 U	0.0019 U
1,2-Dichloroethane	mg/Kg	0.087 U	0.0011 U	2 U	0.0013 U	0.0047 U	0.001 U	0.0019 U
1,2-Dichloroethene, cis-	mg/Kg	0.43 U	0.0056 U	9.8 U	0.0065 U	**0.32**	0.005 U	0.0097 U
1,2-Dichloroethene, trans-	mg/Kg	0.43 U	0.0056 U	9.8 U	0.0065 U	**0.0206 J**	0.005 U	0.0097 U
1,2-Dichloropropane	mg/Kg	0.43 U	0.0056 U	9.8 U	0.0065 U	0.023 U	0.005 U	0.0097 U
1,3,5-Trimethylbenzene	mg/Kg	0.43 U	0.0056 U	**49.7**	0.0065 U	0.023 U	0.005 U	**0.0301**
1,3-Dichloropropene, cis-	mg/Kg	0.43 U	0.0056 U	9.8 U	0.0065 U	0.023 U	0.005 U	0.0097 U
1,3-Dichloropropene, trans-	mg/Kg	0.43 U	0.0056 U	9.8 U	0.0065 U	0.023 U	0.005 U	0.0097 U
2-Butanone (MEK)	mg/Kg	0.87 U	0.011 U	20 U	0.013 U	0.047 U	**0.02**	0.019 U
2-Hexanone	mg/Kg	0.43 U	0.0056 U	9.8 U	0.0065 U	0.023 U	0.005 U	0.0097 U
4-Methyl-2-pentanone (MIBK)	mg/Kg	0.43 U	0.0056 U	9.8 U	0.0065 U	0.023 U	0.005 U	0.0097 U
Acetone	mg/Kg	0.87 U	**0.0345**	20 U	0.013 UJ	**0.118 J**	**0.115**	0.019 U
Acrolein	mg/Kg	4.3 U	0.056 U	98 U	0.065 U	0.23 U	0.05 U	0.097 U
Benzene	mg/Kg	**0.0585 J**	0.0011 U	**5.75**	0.0013 U	0.0047 U	**0.0016**	**0.0427**
Bromodichloromethane	mg/Kg	0.43 U	0.0056 U	9.8 U	0.0065 U	0.023 U	0.005 U	0.0097 U
Bromoform	mg/Kg	0.43 U	0.0056 U	9.8 U	0.0065 U	0.023 U	0.005 U	0.0097 U
Bromomethane	mg/Kg	0.43 U	0.0056 U	9.8 U	0.0065 U	0.023 U	0.005 U	0.0097 U
Carbon disulfide	mg/Kg	0.43 U	0.0056 U	9.8 U	0.0065 U	0.023 U	0.005 U	0.0097 U
Carbon tetrachloride	mg/Kg	0.43 U	0.0056 U	9.8 U	0.0065 U	0.023 U	0.005 U	0.0097 U
Chlorobenzene	mg/Kg	0.43 U	0.0056 U	9.8 U	0.0065 U	0.023 U	0.005 U	0.0097 U
Chloroethane	mg/Kg	0.43 U	0.0056 U	9.8 U	0.0065 U	0.023 U	0.005 U	0.0097 U
Chloroform	mg/Kg	0.43 U	0.0056 U	9.8 U	0.0065 U	0.023 U	0.005 U	0.0097 U
Chloromethane	mg/Kg	0.43 U	0.0056 UJ	9.8 U	0.0065 U	0.023 U	0.005 UJ	0.0097 UJ
Cyclohexane	mg/Kg	0.43 UJ	0.0056 U	9.8 U	0.0065 U	0.023 U	0.005 U	0.0097 U
Dibromochloromethane	mg/Kg	0.43 U	0.0056 U	9.8 U	0.0065 U	0.023 U	0.005 U	0.0097 U
Dichlorodifluoromethane	mg/Kg	0.43 U	0.0056 U	9.8 U	0.0065 U	0.023 U	0.005 U	0.0097 U
Ethylbenzene	mg/Kg	0.087 U	0.0011 U	**73.3**	0.0013 U	0.0047 U	0.001 U	**0.259**
Freon 113	mg/Kg	0.43 U	0.0056 U	9.8 U	0.0065 U	0.023 U	0.005 U	0.0097 U
Isopropylbenzene	mg/Kg	**0.0465 J**	0.0056 U	**17.5**	0.0065 U	0.023 U	0.005 U	**0.042**
Methyl Acetate	mg/Kg	**0.483**	0.0056 U	9.8 U	0.0065 U	0.023 U	0.005 U	0.0097 U
Methylcyclohexane	mg/Kg	0.43 U	0.0056 U	**3.47 J**	0.0065 U	0.023 U	0.005 U	0.0097 U
Methylene chloride	mg/Kg	0.43 U	0.0056 U	9.8 U	0.0065 U	0.023 U	0.005 U	0.0097 U
Methyl-tert butyl ether (MTBE)	mg/Kg	0.087 U	0.0011 U	2 U	0.0013 U	0.0047 U	0.001 U	0.0019 U
Propylbenzene, n-	mg/Kg	**0.138 J**	0.0056 U	**4.47 J**	0.0065 U	0.023 U	0.005 U	**0.0098**
Styrene	mg/Kg	0.43 U	0.0056 U	9.8 U	0.0065 U	0.023 U	0.005 U	0.0097 U
Tetrachloroethene	mg/Kg	0.43 U	0.0056 U	9.8 U	0.0065 U	0.023 U	0.005 U	0.0097 U
Toluene	mg/Kg	0.087 U	0.0011 U	**14.6**	0.0013 U	0.0047 U	0.001 U	0.0019 U
Trichloroethene	mg/Kg	0.43 U	0.0056 U	9.8 U	0.0065 U	**0.132**	0.005 U	0.0097 U
Trichlorofluoromethane	mg/Kg	0.43 U	0.0056 U	9.8 U	0.0065 U	0.023 U	0.005 U	0.0097 U
Vinyl chloride	mg/Kg	0.43 U	0.0056 U	9.8 U	0.0065 U	0.023 U	0.005 U	0.0097 U
Xylene, o-	mg/Kg	0.087 U	0.0011 U	**50**	0.0013 U	0.0047 U	0.001 U	**0.043**
Xylenes, m/p-	mg/Kg	**0.109 J**	0.0023 U	**117**	0.0026 U	0.0093 U	0.002 U	**0.0149**
Xylenes, Total	mg/Kg	**0.109 J**	0.0023 U	**167**	0.0026 U	0.0093 U	0.002 U	**0.0579**

Detected concentrations are marked as shaded and bold.
FT - Feet
J - Estimated
mg/Kg - milligrams per kilogram
U - Not Detected

APPENDIX H
Soil Analytical Data for Inorganic Compounds
Quanta Resources Superfund Site, OU1
Edgewater, New Jersey

Location ID		MW-123	MW-123	MW-124	MW-124	MW-124	MW-125	MW-125	MW-126	MW-126	MW-126	MW-127
Field Sample ID		SB-123-0.75	SB-123-4.25	SB-124-1.5	DUP-091208	SB-124-9.0	SB-125-4.75	SB-125-9.75	SB-126-4.5	SB-126-11.25	SB-126-22.5	SB-127-1.75
Sample Date		9/11/2008	9/11/2008	9/12/2008	9/12/2008	9/12/2008	9/15/2008	9/15/2008	10/14/2008	10/14/2008	10/14/2008	9/11/2008
Sample Depth Interval		0.5 - 1 FT	4 - 4.5 FT	1 - 2 FT	1 - 2 FT	8 - 10 FT	4.5 - 5 FT	9.5 - 10 FT	4.3 - 4.8 FT	11 - 11.5 FT	22 - 23 FT	1.5 - 2 FT
Sample Matrix		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Constituent	**Units**											
Aluminum	mg/Kg	**15400**	**1980**	**13100**	**13200**	**4810**	**9520**	**12400**	**11500**	**2810**	--	**13700**
Antimony	mg/Kg	2.2 U	**0.9 J**	**0.27 J**	2.1 U	**2.8**	2.2 U	2.4 U	1.3 U	**8.9**	--	2.2 U
Arsenic	mg/Kg	**2.8**	**67.2**	**6.7**	**5.2**	**6.5**	**1.7 J**	**4.5**	**6.1**	**36.3**	**2.3 J**	**12.5**
Barium	mg/Kg	**52.3**	**56.8**	**64.9**	**49.1**	**139**	**28.3**	**76.4**	**54.4**	**31.7**	--	**25**
Beryllium	mg/Kg	**0.14 J**	**0.32 J**	**0.5 J**	**0.44 J**	**0.41 J**	**0.74**	**1.3**	**0.52 J**	**0.14 J**	--	**0.12 J**
Cadmium	mg/Kg	**0.23 J**	**1.1**	**1.3**	**0.93**	**0.64 J**	0.56 U	0.6 U	0.55 U	1.4 U	--	**0.5 J**
Calcium	mg/Kg	**14500**	**1060**	**32600**	**29200**	**2250**	**20100**	**38000**	**11200**	**4940**	--	**10900**
Chromium	mg/Kg	**7.3**	**5.8**	**12.7**	**12**	**11**	**12.9**	**20**	**15.7**	**36**	--	**26.6**
Cobalt	mg/Kg	**16.8**	**15.3**	**6.3**	**6.5**	**5.3 J**	**6.6**	**6.8**	**7.9**	**20.1**	--	**14.7**
Copper	mg/Kg	**155**	**272**	**89.8**	**75.5**	**41**	**41.3**	**41.8**	**30.9**	**122**	--	**182**
Iron	mg/Kg	**33000**	**15100**	**21500**	**19100**	**11900**	**12400**	**13900**	**22500**	**140000**	--	**29200**
Lead	mg/Kg	**28.1**	**23.8**	**56.7**	**57.8**	**353**	**22.6**	**90.5**	**25**	**89.1**	--	**48.8**
Magnesium	mg/Kg	**6570**	**124 J**	**4750**	**4680**	**410 J**	**4450**	**5300**	**6470**	**515 J**	--	**10100**
Manganese	mg/Kg	**328**	**62.6**	**238**	**238**	**54.4**	**205**	**309**	**406**	**1120**	--	**394**
Mercury	mg/Kg	**0.015 J**	**0.094**	**0.13**	**0.13**	**1.9**	**0.14**	**0.21**	**0.078**	0.045 U	--	**0.1**
Nickel	mg/Kg	**14.5**	**44.5**	**17.1**	**15.6**	**21.7**	**15.3**	**17.7**	**21**	**46.6**	--	**36.4**
Potassium	mg/Kg	**2360**	**206 J**	**832 J**	**661 J**	**775 J**	**772 J**	**1760**	**1610**	**405 J**	--	**419 J**
Selenium	mg/Kg	2.2 U	**1.6 J**	2.1 U	2.1 U	**6.8**	**0.74 J**	**0.76 J**	**1.7 J**	**11**	--	2.2 U
Silver	mg/Kg	1.1 U	1.2 U	1.1 U	1.1 U	1.4 U	1.1 U	1.2 U	1.1 U	1.4 U	--	1.1 U
Sodium	mg/Kg	**1450**	**106 J**	**1500**	**1560**	**506 J**	**649 J**	**648 J**	286 U	186 U	--	**1180**
Thallium	mg/Kg	1.1 U	**0.22 J**	**0.52 J**	**0.66 J**	1.4 U	1.1 U	1.2 U	1.1 U	2.7 U	--	**0.16 J**
Vanadium	mg/Kg	**116**	**11.1**	**56.9**	**53.5**	**21.4**	**23.3**	**27.1**	**21.3**	**84.4**	--	**76**
Zinc	mg/Kg	**65.5**	**178**	**267**	**91.9**	**381**	**32.9**	**81**	**82.9**	**256**	--	**123**

Detected concentrations are marked as shaded and bold.
FT - Feet
J - Estimated Concentration
mg/Kg - milligrams per kilogram
U - Not Detected

APPENDIX H
Soil Analytical Data for Inorganic Compounds
Quanta Resources Superfund Site, OU1
Edgewater, New Jersey

Location ID		MW-127	MW-127	MW-128	MW-128	MW-128	MW-128	MW-129	MW-129	MW-129	MW-130B	MW-130B
Field Sample ID		SB-127-8.25	SB-127-9.5	SB-128-1.8-022409	SB-128-3.8-022409	SB-128-8.5-022509	SB-128-13.5-022509	SB-129-1.8-022409	SB-129-7.5-022409	DUP-022409	SB-130-16.5	SB-130-20.5
Sample Date		9/11/2008	9/11/2008	2/24/2009	2/24/2009	2/25/2009	2/25/2009	2/24/2009	2/24/2009	2/24/2009	10/9/2008	10/9/2008
Sample Depth Interval		8 - 8.5 FT	9 - 10 FT	1.5 - 2 FT	3.6 - 4 FT	8 - 9 FT	13 - 14 FT	1.6 - 2 FT	7 - 8 FT	7 - 8 FT	16 - 17 FT	20 - 21 FT
Sample Matrix		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Constituent	**Units**											
Aluminum	mg/Kg	**19000**	**14600**	**5990**	**6010**	--	--	**12000**	**8800**	**9050**	--	--
Antimony	mg/Kg	2.4 U	3 U	**26.8**	**2.5**	--	--	2.3 U	2.4 U	2.5 U	--	--
Arsenic	mg/Kg	**13.3**	**4.4**	**161**	**18.3**	**3.8**	**3.8**	**8.6**	**3.7**	**3.4**	**192**	**64.7**
Barium	mg/Kg	**64.9**	**34.8**	**71.7**	**109**	--	--	**88.2**	**31.3**	**31.6**	--	--
Beryllium	mg/Kg	**0.62**	**0.66 J**	0.54 U	0.59 U	--	--	0.57 U	0.14 U	0.11 U	--	--
Cadmium	mg/Kg	**0.36 J**	**0.15 J**	**1.3**	**0.82**	--	--	**0.046 J**	0.6 U	0.64 U	--	--
Calcium	mg/Kg	**7830**	**3080**	**15300**	**13000**	--	--	**5270**	**1020**	**1030**	--	--
Chromium	mg/Kg	**52.8**	**22.2**	**29.2**	**54.8**	--	--	**24.8**	**13.1**	**13.1**	--	--
Cobalt	mg/Kg	**17.1**	**9.2**	**8.1**	**5.4 J**	--	--	**9.8**	**7.3**	**6.8**	--	--
Copper	mg/Kg	**62.2**	**15.4**	**97.1**	**65.7**	--	--	**52.4**	**18.2**	**18.4**	--	--
Iron	mg/Kg	**29600**	**20100**	**27500**	**12900**	--	--	**20100**	**18200**	**18300**	--	--
Lead	mg/Kg	**69.4**	**15.9**	**200**	**212**	--	--	**306**	**7.7**	**7**	--	--
Magnesium	mg/Kg	**8690**	**3780**	**3980**	**2240**	--	--	**5040**	**3310**	**3610**	--	--
Manganese	mg/Kg	**364**	**308**	**183**	**103**	--	--	**416**	**383**	**334**	--	--
Mercury	mg/Kg	**2.1**	**0.026 J**	**51.7**	**11.3**	--	--	**0.39**	**0.017 J**	0.04 UJ	--	--
Nickel	mg/Kg	**53.2**	**16.2**	**38.5**	**18.6**	--	--	**22.9**	**14.5**	**14.5**	--	--
Potassium	mg/Kg	**1510**	**1240 J**	**464 J**	**628 J**	--	--	**1390**	**1240**	**1290 J**	--	--
Selenium	mg/Kg	**0.46 J**	**0.51 J**	**3.2**	**2.2 J**	--	--	**1.1 J**	**0.73 J**	2.5 U	--	--
Silver	mg/Kg	1.2 U	1.5 U	**0.53 J**	0.35 U	--	--	1.1 U	1.2 U	1.3 U	--	--
Sodium	mg/Kg	**924 J**	**487 J**	**592 J**	**548 J**	--	--	**1360**	142 U	105 U	--	--
Thallium	mg/Kg	1.2 U	1.5 U	**2.8**	**1.1 J**	--	--	1.1 U	1.2 U	1.3 U	--	--
Vanadium	mg/Kg	**54.8**	**32.7**	**22.9**	**24.4**	--	--	**42.1**	**16.9**	**16.1**	--	--
Zinc	mg/Kg	**176**	**52**	**1480**	**661**	--	--	**120**	**44.2**	**45.8**	--	--

Detected concentrations are marked as shaded and bold.
FT - Feet
J - Estimated Concentration
mg/Kg - milligrams per kilogram
U - Not Detected

APPENDIX H
Soil Analytical Data for Inorganic Compounds
Quanta Resources Superfund Site, OU1
Edgewater, New Jersey

Location ID		MW-131	MW-131	MW-132	MW-132	MW-132	MW-133	MW-134	MW-134	MW-136	MW-136	MW-136
Field Sample ID		SB-131-7.5	SB-131-19.5	SB-132-8.5	DUP-100708	SB-132-19.5	SB-133-13.25	SB-134-14.75	SB-134-17.5	SB-136-1.0	SB-136-8.5	SB-136-21.5
Sample Date		10/6/2008	10/6/2008	10/7/2008	10/7/2008	10/7/2008	10/2/2008	10/1/2008	10/1/2008	9/10/2008	9/10/2008	9/10/2008
Sample Depth Interval		7 - 8 FT	19.25 - 19.75 FT	8 - 9 FT	8 - 9 FT	19 - 20 FT	13 - 13.5 FT	14.5 - 15 FT	17 - 18 FT	0.5 - 1 FT	8.5 - 9.5 FT	21 - 22 FT
Sample Matrix		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Constituent	**Units**											
Aluminum	mg/Kg	--	--	--	--	--	--	--	--	**9350**	**13900**	**13600**
Antimony	mg/Kg	--	--	--	--	--	--	--	--	**29**	**0.34 J**	3.5 U
Arsenic	mg/Kg	4.7 U	**15**	**18.6 J**	**108 J**	**10.7**	**37.4**	**192**	**710**	**3850**	**27.9**	**45.7**
Barium	mg/Kg	--	--	--	--	--	--	--	--	**576**	**80.9**	**40.5**
Beryllium	mg/Kg	--	--	--	--	--	--	--	--	**0.59 J**	**0.67**	**0.67 J**
Cadmium	mg/Kg	--	--	--	--	--	--	--	--	**12.3**	**0.28 J**	**0.32 J**
Calcium	mg/Kg	--	--	--	--	--	--	--	--	**8560**	**3410**	**2410**
Chromium	mg/Kg	--	--	--	--	--	--	--	--	**28.9**	**24.2**	**33**
Cobalt	mg/Kg	--	--	--	--	--	--	--	--	**8.2**	**9.4**	**9**
Copper	mg/Kg	--	--	--	--	--	--	--	--	**265**	**77.8**	**43.3**
Iron	mg/Kg	--	--	--	--	--	--	--	--	**36600**	**19300**	**32000**
Lead	mg/Kg	--	--	--	--	--	--	--	--	**302**	**257**	**36.5**
Magnesium	mg/Kg	--	--	--	--	--	--	--	--	**2800**	**4440**	**4310**
Manganese	mg/Kg	--	--	--	--	--	--	--	--	**164**	**247**	**291**
Mercury	mg/Kg	--	--	--	--	--	--	--	--	**2.6**	**0.77**	**0.29**
Nickel	mg/Kg	--	--	--	--	--	--	--	--	**35.4**	**23.1**	**21.6**
Potassium	mg/Kg	--	--	--	--	--	--	--	--	**797 J**	**1520**	**2580**
Selenium	mg/Kg	--	--	--	--	--	--	--	--	**3.3**	**2 J**	**0.74 J**
Silver	mg/Kg	--	--	--	--	--	--	--	--	**0.16 J**	1.3 U	1.8 U
Sodium	mg/Kg	--	--	--	--	--	--	--	--	**510 J**	**428 J**	**2300**
Thallium	mg/Kg	--	--	--	--	--	--	--	--	**0.91 J**	**0.23 J**	1.8 U
Vanadium	mg/Kg	--	--	--	--	--	--	--	--	**37.9**	**34.6**	**29.1**
Zinc	mg/Kg	--	--	--	--	--	--	--	--	**263**	**135**	**109**

Detected concentrations are marked as shaded and bold.
FT - Feet
J - Estimated Concentration
mg/Kg - milligrams per kilogram
U - Not Detected

APPENDIX H
Soil Analytical Data for Inorganic Compounds
Quanta Resources Superfund Site, OU1
Edgewater, New Jersey

Location ID		SB-39	SB-39	SB-40	SB-40	SB-42	SB-42	SB-43	SB-43	SB-44	SB-44	SB-47
Field Sample ID		SB-39-1.0-022409	SB-39-5.3-022409	SB-40-1.0	SB-40-4.0	SB-42-1.0	SB-42-9.0	SB-43-0.5	SB-43-3.5	SB-44-1.0	SB-44-8.0	SB-47-1.5
Sample Date		2/24/2009	2/24/2009	8/26/2008	8/26/2008	8/26/2008	8/26/2008	8/26/2008	8/26/2008	9/4/2008	9/4/2008	8/27/2008
Sample Depth Interval		0.8 - 1.2 FT	5 - 5.5 FT	0 - 1.5 FT	3.8 - 5 FT	0 - 1.5 FT	8.5 - 10 FT	0 - 1 FT	3 - 4 FT	0.5 - 1.5 FT	7 - 9 FT	1 - 2 FT
Sample Matrix		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Constituent	**Units**											
Aluminum	mg/Kg	**15200**	**14000**	**6430**	**6640**	**13400**	**4960**	**11600**	**12600**	**11300**	**14100**	**6950**
Antimony	mg/Kg	**0.71 J**	**0.83 J**	**23.8**	**10.2**	**0.84 J**	**0.58 J**	2.2 U	**6.6**	2.1 U	3.2 U	**2.2**
Arsenic	mg/Kg	**6.3**	**7.2**	**497**	**55.3**	**6.8**	**18.8**	**3.2**	**65.6**	**14.7**	**21.9**	**15.9**
Barium	mg/Kg	**67.4**	**83**	**314**	**58.8**	**93.6**	**61.5**	**49.3**	**264**	**50.5**	**82.6**	**729**
Beryllium	mg/Kg	0.56 U	0.61 U	**0.34 J**	**0.73**	**0.3 J**	**0.26 J**	**0.18 J**	**0.72 J**	0.24 U	**0.62 J**	0.3 U
Cadmium	mg/Kg	0.56 U	**0.049 J**	**2**	0.62 U	**0.31 J**	**0.23 J**	0.56 U	**0.73**	0.092 U	**0.17 J**	**1.4**
Calcium	mg/Kg	**2080**	**2150**	**7530**	**9090**	**15900**	**37300**	**60800**	**5870**	**46100**	**11300**	**7480**
Chromium	mg/Kg	**25.9**	**26.1**	**29.9**	**15**	**23**	**9.4**	**17.1**	**33.9**	**14.4**	**24.6**	**12.7**
Cobalt	mg/Kg	**11.3**	**10.5**	**10.9**	**11.6**	**11.5**	**7.3**	**5.4 J**	**11.7**	**5.9**	**7 J**	**9.4**
Copper	mg/Kg	**31.6**	**37.1**	**343**	**72.9**	**74.2**	**29.1**	**13.3**	**200**	**36**	**37.7**	**132**
Iron	mg/Kg	**26200**	**24000**	**64700**	**40200**	**23900**	**22000**	**13700**	**35800**	**12800**	**19800**	**16400**
Lead	mg/Kg	**40.3**	**101**	**793**	**279**	**45.8**	**47.6**	**4.1**	**655**	**16.8**	**180**	**466**
Magnesium	mg/Kg	**5170**	**4470**	**2550**	**1140**	**9250**	**2320**	**5530**	**4060**	**4740**	**4650**	**1210**
Manganese	mg/Kg	**580**	**504**	**191**	**238**	**488**	**453**	**248**	**276**	**226**	**258**	**321**
Mercury	mg/Kg	**0.039 J**	**0.099 J**	**4.6**	**0.22 J**	**0.012 J**	**0.051**	0.035 U	**1.7**	**0.22**	**0.19**	**0.24**
Nickel	mg/Kg	**23.9**	**21.4**	**112**	**23.3**	**53.3**	**16.8**	**9.2**	**30.9**	**29.6**	**17.9**	**21.4**
Potassium	mg/Kg	**1550**	**1280**	**3240**	**724 J**	**601 J**	**712 J**	**1120**	**1440 J**	**879 J**	**1500 J**	**447 J**
Selenium	mg/Kg	**1.3 J**	**1.2 J**	**0.87 J**	**3.1**	2.1 U	**1.1 J**	2.2 U	**4.1**	2.1 U	0.63 U	**2.5**
Silver	mg/Kg	1.1 U	1.2 U	**1 J**	**0.35 J**	1.1 U	1.2 U	1.1 U	**0.89 J**	**1.1**	**1.7**	**0.44 J**
Sodium	mg/Kg	136 U	155 U	**367 J**	**287 J**	**1140**	**491 J**	**620 J**	**2080**	**497 J**	**1760**	**711 J**
Thallium	mg/Kg	1.1 U	1.2 U	**1 J**	1.2 U	1.1 U	1.2 U	1.1 U	1.5 U	1 U	1.6 U	0.19 U
Vanadium	mg/Kg	**32.9**	**33**	**42.8**	**23.5**	**61.5**	**18.4**	**25**	**39.6**	**21.7**	**28.1**	**28.9**
Zinc	mg/Kg	**71.7**	**101**	**527**	**92.7**	**144**	**89.7**	**23**	**485**	**31.4**	**99.7**	**251**

Detected concentrations are marked as shaded and bold.
FT - Feet
J - Estimated Concentration
mg/Kg - milligrams per kilogram
U - Not Detected

APPENDIX H
Soil Analytical Data for Inorganic Compounds
Quanta Resources Superfund Site, OU1
Edgewater, New Jersey

Location ID		SB-47	SB-48	SB-49	SB-49	SB-50	SB-50	SB-51	SB-51	SB-52	SB-52	SB-53
Field Sample ID		SB-47-3.2	SB-48-6.0	SB-49-4.5	SB-49-9.5	SB-50-3.0	SB-50-11.25	SB-51-3.5	SB-51-18	SB-52-3.0	SB-52-6.0	SB-53-3.0
Sample Date		8/27/2008	8/27/2008	9/2/2008	9/2/2008	9/2/2008	10/16/2008	9/2/2008	9/2/2008	2/24/2009	2/24/2009	9/5/2008
Sample Depth Interval		2.7 - 3.7 FT	5 - 7 FT	4 - 5 FT	9 - 10 FT	2.5 - 3.5 FT	11 - 11.5 FT	3 - 4 FT	17.5 - 18.5 FT	2 - 4 FT	5.7 - 6.3 FT	2.5 - 3.5 FT
Sample Matrix		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Constituent	**Units**											
Aluminum	mg/Kg	**6030**	**6460**	**4410**	**5950**	**9060**	**9400**	**3910**	**6160**	**11300**	**9460**	--
Antimony	mg/Kg	**5.6**	**2.8**	**54**	**3.4**	2.2 U	**1.7 J**	2.3 UJ	2.4 U	**0.53 J**	2.2 U	--
Arsenic	mg/Kg	**9.2**	**10.4**	**440**	**28.4**	**7.1**	**25.4**	**2.5**	**35.3**	**6.9**	**4.8**	**187**
Barium	mg/Kg	**248**	**158**	**511**	**144**	**64.6**	**80.9**	**25.2**	**13.9 J**	**97.1**	**69.1**	--
Beryllium	mg/Kg	**0.73**	**0.46 J**	0.62 U	**0.65**	0.38 U	0.72 U	0.13 U	0.21 U	0.16 U	0.044 U	--
Cadmium	mg/Kg	**0.29 J**	0.64 U	**1**	**0.82**	0.56 U	0.14 U	0.58 U	0.6 U	**0.95**	**0.077 J**	--
Calcium	mg/Kg	**5260**	**14700**	**8680**	**29700**	**3100**	**7350**	**2950 J**	**481 J**	**18900**	**21700**	--
Chromium	mg/Kg	**14.6**	**23.7**	**35.2**	**30.4**	**17.1**	**25.7**	**9.5**	**8.6**	**41.8 J**	**20.8**	--
Cobalt	mg/Kg	**8.7**	**7.1**	**15.5**	**9.4**	**6.5**	**14.3**	**3.9 J**	**3.9 J**	**8.4 J**	**7.6**	--
Copper	mg/Kg	**242**	**70.1**	**611**	**152**	**32.4**	**98.4**	**10.6**	**13**	**78.3**	**40.5**	--
Iron	mg/Kg	**11800**	**22100**	**80900**	**24200**	**13300**	**21200**	**10100**	**14500**	**19800**	**16600**	--
Lead	mg/Kg	**594**	**280**	**6280**	**524**	**113**	**90.6**	**15**	**7.1**	**100 J**	**55.9**	--
Magnesium	mg/Kg	**630 J**	**1640**	**2230**	**3240**	**2480**	**1660**	**1830 J**	**2670**	**7950**	**6290**	--
Manganese	mg/Kg	**253**	**245**	**98.5**	**229**	**281**	**113**	**111**	**92.4**	**305 J**	**246**	--
Mercury	mg/Kg	**1.4**	**0.87**	**137**	**1.9**	**0.16**	**0.25**	**0.048**	0.037 U	**0.25 J**	**0.12 J**	--
Nickel	mg/Kg	**22.5**	**18.1**	**17.1**	**64.4**	**13.4**	**24.7**	**10.3**	**11.3**	**24.9 J**	**19.8**	--
Potassium	mg/Kg	**824 J**	**869 J**	**1570**	**1630**	**964 J**	**1250 J**	**1070 J**	**694 J**	**2110**	**1720**	--
Selenium	mg/Kg	**1.9 J**	**2 J**	**99.6**	**4.6**	**1.9 J**	**2.5 J**	1.4 U	1.4 U	**0.88 J**	**1.4 J**	--
Silver	mg/Kg	**1.4**	1.3 U	**6.9**	**0.35 J**	1.1 U	0.56 U	1.2 U	1.2 U	0.22 U	**0.62 J**	--
Sodium	mg/Kg	**789 J**	**586 J**	**2510**	**1010 J**	**283 J**	**684 J**	**262 J**	**285 J**	**815 J**	**626 J**	--
Thallium	mg/Kg	1.3 U	1.3 U	**0.86 J**	0.83 U	**1 J**	1.8 U	1.2 U	1.2 U	1.1 U	1.1 U	--
Vanadium	mg/Kg	**25.2**	**26.9**	**36.9**	**83.5**	**30.7**	**20.9**	**12.3**	**9.3**	**45.2**	**54.3**	--
Zinc	mg/Kg	**337**	**132**	**306**	**412**	**99.2**	**234**	**27.7**	**35.7**	**129**	**67.1**	--

Detected concentrations are marked as shaded and bold.
FT - Feet
J - Estimated Concentration
mg/Kg - milligrams per kilogram
U - Not Detected

APPENDIX H
Soil Analytical Data for Inorganic Compounds
Quanta Resources Superfund Site, OU1
Edgewater, New Jersey

Location ID		SB-53	SB-54	SB-54	SB-55	SB-55	SS-58	SB-58	SB-58	SB-58	TL08.5-10.5	TL08.5-10.5
Field Sample ID		SB-53-16.5	SB-54-10.5	SB-54-22.75	SB-55-19.5	SB-55-5.25	SS-58-0.1	SB-58-3.7	SB-58-9.5	SB-58-11.7	TL 8.5-10.5-0.5	TL 8.5-10.5-13*
Sample Date		9/5/2008	10/3/2008	10/3/2008	10/7/2008	10/8/2008	10/15/2008	2/25/2009	2/25/2009	2/25/2009	8/28/2008	8/28/2008
Sample Depth Interval		16 - 17 FT	10.25 - 10.75 FT	22.5 - 23 FT	19 - 20 FT	5 - 5.5 FT	0.1 - 0.2 FT	3.5 - 4 FT	9.3 - 9.7 FT	11.3 - 12 FT	0 - 1 FT	12 - 14 FT
Sample Matrix		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Constituent	**Units**											
Aluminum	mg/Kg	--	--	--	--	--	**6740**	**9270**	**13400**	**1760**	**7930**	**16400**
Antimony	mg/Kg	--	--	--	--	--	**13.5**	2.3 U	**0.8 J**	**506**	2 U	5.6 UJ
Arsenic	mg/Kg	**1220**	**39500**	9.3 U	**149**	**7040**	**300**	**5.2**	**7.9**	**2020**	**4**	**4.3 J**
Barium	mg/Kg	--	--	--	--	--	**93.4**	**79.5**	**84.2**	**1480**	**28.1**	**53 J**
Beryllium	mg/Kg	--	--	--	--	--	0.54 U	0.59 U	0.65 U	0.62 U	**0.017 J**	**0.68 J**
Cadmium	mg/Kg	--	--	--	--	--	**1.7**	0.12 U	**0.5 J**	**2.6**	**0.12 J**	1.4 U
Calcium	mg/Kg	--	--	--	--	--	**51200**	**66700**	**11800**	**1390**	**6690**	**3610**
Chromium	mg/Kg	--	--	--	--	--	**65.2**	**15.3**	**22.8**	**10.8**	**15.2**	**29.5**
Cobalt	mg/Kg	--	--	--	--	--	**9**	**4.5 J**	**10**	**32.7**	**7.1**	**3.7 J**
Copper	mg/Kg	--	--	--	--	--	**90.4**	**28.4**	**49.9**	**557**	**41.9**	**11.8 J**
Iron	mg/Kg	--	--	--	--	--	**22300**	**12100**	**23700**	**115000**	**14300**	**26000 J**
Lead	mg/Kg	--	--	--	--	--	**208**	**56.7**	**142**	**9910**	**35.9**	**10.9**
Magnesium	mg/Kg	--	--	--	--	--	**25000**	**4740**	**4250**	**395 J**	**5180**	**5360**
Manganese	mg/Kg	--	--	--	--	--	**211**	**270**	**296**	**52.1**	**193**	**164**
Mercury	mg/Kg	--	--	--	--	--	**1.4**	**0.11**	**0.29**	**20.6**	**0.099**	**0.031 J**
Nickel	mg/Kg	--	--	--	--	--	**22.1**	**13.1**	**24.7**	**8.1 J**	**20.4**	**14.1 J**
Potassium	mg/Kg	--	--	--	--	--	**1290**	**1650**	**1810**	**2000**	**842 J**	**4050 J**
Selenium	mg/Kg	--	--	--	--	--	**1.6 J**	**0.45 J**	**0.99 J**	**144**	2 U	**2.6 J**
Silver	mg/Kg	--	--	--	--	--	0.6 U	0.25 U	1.3 U	**8.2**	1 U	2.8 U
Sodium	mg/Kg	--	--	--	--	--	**639 J**	**613 J**	**432 J**	**766 J**	**729 J**	**1300 J**
Thallium	mg/Kg	--	--	--	--	--	**1.1 J**	1.2 U	1.3 U	**23.8**	1 U	2.8 U
Vanadium	mg/Kg	--	--	--	--	--	**38.3**	**19.5**	**31.9**	**18.2**	**35.7**	**40.7**
Zinc	mg/Kg	--	--	--	--	--	**245**	**76.6**	**251**	**371**	**53.9**	**41.9**

Detected concentrations are marked as shaded and bold.
FT - Feet
J - Estimated Concentration
mg/Kg - milligrams per kilogram
U - Not Detected

307818

APPENDIX H
Soil Analytical Data for Inorganic Compounds
Quanta Resources Superfund Site, OU1
Edgewater, New Jersey

Location ID		TL09.5-10.5	TL09.5-10.5	TL09.5-10.5	TL09.5-11.25	TL09.5-11.25	TL09-09	TL09-09	TL09-09	TL10.5-09.5	TL10.5-09.5	TL10.5-09.5
Field Sample ID		TL 9.5-10.5-1.5	TL 9.5-10.5-3.5	TL 9.5-10.5-16.5	TL 9.5-11.25-0.5	TL 9.5-11.25-7.5	TL09-09-1.0	TL09-09-4.5	TL09-09-19.5	TL10.5-9.5-1.0	DUP-082908	TL10.5-9.5-9.5
Sample Date		8/28/2008	8/28/2008	8/28/2008	8/28/2008	8/28/2008	8/29/2008	8/29/2008	8/29/2008	8/29/2008	8/29/2008	8/29/2008
Sample Depth Interval		1 - 2 FT	3 - 4 FT	16 - 17 FT	0 - 1 FT	5 - 10 FT	0.5 - 1.5 FT	4 - 5 FT	19.3 - 20 FT	0 - 1.5 FT	0 - 1.5 FT	9 - 10 FT
Sample Matrix		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Constituent	**Units**											
Aluminum	mg/Kg	**3760**	**11000**	**22100**	**10300**	**6230**	**15600**	**4350**	**10200**	**7820 J**	**7590**	**13700**
Antimony	mg/Kg	**2.1**	**0.68 J**	6.6 U	2 U	**3.8**	**1.1 J**	**8.2**	**0.94 J**	**11.9 J**	**17.4**	**1.7 J**
Arsenic	mg/Kg	**19.3**	**19.7**	**4.3 J**	**5.4**	**11.7**	**3**	**26.6**	**2.5 J**	**48.9**	**57.6**	**101**
Barium	mg/Kg	**52.2**	**55.5**	**35.1 J**	**28.6**	**153**	**32**	**64.1**	**27.2 J**	**109**	**104**	**176**
Beryllium	mg/Kg	**0.077 J**	**0.02 J**	**0.59 J**	**0.19 J**	**0.29 J**	**0.89**	0.46 U	0.47 U	**1.1**	**1.3**	**1.1**
Cadmium	mg/Kg	**0.21 J**	**0.19 J**	1.7 U	0.5 U	**0.32 J**	0.31 U	0.31 U	0.074 U	**2.1**	**1.3**	**0.79 J**
Calcium	mg/Kg	**3280**	**9860**	**3900**	**28800**	**10500**	**13900**	**3030**	**1450**	**62300**	**78600**	**7740**
Chromium	mg/Kg	**11.4**	**25.7**	**18**	**17.7**	**22.2**	**21.1**	**19.4**	**15.3**	**54.3 J**	**38.4**	**28.9**
Cobalt	mg/Kg	**5 J**	**12.2**	**14.6 J**	**8.5**	**6.7**	**10.9**	**6.5**	**3.7 J**	**13.6**	**14.2**	**16.3**
Copper	mg/Kg	**67.4**	**90.9**	**13.1**	**43.1**	**200**	**53.1**	**154**	**8.8**	**303**	**362**	**91.1**
Iron	mg/Kg	**29600**	**30200**	**21900**	**17500**	**14700**	**21100**	**12100**	**9210**	**60100 J**	**26800 J**	**28800**
Lead	mg/Kg	**137**	**173**	**19.3**	**15.1**	**365**	**5.5**	**568**	**7.3**	**360 J**	**533**	**1360**
Magnesium	mg/Kg	**1290**	**7240**	**4880**	**11000**	**4700**	**7440**	**1010**	**2680**	**2590 J**	**2740**	**3240**
Manganese	mg/Kg	**104**	**260**	**99.1**	**397**	**220**	**305**	**105**	**63.4**	**333 J**	**280**	**504**
Mercury	mg/Kg	**0.28**	**0.21**	0.064 U	**0.014 J**	**0.83**	0.031 U	**0.28**	0.073 U	**0.85**	**0.85**	**3.4**
Nickel	mg/Kg	**13.3**	**28.7**	**30.7**	**23.7**	**19.1**	**28.8**	**14.2**	**9.7 J**	**98.2 J**	**149**	**33.4**
Potassium	mg/Kg	**371 J**	**735 J**	**2700 J**	**1080**	**621 J**	**1260**	**506 J**	**2580**	**1200**	**1190**	**2140**
Selenium	mg/Kg	**1.5 J**	**1.1 J**	**3.4 J**	2 U	**1.8 J**	**0.49 J**	**3.6**	5 U	**3.7**	**3.2**	**2.9 J**
Silver	mg/Kg	1 U	1.2 U	3.3 U	1 U	1.2 U	1.1 U	**0.49 J**	2.5 U	**0.78 J**	**0.74 J**	**0.36 J**
Sodium	mg/Kg	**287 J**	**500 J**	**7330**	**744 J**	**651 J**	**1650**	**327 J**	**3830**	**584 J**	**544 J**	**668 J**
Thallium	mg/Kg	**0.26 J**	**0.5 J**	**2.2 J**	1 U	1.2 U	0.46 U	0.49 U	0.35 U	1.1 U	1 U	1.8 U
Vanadium	mg/Kg	**30.5**	**66.5**	**24.1**	**52.6**	**31.9**	**72.9**	**16.3**	**20.6**	**24.6**	**27.1**	**33.1**
Zinc	mg/Kg	**61.9**	**96.8**	**81.8**	**40.2**	**301**	**38.3**	**93.8**	**25.4**	**634**	**872**	**299**

Detected concentrations are marked as shaded and bold.
FT - Feet
J - Estimated Concentration
mg/Kg - milligrams per kilogram
U - Not Detected

APPENDIX H
Soil Analytical Data for Inorganic Compounds
Quanta Resources Superfund Site, OU1
Edgewater, New Jersey

Location ID		TL10.5-09.5	TL10.5-10.5	TL10.5-10.5	TL10.5-10.5	TL10.5-10.5	TL10.5-11.25	TL10.5-11.25	TL10.5-11.25	TL10-09.5	TL10-09.5	TL11.25-00
Field Sample ID		TL10.5-9.5-23.5	TL 10.5-10.5-0.5	TL 10.5-10.5-4.0	TL 10.5-10.5-14.5	DUP-082708	TL 10.5-11.25-0.5	TL 10.5-11.25-8.5	TL 10.5-11.25-12	TL 10-9.5-7.5	DUP-090408	TL 11.25-00-17.5
Sample Date		8/29/2008	8/27/2008	8/27/2008	8/27/2008	8/27/2008	8/28/2008	8/28/2008	8/28/2008	9/4/2008	9/4/2008	9/4/2008
Sample Depth Interval		23 - 24 FT	0 - 1 FT	3.5 - 4.5 FT	14 - 15 FT	14 - 15 FT	0 - 1 FT	8 - 9 FT	11 - 12 FT	6.5 - 8.5 FT	6.5 - 8.5 FT	16.5 - 18.5 FT
Sample Matrix		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Constituent	**Units**											
Aluminum	mg/Kg	**22100**	**7020**	**4780**	**6090**	**3870**	**17900**	**3920**	**7100**	**5390**	**5430**	**21500 J**
Antimony	mg/Kg	**1.1 J**	**10.5 J**	**2 J**	**3.3**	**0.84 J**	2.2 U	**4.4**	3.8 U	**0.84 J**	**1.2 J**	**0.59 J**
Arsenic	mg/Kg	**12.3**	**201**	**28.6**	**35**	**21.6**	**6.3**	**14.1**	**2.7 J**	**78.4**	**77.8**	**6.4**
Barium	mg/Kg	**50**	**121**	**73.7**	**122**	**154**	**120**	**130**	**21.1 J**	**120**	**126**	**118**
Beryllium	mg/Kg	**1.2**	**0.62**	**0.5 J**	**0.65 J**	**0.41 J**	**0.032 J**	**0.37 J**	**0.33 J**	**0.6 J**	**0.56 J**	**1.3 J**
Cadmium	mg/Kg	**0.83 J**	**0.49 J**	**0.25 J**	**0.2 J**	0.71 U	**0.25 J**	**1.5**	0.94 U	**0.31 J**	**0.45 J**	**2.5**
Calcium	mg/Kg	**2460**	**11000**	**19200**	**20500 J**	**3240 J**	**28900**	**2920**	**1790**	**5730**	**8530**	**9920 J**
Chromium	mg/Kg	**35.9**	**110 J**	**57.7**	**60.3 J**	**10.9 J**	**58.3**	**12**	**12**	**12.9**	**17.6**	**61.5 J**
Cobalt	mg/Kg	**15**	**6.8**	**5.5**	**7.2 J**	**5.8 J**	**10.5**	**7.4 J**	**2.2 J**	**10.2**	**7.6**	**8.8 J**
Copper	mg/Kg	**20**	**107**	**74.5**	**84.4 J**	**44.8 J**	**98.8**	**262**	**5.6**	**47.3**	**67.5**	**35.4 J**
Iron	mg/Kg	**39000**	**22300**	**20700**	**25100 J**	**11300 J**	**19400**	**18500**	**16100**	**19800**	**23800**	**21800 J**
Lead	mg/Kg	**16.4**	**412**	**165**	**306 J**	**685 J**	**79.8**	**438**	**5.3**	**165 J**	**283 J**	**81.3 J**
Magnesium	mg/Kg	**7750**	**4000 J**	**5200**	**5530 J**	**749 J**	**6710**	**775 J**	**2630**	**1060**	**728 J**	**17700**
Manganese	mg/Kg	**543**	**235**	**252**	**335 J**	**180 J**	**248**	**103**	**71**	**154**	**151**	**304 J**
Mercury	mg/Kg	0.058 U	**1.7**	**0.58**	**0.54 J**	**1 J**	**0.12**	**1.3**	**0.035 J**	**0.61**	**0.62**	**0.072 J**
Nickel	mg/Kg	**30.9**	**29.5**	**32.6**	**36.7 J**	**14.3 J**	**28.2**	**24.2**	**7.2 J**	**97.7**	**158**	**19.4 J**
Potassium	mg/Kg	**4710**	**678 J**	**853 J**	**994 J**	**555 J**	**961 J**	**488 J**	**1560 J**	**530 J**	**517 J**	**2450 J**
Selenium	mg/Kg	**1.5 J**	**3**	**2.2**	**2.8 J**	**2.6 J**	2.2 U	**6.2**	**1.7 J**	**2.4 J**	**2 J**	1.1 U
Silver	mg/Kg	1.8 U	**0.44 J**	**0.33 J**	**0.39 J**	1.4 U	**1.6**	1.7 U	1.9 U	**2.2**	**2.7**	**2 J**
Sodium	mg/Kg	**4270**	**322 J**	**202 J**	**483 J**	**774 J**	**2070**	**419 J**	**1780 J**	**473 J**	**482 J**	**4480**
Thallium	mg/Kg	1.8 U	1.1 U	1.1 U	1.5 U	1.4 U	1.1 U	1.7 U	1.9 U	1.5 U	1.5 U	1 U
Vanadium	mg/Kg	**44**	**33**	**27.2**	**32.6**	**20.9**	**36.4**	**21.5**	**17.7**	**23.8**	**24.6**	**48.9**
Zinc	mg/Kg	**92.5**	**218**	**109**	**159**	**156**	**142**	**945**	**16.7**	**209**	**247**	**534 J**

Detected concentrations are marked as shaded and bold.
FT - Feet
J - Estimated Concentration
mg/Kg - milligrams per kilogram
U - Not Detected

APPENDIX H
Soil Analytical Data for Inorganic Compounds
Quanta Resources Superfund Site, OU1
Edgewater, New Jersey

Location ID		TL11.75-00	TL11-11.75	TL12.5-00	TL12.5-10.5	TL12.5-10.5	TL12-00.5	TL12-00.5	TL12-01.5	TL13.5-10.5	TL13.5-10.5	TL13.5-12.75
Field Sample ID		TL 11.75-00-13.5	TL 11-11.75-11	TL 12.5-00-17.5	TL 12.5-10.5-1.5	TL 12.5-10.5-8.5	TL 12-0.5-7.5	TL 12-0.5-18.5	TL12-1.5-8.5	TL 13.5-10.5-1.5	TL 13.5-10.5-8.5	TL 13.5-12.75-0.5
Sample Date		9/3/2008	8/27/2008	9/3/2008	8/25/2008	8/25/2008	9/3/2008	9/3/2008	8/29/2008	8/25/2008	8/25/2008	8/26/2008
Sample Depth Interval		13 - 14 FT	10 - 12 FT	17 - 18 FT	0.25 - 2.5 FT	7.5 - 9.5 FT	7 - 8 FT	17.5 - 19.5 FT	7.1 - 10 FT	0.5 - 2.5 FT	7.5 - 9.5 FT	0 - 1 FT
Sample Matrix		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Constituent	**Units**											
Aluminum	mg/Kg	**15300**	**14400**	**11500**	**9930**	**14000**	**12900**	**11500**	**8460**	**9300**	**21900**	**9220**
Antimony	mg/Kg	3.9 U	5.5 U	2.3 U	**2 J**	**0.6 J**	**2.8 J**	**2.6 J**	**1.2 J**	**6.4**	**6.7**	2 U
Arsenic	mg/Kg	**4.1**	**6.2**	**3.3**	**48.6**	**12.4**	**18.7**	**193**	**8.7**	**101**	**10.2**	**40.3**
Barium	mg/Kg	**77.1**	**59.2**	**88.4**	**386**	**87.8**	**638**	**192**	**113**	**105**	**254**	**68.1**
Beryllium	mg/Kg	**0.85 J**	**0.76 J**	0.56 U	**0.42 J**	**0.79**	**0.99**	0.48 U	0.39 U	**0.36 J**	**1.1**	**0.2 J**
Cadmium	mg/Kg	**0.98**	1.4 U	0.56 U	**0.82**	0.24 U	**0.85 J**	**4.1**	**0.7**	**0.35 J**	**0.73 J**	**0.25 J**
Calcium	mg/Kg	**20200**	**3100**	**1170**	**14300**	**15700**	**7460**	**10700**	**3220**	**24600**	**22100**	**53900**
Chromium	mg/Kg	**43.9**	**26.2**	**23.4**	**41.2**	**12.2**	**29.7**	**316**	**35.1**	**32.1**	**102**	**27.8**
Cobalt	mg/Kg	**4.5 J**	**4.7 J**	**13.9**	**7.5**	**5.6 J**	**6.5 J**	**8.7**	**4.9 J**	**7.1**	**10.2**	**3.5 J**
Copper	mg/Kg	**19.5**	**10.3**	**40.3**	**104**	**63.4**	**116**	**152**	**40.6**	**65.8**	**114**	**27.6**
Iron	mg/Kg	**9330**	**21500**	**23500**	**23300**	**16900**	**26100**	**25900**	**16700**	**19100**	**25700**	**9450**
Lead	mg/Kg	**37.4**	**12.7**	**9.4**	**412**	**96.6**	**212**	**502**	**158**	**224**	**917**	**44.8**
Magnesium	mg/Kg	**17500**	**5340**	**5470**	**5300**	**1840**	**7670**	**5360**	**1860**	**5550**	**13500**	**5100**
Manganese	mg/Kg	**146**	**152**	**93.1**	**305**	**157**	**136**	**283**	**154**	**294**	**357**	**320**
Mercury	mg/Kg	0.057 U	**0.39**	**0.063**	**0.87**	**0.23**	**0.16**	**3.9**	**0.16**	**0.79**	**8**	**0.12**
Nickel	mg/Kg	**9.8**	**13.8**	**27.2**	**49.4**	**19.2**	**223**	**26.7**	**12.5**	**28.3**	**66.7**	**10.5**
Potassium	mg/Kg	**1820 J**	**3450**	**7140**	**913 J**	**982 J**	**941 J**	**2270**	**1290 J**	**1550**	**2210**	**1530**
Selenium	mg/Kg	**2 J**	**3.8 J**	1.3 U	**0.68 J**	**0.85 J**	**4.2**	**5.4**	**1.5 J**	**0.7 J**	4 U	2 U
Silver	mg/Kg	2 U	2.8 U	1.1 U	1.2 U	1.3 U	1.7 U	**1 J**	1.4 U	**0.16 J**	2 U	0.99 U
Sodium	mg/Kg	**2270**	**4590**	**682 J**	**406 J**	313 U	**675 J**	**3110**	**1040 J**	**457 J**	**866 J**	**445 J**
Thallium	mg/Kg	2 U	2.8 U	1.1 U	1.2 U	1.3 U	1.7 U	**1.1 J**	1.4 U	**0.83 J**	2 U	0.99 U
Vanadium	mg/Kg	**37.6**	**39**	**24.5**	**50.2**	**25.7**	**28.4**	**24.4**	**19.7**	**46.3**	**101**	**18.4**
Zinc	mg/Kg	**288**	**46.9**	**78.8**	**306**	**94.7**	**371**	**613**	**169**	**146**	**244**	**65.6**

Detected concentrations are marked as shaded and bold.
FT - Feet
J - Estimated Concentration
mg/Kg - milligrams per kilogram
U - Not Detected

APPENDIX H
Soil Analytical Data for Inorganic Compounds
Quanta Resources Superfund Site, OU1
Edgewater, New Jersey

Location ID		TL13.5-12.75	TL14-13.25	TL14-13.25
Field Sample ID		TL 13.5-12.75-8.5	TL 14-13.25-1.0	TL 14-13.25-8.5
Sample Date		8/26/2008	8/25/2008	8/25/2008
Sample Depth Interval		8 - 9 FT	0.4 - 1.5 FT	7.5 - 9.5 FT
Sample Matrix		Soil	Soil	Soil
Constituent	**Units**			
Aluminum	mg/Kg	**18500**	**13100**	**4770**
Antimony	mg/Kg	4.9 U	2.2 U	**0.5 J**
Arsenic	mg/Kg	**6.5**	**3.7**	**18.3**
Barium	mg/Kg	**89.5**	**23.6**	**77.6**
Beryllium	mg/Kg	**0.9 J**	0.13 U	**0.32 J**
Cadmium	mg/Kg	1.2 U	0.23 U	0.17 U
Calcium	mg/Kg	**5190**	**10900**	**5810**
Chromium	mg/Kg	**29**	**16.6**	**14**
Cobalt	mg/Kg	**8 J**	**12.8**	**5.1 J**
Copper	mg/Kg	**20.8**	**84.3**	**32.6**
Iron	mg/Kg	**21800**	**23300**	**11500**
Lead	mg/Kg	**15.9**	**27.2**	**47.5**
Magnesium	mg/Kg	**5720**	**9240**	**1450**
Manganese	mg/Kg	**196**	**275**	**124**
Mercury	mg/Kg	0.082 U	**0.75**	**0.66**
Nickel	mg/Kg	**23.4**	**34.9**	**15.5**
Potassium	mg/Kg	**2830**	**389 J**	**1090 J**
Selenium	mg/Kg	**3.2 J**	2.2 U	**2 J**
Silver	mg/Kg	2.5 U	**0.19 J**	1.3 U
Sodium	mg/Kg	**266 J**	**1130**	**435 J**
Thallium	mg/Kg	2.5 U	1.1 U	1.3 U
Vanadium	mg/Kg	**39.5**	**81.1**	**16.7**
Zinc	mg/Kg	**69.7**	**85**	**134**

Detected concentrations are marked as shaded and bold.
FT - Feet
J - Estimated Concentration
mg/Kg - milligrams per kilogram
U - Not Detected

APPENDIX I
Soil Analytical Data for Metals by Sequential Extraction Procedure
Quanta Resources Superfund Site, OU1
Edgewater, New Jersey

Location ID			MW-126	MW-126	MW-128	MW-128	MW-130B	MW-130B	MW-131	MW-131	MW-132	MW-132
Field Sample ID			SB-126-15.5	SB-126-22.6	SB-128-8.5	SB-128-13.5	SB-130-15.5	SB-130-20.6	SB-131-6.0	SB-131-19.5	SB-132-10.75	SB-132-19.5
Sample Date			10/14/2008	10/14/2008	2/25/2009	2/25/2009	10/9/2008	10/9/2008	10/6/2008	10/6/2008	10/7/2008	10/7/2008
Sample Depth Interval			15.25 - 15.75 FT	22 - 23 FT	8 - 9 FT	13 - 14 FT	15.3 - 15.8 FT	20 - 21 FT	5.75 - 6.25 FT	19.25 - 19.75 FT	10.5 - 11 FT	19 - 20 FT
Sample Matrix			Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Parameter, Fraction	**Extractant**	**Units**										
Aluminum, Amorphous Iron oxyhydroxide	0.2M (NH4)2C2O4	mg/Kg	1240	347	486	825	485	874	5160	777	1220	738
Aluminum, Crystilline Iron oxyhydroxide	0.2M (NH4)2C2O4 + 0.1M Ascorbic acid	mg/Kg	2000	1880	702	1230	1930	2010	907	4240	3340	3280
Aluminum, EEOSC	0.05 M (NH4)H2PO4	mg/Kg	51.3	23.1	16.9	10.1	29.4	32.3	7.14	317	43.9	42.4
Aluminum, Residual	Aqua Regia	mg/Kg	34900	33700	44500	30600	33500	39000	58200	36000	37100	52300
Aluminum, Residual	HF/HNO3/HCl	mg/Kg	1810	2250	4360	1720	2020	1480	1820	2250	1810	1850
Aluminum, Soluble	DI Water	mg/Kg	685	102	75.8	106	98.5	ND(<1.1)	ND(<1.1)	867	664	680
Aluminum, Total (Original sample)	Aqua Regia	mg/Kg	45100	40000	45300	33400	38500	47000	91800	59900	61800	61200
Aluminum, Total (Original sample)	HF/HNO3/HCl	mg/Kg	3100	2970	2810	1120	2900	2960	4270	4250	2820	2650
Arsenic, Amorphous Iron oxyhydroxide	0.2M (NH4)2C2O4	mg/Kg	2.52	0.978	0.953	1.66	5.30	44.6	2.02	0.329	0.413	0.815
Arsenic, Crystilline Iron oxyhydroxide		mg/Kg	.261	0.961	0.322	0.706	0.132	5.53	0.670	0.243	0.135	0.879
Arsenic, EEOSC	0.05 M (NH4)H2PO4	mg/Kg	.419	0.165	0.165	0.328	3.57	21.4	4.63	0.171	0.177	0.285
Arsenic, Residual	Aqua Regia	mg/Kg	0.221	0.136	0.532	0.351	0.585	3.06	4.39	2.37	3.22	3.10
Arsenic, Residual	HF/HNO3/HCl	mg/Kg	0.874	0.660	0.710	0.621	1.79	18.4	14.8	9.00	9.88	10.9
Arsenic, Soluble	DI Water	mg/Kg	0.442	0.123	0.0362	.0695	1.56	26.2	0.581	0.432	0.486	0.479
Arsenic, Total (Original sample)	Aqua Regia	mg/Kg	0.989	0.5	1.54	1.21	2.71	21.5	3.48	2.2	2.38	2.87
Arsenic, Total (Original sample)	HF/HNO3/HCl	mg/Kg	3.54	2.14	3.12	2.57	10.8	90.2	20.5	9.97	9.29	12.1
Calcium, Amorphous Iron oxyhydroxide	0.2M (NH4)2C2O4	mg/Kg	24.5	38.6	14.4	13.0	22.3	26.6	40.4	39.2	33.4	31.1
Calcium, Crystilline Iron oxyhydroxide	0.2M (NH4)2C2O4 + 0.1M Ascorbic acid	mg/Kg	59.7	57.1	12.8	10.9	64.6	83.8	78.3	52.2	76.9	61.5
Calcium, EEOSC	0.05 M (NH4)H2PO4	mg/Kg	149	310	859	1640	267	15.2	380	433	1130	923
Calcium, Residual	Aqua Regia	mg/Kg	3830	3650	8960	14900	2712	3440	3340	2400	6340	6080
Calcium, Residual	HF/HNO3/HCl	mg/Kg	1160	1520	2470	3140	582	537	74.8	85.9	1050	635
Calcium, Soluble	DI Water	mg/Kg	50.7	12.2	18.3	21.4	106	135	265	55.3	59.1	16.2
Calcium, Total (Original sample)	Aqua Regia	mg/Kg	4830	5090	11000	18100	3440	4190	3550	3470	6870	5480
Calcium, Total (Original sample)	HF/HNO3/HCl	mg/Kg	311	456	331	849	259	281	ND(<18)	43	486	221

EEOSC - Easily-Exchangeable Outer Sphere Complexes
FT - Feet
mg/Kg - milligrams per kilogram
NA - Not Applicable
ND - Not Detected

APPENDIX I
Soil Analytical Data for Metals by Sequential Extraction Procedure
Quanta Resources Superfund Site, OU1
Edgewater, New Jersey

Location ID			MW-126	MW-126	MW-128	MW-128	MW-130B	MW-130B	MW-131	MW-131	MW-132	MW-132
Field Sample ID			SB-126-15.5	SB-126-22.6	SB-128-8.5	SB-128-13.5	SB-130-15.5	SB-130-20.6	SB-131-6.0	SB-131-19.5	SB-132-10.75	SB-132-19.5
Sample Date			10/14/2008	10/14/2008	2/25/2009	2/25/2009	10/9/2008	10/9/2008	10/6/2008	10/6/2008	10/7/2008	10/7/2008
Sample Depth Interval			15.25 - 15.75 FT	22 - 23 FT	8 - 9 FT	13 - 14 FT	15.3 - 15.8 FT	20 - 21 FT	5.75 - 6.25 FT	19.25 - 19.75 FT	10.5 - 11 FT	19 - 20 FT
Sample Matrix			Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Parameter, Fraction	**Extractant**	**Units**										
Iron, Amorphous Iron oxyhydroxide	0.2M (NH4)2C2O4	mg/Kg	6930	2510	1880	3770	3470	653	8300	345	3010	1410
Iron, Crystilline Iron oxyhydroxide	0.2M (NH4)2C2O4 + 0.1M Ascorbic acid	mg/Kg	4400	5430	2770	6760	3870	4100	3470	6060	6390	6030
Iron, EEOSC	0.05 M (NH4)H2PO4	mg/Kg	72.0	24.4	11.7	10.6	183	20.1	5.47	109	20.6	15.4
Iron, Residual	Aqua Regia	mg/Kg	3770	2420	10000	11600	2840	1400	5600	6430	7670	6980
Iron, Residual	HF/HNO3/HCl	mg/Kg	18600	15500	11300	17800	9810	12200	15500	24800	26600	26700
Iron, Soluble	DI Water	mg/Kg	476	128	65.7	130	94.9	184	.194	319	332	281
Iron, Total (Original sample)	Aqua Regia	mg/Kg	11200	7370	11700	16000	5970	5600	11800	11700	10200	12100
Iron, Total (Original sample)	HF/HNO3/HCl	mg/Kg	32200	20800	15500	18900	17700	15500	31600	33400	36000	33400
Magnesium, Amorphous Iron oxyhydroxide	0.2M (NH4)2C2O4	mg/Kg	54.1	2.49	72.0	323	59.3	24.7	129	722	637	569
Magnesium, Crystilline Iron oxyhydroxide	0.2M (NH4)2C2O4 + 0.1M Ascorbic acid	mg/Kg	626	668	483	1360	741	721	235	1450	1430	1460
Magnesium, EEOSC	0.05 M (NH4)H2PO4	mg/Kg	27.5	32.4	188	391	30.7	7.5	87.4	1030	630	734
Magnesium, Residual	Aqua Regia	mg/Kg	6320	5640	9270	12100	4230	4660	740	3710	4080	7040
Magnesium, Residual	HF/HNO3/HCl	mg/Kg	25.4	37.8	302	707	16.6	10.0	ND(<0.46)	4.79	7.70	4.64
Magnesium, Soluble	DI Water	mg/Kg	48.9	10.0	17.6	37.5	18.0	40.6	92.2	276	146	167
Magnesium, Total (Original sample)	Aqua Regia	mg/Kg	8120	7200	8150	8420	5730	6160	2810	10180	9230	9720
Magnesium, Total (Original sample)	HF/HNO3/HCl	mg/Kg	2.43	3.12	7.43	17.6	2.48	2.58	ND(<0.74)	2.46	2.04	2.02
Manganese, Amorphous Iron oxyhydroxide	0.2M (NH4)2C2O4	mg/Kg	27.2	46.4	55.4	119	13.6	46.4	75.4	15.8	172	85.1
Manganese, Crystilline Iron oxyhydroxide	0.2M (NH4)2C2O4 + 0.1M Ascorbic acid	mg/Kg	24.0	35.2	21.7	26.7	20.9	20.6	30.5	70.9	93.8	114
Manganese, EEOSC	0.05 M (NH4)H2PO4	mg/Kg	4.18	23.8	11.8	5.59	5.06	.364	15.0	4.55	48.9	33.3
Manganese, Residual	Aqua Regia	mg/Kg	93.6	54.4	171	202	100	35.3	112	76.1	143	211
Manganese, Residual	HF/HNO3/HCl	mg/Kg	401	288	222	345	137	179	136	228	422	647
Manganese, Soluble	DI Water	mg/Kg	1.33	4.95	1.16	2.10	ND(<0.37)	1.68	3.52	3.71	11.5	8.49
Manganese, Total (Original sample)	Aqua Regia	mg/Kg	182	117	232	216	63.1	65.8	172	204	264	398
Manganese, Total (Original sample)	HF/HNO3/HCl	mg/Kg	499	353	290	386	153	161	134	225	637	701

EEOSC - Easily-Exchangeable Outer Sphere Complexes
FT - Feet
mg/Kg - milligrams per kilogram
NA - Not Applicable
ND - Not Detected

APPENDIX I
Soil Analytical Data for Metals by Sequential Extraction Procedure
Quanta Resources Superfund Site, OU1
Edgewater, New Jersey

Location ID			**MW-133**	**MW-134**	**MW-134**	**SB-53**	**SB-53**	**SB-54**	**SB-54**	**SB-55**	**SB-55**
Field Sample ID			**SB-133-13.25**	**SB-134-14.75**	**SB-134-17.5**	**SB-53-SZone**	**SB-53-16.6**	**SB-54-10.5**	**SB-54-22.75**	**SB-55-13.75**	**SB-55-19.5**
Sample Date			**10/2/2008**	**10/1/2008**	**10/1/2008**	**9/5/2008**	**9/5/2008**	**10/3/2008**	**10/3/2008**	**10/8/2008**	**10/7/2008**
Sample Depth Interval			**13 - 13.5 FT**	**14.5 - 15 FT**	**17 - 18 FT**	**-**	**16 - 17 FT**	**10.25 - 10.75 FT**	**22.5 - 23 FT**	**13.5 - 14 FT**	**19 - 20 FT**
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**	**Soil**	**Soil**	**Soil**	**Soil**	**Soil**
Parameter, Fraction	**Extractant**	**Units**									
Aluminum, Amorphous Iron oxyhydroxide	0.2M (NH4)2C2O4	mg/Kg	1180	1380	1580	346	238	431	1140	751	877
Aluminum, Crystilline Iron oxyhydroxide	0.2M (NH4)2C2O4 + 0.1M Ascorbic acid	mg/Kg	1260	1320	1260	304	2710	528	1010	1450	1810
Aluminum, EEOSC	0.05 M (NH4)H2PO4	mg/Kg	6.4	3.26	1.66	5.24	50.6	25.6	34.6	78.0	34.3
Aluminum, Residual	Aqua Regia	mg/Kg	42500	26200	NA	NA	29300	25900	34000	26300	35100
Aluminum, Residual	HF/HNO3/HCl	mg/Kg	949	7870	1170	162	1770	1180	3360	2310	1330
Aluminum, Soluble	DI Water	mg/Kg	ND(<1.1)	32.3	75.0	2.06	14.3	67.7	178	4.19	7.15
Aluminum, Total (Original sample)	Aqua Regia	mg/Kg	53000	38300	57000	13400	41200	30524	46900	44200	42400
Aluminum, Total (Original sample)	HF/HNO3/HCl	mg/Kg	2120	2830	2860	2750	2850	928	3080	3390	2920
Arsenic, Amorphous Iron oxyhydroxide	0.2M (NH4)2C2O4	mg/Kg	22.7	32.9	33.3	56.4	170	4930	1.08	13.4	37.0
Arsenic, Crystilline Iron oxyhydroxide		mg/Kg	2.43	0.893	1.14	55.9	63.6	72.0	0.106	6.88	6.98
Arsenic, EEOSC	0.05 M (NH4)H2PO4	mg/Kg	6.91	76.4	72.1	12.9	38.5	204	0.091	10.3	15.9
Arsenic, Residual	Aqua Regia	mg/Kg	1.89	60.3	NA	NA	12.5	24.0	0.312	2.86	3.24
Arsenic, Residual	HF/HNO3/HCl	mg/Kg	6.66	239	302	39.8	53.9	104	0.994	17.5	17.8
Arsenic, Soluble	DI Water	mg/Kg	1.95	16.8	8.43	1.37	73.9	167	0.162	13.7	13.4
Arsenic, Total (Original sample)	Aqua Regia	mg/Kg	5.68	78.3	80.5	24.1	96.5	805	0.464	11.4	15.9
Arsenic, Total (Original sample)	HF/HNO3/HCl	mg/Kg	26.6	309	281	147	316	3940	2.00	41.2	79.9
Calcium, Amorphous Iron oxyhydroxide	0.2M (NH4)2C2O4	mg/Kg	31.2	20.9	27.6	18.9	13.5	79.3	31.0	25.1	18.1
Calcium, Crystilline Iron oxyhydroxide	0.2M (NH4)2C2O4 + 0.1M Ascorbic acid	mg/Kg	50.2	50.1	379	76.1	60.1	78.5	53.2	49.6	57.3
Calcium, EEOSC	0.05 M (NH4)H2PO4	mg/Kg	1460	993	447	840	139	722	143	32.2	92.5
Calcium, Residual	Aqua Regia	mg/Kg	13600	6820	NA	NA	2190	8070	2690	2370	2870
Calcium, Residual	HF/HNO3/HCl	mg/Kg	940	1600	473	1900	218	339	1020	1010	406
Calcium, Soluble	DI Water	mg/Kg	2000	141	268	182	3150	483	35.1	53.9	191
Calcium, Total (Original sample)	Aqua Regia	mg/Kg	16700	12000	15300	8440	7400	9700	4100	4240	3070
Calcium, Total (Original sample)	HF/HNO3/HCl	mg/Kg	304	124	229	77	280	141	141	284	178

EEOSC - Easily-Exchangeable Outer Sphere Complexes
FT - Feet
mg/Kg - milligrams per kilogram
NA - Not Applicable
ND - Not Detected

APPENDIX I
Soil Analytical Data for Metals by Sequential Extraction Procedure
Quanta Resources Superfund Site, OU1
Edgewater, New Jersey

Location ID			**MW-133**	**MW-134**	**MW-134**	**SB-53**	**SB-53**	**SB-54**	**SB-54**	**SB-55**	**SB-55**
Field Sample ID			**SB-133-13.25**	**SB-134-14.75**	**SB-134-17.5**	**SB-53-SZone**	**SB-53-16.6**	**SB-54-10.5**	**SB-54-22.75**	**SB-55-13.75**	**SB-55-19.5**
Sample Date			**10/2/2008**	**10/1/2008**	**10/1/2008**	**9/5/2008**	**9/5/2008**	**10/3/2008**	**10/3/2008**	**10/8/2008**	**10/7/2008**
Sample Depth Interval			**13 - 13.5 FT**	**14.5 - 15 FT**	**17 - 18 FT**	**-**	**16 - 17 FT**	**10.25 - 10.75 FT**	**22.5 - 23 FT**	**13.5 - 14 FT**	**19 - 20 FT**
Sample Matrix			**Soil**	**Soil**	**Soil**	**Soil**	**Soil**	**Soil**	**Soil**	**Soil**	**Soil**
Parameter, Fraction	**Extractant**	**Units**									
Iron, Amorphous Iron oxyhydroxide	0.2M (NH4)2C2O4	mg/Kg	5830	8750	29900	2680	2130	151000	2020	556	1190
Iron, Crystilline Iron oxyhydroxide	0.2M (NH4)2C2O4 + 0.1M Ascorbic acid	mg/Kg	3920	5040	8780	8460	4540	31000	2120	2540	3410
Iron, EEOSC	0.05 M (NH4)H2PO4	mg/Kg	6.91	55.1	106	14.2	18.8	50.6	26.1	57.5	28.1
Iron, Residual	Aqua Regia	mg/Kg	4010	4340	NA	NA	289	42000	2660	1510	1740
Iron, Residual	HF/HNO3/HCl	mg/Kg	16000	17800	29300	17100	5290	111000	11100	11400	11000
Iron, Soluble	DI Water	mg/Kg	ND(<2.1)	31.4	86.2	39.2	117	235	124	101	28.9
Iron, Total (Original sample)	Aqua Regia	mg/Kg	9690	11600	15900	7460	5480	381000	6990	6170	4850
Iron, Total (Original sample)	HF/HNO3/HCl	mg/Kg	23600	28700	37200	20500	13600	25100	19000	14000	16000
Magnesium, Amorphous Iron oxyhydroxide	0.2M (NH4)2C2O4	mg/Kg	351	434	284	210	2.49	174	108	11.7	20.5
Magnesium, Crystilline Iron oxyhydroxide	0.2M (NH4)2C2O4 + 0.1M Ascorbic acid	mg/Kg	586	723	790	310	8.21	472	281	478	597
Magnesium, EEOSC	0.05 M (NH4)H2PO4	mg/Kg	139	224	168	73.8	5.40	75.5	23.3	11.0	23.5
Magnesium, Residual	Aqua Regia	mg/Kg	6210	2790	NA	NA	1740	1710	4550	3910	4280
Magnesium, Residual	HF/HNO3/HCl	mg/Kg	10.6	16.1	2.06	145	3.97	4.44	47.7	27.1	4.32
Magnesium, Soluble	DI Water	mg/Kg	69.9	80.9	50.9	13.7	31.5	44.8	21.2	10.9	42.6
Magnesium, Total (Original sample)	Aqua Regia	mg/Kg	8540	5520	6390	3560	2780	2810	7030	6910	6390
Magnesium, Total (Original sample)	HF/HNO3/HCl	mg/Kg	1.84	1.81	16.0	1.43	1.88	1.84	4.09	3.75	1.67
Manganese, Amorphous Iron oxyhydroxide	0.2M (NH4)2C2O4	mg/Kg	80.9	49.8	129	3.88	1.73	29.0	16.2	1.75	4.76
Manganese, Crystilline Iron oxyhydroxide	0.2M (NH4)2C2O4 + 0.1M Ascorbic acid	mg/Kg	29.7	25.5	72.9	16.3	3.92	17.8	11.1	13.8	18.0
Manganese, EEOSC	0.05 M (NH4)H2PO4	mg/Kg	18.2	70.4	4.06	1.60	0.19	14.7	10.7	ND(<0.17)	2.55
Manganese, Residual	Aqua Regia	mg/Kg	220	59.1	NA	NA	35.4	40.6	39.8	31.7	34.0
Manganese, Residual	HF/HNO3/HCl	mg/Kg	697	226	288	296	134	217	125	184	139
Manganese, Soluble	DI Water	mg/Kg	1.32	ND(<0.37)	ND(<0.37)	ND(<0.37)	1.37	1.59	2.56	ND(<0.37)	4.47
Manganese, Total (Original sample)	Aqua Regia	mg/Kg	136	107	164	37.8	53.0	117.7	78.1	75.8	69.0
Manganese, Total (Original sample)	HF/HNO3/HCl	mg/Kg	354	207	309	175	124	108	216	167	193

EEOSC - Easily-Exchangeable Outer Sphere Complexes
FT - Feet
mg/Kg - milligrams per kilogram
NA - Not Applicable
ND - Not Detected

APPENDIX J
Soil Analytical Data for Polychlorinated Biphenyls (PCBs)
Quanta Resources Superfund Site, OU1
Edgewater, New Jersey

Location ID		MW-123	MW-123	MW-124	MW-124	MW-124	MW-125	MW-125	MW-126	MW-126	MW-127	MW-127	MW-127	MW-128
Field Sample ID		**SB-123-0.75**	**SB-123-4.25**	**SB-124-1.5**	**DUP-091208**	**SB-124-9.0**	**SB-125-4.75**	**SB-125-9.75**	**SB-126-4.5**	**SB-126-11.25**	**SB-127-1.75**	**SB-127-8.25**	**SB-127-9.5**	**SB-128-1.8-022409**
Sample Date		**9/11/2008**	**9/11/2008**	**9/12/2008**	**9/12/2008**	**9/12/2008**	**9/15/2008**	**9/15/2008**	**10/14/2008**	**10/14/2008**	**9/11/2008**	**9/11/2008**	**9/11/2008**	**2/24/2009**
Sample Depth Interval		**0.5 - 1 FT**	**4 - 4.5 FT**	**1 - 2 FT**	**1 - 2 FT**	**8 - 10 FT**	**4.5 - 5 FT**	**9.5 - 10 FT**	**4.3 - 4.8 FT**	**11 - 11.5 FT**	**1.5 - 2 FT**	**8 - 8.5 FT**	**9 - 10 FT**	**1.5 - 2 FT**
Sample Matrix		**Soil**	**Soil**	**Soil**	**Soil**	**Soil**	**Soil**	**Soil**	**Soil**	**Soil**	**Soil**	**Soil**	**Soil**	**Soil**
Constituent	**Units**													
Aroclor 1016	mg/Kg	0.034 U	0.04 U	0.034 U	0.035 U	0.046 U	0.036 U	0.038 U	0.11 U	0.044 U	0.035 U	0.042 U	0.053 U	0.037 U
Aroclor 1221	mg/Kg	0.034 U	0.04 U	0.034 U	0.035 U	0.046 U	0.036 U	0.038 U	0.11 U	0.044 U	0.035 U	0.042 U	0.053 U	0.037 U
Aroclor 1232	mg/Kg	0.034 U	0.04 U	0.034 U	0.035 U	0.046 U	0.036 U	0.038 U	0.11 U	0.044 U	0.035 U	0.042 U	0.053 U	0.037 U
Aroclor 1242	mg/Kg	0.034 U	0.04 U	0.034 U	0.035 U	0.046 U	0.036 U	0.038 U	**0.205**	0.044 U	0.035 U	0.042 U	0.053 U	0.037 U
Aroclor 1248	mg/Kg	0.034 U	0.04 U	0.034 U	0.035 U	0.046 U	0.036 U	0.038 U	0.11 U	0.044 U	0.035 U	0.042 U	0.053 U	0.037 U
Aroclor 1254	mg/Kg	0.034 U	0.04 U	0.034 U	0.035 U	0.046 U	0.036 U	0.038 U	0.11 U	0.044 U	0.035 U	0.042 U	0.053 U	0.037 U
Aroclor 1260	mg/Kg	0.034 U	0.04 U	0.034 U	0.035 U	0.046 U	0.036 U	0.038 U	0.11 U	0.044 U	0.035 U	0.042 U	0.053 U	0.037 U

Detected concentrations are marked as shaded and bold.
FT - Feet
J - Estimated Concentration
mg/Kg - milligrams per kilogram
U - Not Detected

APPENDIX J
Soil Analytical Data for Polychlorinated Biphenyls (PCBs)
Quanta Resources Superfund Site, OU1
Edgewater, New Jersey

Location ID		MW-128	MW-129	MW-129	MW-129	MW-136	MW-136	MW-136	SB-39	SB-39	SB-40	SB-40	SB-42	SB-42
Field Sample ID		SB-128-3.8-022409	SB-129-1.8-022409	SB-129-7.5-022409	DUP-022409	SB-136-1.0	SB-136-8.5	SB-136-21.5	SB-39-1.0-022409	SB-39-5.3-022409	SB-40-1.0	SB-40-4.0	SB-42-1.0	SB-42-9.0
Sample Date		2/24/2009	2/24/2009	2/24/2009	2/24/2009	9/10/2008	9/10/2008	9/10/2008	2/24/2009	2/24/2009	8/26/2008	8/26/2008	8/26/2008	8/26/2008
Sample Depth Interval		3.6 - 4 FT	1.6 - 2 FT	7 - 8 FT	7 - 8 FT	0.5 - 1 FT	8.5 - 9.5 FT	21 - 22 FT	0.8 - 1.2 FT	5 - 5.5 FT	0 - 1.5 FT	3.8 - 5 FT	0 - 1.5 FT	8.5 - 10 FT
Sample Matrix		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Constituent	**Units**													
Aroclor 1016	mg/Kg	0.041 U	0.038 U	0.041 U	0.042 U	0.038 U	0.12 U	0.16 U	0.038 U	0.041 U	0.038 U	0.061 U	0.034 U	0.041 U
Aroclor 1221	mg/Kg	0.041 U	0.038 U	0.041 U	0.042 U	0.038 U	0.12 U	0.16 U	0.038 U	0.041 U	0.038 U	0.061 U	0.034 U	0.041 U
Aroclor 1232	mg/Kg	0.041 U	0.038 U	0.041 U	0.042 U	0.038 U	0.12 U	0.16 U	0.038 U	0.041 U	0.038 U	0.061 U	0.034 U	0.041 U
Aroclor 1242	mg/Kg	0.041 U	0.038 U	0.041 U	0.042 U	0.038 U	0.12 U	0.16 U	0.038 U	0.041 U	0.038 U	0.061 U	0.034 U	0.041 U
Aroclor 1248	mg/Kg	0.041 U	0.038 U	0.041 U	0.042 U	0.038 U	0.12 U	0.16 U	0.038 U	0.041 U	0.038 U	0.061 U	0.034 U	0.041 U
Aroclor 1254	mg/Kg	0.041 U	0.038 U	0.041 U	0.042 U	0.038 U	0.12 U	0.16 U	0.038 U	0.041 U	0.038 U	0.061 U	0.034 U	0.041 U
Aroclor 1260	mg/Kg	0.041 U	0.038 U	0.041 U	0.042 U	0.038 U	0.12 U	0.16 U	0.038 U	0.041 U	0.038 U	0.061 U	0.034 U	0.041 U

Detected concentrations are marked as shaded and bold.
FT - Feet
J - Estimated Concentration
mg/Kg - milligrams per kilogram
U - Not Detected

APPENDIX J
Soil Analytical Data for Polychlorinated Biphenyls (PCBs)
Quanta Resources Superfund Site, OU1
Edgewater, New Jersey

Location ID		SB-43	SB-43	SB-44	SB-44	SB-47	SB-47	SB-48	SB-49	SB-49	SB-50	SB-50	SB-51	SB-51
Field Sample ID		SB-43-0.5	SB-43-3.5	SB-44-1.0	SB-44-8.0	SB-47-1.5	SB-47-3.2	SB-48-6.0	SB-49-4.5	SB-49-9.5	SB-50-3.0	SB-50-11.25	SB-51-3.5	SB-51-18
Sample Date		8/26/2008	8/26/2008	9/4/2008	9/4/2008	8/27/2008	8/27/2008	8/27/2008	9/2/2008	9/2/2008	9/2/2008	10/16/2008	9/2/2008	9/2/2008
Sample Depth Interval		0 - 1 FT	3 - 4 FT	0.5 - 1.5 FT	7 - 9 FT	1 - 2 FT	2.7 - 3.7 FT	5 - 7 FT	4 - 5 FT	9 - 10 FT	2.5 - 3.5 FT	11 - 11.5 FT	3 - 4 FT	17.5 - 18.5 FT
Sample Matrix		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Constituent	**Units**													
Aroclor 1016	mg/Kg	0.018 U	0.023 U	0.034 U	0.73 U	0.037 U	0.022 U	0.021 U	0.042 U	0.11 U	0.036 U	0.17 U	0.037 U	0.041 U
Aroclor 1221	mg/Kg	0.018 U	0.023 U	0.034 U	0.73 U	0.037 U	0.022 U	0.021 U	0.042 U	0.11 U	0.036 U	0.17 U	0.037 U	0.041 U
Aroclor 1232	mg/Kg	0.018 U	0.023 U	0.034 U	0.73 U	0.037 U	0.022 U	0.021 U	0.042 U	0.11 U	0.036 U	0.17 U	0.037 U	0.041 U
Aroclor 1242	mg/Kg	0.018 U	0.023 U	0.034 U	0.73 U	0.037 U	0.022 U	0.021 U	0.042 U	0.11 U	0.036 U	0.17 U	0.037 U	0.041 U
Aroclor 1248	mg/Kg	0.018 U	0.023 U	0.034 U	0.73 U	0.037 U	0.022 U	0.021 U	0.042 U	0.11 U	0.036 U	0.17 U	0.037 U	0.041 U
Aroclor 1254	mg/Kg	0.018 U	0.023 U	0.034 U	0.73 U	0.037 U	0.022 U	0.021 U	**0.549**	**2.34**	0.036 U	0.17 U	0.037 U	0.041 U
Aroclor 1260	mg/Kg	0.018 U	0.023 U	0.034 U	0.73 U	0.037 U	0.022 U	0.021 U	**0.879**	**1.91**	0.036 U	0.17 U	**0.0579**	0.041 U

Detected concentrations are marked as shaded and bold.
FT - Feet
J - Estimated Concentration
mg/Kg - milligrams per kilogram
U - Not Detected

APPENDIX J
Soil Analytical Data for Polychlorinated Biphenyls (PCBs)
Quanta Resources Superfund Site, OU1
Edgewater, New Jersey

Location ID		SB-52	SB-52	SS-58	SB-58	SB-58	SB-58	TL08.5-10.5	TL08.5-10.5	TL09.5-10.5	TL09.5-10.5	TL09.5-10.5	TL09.5-11.25	TL09.5-11.25
Field Sample ID		SB-52-3.0	SB-52-6.0	SS-58-0.1	SB-58-3.7	SB-58-9.5	SB-58-11.7	TL 8.5-10.5-0.5	TL 8.5-10.5-13*	TL 9.5-10.5-1.5	TL 9.5-10.5-3.5	TL 9.5-10.5-16.5	TL 9.5-11.25-0.5	TL 9.5-11.25-7.5
Sample Date		2/24/2009	2/24/2009	10/15/2008	2/25/2009	2/25/2009	2/25/2009	8/28/2008	8/28/2008	8/28/2008	8/28/2008	8/28/2008	8/28/2008	8/28/2008
Sample Depth Interval		2 - 4 FT	5.7 - 6.3 FT	0.1 - 0.2 FT	3.5 - 4 FT	9.3 - 9.7 FT	11.3 - 12 FT	0 - 1 FT	12 - 14 FT	1 - 2 FT	3 - 4 FT	16 - 17 FT	0 - 1 FT	5 - 10 FT
Sample Matrix		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Constituent	**Units**													
Aroclor 1016	mg/Kg	0.036 U	0.035 U	0.12 U	0.038 U	0.042 U	0.041 U	0.11 U	0.29 U	0.11 U	0.12 U	0.32 U	0.1 U	0.12 U
Aroclor 1221	mg/Kg	0.036 U	0.035 U	0.12 U	0.038 U	0.042 U	0.041 U	0.11 U	0.29 U	0.11 U	0.12 U	0.32 U	0.1 U	0.12 U
Aroclor 1232	mg/Kg	0.036 U	0.035 U	0.12 U	0.038 U	0.042 U	0.041 U	0.11 U	0.29 U	0.11 U	0.12 U	0.32 U	0.1 U	0.12 U
Aroclor 1242	mg/Kg	0.036 U	0.035 U	0.12 U	0.038 U	0.042 U	0.041 U	0.11 U	0.29 U	0.11 U	0.12 U	0.32 U	0.1 U	0.12 U
Aroclor 1248	mg/Kg	0.036 U	0.035 U	0.12 U	**1.32**	0.042 U	0.041 U	0.11 U	0.29 U	0.11 U	0.12 U	0.32 U	0.1 U	0.12 U
Aroclor 1254	mg/Kg	0.036 U	0.035 U	0.12 U	**0.759**	0.042 U	0.041 U	0.11 U	0.29 U	0.11 U	0.12 U	0.32 U	0.1 U	0.12 U
Aroclor 1260	mg/Kg	**0.0441**	0.035 U	0.12 U	**0.363**	0.042 U	0.041 U	0.11 U	0.29 U	0.11 U	0.12 U	0.32 U	0.1 U	0.12 U

Detected concentrations are marked as shaded and bold.
FT - Feet
J - Estimated Concentration
mg/Kg - milligrams per kilogram
U - Not Detected

APPENDIX J
Soil Analytical Data for Polychlorinated Biphenyls (PCBs)
Quanta Resources Superfund Site, OU1
Edgewater, New Jersey

Location ID		TL09-09	TL09-09	TL09-09	TL10.5-09.5	TL10.5-09.5	TL10.5-09.5	TL10.5-09.5	TL10.5-10.5	TL10.5-10.5	TL10.5-10.5	TL10.5-10.5	TL10.5-11.25	TL10.5-11.25
Field Sample ID		TL09-09-1.0	TL09-09-4.5	TL09-09-19.5	TL10.5-9.5-1.0	DUP-082908	TL10.5-9.5-9.5	TL10.5-9.5-23.5	TL 10.5-10.5-0.5	TL 10.5-10.5-4.0	TL 10.5-10.5-14.5	DUP-082708	TL 10.5-11.25-0.5	TL 10.5-11.25-8.5
Sample Date		8/29/2008	8/29/2008	8/29/2008	8/29/2008	8/29/2008	8/29/2008	8/29/2008	8/27/2008	8/27/2008	8/27/2008	8/27/2008	8/28/2008	8/28/2008
Sample Depth Interval		0.5 - 1.5 FT	4 - 5 FT	19.3 - 20 FT	0 - 1.5 FT	0 - 1.5 FT	9 - 10 FT	23 - 24 FT	0 - 1 FT	3.5 - 4.5 FT	14 - 15 FT	14 - 15 FT	0 - 1 FT	8 - 9 FT
Sample Matrix		Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil	Soil
Constituent	**Units**													
Aroclor 1016	mg/Kg	0.034 U	0.04 U	0.24 U	0.035 U	0.035 U	0.058 U	0.063 U	0.036 U	0.037 U	0.066 U	0.072 U	0.1 U	0.058 U
Aroclor 1221	mg/Kg	0.034 U	0.04 U	0.24 U	0.035 U	0.035 U	0.058 U	0.063 U	0.036 U	0.037 U	0.066 U	0.072 U	0.1 U	0.058 U
Aroclor 1232	mg/Kg	0.034 U	0.04 U	0.24 U	0.035 U	0.035 U	0.058 U	0.063 U	0.036 U	0.037 U	0.066 U	0.072 U	0.1 U	0.058 U
Aroclor 1242	mg/Kg	0.034 U	0.04 U	0.24 U	0.035 U	0.035 U	0.058 U	0.063 U	0.036 U	0.037 U	0.066 U	0.072 U	0.1 U	0.058 U
Aroclor 1248	mg/Kg	0.034 U	0.04 U	0.24 U	0.035 U	0.035 U	0.058 U	0.063 U	0.036 U	0.037 U	0.066 U	0.072 U	0.1 U	0.058 U
Aroclor 1254	mg/Kg	0.034 U	0.04 U	0.24 U	**0.136**	**0.147**	0.058 U	0.063 U	**1.09 J**	0.037 U	0.066 U	0.072 U	0.1 U	0.058 U
Aroclor 1260	mg/Kg	0.034 U	0.04 U	0.24 U	**0.0872**	**0.0612**	0.058 U	0.063 U	**0.67 J**	0.037 U	0.066 U	0.072 U	0.1 U	0.058 U

Detected concentrations are marked as shaded and bold.
FT - Feet
J - Estimated Concentration
mg/Kg - milligrams per kilogram
U - Not Detected

APPENDIX J
Soil Analytical Data for Polychlorinated Biphenyls (PCBs)
Quanta Resources Superfund Site, OU1
Edgewater, New Jersey

Location ID		TL10.5-11.25	TL10-09.5	TL10-09.5	TL11.25-00	TL11.75-00	TL11-11.75	TL12.5-00	TL12.5-10.5	TL12.5-10.5	TL12-00.5	TL12-00.5	TL12-01.5	TL13.5-10.5
Field Sample ID		**TL 10.5-11.25-12**	**TL 10-9.5-7.5**	**DUP-090408**	**TL 11.25-00-17.5**	**TL 11.75-00-13.5**	**TL 11-11.75-11**	**TL 12.5-00-17.5**	**TL 12.5-10.5-1.5**	**TL 12.5-10.5-8.5**	**TL 12-0.5-7.5**	**TL 12-0.5-18.5**	**TL12-1.5-8.5**	**TL 13.5-10.5-1.5**
Sample Date		**8/28/2008**	**9/4/2008**	**9/4/2008**	**9/4/2008**	**9/3/2008**	**8/27/2008**	**9/3/2008**	**8/25/2008**	**8/25/2008**	**9/3/2008**	**9/3/2008**	**8/29/2008**	**8/25/2008**
Sample Depth Interval		**11 - 12 FT**	**6.5 - 8.5 FT**	**6.5 - 8.5 FT**	**16.5 - 18.5 FT**	**13 - 14 FT**	**10 - 12 FT**	**17 - 18 FT**	**0.25 - 2.5 FT**	**7.5 - 9.5 FT**	**7 - 8 FT**	**17.5 - 19.5 FT**	**7.1 - 10 FT**	**0.5 - 2.5 FT**
Sample Matrix		**Soil**	**Soil**	**Soil**	**Soil**	**Soil**	**Soil**	**Soil**	**Soil**	**Soil**	**Soil**	**Soil**	**Soil**	**Soil**
Constituent	**Units**													
Aroclor 1016	mg/Kg	0.18 U	0.14 U	0.15 U	0.21 U	0.17 U	0.14 U	0.036 U	0.038 U	0.13 U	0.059 U	0.17 U	0.13 U	0.037 U
Aroclor 1221	mg/Kg	0.18 U	0.14 U	0.15 U	0.21 U	0.17 U	0.14 U	0.036 U	0.038 U	0.13 U	0.059 U	0.17 U	0.13 U	0.037 U
Aroclor 1232	mg/Kg	0.18 U	0.14 U	0.15 U	0.21 U	0.17 U	0.14 U	0.036 U	0.038 U	0.13 U	0.059 U	0.17 U	0.13 U	0.037 U
Aroclor 1242	mg/Kg	0.18 U	0.14 U	0.15 U	0.21 U	0.17 U	0.14 U	0.036 U	0.038 U	0.13 U	0.059 U	0.17 U	0.13 U	0.037 U
Aroclor 1248	mg/Kg	0.18 U	0.14 U	0.15 U	0.21 U	0.17 U	0.14 U	0.036 U	0.038 U	0.13 U	0.059 U	0.17 U	0.13 U	0.037 U
Aroclor 1254	mg/Kg	0.18 U	0.14 U	0.15 U	0.21 U	0.17 U	0.14 U	0.036 U	0.038 U	0.13 U	0.059 U	0.17 U	0.13 U	0.037 U
Aroclor 1260	mg/Kg	0.18 U	0.14 U	0.15 U	0.21 U	0.17 U	0.14 U	0.036 U	0.038 U	0.13 U	0.059 U	0.17 U	0.13 U	0.037 U

Detected concentrations are marked as shaded and bold.
FT - Feet
J - Estimated Concentration
mg/Kg - milligrams per kilogram
U - Not Detected

APPENDIX J
Soil Analytical Data for Polychlorinated Biphenyls (PCBs)
Quanta Resources Superfund Site, OU1
Edgewater, New Jersey

Location ID		TL13.5-10.5	TL13.5-12.75	TL13.5-12.75	TL14-13.25	TL14-13.25
Field Sample ID		TL 13.5-10.5-8.5	TL 13.5-12.75-0.5	TL 13.5-12.75-8.5	TL 14-13.25-1.0	TL 14-13.25-8.5
Sample Date		8/25/2008	8/26/2008	8/26/2008	8/25/2008	8/25/2008
Sample Depth Interval		7.5 - 9.5 FT	0 - 1 FT	8 - 9 FT	0.4 - 1.5 FT	7.5 - 9.5 FT
Sample Matrix		Soil	Soil	Soil	Soil	Soil
Constituent	**Units**					
Aroclor 1016	mg/Kg	0.18 U	0.017 U	0.042 U	0.035 U	0.044 U
Aroclor 1221	mg/Kg	0.18 U	0.017 U	0.042 U	0.035 U	0.044 U
Aroclor 1232	mg/Kg	0.18 U	0.017 U	0.042 U	0.035 U	0.044 U
Aroclor 1242	mg/Kg	0.18 U	0.017 U	0.042 U	0.035 U	0.044 U
Aroclor 1248	mg/Kg	0.18 U	0.017 U	0.042 U	0.035 U	0.044 U
Aroclor 1254	mg/Kg	0.18 U	0.017 U	0.042 U	0.035 U	0.044 U
Aroclor 1260	mg/Kg	0.18 U	0.017 U	0.042 U	0.035 U	0.044 U

Detected concentrations are marked as shaded and bold.
FT - Feet
J - Estimated Concentration
mg/Kg - milligrams per kilogram
U - Not Detected

APPENDIX K
Soil Analytical Data for Total Organic Carbon (TOC)
Quanta Resources Superfund Site, OU1
Edgewater, New Jersey

Location ID		MW-126	MW-126	MW-126	MW-128	MW-128	MW-130B	MW-130B
Field Sample ID		SB-126-4.5	SB-126-11.25	SB-126-22.5	SB-128-8.5-022509	SB-128-13.5-022509	SB-130-16.5	SB-130-20.5
Sample Date		10/14/2008	10/14/2008	10/14/2008	2/25/2009	2/25/2009	10/9/2008	10/9/2008
Sample Depth Interval		4.3 - 4.8 FT	11 - 11.5 FT	22 - 23 FT	8 - 9 FT	13 - 14 FT	16 - 17 FT	20 - 21 FT
Sample Matrix		Soil	Soil	Soil	Soil	Soil	Soil	Soil
Constituent	**Units**							
Total Organic Carbon	mg/Kg	**26200**	**193000**	**359 J**	1100 U	1200 U	**881 J**	**709 J**

Location ID		MW-131	MW-131	MW-132	MW-132	MW-132	MW-133	MW-134
Field Sample ID		SB-131-7.5	SB-131-19.5	SB-132-8.5	DUP-100708	SB-132-19.5	SB-133-13.25	SB-134-14.75
Sample Date		10/6/2008	10/6/2008	10/7/2008	10/7/2008	10/7/2008	10/2/2008	10/1/2008
Sample Depth Interval		7 - 8 FT	19.25 - 19.75 FT	8 - 9 FT	8 - 9 FT	19 - 20 FT	13 - 13.5 FT	14.5 - 15 FT
Sample Matrix		Soil	Soil	Soil	Soil	Soil	Soil	Soil
Constituent	**Units**							
Total Organic Carbon	mg/Kg	**381000**	**33900**	**434000 J**	**138000 J**	**25200**	**19200**	**81300**

Location ID		MW-134	SB-53	SB-53	SB-54	SB-54	SB-55	SB-55
Field Sample ID		SB-134-17.5	SB-53-3.0	SB-53-16.5	SB-54-10.5	SB-54-22.75	SB-55-19.5	SB-55-5.25
Sample Date		10/1/2008	9/5/2008	9/5/2008	10/3/2008	10/3/2008	10/7/2008	10/8/2008
Sample Depth Interval		17 - 18 FT	2.5 - 3.5 FT	16 - 17 FT	10.25 - 10.75 FT	22.5 - 23 FT	19 - 20 FT	5 - 5.5 FT
Sample Matrix		Soil	Soil	Soil	Soil	Soil	Soil	Soil
Constituent	**Units**							
Total Organic Carbon	mg/Kg	**95500**	**703000**	1200 U	**260000**	1200 U	1100 U	**496000**

Detected concentrations are marked as shaded and bold.
FT - Feet
J - Estimated Concentration
mg/Kg - milligrams per kilogram
U - Not Detected

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit Number 2600088515

Atlas Sheet Coordinates 2614276

OWNER IDENTIFICATION FIOLA FAMILY ASSOCIATES, LP

Address 884 EDGEWATER AVENUE

City Ridgefield State New Jersey Zip Code 07657

WELL LOCATION - If not the same as owner please give address **Owner's Well No.** BH-1

County Bergen Municipality Edgewater Boro Lot No. 1 Block No. 95

Address 145 RIVER ROAD / (BH-1) QUANTA PROPERTY

WELL USE Monitoring

DATE WELL STARTED 9-17-08

DATE WELL COMPLETED 9-17-08

WELL CONSTRUCTION

Total Depth Drilled 41.50 ft.

Finished Well Depth 41.50 ft.

Borehole Diameter:

Top ____ in.

Bottom ____ in.

Well was finished: ☐ above grade ☐ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Steel protective casing installed? ☐ Yes ☐ No

Static Water Level after drilling ____ ft.

Water Level was Measured Using ____

Well was developed for ____ hours

at ____ gpm

Method of development ____

Pump Capacity ____ gpm

Pump Type ____

Drilling Fluid ____ Type of Rig Mini Sonic

Health and Safety Plan Submitted? ☑ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0'	41.50			
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)					
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack					
Grout	Surface	41.50		Neat Cement Bentonite	430 lbs 21 lbs

Grouting Method Tremie Grout

Drilling Method Sonic Drilling

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations

0-10 Fill
10-24 Silty Clay
24-30 Sand/Silt/Gravel
30-35 Sand w/ Clay
35- Bedrock (Sandstone)

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company BOART LONGYEAR

Well Driller (Print) Joseph Cesaro

Driller's Signature Joseph Cesaro

Registration No. MW 294916 Date 9/17/08

AS-BUILT WELL LOCATION (NAD 83 HORIZONTAL DATUM)

NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: 718555.5 EASTING: 633638.3

OR

LATITUDE: ° ' " LONGITUDE: ° ' "

ORIGINAL: DEP *COPIES: DRILLER* *OWNER* *HEALTH DEPARTMENT*

New Jersey Department of Environmental Protection
Bureau of Water Allocation

Well Permit Number 2600088516

MONITORING WELL RECORD

Atlas Sheet Coordinates 2614276

OWNER IDENTIFICATION FIOLA FAMILY ASSOCIATES, LP

Address 884 EDGEWATER AVENUE

City Ridgefield State New Jersey Zip Code 07657

WELL LOCATION - If not the same as owner please give address **Owner's Well No.** BH-2

County Bergen Municipality Edgewater Boro Lot No. 1 Block No. 95

Address 145 RIVER ROAD / (BH-2) QUANTA PROPERTY

WELL USE Monitoring

DATE WELL STARTED 9-18-08

DATE WELL COMPLETED 9-18-08

WELL CONSTRUCTION

Total Depth Drilled 55' ft.

Finished Well Depth 55' ft.

Borehole Diameter:

Top 6" in.

Bottom in.

Well was finished: ☐ above grade ☐ flush mounted

If finished above grade, casing height (stick up) above land surface ft.

Steel protective casing installed? ☐ Yes ☐ No

Static Water Level after drilling ft.

Water Level was Measured Using

Well was developed for hours

at gpm

Method of development

Pump Capacity gpm

Pump Type

Drilling Fluid Type of Rig Mini Sonic

Health and Safety Plan Submitted? ☑ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	55'			
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)					
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack					
Grout	surface	55'		Neat Cement Bentonite	590 lbs 27 lbs

Grouting Method Tremie Grout

Drilling Method Sonic drilling.

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations

0-10 Fill
10-33 Silt and Clay
33-50 Silty Sand w/ some med sand
50-55 Bedrock (Sandstone)

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company BOART LONGYEAR

Well Driller (Print) Joseph Cesaro.

Driller's Signature

Registration No. MW 294916 Date 9/18/08

AS-BUILT WELL LOCATION (NAD 83 HORIZONTAL DATUM)

NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: 718463.7 EASTING: 633605.1

OR

LATITUDE: ° ' " LONGITUDE: ° ' "

ORIGINAL: DEP *COPIES: DRILLER* *OWNER* *HEALTH DEPARTMENT*

307836

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit Number 2600088517

Atlas Sheet Coordinates 2614276

OWNER IDENTIFICATION FIOLA FAMILY ASSOCIATES, LP

Address 884 EDGEWATER AVENUE

City Ridgefield State New Jersey Zip Code 07657

WELL LOCATION - If not the same as owner please give address **Owner's Well No.** BH-3 Not Installed

County Bergen Municipality Edgewater Boro Lot No. 1 Block No. 95

Address 145 RIVER ROAD / (BH-3) QUANTA PROPERTY

WELL USE Monitoring

DATE WELL STARTED

DATE WELL COMPLETED

WELL CONSTRUCTION

Total Depth Drilled ____ ft.

Finished Well Depth ____ ft.

Borehole Diameter:

Top ____ in.

Bottom ____ in.

Well was finished: ☐ above grade ☐ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Steel protective casing installed? ☐ Yes ☐ No

Static Water Level after drilling ____ ft.

Water Level was Measured Using ____

Well was developed for ____ hours at ____ gpm

Method of development ____

Pump Capacity ____ gpm

Pump Type ____

Drilling Fluid ____ Type of Rig ____

Health and Safety Plan Submitted? ☐ Yes ☐ No

Level of Protection used on site (circle one) None D C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing					
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)					
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack					
Grout				Neat Cement Bentonite	____ lbs ____ lbs

Not Installed

Grouting Method ____

Drilling Method ____

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company BOART LONGYEAR

Well Driller (Print) Joseph Cesare

Driller's Signature Joseph Cesare

Registration No. MW 294916 Date 10/MAR

AS-BUILT WELL LOCATION (NAD 83 HORIZONTAL DATUM)

NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: ____ **EASTING:** ____

OR

LATITUDE: ° ' " **LONGITUDE:** ° ' "

ORIGINAL: DEP *COPIES: DRILLER* *OWNER* *HEALTH DEPARTMENT*

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit Number 2600088524

Atlas Sheet Coordinates 2614275

OWNER IDENTIFICATION METROPOLITIAN CONSUM, LLC

Address PO BOX 36

City Edgewater State New Jersey Zip Code 07020

WELL LOCATION - If not the same as owner please give address Owner's Well No. MW-123

County Bergen Municipality Edgewater Boro Lot No. 4 Block No. 93

Address 125 OLD RIVER ROAD (MW-123) MEDICAL BLDG. (BLOCK 93 S(

WELL USE Monitoring

DATE WELL STARTED 9-11-08

DATE WELL COMPLETED 9-11-08

WELL CONSTRUCTION

Total Depth Drilled 30 ft.

Finished Well Depth 18 ft.

Borehole Diameter:

Top 6" in.

Bottom in.

Well was finished: ☐ above grade ☑ flush mounted

If finished above grade, casing height (stick up) above land surface ft.

Steel protective casing installed? ☑ Yes ☐ No

Static Water Level after drilling 4 ft.

Water Level was Measured Using

Well was developed for hours

at gpm

Method of development

Pump Capacity gpm

Pump Type

Drilling Fluid Type of Rig mini sonic

Health and Safety Plan Submitted? ☑ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	surface	6'			
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen 2" (No. Used 020)	6'	16'			
Blank Casings (No. Used)					
Tail Piece	16	18'			
Gravel Pack	3'	16.00			
Grout	1'	3'		Neat Cement Bentonite	42 lbs 2 lbs

Grouting Method Gravity Feed.

Drilling Method Sonic Drilling

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations

0-15 gravelly Sand w/ some wood and Silt Layers. Sand is Fine to Coarse

15-30' Dark brown clayey Peat.

AS-BUILT WELL LOCATION (NAD 83 HORIZONTAL DATUM)

NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: 718728.96 EASTING: 632591.99

OR

LATITUDE: ° ' " LONGITUDE: ° ' "

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company BOART LONGYEAR

Well Driller (Print) Joseph Cesaro

Driller's Signature Joseph Cesaro

Registration No. MW 294916 Date 9/11/08

ORIGINAL: DEP *COPIES: DRILLER* *OWNER* *HEALTH DEPARTMENT*

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit Number 2600088529

Atlas Sheet Coordinates 2614275

OWNER IDENTIFICATION METROPOLITIAN CONSUM, LLC

Address PO BOX 36

City Edgewater State New Jersey Zip Code 07020

WELL LOCATION - If not the same as owner please give address Owner's Well No. MW-124

County Bergen Municipality Edgewater Boro Lot No. 4 Block No. 93

Address 125 OLD RIVER ROAD (MW-124) MEDICAL BLDG. (BLOCK 93 SC

WELL USE Monitoring

DATE WELL STARTED 9-12-08

DATE WELL COMPLETED 9-12-08

WELL CONSTRUCTION

Total Depth Drilled 30' ft.

Finished Well Depth 18' ft.

Borehole Diameter:

Top 6" in.

Bottom ____ in.

Well was finished: ☐ above grade ☑ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Steel protective casing installed? ☑ Yes ☐ No

Static Water Level after drilling 4 ft.

Water Level was Measured Using ____

Well was developed for ____ hours

at ____ gpm

Method of development ____

Pump Capacity ____ gpm

Pump Type ____

Drilling Fluid ____ Type of Rig Mini Sonic

Health and Safety Plan Submitted? ☑ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	Surface	6'			
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen 2" (No. Used 020)	6'	18'			
Blank Casings (No. Used)					
Tail Piece	16'	18'			
Gravel Pack	2'	16.50			
Grout	1'	2'		Neat Cement	51 lbs
				Bentonite	2 lbs

Grouting Method Gravity Feed.

Drilling Method Sonic Drilling

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations

0-10' Fill

10-20' Fine to Medium Sand some gravel

20-30' Sand + gravel

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company BOART LONGYEAR

Well Driller (Print) Joseph Cesaro

Driller's Signature Joseph Cesaro

Registration No. MW 294916 Date 9/12/08

AS-BUILT WELL LOCATION (NAD 83 HORIZONTAL DATUM)

NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: 748620.61 EASTING: 632423.84

OR

LATITUDE: ° ' " LONGITUDE: ° ' "

ORIGINAL: DEP *COPIES: DRILLER* *OWNER* *HEALTH DEPARTMENT*

307839

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit Number 2600088530

Atlas Sheet Coordinates 2614275

OWNER IDENTIFICATION EDGEWATER BOROUGH

Address 916 RIVER ROAD

City Edgewater State New Jersey Zip Code 07020

WELL LOCATION - If not the same as owner please give address **Owner's Well No.** MW-125

County Bergen Municipality Edgewater Boro Lot No. 4 Block No. 89

Address INTERSECTION OF GORGE & OLD RIVER MW-125

WELL USE Monitoring

DATE WELL STARTED 9-15-08

DATE WELL COMPLETED 9-15-08

WELL CONSTRUCTION

Total Depth Drilled 25' ft.

Finished Well Depth 17' ft.

Borehole Diameter:

Top 6" in.

Bottom ____ in.

Well was finished: ☐ above grade ☑ flush mounted

If finished above grade, casing height (stick up) above land surface 0 ft.

Steel protective casing installed? ☑ Yes ☐ No

Static Water Level after drilling 4 ft.

Water Level was Measured Using ____

Well was developed for ____ hours at ____ gpm

Method of development ____

Pump Capacity ____ gpm

Pump Type ____

Drilling Fluid ____ Type of Rig MINISONIC

Health and Safety Plan Submitted? ☑ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	surface	5'			
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used 020) 2"	5'	15'			
Blank Casings (No. Used)					
Tail Piece	15'	17'			
Gravel Pack	3'	15.50			
Grout	1'	3'		Neat Cement Bentonite	42 lbs 2 lbs

Grouting Method Gravity Feed.

Drilling Method Sonic Drilling.

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations

0-25 Fine to coarse gravel some Fine/Med Sand
25-11 Silty gravel
11-15 Fine sand w/ med and some gravel
15-25 Silt + Clay

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company BOART LONGYEAR

Well Driller (Print) Joseph Cesaro

Driller's Signature [signature]

Registration No. MW294916 Date 9/15/08

AS-BUILT WELL LOCATION (NAD 83 HORIZONTAL DATUM)

NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: 719375.31 EASTING: 632626.92

OR

LATITUDE: ° ' " LONGITUDE: ° ' "

ORIGINAL: DEP *COPIES: DRILLER* *OWNER* *HEALTH DEPARTMENT*

307840

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit Number 2600088531

Atlas Sheet Coordinates 2614276

OWNER IDENTIFICATION EDGEWATER BOROUGH

Address 916 RIVER ROAD

City Edgewater State New Jersey Zip Code 07020

WELL LOCATION - If not the same as owner please give address Owner's Well No. MW-126

County Bergen Municipality Edgewater Boro Lot No. 1 Block No. 93

Address INTERSECTION OF GORGE & RIVER MW-126

WELL USE Monitoring

DATE WELL STARTED 10-14-08

DATE WELL COMPLETED 10-14-08

WELL CONSTRUCTION

Total Depth Drilled 30' ft.

Finished Well Depth 20' ft.

Borehole Diameter:

Top 6" in.

Bottom ____ in.

Well was finished: ☐ above grade ☑ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Steel protective casing installed? ☑ Yes ☐ No

Static Water Level after drilling 4 ft.

Water Level was Measured Using ____

Well was developed for ____ hours at ____ gpm

Method of development ____

Pump Capacity ____ gpm

Pump Type ____

Drilling Fluid ____ Type of Rig Mini Sonic

Health and Safety Plan Submitted? ☑ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	surface	8'			
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen 2" (No. Used 020)	8	18'			
Blank Casings (No. Used)					
Tail Piece	18'	20'			
Gravel Pack	4'	20'			
Grout	1'	4'		Neat Cement Bentonite	52 lbs 3 lbs

Grouting Method Gravity Feed.

Drilling Method Sonic drilling

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations

0-14 Fill
14-15 Silty Clay
15-20 Fine Sand w/ med Sand

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company BOART LONGYEAR

Well Driller (Print) Joseph Gesaro

Driller's Signature [signature]

Registration No. MW 294916 Date 10/14/08

AS-BUILT WELL LOCATION (NAD 83 HORIZONTAL DATUM)

NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: 719166.7 EASTING: 632793.6

OR

LATITUDE: ° ' " LONGITUDE: ° ' "

ORIGINAL: DEP *COPIES: DRILLER* *OWNER* *HEALTH DEPARTMENT*

307841

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit Number 2600088528

Atlas Sheet Coordinates 2614275

OWNER IDENTIFICATION MB EDGEWATER, LLC

Address EAST 80 / RT 4 ATRIUM # 128

City Paramus State New Jersey Zip Code 07652

WELL LOCATION - If not the same as owner please give address Owner's Well No. MW ~~122~~-127

County Bergen Municipality Edgewater Boro Lot No. 1.01 Block No. 93

Address 143 OLD RIVER ROAD (MW-122) FORMER FAESY BESTOFF BLD

WELL USE Monitoring

DATE WELL STARTED 9/11/08

DATE WELL COMPLETED 9/11/08

WELL CONSTRUCTION

Total Depth Drilled 30' ft.

Finished Well Depth 18' ft.

Borehole Diameter:

Top 6" in.

Bottom ____ in.

Well was finished: ☐ above grade ☑ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Steel protective casing installed? ☑ Yes ☐ No

Static Water Level after drilling 4 ft.

Water Level was Measured Using ____

Well was developed for ____ hours at ____ gpm

Method of development ____

Pump Capacity ____ gpm

Pump Type ____

Drilling Fluid ____ Type of Rig Mini Sonic

Health and Safety Plan Submitted? ☑ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	Surface	6'			
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or (Screen) 2" (No. Used 020)	6'	16'			
Blank Casings (No. Used)					
Tail Piece	16'	18'			
Gravel Pack	2'	16.5'			
Grout	1'	2'		Neat Cement Bentonite	31 lbs 2 lbs

Grouting Method Gravity Feed

Drilling Method Sonic Drilling

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations

0-3 Gravel Fine to Coarse w/ some Silt.

3-8 Silt

8-15 Peaty Clay w/ some gravel

15-30 Peaty Silt w/ some Clay

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company BOART LONGYEAR

Well Driller (Print) Joseph Cesano

Driller's Signature Joseph Cesano

Registration No. MW 294916 Date 9/11/08

AS-BUILT WELL LOCATION (NAD 83 HORIZONTAL DATUM)

NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: 718878.53 EASTING: 632458.81

OR

LATITUDE: ° ' " LONGITUDE: ° ' "

ORIGINAL: DEP *COPIES: DRILLER* *OWNER* *HEALTH DEPARTMENT*

307842

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit Number P200900834

Atlas Sheet Coordinates 2614275

OWNER IDENTIFICATION COFFEE ASSOC. LLC.

Address 178 OLD RIVER ROAD

City Edgewater State New Jersey Zip Code 07020

WELL LOCATION - If not the same as owner please give address **Owner's Well No.** MW-128

County Bergen Municipality Edgewater Boro Lot No. 1 Block No. 94

Address 178 OLD RIVER ROAD MW-128

WELL USE Monitoring

DATE WELL STARTED 2-24-09

DATE WELL COMPLETED 2-26-09

WELL CONSTRUCTION

Total Depth Drilled 17.5 ft.

Finished Well Depth 17.5 ft.

Borehole Diameter:

Top 10 in.

Bottom 10 in.

Well was finished: ☐ above grade ☑ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Steel protective casing installed? ☐ Yes ☑ No

Static Water Level after drilling 7 ft.

Water Level was Measured Using Tape

Well was developed for 1½ hours

at 1 gpm

Method of development Sub Pump

Pump Capacity ____ gpm

Pump Type ____

Drilling Fluid ____ Type of Rig Hurricane

Health and Safety Plan Submitted? ☑ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	5.5	2	PVC	Sch 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used .010)	5.5	15.5	2	PVC	Sch 40
Blank Casings (No. Used)					
Tail Piece	15.5	17.5		Sump	
Gravel Pack	3.5	17.5		Morie #1	
Grout	0	3.5		Neat Cement Bentonite	47 lbs 3 lbs

Grouting Method Gravity

Drilling Method HSA

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations

0-6' Asphalt + rock

6'-9' Silty Sand

9'-17.5' Fill Material

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company ENVIRONMENTAL PROBING INVESTIGATI(

Well Driller (Print) Ronald Higgins

Driller's Signature Ronald Higgins

Registration No. J0013755 Date 3/7/09

AS-BUILT WELL LOCATION (NAD 83 HORIZONTAL DATUM)

NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: 719192 **EASTING:** 632444

OR

LATITUDE: ___ ° ___ ' ___.___ " **LONGITUDE:** ___ ° ___ ' ___.___ "

ORIGINAL: DEP ***COPIES: DRILLER*** ***OWNER*** ***HEALTH DEPARTMENT***

307843

New Jersey Department of Environmental Protection
Bureau of Water Allocation

Well Permit Number P200900835

MONITORING WELL RECORD

Atlas Sheet Coordinates 2614275

OWNER IDENTIFICATION COFFEE ASSOC. LLC.

Address 178 OLD RIVER ROAD

City Edgewater State New Jersey Zip Code 07020

WELL LOCATION - If not the same as owner please give address **Owner's Well No.** MW-129

County Bergen Municipality Edgewater Boro Lot No. 1 Block No. 94

Address 178 OLD RIVER ROAD MW-129

WELL USE Monitoring

DATE WELL STARTED 2-26-09

DATE WELL COMPLETED 2-26-09

WELL CONSTRUCTION

Total Depth Drilled 17 ft.

Finished Well Depth 17 ft.

Borehole Diameter:

Top 10 in.

Bottom 10 in.

Well was finished: ☐ above grade ☑ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Steel protective casing installed? ☐ Yes ☑ No

Static Water Level after drilling 7 ft.

Water Level was Measured Using Tape

Well was developed for 1/2 hours

at 1 gpm

Method of development Sub Pump

Pump Capacity ____ gpm

Pump Type ____

Drilling Fluid ____ Type of Rig Hurricane

Health and Safety Plan Submitted? ☑ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	5	2	PVC	Sch 40
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used .020)	5	15	2	PVC	Sch 40
Blank Casings (No. Used)					
Tail Piece	15	17		Sump	
Gravel Pack	3	17		Morie #1	
Grout	0	3		Neat Cement Bentonite	47 lbs 3 lbs

Grouting Method Gravity

Drilling Method HSA

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations

0-6" Asphalt

6"-17' Brown Silty Sand

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company ENVIRONMENTAL PROBING INVESTIGATI

Well Driller (Print) Ronald Higgins

Driller's Signature Ronald Higgins

Registration No. J00 13755 Date 3/17/09

AS-BUILT WELL LOCATION (NAD 83 HORIZONTAL DATUM)

NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: 719076 **EASTING:** 632425

OR

LATITUDE: __° __' __.__" **LONGITUDE:** __° __' __.__"

ORIGINAL: DEP ***COPIES: DRILLER*** ***OWNER*** ***HEALTH DEPARTMENT***

307844

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit Number 2600088534

Atlas Sheet Coordinates 2614276

OWNER IDENTIFICATION 1 PARK EDGEWATER, LLC

Address 485 WEST PUTNUM STREET

City Greenwich State Connecticut Zip Code 06830

WELL LOCATION - If not the same as owner please give address Owner's Well No. MW-130 A

County Bergen Municipality Edgewater Boro Lot No. 1 Block No. 99

Address 45 RIVER ROAD (MW-130A) FORMER LEVER BROTHERS

WELL USE Monitoring

DATE WELL STARTED 10-9-08

DATE WELL COMPLETED 10-9-08

WELL CONSTRUCTION

Total Depth Drilled 25' ft.

Finished Well Depth 17' ft.

Borehole Diameter:

Top 6" in.

Bottom in.

Well was finished: ☐ above grade ☑ flush mounted

If finished above grade, casing height (stick up) above land surface ft.

Steel protective casing installed? ☑ Yes ☐ No

Static Water Level after drilling 4.15 ft.

Water Level was Measured Using

Well was developed for hours

at gpm

Method of development

Pump Capacity gpm

Pump Type

Drilling Fluid Type of Rig Mini Sonic

Health and Safety Plan Submitted? ☑ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	5'			
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used 020)	5'	15			
Blank Casings (No. Used)					
Tail Piece	15'	17'			
Gravel Pack	3	17			
Grout	1'	3'		Neat Cement Bentonite	42 lbs 2 lbs

Grouting Method Gravity Feed

Drilling Method Sonic Drilling

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations

0-10 Fill

~~10-15~~

10-25 Fine to Med Sand w/silt

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company BOART LONGYEAR

Well Driller (Print) Joseph Cesaro

Driller's Signature Joseph Cesaro

Registration No. MW 294916 Date 10/9/08

AS-BUILT WELL LOCATION (NAD 83 HORIZONTAL DATUM)

NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: 718485.1 **EASTING:** 633029.6

OR

LATITUDE: ° ' " **LONGITUDE:** ° ' "

ORIGINAL: DEP *COPIES: DRILLER* *OWNER* *HEALTH DEPARTMENT*

307845

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit Number 2600088535

Atlas Sheet Coordinates 2614276

OWNER IDENTIFICATION 1 PARK EDGEWATER, LLC

Address 485 WEST PUTNUM STREET

City Greenwich State Connecticut Zip Code 06830

WELL LOCATION - If not the same as owner please give address **Owner's Well No.** MW-130B

County Bergen Municipality Edgewater Boro Lot No. 1 Block No. 99

Address 45 RIVER ROAD (MW-130B) FORMER LEVER BROTHERS

WELL USE Monitoring

DATE WELL STARTED 10-9-08

DATE WELL COMPLETED 10-9-08

WELL CONSTRUCTION

Total Depth Drilled 30' ft.

Finished Well Depth 27' ft.

Borehole Diameter:

Top 6 in.

Bottom ____ in.

Well was finished: ☐ above grade ☑ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Steel protective casing installed? ☑ Yes ☐ No

Static Water Level after drilling 4.10 ft.

Water Level was Measured Using ____

Well was developed for ____ hours at ____ gpm

Method of development ____

Pump Capacity ____ gpm

Pump Type ____

Drilling Fluid ____ Type of Rig Mini sonic

Health and Safety Plan Submitted? ☑ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	15'			
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	15'	25'			
Blank Casings (No. Used)					
Tail Piece	25'	27'			
Gravel Pack	11'	27			
Grout	1'	11'		Neat Cement Bentonite	115 lbs 5 lbs

Grouting Method Tremie grout

Drilling Method Sonic Drilling

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations

0-10 Fill
10-23 Fine to medium sand w/silt
23-25 Silty Clay
25-30 Sand w/silty clay

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company BOART LONGYEAR

Well Driller (Print) Joseph Cesare

Driller's Signature Joseph Cesare

Registration No. MW 294916 Date 10/9/08

AS-BUILT WELL LOCATION (NAD 83 HORIZONTAL DATUM)

NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: 718487.2 **EASTING:** 633030.8

OR

LATITUDE: ° ' " **LONGITUDE:** ° ' "

ORIGINAL: DEP *COPIES: DRILLER* *OWNER* *HEALTH DEPARTMENT*

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit Number 2600088536

Atlas Sheet Coordinates 2614276

OWNER IDENTIFICATION 1 PARK EDGEWATER, LLC

Address 485 WEST PUTNUM STREET

City Greenwich State Connecticut Zip Code 06830

WELL LOCATION - If not the same as owner please give address **Owner's Well No.** MW-131

County Bergen Municipality Edgewater Boro Lot No. 1 Block No. 99

Address 45 RIVER ROAD (MW-131) FORMER LEVER BROTHERS

WELL USE Monitoring

DATE WELL STARTED 10-6-08

DATE WELL COMPLETED 10-6-08

WELL CONSTRUCTION

Total Depth Drilled 30' ft.

Finished Well Depth 16' ft.

Borehole Diameter:

Top 6" in.

Bottom ____ in.

Well was finished: ☐ above grade ☑ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Steel protective casing installed? ☑ Yes ☐ No

Static Water Level after drilling 4.2 ft.

Water Level was Measured Using M Scope

Well was developed for ____ hours

at ____ gpm

Method of development ____

Pump Capacity ____ gpm

Pump Type ____

Drilling Fluid ____ Type of Rig Mini Sonic

Health and Safety Plan Submitted? ☑ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	4'			
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used 020)	4'	14'			
Blank Casings (No. Used)					
Tail Piece	14'	16'			
Gravel Pack	2'	16'			
Grout		4		Neat Cement	40 lbs
				Bentonite	2 lbs

Grouting Method Gravity Feed

Drilling Method Sonic Drilling

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations

0-10 Fine to Med. Sand
10-20 Peat
20-30 ~~Lost Sample~~
No Recovery

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company BOART LONGYEAR

Well Driller (Print) Joseph Cesaro

Driller's Signature Joseph Cesaro

Registration No. MW 294916 Date 10/6/08

AS-BUILT WELL LOCATION (NAD 83 HORIZONTAL DATUM)

NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: 740179.9 **EASTING:** 633097.7

OR

LATITUDE: ° ' " **LONGITUDE:** ° ' "

ORIGINAL: DEP *COPIES: DRILLER* *OWNER* *HEALTH DEPARTMENT*

307847

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit Number 2600088537

Atlas Sheet Coordinates 2614276

OWNER IDENTIFICATION 1 PARK EDGEWATER, LLC

Address 485 WEST PUTNUM STREET

City Greenwich State Connecticut Zip Code 06830

WELL LOCATION - If not the same as owner please give address Owner's Well No. MW-132

County Bergen Municipality Edgewater Boro Lot No. 1 Block No. 99

Address 45 RIVER ROAD (MW-132) FORMER LEVER BROTHERS

WELL USE Monitoring

DATE WELL STARTED 10-7-08

DATE WELL COMPLETED 10-7-08

WELL CONSTRUCTION

Total Depth Drilled 20' ft.

Finished Well Depth 16' ft.

Borehole Diameter:

Top 6" in.

Bottom ____ in.

Well was finished: ☐ above grade ☑ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Steel protective casing installed? ☑ Yes ☐ No

Static Water Level after drilling 4 ft.

Water Level was Measured Using M scope

Well was developed for ____ hours at ____ gpm

Method of development ____

Pump Capacity ____ gpm

Pump Type ____

Drilling Fluid ____ Type of Rig Mini sonic

Health and Safety Plan Submitted? ☑ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0'	4'			
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used 020 SLOT)	4'	14			
Blank Casings (No. Used)					
Tail Piece	14'	16'			
Gravel Pack	2	16			
Grout		4		Neat Cement Bentonite	40 lbs 2 lbs

Grouting Method ~~Tremie~~ Gravity Feed

Drilling Method Sonic drilling

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations

0-14 Silt and Sand w/ wood. Some gravel

14-20 Silty Clay.

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company BOART LONGYEAR

Well Driller (Print) Joseph Cesaro

Driller's Signature Joseph Cesaro

Registration No. MW 274916 Date 10/7/08

AS-BUILT WELL LOCATION (NAD 83 HORIZONTAL DATUM)

NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: 718079.2 EASTING: 633160.0

OR

LATITUDE: ° ' " LONGITUDE: ° ' "

ORIGINAL: DEP *COPIES: DRILLER* *OWNER* *HEALTH DEPARTMENT*

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit Number 2600088525

Atlas Sheet Coordinates 2614276

OWNER IDENTIFICATION PROMENADE @ EDGEWATER CONDOMINUM ASSOC.

Address 525 RIVER ROAD ATTN: LEN PERES

City Edgewater State New Jersey Zip Code 07020

WELL LOCATION - If not the same as owner please give address Owner's Well No. MW-133

County Bergen Municipality Edgewater Boro Lot No. 3 Block No. 92

Address 225 RIVER ROAD (MW-133) EDGEWATER ENTERPRISES

WELL USE Monitoring

DATE WELL STARTED 10-2-08

DATE WELL COMPLETED 10-2-08

WELL CONSTRUCTION

Total Depth Drilled 25' ft.

Finished Well Depth 15' ft.

Borehole Diameter:

Top 6" in.

Bottom ____ in.

Well was finished: ☐ above grade ☑ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Steel protective casing installed? ☑ Yes ☐ No

Static Water Level after drilling 9.85 ft.

Water Level was Measured Using ____

Well was developed for ____ hours at ____ gpm

Method of development ____

Pump Capacity ____ gpm

Pump Type ____

Drilling Fluid ____ Type of Rig Mini Sonic

Health and Safety Plan Submitted? ☑ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	15'			
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen 1" (No. Used 020)	10'	15'			
Blank Casings (No. Used)					
Tail Piece					
Gravel Pack	6'	15'			
Grout	0'			Neat Cement	31 lbs
				Bentonite	1 lbs

Grouting Method Gravity Feed grout

Drilling Method Sonic drilling

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations

0-15 - Silt w/ fine sand

15-25 Rock Flow

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company BOART LONGYEAR

Well Driller (Print) Joseph Cesaro

Driller's Signature [signature]

Registration No. MW 294916 Date 10/2/08

AS-BUILT WELL LOCATION (NAD 83 HORIZONTAL DATUM)

NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: 718804.2 **EASTING:** 634785

OR

LATITUDE: ___ ° ___ ' ___ " **LONGITUDE:** ___ ° ___ ' ___ "

ORIGINAL: DEP ***COPIES: DRILLER*** ***OWNER*** ***HEALTH DEPARTMENT***

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit Number 2600088526

Atlas Sheet Coordinates 2614276

OWNER IDENTIFICATION PROMENADE @ EDGEWATER CONDOMINUM ASSOC.

Address 525 RIVER ROAD ATTN: LEN PERES

City Edgewater State New Jersey Zip Code 07020

WELL LOCATION - If not the same as owner please give address Owner's Well No. MW-134

County Bergen Municipality Edgewater Boro Lot No. 3 Block No. 92

Address 225 RIVER ROAD (MW-134) EDGEWATER ENTERPRISES

WELL USE Monitoring

DATE WELL STARTED 10-1-08

DATE WELL COMPLETED 10-1-08

WELL CONSTRUCTION

Total Depth Drilled 26' ft.

Finished Well Depth 23' ft.

Borehole Diameter:

Top 6" in.

Bottom in.

Well was finished: ☐ above grade ☑ flush mounted

If finished above grade, casing height (stick up) above land surface ft.

Steel protective casing installed? ☑ Yes ☐ No

Static Water Level after drilling 10.7 ft.

Water Level was Measured Using

Well was developed for hours

at gpm

Method of development

Pump Capacity gpm

Pump Type

Drilling Fluid Type of Rig Mini Sonic

Health and Safety Plan Submitted? ☑ Yes ☐ No

Level of Protection used on site (circle one) None D C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0'	11'			
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen 2" (No. Used 020)	11'	21'			
Blank Casings (No. Used)					
Tail Piece	21'	23'			
Gravel Pack	7'	23'			
Grout	1'	7		Neat Cement Bentonite	85 lbs 4 lbs

Grouting Method Gravity Feed Grout

Drilling Method

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations

0-25 Silt / Clay Silt / Fine Sand

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company BOART LONGYEAR

Well Driller (Print) Joseph Cesaro

Driller's Signature Joseph Cesaro

Registration No. MW 294916 Date 10/1/08

AS-BUILT WELL LOCATION (NAD 83 HORIZONTAL DATUM)

NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: 718686.2 EASTING: 633697.7

OR

LATITUDE: 0 ' " LONGITUDE: 0 ' "

ORIGINAL: DEP *COPIES: DRILLER* *OWNER* *HEALTH DEPARTMENT*

307850

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit Number 2600088538

Atlas Sheet Coordinates 2614276

OWNER IDENTIFICATION PROMENADE @ EDGEWATER CONDOMINIUMS ASSOC

Address 525 RIVER ROAD ATTN: LEN PERES

City Edgewater State New Jersey Zip Code 07020

WELL LOCATION - If not the same as owner please give address Owner's Well No. MW-135

County Bergen Municipality Edgewater Boro Lot No. 3 Block No. 92

Address 225 RIVER ROAD (MW-135) EDGEWATER ENTERPRISES

WELL USE Monitoring

DATE WELL STARTED 9-16-08

DATE WELL COMPLETED 9-16-08

WELL CONSTRUCTION

Total Depth Drilled 45' ft.

Finished Well Depth 32' ft.

Borehole Diameter:

Top 8" in.

Bottom in.

Well was finished: ☐ above grade ☑ flush mounted

If finished above grade, casing height (stick up) above land surface ft.

Steel protective casing installed? ☑ Yes ☐ No

Static Water Level after drilling 11' ft.

Water Level was Measured Using

Well was developed for hours

at gpm

Method of development

Pump Capacity gpm

Pump Type

Drilling Fluid Type of Rig

Health and Safety Plan Submitted? ☐ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	0	20'			
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or (Screen) 4" (No. Used 020)	20'	30'			
Blank Casings (No. Used)					
Tail Piece	30'	32'			
Gravel Pack	16'	30.50			
Grout	1'	16		Neat Cement Bentonite	165 lbs 6 lbs

Grouting Method Tremie Grout

Drilling Method Sonic drilling

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations

0-18 Sandy Silt
18-20 Clay Silt
20-25 Silty Clay and Gravel
25-32 Silty Clay Sand
Silt w/ gravel
30-40 Boulder
40-45 Gravel, Silty Clay
Rock

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company BOART LONGYEAR

Well Driller (Print) Joseph Cesare

Driller's Signature Joseph Cesare

Registration No. MW 294916 Date 9/16/08

AS-BUILT WELL LOCATION (NAD 83 HORIZONTAL DATUM)

NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: 718635.2 EASTING: 633660

OR

LATITUDE: ° ' " LONGITUDE: ° ' "

ORIGINAL: DEP *COPIES: DRILLER* *OWNER* *HEALTH DEPARTMENT*

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit Number 2600088527

Atlas Sheet Coordinates 2614275

OWNER IDENTIFICATION MB EDGEWATER, LLC

Address EAST 80 / RT 4 ATRIUM # 128

City Paramus State New Jersey Zip Code 07652

WELL LOCATION - If not the same as owner please give address Owner's Well No. MW-136

County Bergen Municipality Edgewater Boro Lot No. 1.01 Block No. 93

Address 143 OLD RIVER ROAD (MW-136) FORMER FAESY BESTOFF BLD

WELL USE Monitoring

DATE WELL STARTED 9-10-08

DATE WELL COMPLETED 9-10-08

WELL CONSTRUCTION

Total Depth Drilled 30' ft.

Finished Well Depth 12' ft.

Borehole Diameter:

Top 6" in.

Bottom ____ in.

Well was finished: ☐ above grade ☑ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Steel protective casing installed? ☑ Yes ☐ No

Static Water Level after drilling 4 ft.

Water Level was Measured Using ____

Well was developed for ____ hours

at ____ gpm

Method of development ____

Pump Capacity ____ gpm

Pump Type ____

Drilling Fluid ____ Type of Rig Minisonic

Health and Safety Plan Submitted? ☑ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	surface	5'			
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used 020)	5'	10'			
Blank Casings (No. Used)					
Tail Piece	10'	12'			
Gravel Pack	2'	10.50			
Grout	1'	2'		Neat Cement	31 lbs
				Bentonite	2 lbs

Grouting Method Gravity Feed

Drilling Method Sonic Drilling

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations

0-15 Coarse Sand + gravel
15-25 Peaty Clay
25-30 Silty Clay

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company BOART LONGYEAR

Well Driller (Print) Joseph Cesaro

Driller's Signature Joseph Cesaro

Registration No. MW 294916 Date 9/10/08

AS-BUILT WELL LOCATION (NAD 83 HORIZONTAL DATUM)

NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: 718854.68 EASTING: 632600.74

OR

LATITUDE: ° ' " LONGITUDE: ° ' "

ORIGINAL: DEP *COPIES: DRILLER* *OWNER* *HEALTH DEPARTMENT*

307852

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit Number 2600088512

Atlas Sheet Coordinates 2614276

OWNER IDENTIFICATION FIOLA FAMILY ASSOCIATES, LP

Address 884 EDGEWATER AVENUE

City Ridgefield State New Jersey Zip Code 07657

WELL LOCATION - If not the same as owner please give address Owner's Well No. PZ-6D

County Bergen Municipality Edgewater Boro Lot No. 1 Block No. 95

Address 145 RIVER ROAD / (PZ-6D) QUANTA PROPERTY

WELL USE Monitoring

DATE WELL STARTED 9-24-08

DATE WELL COMPLETED 9-24-08

WELL CONSTRUCTION

Total Depth Drilled 34.50 ft.

Finished Well Depth 32' ft.

Borehole Diameter:

Top 6' in.

Bottom in.

Well was finished: ☐ above grade ☐ flush mounted

If finished above grade, casing height (stick up) above land surface ft.

Steel protective casing installed? ☐ Yes ☐ No

Static Water Level after drilling 1.50 ft.

Water Level was Measured Using

Well was developed for hours at gpm

Method of development

Pump Capacity gpm

Pump Type

Drilling Fluid Type of Rig Mini SONIC

Health and Safety Plan Submitted? ☑ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	Surface	28'			
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen 2" (No. Used 020)	28'	30'			
Blank Casings (No. Used)					
Tail Piece	30'	32'			
Gravel Pack	30'	32.00			
Grout	20'	35'		Neat Cement Bentonite	460 lbs 22 lbs

Grouting Method Tremie Grout.

Drilling Method Mini SONIC

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations

0-15 Fill
15-20 Silt w/ Some Fine Sand
20-25 gravel and clay w/ Silt
25-35 Bedrock.

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company BOART LONGYEAR

Well Driller (Print) Joseph Cesaro

Driller's Signature Joseph Cesaro

Registration No. MW 274916 Date 9/24/08

AS-BUILT WELL LOCATION (NAD 83 HORIZONTAL DATUM)

NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: 718 580 EASTING: 633 648

OR

LATITUDE: ° ' " LONGITUDE: ° ' "

ORIGINAL: DEP *COPIES: DRILLER* *OWNER* *HEALTH DEPARTMENT*

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit Number 2600088519

Atlas Sheet Coordinates 2614276

OWNER IDENTIFICATION FIOLA FAMILY ASSOCIATES, LP

Address 884 EDGEWATER AVENUE

City Ridgefield State New Jersey Zip Code 07657

WELL LOCATION - If not the same as owner please give address **Owner's Well No.** PZ-6I

County Bergen Municipality Edgewater Boro Lot No. 1 Block No. 95

Address 145 RIVER ROAD / (PZ-6I) QUANTA PROPERTY

WELL USE Monitoring

DATE WELL STARTED 9-24-08

DATE WELL COMPLETED 9-24-08

WELL CONSTRUCTION

Total Depth Drilled ____ ft.

Finished Well Depth 20' ft.

Borehole Diameter:

Top ____ in.

Bottom ____ in.

Well was finished: ☐ above grade ☐ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Steel protective casing installed? ☐ Yes ☐ No

Static Water Level after drilling ____ ft.

Water Level was Measured Using ____

Well was developed for ____ hours at ____ gpm

Method of development ____

Pump Capacity ____ gpm

Pump Type ____

Drilling Fluid ____ Type of Rig Mini Sonic

Health and Safety Plan Submitted? ☑ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	surface	18'			
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or (Screen) (No. Used 020)	16	18'			
Blank Casings (No. Used)					
Tail Piece	18'	20'			
Gravel Pack	19'	20'			
Grout	10'	13'		Neat Cement Bentonite	237 lbs 10 lbs

Grouting Method Tremie Grout

Drilling Method Sonic drilling

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations

0-10 Fill
10-15 Fill
15-20 Silt w/ some fine sand

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company BOART LONGYEAR

Well Driller (Print) Joseph Cesaro

Driller's Signature [signature]

Registration No. MW 294916 Date 9/24/08

AS-BUILT WELL LOCATION (NAD 83 HORIZONTAL DATUM)

NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: 718580 **EASTING:** 683648

OR

LATITUDE: 0 ' " **LONGITUDE:** 0 ' "

ORIGINAL: DEP *COPIES: DRILLER* *OWNER* *HEALTH DEPARTMENT*

307854

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit Number 2600088518

Atlas Sheet Coordinates 2614276

OWNER IDENTIFICATION FIOLA FAMILY ASSOCIATES, LP

Address 884 EDGEWATER AVENUE

City Ridgefield State New Jersey Zip Code 07657

WELL LOCATION - If not the same as owner please give address **Owner's Well No.** PZ-6S

County Bergen Municipality Edgewater Boro Lot No. 1 Block No. 95

Address 145 RIVER ROAD / (PZ-6S) QUANTA PROPERTY

WELL USE Monitoring

DATE WELL STARTED 9-25-08

DATE WELL COMPLETED 9-25-08

WELL CONSTRUCTION

Total Depth Drilled ____ ft.

Finished Well Depth 10' ft.

Borehole Diameter:

Top ____ in.

Bottom ____ in.

Well was finished: ☐ above grade ☐ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Steel protective casing installed? ☐ Yes ☐ No

Static Water Level after drilling ____ ft.

Water Level was Measured Using ____

Well was developed for ____ hours at ____ gpm

Method of development ____

Pump Capacity ____ gpm

Pump Type ____

Drilling Fluid ____ Type of Rig Sonic

Health and Safety Plan Submitted? ☑ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	surface	8'			
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen 1" (No. Used 020)	6'	8'			
Blank Casings (No. Used)					
Tail Piece	8'	10'			
Gravel Pack	4'	10'			
Grout	1'	4		Neat Cement Bentonite	52 lbs 3 lbs

Grouting Method Gravity Feed

Drilling Method Sonic Drilling

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations

0-10 Fill

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company BOART LONGYEAR

Well Driller (Print) Joseph Cesare

Driller's Signature Joseph Cesare

Registration No. MW 294916 Date 9/25/08

AS-BUILT WELL LOCATION (NAD 83 HORIZONTAL DATUM)

NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: 718580.0 **EASTING:** 633648

OR

LATITUDE: ° ' " **LONGITUDE:** ° ' "

ORIGINAL: DEP *COPIES: DRILLER* *OWNER* *HEALTH DEPARTMENT*

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit Number 2600088513

Atlas Sheet Coordinates 2614276

OWNER IDENTIFICATION FIOLA FAMILY ASSOCIATES, LP

Address 884 EDGEWATER AVENUE

City Ridgefield State New Jersey Zip Code 07657

WELL LOCATION - If not the same as owner please give address Owner's Well No. PZ-7D

County Bergen Municipality Edgewater Boro Lot No. 1 Block No. 95

Address 145 RIVER ROAD / (PZ-7D) QUANTA PROPERTY

WELL USE Monitoring

DATE WELL STARTED 9/19/08

DATE WELL COMPLETED 9/19/08

WELL CONSTRUCTION

Total Depth Drilled 40' ft.

Finished Well Depth 37' ft.

Borehole Diameter:

Top 6" in.

Bottom ____ in.

Well was finished: ☐ above grade ☐ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Steel protective casing installed? ☐ Yes ☐ No

Static Water Level after drilling ____ ft.

Water Level was Measured Using ____

Well was developed for ____ hours at ____ gpm

Method of development ____

Pump Capacity ____ gpm

Pump Type ____

Drilling Fluid ____ Type of Rig Minisonic

Health and Safety Plan Submitted? ☐ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	Surface	33'			
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or ~~Screen~~ 2" (No. Used 020)	33'	35'			
Blank Casings (No. Used)					
Tail Piece	35	37'			
Gravel Pack	31	35.50			
Grout	25'	31		Neat Cement Bentonite	260 lbs 12 lbs

Grouting Method Tremie grout

Drilling Method Mini sonic

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations

0-16 Fill
16-20 Silt w/ Trace Sand Shells Wood
20-30 Silty Clay
30-36 Silt w Sand
36 - Bedrock

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company BOART LONGYEAR

Well Driller (Print) Joseph Cesaro

Driller's Signature Joseph Cesaro

Registration No. MW 294916 Date 9/19/08

AS-BUILT WELL LOCATION (NAD 83 HORIZONTAL DATUM)

NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: 718511.8 EASTING: 633625

OR

LATITUDE: ___ ° ___ ' ___ " LONGITUDE: ___ ° ___ ' ___ "

ORIGINAL: DEP *COPIES: DRILLER* *OWNER* *HEALTH DEPARTMENT*

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit Number 2600088521

Atlas Sheet Coordinates 2614276

OWNER IDENTIFICATION FIOLA FAMILY ASSOCIATES, LP

Address 884 EDGEWATER AVENUE

City Ridgefield State New Jersey Zip Code 07657

WELL LOCATION - If not the same as owner please give address Owner's Well No. PZ-7I

County Bergen Municipality Edgewater Boro Lot No. 1 Block No. 95

Address 145 RIVER ROAD / (PZ-7I) QUANTA PROPERTY

WELL USE Monitoring

DATE WELL STARTED 9-19-08

DATE WELL COMPLETED 9-19-08

WELL CONSTRUCTION

Total Depth Drilled ____ ft.

Finished Well Depth 25 ft.

Borehole Diameter:

Top ____ in.

Bottom ____ in.

Well was finished: ☐ above grade ☐ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Steel protective casing installed? ☐ Yes ☐ No

Static Water Level after drilling ____ ft.

Water Level was Measured Using ____

Well was developed for ____ hours at ____ gpm

Method of development ____

Pump Capacity ____ gpm

Pump Type ____

Drilling Fluid ____ Type of Rig Minisonic

Health and Safety Plan Submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	Surface	21'			
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen 1" (No. Used 020)	21'	23'			
Blank Casings (No. Used)					
Tail Piece	23'	25			
Gravel Pack	19'	25'			
Grout	12'	19'		Neat Cement Bentonite	125 lbs 5 lbs

Grouting Method Tremie grout

Drilling Method Minisonic

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations

0-16 Fill

16-20 Silt w/ trace Sand shells wood

20-25 Silty Clay

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company BOART LONGYEAR

Well Driller (Print) Joseph Cesner

Driller's Signature Joseph Cesner

Registration No. MW 294916 Date 9/19/08

AS-BUILT WELL LOCATION (NAD 83 HORIZONTAL DATUM)

NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: 718511.8 EASTING: 633625

OR

LATITUDE: ° ' " LONGITUDE: ° ' "

ORIGINAL: DEP *COPIES: DRILLER* *OWNER* *HEALTH DEPARTMENT*

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit Number 2600088520

Atlas Sheet Coordinates 2614276

OWNER IDENTIFICATION FIOLA FAMILY ASSOCIATES, LP

Address 884 EDGEWATER AVENUE

City Ridgefield State New Jersey Zip Code 07657

WELL LOCATION - If not the same as owner please give address **Owner's Well No.** PZ-7S

County Bergen Municipality Edgewater Boro Lot No. 1 Block No. 95

Address 145 RIVER ROAD / (PZ-7S) QUANTA PROPERTY

WELL USE Monitoring

DATE WELL STARTED 10-23-08

DATE WELL COMPLETED 10-23-08

WELL CONSTRUCTION

Total Depth Drilled ____ ft.

Finished Well Depth 12' ft.

Borehole Diameter:

Top 6" in.

Bottom ____ in.

Well was finished: ☐ above grade ☐ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Steel protective casing installed? ☐ Yes ☐ No

Static Water Level after drilling ____ ft.

Water Level was Measured Using ____

Well was developed for ____ hours at ____ gpm

Method of development ____

Pump Capacity ____ gpm

Pump Type ____

Drilling Fluid ____ Type of Rig Mini Sonic

Health and Safety Plan Submitted? ☒ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	surface	8'			
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen 2" (No. Used 020)	8'	12'			
Blank Casings (No. Used)					
Tail Piece	10'	12'			
Gravel Pack	5'	12'			
Grout	1'	5'		Neat Cement Bentonite	92 lbs 2 lbs

Grouting Method Gravity Feed

Drilling Method Sonic drilling

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations

0-12 Fill

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company BOART LONGYEAR

Well Driller (Print) Joseph Cesneo

Driller's Signature Joseph Cesneo

Registration No. MW 294916 Date 10/23/08

AS-BUILT WELL LOCATION (NAD 83 HORIZONTAL DATUM)

NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: 718511.8 **EASTING:** 633625

OR

LATITUDE: ° ' " **LONGITUDE:** ° ' "

ORIGINAL: DEP ***COPIES: DRILLER*** ***OWNER*** ***HEALTH DEPARTMENT***

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit Number 2600088514

Atlas Sheet Coordinates 2614276

OWNER IDENTIFICATION FIOLA FAMILY ASSOCIATES, LP

Address 884 EDGEWATER AVENUE

City Ridgefield State New Jersey Zip Code 07657

WELL LOCATION - If not the same as owner please give address **Owner's Well No.** PZ-8D

County Bergen Municipality Edgewater Boro Lot No. 1 Block No. 95

Address 145 RIVER ROAD / (PZ-8D) QUANTA PROPERTY

WELL USE Monitoring

DATE WELL STARTED 9-25-08

DATE WELL COMPLETED 9-30-08

WELL CONSTRUCTION

Total Depth Drilled 75' ft.

Finished Well Depth 58' ft.

Borehole Diameter:

Top 6" in.

Bottom ____ in.

Well was finished: ☐ above grade ☑ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Steel protective casing installed? ☑ Yes ☐ No

Static Water Level after drilling 1' ft.

Water Level was Measured Using ____

Well was developed for ____ hours

at ____ gpm

Method of development ____

Pump Capacity ____ gpm

Pump Type ____

Drilling Fluid ____ Type of Rig Mini Sonic

Health and Safety Plan Submitted? ☑ Yes ☐ No

Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	Surface	54			
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	54'	56'			
Blank Casings (No. Used)					
Tail Piece	56'	58'			
Gravel Pack	51'	58'			
Grout	42'	51		Neat Cement Bentonite	45 lbs 40 lbs

Grouting Method Tremie grout

Drilling Method Sonic drilling

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations

0-15 Fill
15-20 No Recovery
20-25 Silty Clay
25-33 Med Sand w/some Coarse Sand
33-40 Gravel
40-50 Silty Clay
50-60 Sand w/ Silt
60-67 Silt - Clay
67-75 Bedrock

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company BOART LONGYEAR

Well Driller (Print) Joseph Cesare

Driller's Signature Joseph Cesare

Registration No. MW 294916 Date 9/30/08

AS-BUILT WELL LOCATION (NAD 83 HORIZONTAL DATUM)

NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: 718375 EASTING: 633554.4

OR

LATITUDE: ° ' " LONGITUDE: ° ' "

ORIGINAL: DEP *COPIES: DRILLER* *OWNER* *HEALTH DEPARTMENT*

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit Number 2600088523

Atlas Sheet Coordinates 2614276

OWNER IDENTIFICATION FIOLA FAMILY ASSOCIATES, LP

Address 884 EDGEWATER AVENUE

City Ridgefield State New Jersey Zip Code 07657

WELL LOCATION - If not the same as owner please give address Owner's Well No. PZ-8I

County Bergen Municipality Edgewater Boro Lot No. 1 Block No. 95

Address 145 RIVER ROAD / (PZ-8I) QUANTA PROPERTY

WELL USE Monitoring

DATE WELL STARTED 9-30-08

DATE WELL COMPLETED 9-30-08

WELL CONSTRUCTION

Total Depth Drilled 42 ft.

Finished Well Depth 42' ft.

Borehole Diameter:

Top ____ in.

Bottom ____ in.

Well was finished: ☐ above grade ☐ flush mounted

If finished above grade, casing height (stick up) above land surface ____ ft.

Steel protective casing installed? ☐ Yes ☐ No

Static Water Level after drilling ____ ft.

Water Level was Measured Using ____

Well was developed for ____ hours at ____ gpm

Method of development ____

Pump Capacity ____ gpm

Pump Type ____

Drilling Fluid ____ Type of Rig Mini Sonic

Health and Safety Plan Submitted? ☐ Yes ☐ No

Level of Protection used on site (circle one) None D C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	Surface	38'			
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	38'	40'			
Blank Casings (No. Used)					
Tail Piece	40'	42'			
Gravel Pack	35'	42			
Grout	10'	35'		Neat Cement Bentonite	460 lbs 22 lbs

Grouting Method Tremie grout

Drilling Method Sonic drilling.

GEOLOGIC LOG

Note each depth where water was encountered in consolidated formations

0-15 Fill
15-20 No Recovery
20-25 Silty Clay
25-33 Med sand w/some course sand
33-40 Gravel
40-42 Silty clay

AS-BUILT WELL LOCATION (NAD 83 HORIZONTAL DATUM)

NJ STATE PLANE COORDINATE IN US SURVEY FEET

NORTHING: 718 375 EASTING: 633554.4

OR

LATITUDE: ° ' " LONGITUDE: ° ' "

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company BOART LONGYEAR

Well Driller (Print) Joseph Cesaro

Driller's Signature [signature]

Registration No. MW 29496 Date 9/30/08

ORIGINAL: DEP *COPIES: DRILLER* *OWNER* *HEALTH DEPARTMENT*

307860

New Jersey Department of Environmental Protection
Bureau of Water Allocation

MONITORING WELL RECORD

Well Permit Number 2600088522
Atlas Sheet Coordinates 2614276

OWNER IDENTIFICATION FIOLA FAMILY ASSOCIATES, LP
Address 884 EDGEWATER AVENUE
City Ridgefield State New Jersey Zip Code 07657

WELL LOCATION - If not the same as owner please give address Owner's Well No. PZ-8s
County Bergen Municipality Edgewater Boro Lot No. 1 Block No. 95
Address 145 RIVER ROAD / (PZ-8S) QUANTA PROPERTY

WELL USE Monitoring

DATE WELL STARTED 9-30-08
DATE WELL COMPLETED 9-30-08

WELL CONSTRUCTION
Total Depth Drilled ____ ft.
Finished Well Depth 10' ft.
Borehole Diameter:
Top 6" in.
Bottom ____ in.
Well was finished: ☐ above grade ☐ flush mounted
If finished above grade, casing height (stick up) above land surface ____ ft.
Steel protective casing installed? ☐ Yes ☐ No
Static Water Level after drilling ____ ft.
Water Level was Measured Using ____
Well was developed for ____ hours at ____ gpm
Method of development ____
Pump Capacity ____ gpm
Pump Type ____
Drilling Fluid ____ Type of Rig Minisonic
Health and Safety Plan Submitted? ☑ Yes ☐ No
Level of Protection used on site (circle one) None (D) C B A

Note: Measure all depths from land surface	Depth to Top (ft.)	Depth to Bottom (ft.)	Diameter (inches)	Material	Wgt./Rating (lbs/sch no.)
Single/Inner Casing	surface	6			
Middle Casing (for triple cased wells only)					
Outer Casing (largest diameter)					
Open Hole or Screen (No. Used)	6'	8'			
Blank Casings (No. Used)					
Tail Piece	8'	10'			
Gravel Pack	3'	10'			
Grout	1'	3'		Neat Cement Bentonite	~~2~~ 2 lbs ~~2~~ lbs

Grouting Method Gravity Feed.
Drilling Method Sonic drilling

GEOLOGIC LOG
Note each depth where water was encountered in consolidated formations
0-10 Fill

I certify that I have constructed the above referenced well in accordance with all well permit requirements and applicable State rules and regulations.

Drilling Company BOART LONGYEAR
Well Driller (Print) Joseph Cesaro
Driller's Signature Joseph Cesaro
Registration No. MW 294916 Date 9/30/08

AS-BUILT WELL LOCATION (NAD 83 HORIZONTAL DATUM)
NJ STATE PLANE COORDINATE IN US SURVEY FEET
NORTHING: ~~718511.8~~ 718375 EASTING: ~~633625~~ 633554.4
OR
LATITUDE: ° ' " LONGITUDE: ° ' "

ORIGINAL: DEP *COPIES: DRILLER* *OWNER* *HEALTH DEPARTMENT*

307861

MONITORING WELL CERTIFICATION FORM B - LOCATION CERTIFICATION

Name of Owner: Fiola Family Associates, LP

Name of Facility: Quanta Property

Location: 145 River Road, Borough of Edgewater, Bergen County, NJ

Case Number(s): 11-CERCLA-2003-2012 **(UST #, ISRA #, Incident #, or EPA #)**

LAND SURVEYOR'S CERTIFICATION

Well Permit Number: 2 6 - 8 8 5 1 5
(This number must be permanently affixed to the well casing.)

Owners Well Number (As shown on application or plans): BH-1

Geographic Coordinate NAD 83 (to nearest 1/10 of second):

Longitude: West 73° 59′ 19.6″ **Latitude:** North 40° 48′ 17.9″

New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:

North 718,556 feet East 633,638 feet

Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01′): 6.28

Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

Elevations are referenced to NAVD 1988, Horizontal datum is referenced NJSPC NAD 1983 based on NGS OPUS solution: 83431992.05o, dated 07/19/05. Base Stations used: NJI2 (PID AJ3348), SHK1 (PID AF9509), and LAMT (PID AJ4872.)

Significant observations and notes:

AUTHENTICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL

PROFESSIONAL LAND SURVEYOR'S SIGNATURE 12/30/08 **DATE**

Robert E. Vargo, PLS GS43261
PROFESSIONAL LAND SURVEYOR'S NAME AND LICENSE NUMBER
(Please print or type)

P.O. Box 647, Franklinville, New Jersey 08322 856.694.1716
PROFESSIONAL LAND SURVEYOR'S ADDRESS AND PHONE NUMBER

307862

MONITORING WELL CERTIFICATION FORM B - LOCATION CERTIFICATION

Name of Owner: Fiola Family Associates, LP

Name of Facility: Quanta Property

Location: 145 River Road, Borough of Edgewater, Bergen County, NJ

Case Number(s): 11-CERCLA-2003-2012 **(UST #, ISRA #, Incident #, or EPA #)**

LAND SURVEYOR'S CERTIFICATION

Well Permit Number: 2 6 - 8 8 5 1 6
(This number must be permanently affixed to the well casing.)

Owners Well Number (As shown on application or plans): BH-2

Geographic Coordinate NAD 83 (to nearest 1/10 of second):

Longitude: West 73° 59′ 20.1″ **Latitude:** North 40° 48′ 17.0″

New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
North 718,464 feet East 633,605 feet

Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01′): 6.12

Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

Elevations are referenced to NAVD 1988, Horizontal datum is referenced NJSPC NAD 1983 based on NGS OPUS solution: 83431992.05o, dated 07/19/05. Base Stations used: NJI2 (PID AJ3348), SHK1 (PID AF9509), and LAMT (PID AJ4872.)

Significant observations and notes:

AUTHENTICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL

PROFESSIONAL LAND SURVEYOR'S SIGNATURE 12/30/08 **DATE**

Robert E. Vargo, PLS GS43261
PROFESSIONAL LAND SURVEYOR'S NAME AND LICENSE NUMBER
(Please print or type)

P.O. Box 647, Franklinville, New Jersey 08322 856.694.1716
PROFESSIONAL LAND SURVEYOR'S ADDRESS AND PHONE NUMBER

307863

MONITORING WELL CERTIFICATION FORM B - LOCATION CERTIFICATION

Name of Owner: Metropolitian Consum, LLC

Name of Facility: Medical Building

Location: 125 Old River Road, Borough of Edgewater, Bergen County, NJ

Case Number(s): 11-CERCLA-2003-2012 **(UST #, ISRA #, Incident #, or EPA #)**

LAND SURVEYOR'S CERTIFICATION

Well Permit Number: 2 6 - 8 8 5 2 4
(This number must be permanently affixed to the well casing.)

Owners Well Number (As shown on application or plans): MW-123

Geographic Coordinate NAD 83 (to nearest 1/10 of second):

Longitude: West 73° 59′ 33.2″ **Latitude:** North 40° 48′ 19.6″

New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
North 718,729 feet East 632,592 feet

Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01′): 5.54

Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

Elevations are referenced to NAVD 1988, Horizontal datum is referenced NJSPC NAD 1983 based on NGS OPUS solution: 83431992.05o, dated 07/19/05. Base Stations used: NJI2 (PID AJ3348), SHK1 (PID AF9509), and LAMT (PID AJ4872.)

Significant observations and notes:

AUTHENTICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL

PROFESSIONAL LAND SURVEYOR'S SIGNATURE 12/30/08 **DATE**

Robert E. Vargo, PLS GS43261
PROFESSIONAL LAND SURVEYOR'S NAME AND LICENSE NUMBER
(Please print or type)

P.O. Box 647, Franklinville, New Jersey 08322 856.694.1716
PROFESSIONAL LAND SURVEYOR'S ADDRESS AND PHONE NUMBER

307864

MONITORING WELL CERTIFICATION FORM B - LOCATION CERTIFICATION

Name of Owner: Metropolitan Consum, LLC

Name of Facility: Medical Building

Location: 125 Old River Road, Borough of Edgewater, Bergen County, NJ

Case Number(s): 11-CERCLA-2003-2012 **(UST #, ISRA #, Incident #, or EPA #)**

LAND SURVEYOR'S CERTIFICATION

Well Permit Number: 2 6 - 8 8 5 2 9
(This number must be permanently affixed to the well casing.)

Owners Well Number (As shown on application or plans): MW-124

Geographic Coordinate NAD 83 (to nearest 1/10 of second):

Longitude: West 73° 59′ 35.4″ **Latitude:** North 40° 48′ 18.6″

New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:

North 718,621 feet East 632,424 feet

Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01′): 7.48

Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

Elevations are referenced to NAVD 1988, Horizontal datum is referenced NJSPC NAD 1983 based on NGS OPUS solution: 83431992.05o, dated 07/19/05. Base Stations used: NJI2 (PID AJ3348), SHK1 (PID AF9509), and LAMT (PID AJ4872.)

Significant observations and notes:

AUTHENTICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL

PROFESSIONAL LAND SURVEYOR'S SIGNATURE 12/30/08 **DATE**

Robert E. Vargo, PLS GS43261
PROFESSIONAL LAND SURVEYOR'S NAME AND LICENSE NUMBER
(Please print or type)

P.O. Box 647, Franklinville, New Jersey 08322 856.694.1716
PROFESSIONAL LAND SURVEYOR'S ADDRESS AND PHONE NUMBER

307865

MONITORING WELL CERTIFICATION FORM B - LOCATION CERTIFICATION

Name of Owner: Edgewater Borough

Name of Facility: Former Quanta Resources

Location: Intersection of Gorge & Old River Road, Borough of Edgewater, Bergen County, NJ

Case Number(s): 11-CERCLA-2003-2012 **(UST #, ISRA #, Incident #, or EPA #)**

LAND SURVEYOR'S CERTIFICATION

Well Permit Number:
(This number must be permanently affixed to the well casing.) 2 6 - 8 8 5 3 0

Owners Well Number (As shown on application or plans): MW-125

Geographic Coordinate NAD 83 (to nearest 1/10 of second):

Longitude: West 73° 59′ 32.7″ **Latitude:** North 40° 48′ 26.0″

New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:

North 719,375 feet East 632,626 feet

Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01′): 11.97

Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

Elevations are referenced to NAVD 1988, Horizontal datum is referenced NJSPC NAD 1983 based on NGS OPUS solution: 83431992.05o, dated 07/19/05. Base Stations used: NJI2 (PID AJ3348), SHK1 (PID AF9509), and LAMT (PID AJ4872.)

Significant observations and notes:

AUTHENTICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL

PROFESSIONAL LAND SURVEYOR'S SIGNATURE 12/30/08 **DATE**

Robert E. Vargo, PLS GS43261

PROFESSIONAL LAND SURVEYOR'S NAME AND LICENSE NUMBER
(Please print or type)

P.O. Box 647, Franklinville, New Jersey 08322 856.694.1716

PROFESSIONAL LAND SURVEYOR'S ADDRESS AND PHONE NUMBER

307866

MONITORING WELL CERTIFICATION FORM B - LOCATION CERTIFICATION

Name of Owner: Edgewater Borough

Name of Facility: Former Quanta Resources

Location: Intersection of Gorge & River Road, Borough of Edgewater, Bergen County, NJ

Case Number(s): 11-CERCLA-2003-2012 **(UST #, ISRA #, Incident #, or EPA #)**

LAND SURVEYOR'S CERTIFICATION

Well Permit Number: 2 6 - 8 8 5 3 1
(This number must be permanently affixed to the well casing.)

Owners Well Number (As shown on application or plans): MW-126

Geographic Coordinate NAD 83 (to nearest 1/10 of second):

Longitude: West 73° 59′ 30.6″ **Latitude:** North 40° 48′ 24.0″

New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:

North 719,167 feet East 632,794 feet

Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01′): 13.87

Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

Elevations are referenced to NAVD 1988, Horizontal datum is referenced NJSPC NAD 1983 based on NGS OPUS solution: 83431992.05o, dated 07/19/05. Base Stations used: NJI2 (PID AJ3348), SHK1 (PID AF9509), and LAMT (PID AJ4872.)

Significant observations and notes:

AUTHENTICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL

PROFESSIONAL LAND SURVEYOR'S SIGNATURE 12/30/08 **DATE**

Robert E. Vargo, PLS GS43261
PROFESSIONAL LAND SURVEYOR'S NAME AND LICENSE NUMBER
(Please print or type)

P.O. Box 647, Franklinville, New Jersey 08322 856.694.1716
PROFESSIONAL LAND SURVEYOR'S ADDRESS AND PHONE NUMBER

307867

MONITORING WELL CERTIFICATION FORM B - LOCATION CERTIFICATION

Name of Owner: MB Edgewater, LLC

Name of Facility: Faesy Bestoff Bld.

Location: 143 Old River Road, Borough of Edgewater, Bergen County, NJ

Case Number(s): 11-CERCLA-2003-2012 **(UST #, ISRA #, Incident #, or EPA #)**

LAND SURVEYOR'S CERTIFICATION

Well Permit Number: 2 6 - 8 8 5 2 8
(This number must be permanently affixed to the well casing.)

Owners Well Number (As shown on application or plans): MW-127

Geographic Coordinate NAD 83 (to nearest 1/10 of second):

Longitude: West 73° 59′ 34.9″ **Latitude:** North 40° 48′ 20.6″

New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:

North 718,829 feet East 632,459 feet

Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01′): 12/30/08

Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

Elevations are referenced to NAVD 1988, Horizontal datum is referenced NJSPC NAD 1983 based on NGS OPUS solution: 83431992.05o, dated 07/19/05. Base Stations used: NJI2 (PID AJ3348), SHK1 (PID AF9509), and LAMT (PID AJ4872.)

Significant observations and notes:

AUTHENTICATION

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SEAL

PROFESSIONAL LAND SURVEYOR'S SIGNATURE

06/07/07
DATE

Robert E. Vargo, PLS GS43261
PROFESSIONAL LAND SURVEYOR'S NAME AND LICENSE NUMBER
(Please print or type)

P.O. Box 647, Franklinville, New Jersey 08322 856.694.1716
PROFESSIONAL LAND SURVEYOR'S ADDRESS AND PHONE NUMBER

307868

MONITORING WELL CERTIFICATION FORM B - LOCATION CERTIFICATION

Name of Owner: Coffee Associates, LLC

Name of Facility: Coffee Associates, LLC

Location: 178 Old River Road, Borough of Edgewater, Bergen County, NJ

Case Number(s): _____ **(UST #, ISRA #, Incident #, or EPA #)**

LAND SURVEYOR'S CERTIFICATION

Well Permit Number:
(This number must be permanently affixed to the well casing.) P 2 0 0 9 0 0 8 3 4

Owners Well Number (As shown on application or plans): MW 128

Geographic Coordinate NAD 83 (to nearest 1/10 of second):

Longitude: West 73° 59′ 35.2″ **Latitude:** North 40° 48′ 24.2″

New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:

North 719,192 feet East 632,439 feet

Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01′): 8.69

Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

Elevations are referenced to NAVD 1988, Horizontal datum is referenced NJSPC NAD 1983 based on NGS OPUS solution: 83431992.05o, dated 07/19/05. Base Stations used: NJI2 (PID AJ3348), SHK1 (PID AF9509), and LAMT (PID AJ4872.)

Significant observations and notes: Outer casing elevation = 9.03

AUTHENTICATION

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SEAL

PROFESSIONAL LAND SURVEYOR'S SIGNATURE 03/18/09 **DATE**

Robert E. Vargo, PLS GS43261

PROFESSIONAL LAND SURVEYOR'S NAME AND LICENSE NUMBER
(Please print or type)

P.O. Box 647, Franklinville, New Jersey 08322 856.694.1716

PROFESSIONAL LAND SURVEYOR'S ADDRESS AND PHONE NUMBER

307869

MONITORING WELL CERTIFICATION FORM B - LOCATION CERTIFICATION

Name of Owner: Coffee Associates, LLC

Name of Facility: Coffee Associates, LLC

Location: 178 Old River Road, Borough of Edgewater, Bergen County, NJ

Case Number(s): _____ **(UST #, ISRA #, Incident #, or EPA #)**

LAND SURVEYOR'S CERTIFICATION

Well Permit Number:
(This number must be permanently affixed to the well casing.) P 2 0 0 9 0 0 8 3 5

Owners Well Number (As shown on application or plans): MW 129

Geographic Coordinate NAD 83 (to nearest 1/10 of second):

Longitude: West 73° 59′ 35.4″ **Latitude:** North 40° 48′ 23.1″

New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:

North 719,074 feet East 632,426 feet

Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01′): 7.29

Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

Elevations are referenced to NAVD 1988, Horizontal datum is referenced NJSPC NAD 1983 based on NGS OPUS solution: 83431992.05o, dated 07/19/05. Base Stations used: NJI2 (PID AJ3348), SHK1 (PID AF9509), and LAMT (PID AJ4872.)

Significant observations and notes: Outer casing elevation = 7.76

AUTHENTICATION

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P.O. Box 647, Franklinville, New Jersey 08322 856.694.1716

PROFESSIONAL LAND SURVEYOR'S ADDRESS AND PHONE NUMBER

307870

MONITORING WELL CERTIFICATION FORM B - LOCATION CERTIFICATION

Name of Owner: 1 Park Edgewater, LLC

Name of Facility: Former Lever Brothers

Location: 45 River Road, Borough of Edgewater, Bergen County, NJ

Case Number(s): 11-CERCLA-2003-2012 **(UST #, ISRA #, Incident #, or EPA #)**

LAND SURVEYOR'S CERTIFICATION

Well Permit Number:
(This number must be permanently affixed to the well casing.) 2 6 - 8 8 5 3 4

Owners Well Number (As shown on application or plans): MW-130 A

Geographic Coordinate NAD 83 (to nearest 1/10 of second):

Longitude: West 73° 59′ 27.6″ **Latitude:** North 40° 48′ 17.2″

New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:

North 718,485 feet East 633,030 feet

Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01′): 6.34

Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

Elevations are referenced to NAVD 1988, Horizontal datum is referenced NJSPC NAD 1983 based on NGS OPUS solution: 83431992.05o, dated 07/19/05. Base Stations used: NJI2 (PID AJ3348), SHK1 (PID AF9509), and LAMT (PID AJ4872.)

Significant observations and notes:

AUTHENTICATION

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SEAL

PROFESSIONAL LAND SURVEYOR'S SIGNATURE 12/30/08 **DATE**

Robert E. Vargo, PLS GS43261

PROFESSIONAL LAND SURVEYOR'S NAME AND LICENSE NUMBER
(Please print or type)

P.O. Box 647, Franklinville, New Jersey 08322 856.694.1716

PROFESSIONAL LAND SURVEYOR'S ADDRESS AND PHONE NUMBER

MONITORING WELL CERTIFICATION FORM B - LOCATION CERTIFICATION

Name of Owner: 1 Park Edgewater, LLC

Name of Facility: Former Lever Brothers

Location: 45 River Road, Borough of Edgewater, Bergen County, NJ

Case Number(s): 11-CERCLA-2003-2012 **(UST #, ISRA #, Incident #, or EPA #)**

LAND SURVEYOR'S CERTIFICATION

Well Permit Number: 2 6 - 8 8 5 3 5
(This number must be permanently affixed to the well casing.)

Owners Well Number (As shown on application or plans): MW-130 B

Geographic Coordinate NAD 83 (to nearest 1/10 of second):

Longitude: West 73° 59′ 27.5″ **Latitude:** North 40° 48′ 17.2″

New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:

North 718,487 feet East 633,031 feet

Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01′): 6.47

Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

Elevations are referenced to NAVD 1988, Horizontal datum is referenced NJSPC NAD 1983 based on NGS OPUS solution: 83431992.05o, dated 07/19/05. Base Stations used: NJI2 (PID AJ3348), SHK1 (PID AF9509), and LAMT (PID AJ4872.)

Significant observations and notes:

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P.O. Box 647, Franklinville, New Jersey 08322 856.694.1716
PROFESSIONAL LAND SURVEYOR'S ADDRESS AND PHONE NUMBER

307872

MONITORING WELL CERTIFICATION FORM B - LOCATION CERTIFICATION

Name of Owner: 1 Park Edgewater, LLC

Name of Facility: Former Lever Brothers

Location: 45 River Road, Borough of Edgewater, Bergen County, NJ

Case Number(s): 11-CERCLA-2003-2012 **(UST #, ISRA #, Incident #, or EPA #)**

LAND SURVEYOR'S CERTIFICATION

Well Permit Number: 2 6 - 8 8 5 3 6
(This number must be permanently affixed to the well casing.)

Owners Well Number (As shown on application or plans): MW-131

Geographic Coordinate NAD 83 (to nearest 1/10 of second):

Longitude: West 73° 59′ 26.7″ **Latitude:** North 40° 48′ 14.2″

New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:

North 718,180 feet East 633,098 feet

Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01′): 6.88

Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

Elevations are referenced to NAVD 1988, Horizontal datum is referenced NJSPC NAD 1983 based on NGS OPUS solution: 83431992.05o, dated 07/19/05. Base Stations used: NJI2 (PID AJ3348), SHK1 (PID AF9509), and LAMT (PID AJ4872.)

Significant observations and notes:

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PROFESSIONAL LAND SURVEYOR'S ADDRESS AND PHONE NUMBER

307873

MONITORING WELL CERTIFICATION FORM B - LOCATION CERTIFICATION

Name of Owner: 1 Park Edgewater, LLC

Name of Facility: Former Lever Brothers

Location: 45 River Road, Borough of Edgewater, Bergen County, NJ

Case Number(s): 11-CERCLA-2003-2012 **(UST #, ISRA #, Incident #, or EPA #)**

LAND SURVEYOR'S CERTIFICATION

Well Permit Number: 2 6 - 8 8 5 3 7
(This number must be permanently affixed to the well casing.)

Owners Well Number (As shown on application or plans): MW-132

Geographic Coordinate NAD 83 (to nearest 1/10 of second):

Longitude: West 73° 59′ 25.9″ **Latitude:** North 40° 48′ 13.2″

New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:

North 718,079 feet East 633,160 feet

Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01′): 5.90

Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

Elevations are referenced to NAVD 1988, Horizontal datum is referenced NJSPC NAD 1983 based on NGS OPUS solution: 83431992.05o, dated 07/19/05. Base Stations used: NJI2 (PID AJ3348), SHK1 (PID AF9509), and LAMT (PID AJ4872.)

Significant observations and notes:

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307874

MONITORING WELL CERTIFICATION FORM B - LOCATION CERTIFICATION

Name of Owner: Promenade @ Edgewater Condominium Assoc.

Name of Facility: Edgewater Enterprises

Location: 255 River Road, Borough of Edgewater, Bergen County, NJ

Case Number(s): 11-CERCLA-2003-2012 **(UST #, ISRA #, Incident #, or EPA #)**

LAND SURVEYOR'S CERTIFICATION

Well Permit Number: 2 6 - 8 8 5 2 5
(This number must be permanently affixed to the well casing.)

Owners Well Number (As shown on application or plans): MW-133

Geographic Coordinate NAD 83 (to nearest 1/10 of second):

Longitude: West 73° 59′ 21.7″ **Latitude:** North 40° 48′ 20.3″

New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:

North 718,804 feet East 633,478 feet

Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01′): 15.38

Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

Elevations are referenced to NAVD 1988, Horizontal datum is referenced NJSPC NAD 1983 based on NGS OPUS solution: 83431992.05o, dated 07/19/05. Base Stations used: NJI2 (PID AJ3348), SHK1 (PID AF9509), and LAMT (PID AJ4872.)

Significant observations and notes:

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P.O. Box 647, Franklinville, New Jersey 08322 856.694.1716
PROFESSIONAL LAND SURVEYOR'S ADDRESS AND PHONE NUMBER

307875

MONITORING WELL CERTIFICATION FORM B - LOCATION CERTIFICATION

Name of Owner: Promenade @ Edgewater Condominium Assoc.

Name of Facility: Edgewater Enterprises

Location: 225 River Road, Borough of Edgewater, Bergen County, NJ

Case Number(s): 11-CERCLA-2003-2012 **(UST #, ISRA #, Incident #, or EPA #)**

LAND SURVEYOR'S CERTIFICATION

Well Permit Number:
(This number must be permanently affixed to the well casing.) 2 6 - 8 8 5 2 6

Owners Well Number (As shown on application or plans): MW-134

Geographic Coordinate NAD 83 (to nearest 1/10 of second):

Longitude: West 73° 59′ 19.0″ **Latitude:** North 40° 48′ 19.2″

New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:

North 718,686 feet East 633,688 feet

Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01′): 14.13

Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

Elevations are referenced to NAVD 1988, Horizontal datum is referenced NJSPC NAD 1983 based on NGS OPUS solution: 83431992.05o, dated 07/19/05. Base Stations used: NJI2 (PID AJ3348), SHK1 (PID AF9509), and LAMT (PID AJ4872.)

Significant observations and notes:

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P.O. Box 647, Franklinville, New Jersey 08322 856.694.1716

PROFESSIONAL LAND SURVEYOR'S ADDRESS AND PHONE NUMBER

307876

MONITORING WELL CERTIFICATION FORM B - LOCATION CERTIFICATION

Name of Owner: Promenade @ Edgewater Condominium Assoc.

Name of Facility: Edgewater Enterprises

Location: 225 River Road, Borough of Edgewater, Bergen County, NJ

Case Number(s): 11-CERCLA-2003-2012 **(UST #, ISRA #, Incident #, or EPA #)**

LAND SURVEYOR'S CERTIFICATION

Well Permit Number:
(This number must be permanently affixed to the well casing.) 2 6 - 8 8 5 3 8

Owners Well Number (As shown on application or plans): MW-135

Geographic Coordinate NAD 83 (to nearest 1/10 of second):

Longitude: West 73° 59′ 19.3″ **Latitude:** North 40° 48′ 18.7″

New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
North 718,635 feet East 633,660 feet

Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01′): 15.00

Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

Elevations are referenced to NAVD 1988, Horizontal datum is referenced NJSPC NAD 1983 based on NGS OPUS solution: 83431992.05o, dated 07/19/05. Base Stations used: NJI2 (PID AJ3348), SHK1 (PID AF9509), and LAMT (PID AJ4872.)

Significant observations and notes:

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P.O. Box 647, Franklinville, New Jersey 08322 856.694.1716
PROFESSIONAL LAND SURVEYOR'S ADDRESS AND PHONE NUMBER

307877

MONITORING WELL CERTIFICATION FORM B - LOCATION CERTIFICATION

Name of Owner: MB Edgewater , LLC

Name of Facility: Faesy Bestoff Bld.

Location: 143 Old River Road, Borough of Edgewater, Bergen County, NJ

Case Number(s): 11-CERCLA-2003-2012 **(UST #, ISRA #, Incident #, or EPA #)**

LAND SURVEYOR'S CERTIFICATION

Well Permit Number: 2 6 - 8 8 5 2 7
(This number must be permanently affixed to the well casing.)

Owners Well Number (As shown on application or plans): MW-136

Geographic Coordinate NAD 83 (to nearest 1/10 of second):

Longitude: West 73° 59′ 33.1″ **Latitude:** North 40° 48′ 20.9″

New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
North 718,855 feet East 632,601 feet

Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01′): 5.02

Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

Elevations are referenced to NAVD 1988, Horizontal datum is referenced NJSPC NAD 1983 based on NGS OPUS solution: 83431992.05o, dated 07/19/05. Base Stations used: NJI2 (PID AJ3348), SHK1 (PID AF9509), and LAMT (PID AJ4872.)

Significant observations and notes:

AUTHENTICATION

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PROFESSIONAL LAND SURVEYOR'S ADDRESS AND PHONE NUMBER

307878

MONITORING WELL CERTIFICATION FORM B - LOCATION CERTIFICATION

Name of Owner: Fiola Family Associates, LP

Name of Facility: Quanta Property

Location: 145 River Road, Borough of Edgewater, Bergen County, NJ

Case Number(s): 11-CERCLA-2003-2012 **(UST #, ISRA #, Incident #, or EPA #)**

LAND SURVEYOR'S CERTIFICATION

Well Permit Number: 2 6 - 8 8 5 1 2
(This number must be permanently affixed to the well casing.)

Owners Well Number (As shown on application or plans): PZ-6D

Geographic Coordinate NAD 83 (to nearest 1/10 of second):

Longitude: West 73° 59′ 19.5″ **Latitude:** North 40° 48′ 18.1″

New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:

North 718,580 feet East 633,648 feet

Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01′): 5.79

Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

Elevations are referenced to NAVD 1988, Horizontal datum is referenced NJSPC NAD 1983 based on NGS OPUS solution: 83431992.05o, dated 07/19/05. Base Stations used: NJI2 (PID AJ3348), SHK1 (PID AF9509), and LAMT (PID AJ4872.)

Significant observations and notes:

AUTHENTICATION

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SEAL

PROFESSIONAL LAND SURVEYOR'S SIGNATURE 12/30/08 **DATE**

Robert E. Vargo, PLS GS43261
PROFESSIONAL LAND SURVEYOR'S NAME AND LICENSE NUMBER
(Please print or type)

P.O. Box 647, Franklinville, New Jersey 08322 856.694.1716
PROFESSIONAL LAND SURVEYOR'S ADDRESS AND PHONE NUMBER

307879

MONITORING WELL CERTIFICATION FORM B - LOCATION CERTIFICATION

Name of Owner: Fiola Family Associates, LP

Name of Facility: Quanta Property

Location: 145 River Road, Borough of Edgewater, Bergen County, NJ

Case Number(s): 11-CERCLA-2003-2012 **(UST #, ISRA #, Incident #, or EPA #)**

LAND SURVEYOR'S CERTIFICATION

Well Permit Number: 2 6 - 8 8 5 1 9
(This number must be permanently affixed to the well casing.)

Owners Well Number (As shown on application or plans): PZ-6I

Geographic Coordinate NAD 83 (to nearest 1/10 of second):

Longitude: West 73° 59′ 19.5″ **Latitude:** North 40° 48′ 18.1″

New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:

North 718,580 feet East 633,648 feet

Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01′): 5.74

Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

Elevations are referenced to NAVD 1988, Horizontal datum is referenced NJSPC NAD 1983 based on NGS OPUS solution: 83431992.05o, dated 07/19/05. Base Stations used: NJI2 (PID AJ3348), SHK1 (PID AF9509), and LAMT (PID AJ4872.)

Significant observations and notes:

AUTHENTICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe the submitted information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine and imprisonment.

SEAL

PROFESSIONAL LAND SURVEYOR'S SIGNATURE 12/30/08 **DATE**

Robert E. Vargo, PLS GS43261
PROFESSIONAL LAND SURVEYOR'S NAME AND LICENSE NUMBER
(Please print or type)

P.O. Box 647, Franklinville, New Jersey 08322 856.694.1716
PROFESSIONAL LAND SURVEYOR'S ADDRESS AND PHONE NUMBER

307880

MONITORING WELL CERTIFICATION FORM B - LOCATION CERTIFICATION

Name of Owner: Fiola Family Associates, LP

Name of Facility: Quanta Property

Location: 145 River Road, Borough of Edgewater, Bergen County, NJ

Case Number(s): 11-CERCLA-2003-2012 **(UST #, ISRA #, Incident #, or EPA #)**

LAND SURVEYOR'S CERTIFICATION

Well Permit Number: 2 6 - 8 8 5 1 8
(This number must be permanently affixed to the well casing.)

Owners Well Number (As shown on application or plans): PZ-6S

Geographic Coordinate NAD 83 (to nearest 1/10 of second):

Longitude: West 73° 59′ 19.5″ **Latitude:** North 40° 48′ 18.1″

New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:

North 718,580 feet East 633,648 feet

Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01′): 5.72

Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

Elevations are referenced to NAVD 1988, Horizontal datum is referenced NJSPC NAD 1983 based on NGS OPUS solution: 83431992.05o, dated 07/19/05. Base Stations used: NJI2 (PID AJ3348), SHK1 (PID AF9509), and LAMT (PID AJ4872.)

Significant observations and notes:

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PROFESSIONAL LAND SURVEYOR'S NAME AND LICENSE NUMBER
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P.O. Box 647, Franklinville, New Jersey 08322 856.694.1716
PROFESSIONAL LAND SURVEYOR'S ADDRESS AND PHONE NUMBER

307881

MONITORING WELL CERTIFICATION FORM B - LOCATION CERTIFICATION

Name of Owner: Fiola Family Associates, LP

Name of Facility: Quanta Property

Location: 145 River Road, Borough of Edgewater, Bergen County, NJ

Case Number(s): 11-CERCLA-2003-2012 **(UST #, ISRA #, Incident #, or EPA #)**

LAND SURVEYOR'S CERTIFICATION

Well Permit Number: 2 6 - 8 8 5 1 3
(This number must be permanently affixed to the well casing.)

Owners Well Number (As shown on application or plans): PZ-7D

Geographic Coordinate NAD 83 (to nearest 1/10 of second):

Longitude: West 73° 59′ 19.8″ **Latitude:** North 40° 48′ 17.4″

New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
North 718,512 feet East 633,625 feet

Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01′): 5.70

Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

Elevations are referenced to NAVD 1988, Horizontal datum is referenced NJSPC NAD 1983 based on NGS OPUS solution: 83431992.05o, dated 07/19/05. Base Stations used: NJI2 (PID AJ3348), SHK1 (PID AF9509), and LAMT (PID AJ4872.)

Significant observations and notes:

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P.O. Box 647, Franklinville, New Jersey 08322 856.694.1716
PROFESSIONAL LAND SURVEYOR'S ADDRESS AND PHONE NUMBER

MONITORING WELL CERTIFICATION FORM B - LOCATION CERTIFICATION

Name of Owner: Fiola Family Associates, LP

Name of Facility: Quanta Property

Location: 145 River Road, Borough of Edgewater, Bergen County, NJ

Case Number(s): 11-CERCLA-2003-2012 **(UST #, ISRA #, Incident #, or EPA #)**

LAND SURVEYOR'S CERTIFICATION

Well Permit Number: 2 6 - 8 8 5 2 1
(This number must be permanently affixed to the well casing.)

Owners Well Number (As shown on application or plans): PZ-7I

Geographic Coordinate NAD 83 (to nearest 1/10 of second):

Longitude: West 73° 59′ 19.8″ **Latitude:** North 40° 48′ 17.4″

New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
North 718,512 feet East 633,625 feet

Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01′): 5.67

Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

Elevations are referenced to NAVD 1988, Horizontal datum is referenced NJSPC NAD 1983 based on NGS OPUS solution: 83431992.05o, dated 07/19/05. Base Stations used: NJI2 (PID AJ3348), SHK1 (PID AF9509), and LAMT (PID AJ4872.)

Significant observations and notes:

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PROFESSIONAL LAND SURVEYOR'S NAME AND LICENSE NUMBER
(Please print or type)

P.O. Box 647, Franklinville, New Jersey 08322 856.694.1716
PROFESSIONAL LAND SURVEYOR'S ADDRESS AND PHONE NUMBER

307883

MONITORING WELL CERTIFICATION FORM B - LOCATION CERTIFICATION

Name of Owner: Fiola Family Associates, LP

Name of Facility: Quanta Property

Location: 145 River Road, Borough of Edgewater, Bergen County, NJ

Case Number(s): 11-CERCLA-2003-2012 **(UST #, ISRA #, Incident #, or EPA #)**

LAND SURVEYOR'S CERTIFICATION

Well Permit Number: 2 6 - 8 8 5 2 0
(This number must be permanently affixed to the well casing.)

Owners Well Number (As shown on application or plans): PZ-7S

Geographic Coordinate NAD 83 (to nearest 1/10 of second):

Longitude: West 73° 59′ 19.8″ **Latitude:** North 40° 48′ 17.4″

New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
North 718,512 feet East 633,625 feet

Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01′): 5.71

Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

Elevations are referenced to NAVD 1988, Horizontal datum is referenced NJSPC NAD 1983 based on NGS OPUS solution: 83431992.05o, dated 07/19/05. Base Stations used: NJI2 (PID AJ3348), SHK1 (PID AF9509), and LAMT (PID AJ4872.)

Significant observations and notes:

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PROFESSIONAL LAND SURVEYOR'S ADDRESS AND PHONE NUMBER

307884

MONITORING WELL CERTIFICATION FORM B - LOCATION CERTIFICATION

Name of Owner: Fiola Family Associates, LP

Name of Facility: Quanta Property

Location: 145 River Road, Borough of Edgewater, Bergen County, NJ

Case Number(s): 11-CERCLA-2003-2012 **(UST #, ISRA #, Incident #, or EPA #)**

LAND SURVEYOR'S CERTIFICATION

Well Permit Number: 2 6 - 8 8 5 1 4
(This number must be permanently affixed to the well casing.)

Owners Well Number (As shown on application or plans): PZ-8D

Geographic Coordinate NAD 83 (to nearest 1/10 of second):

Longitude: West 73° 59′ 20.7″ **Latitude:** North 40° 48′ 16.1″

New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
North 718,375 feet East 633,554 feet

Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01′): 4.53

Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

Elevations are referenced to NAVD 1988, Horizontal datum is referenced NJSPC NAD 1983 based on NGS OPUS solution: 83431992.05o, dated 07/19/05. Base Stations used: NJI2 (PID AJ3348), SHK1 (PID AF9509), and LAMT (PID AJ4872.)

Significant observations and notes:

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PROFESSIONAL LAND SURVEYOR'S NAME AND LICENSE NUMBER
(Please print or type)

P.O. Box 647, Franklinville, New Jersey 08322 856.694.1716
PROFESSIONAL LAND SURVEYOR'S ADDRESS AND PHONE NUMBER

307885

MONITORING WELL CERTIFICATION FORM B - LOCATION CERTIFICATION

Name of Owner: Fiola Family Associates, LP

Name of Facility: Quanta Property

Location: 145 River Road, Borough of Edgewater, Bergen County, NJ

Case Number(s): 11-CERCLA-2003-2012 **(UST #, ISRA #, Incident #, or EPA #)**

LAND SURVEYOR'S CERTIFICATION

Well Permit Number: 2 6 - 8 8 5 2 3
(This number must be permanently affixed to the well casing.)

Owners Well Number (As shown on application or plans): PZ-8I

Geographic Coordinate NAD 83 (to nearest 1/10 of second):

Longitude: West 73° 59′ 20.7″ **Latitude:** North 40° 48′ 16.1″

New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
North 718,375 feet East 633,554 feet

Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01′): 4.39

Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

Elevations are referenced to NAVD 1988, Horizontal datum is referenced NJSPC NAD 1983 based on NGS OPUS solution: 83431992.05o, dated 07/19/05. Base Stations used: NJI2 (PID AJ3348), SHK1 (PID AF9509), and LAMT (PID AJ4872.)

Significant observations and notes:

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PROFESSIONAL LAND SURVEYOR'S ADDRESS AND PHONE NUMBER

307886

MONITORING WELL CERTIFICATION FORM B - LOCATION CERTIFICATION

Name of Owner: Fiola Family Associates, LP

Name of Facility: Quanta Property

Location: 145 River Road, Borough of Edgewater, Bergen County, NJ

Case Number(s): 11-CERCLA-2003-2012 **(UST #, ISRA #, Incident #, or EPA #)**

LAND SURVEYOR'S CERTIFICATION

Well Permit Number: 2 6 - 8 8 5 2 2
(This number must be permanently affixed to the well casing.)

Owners Well Number (As shown on application or plans): PZ-8S

Geographic Coordinate NAD 83 (to nearest 1/10 of second):

Longitude: West 73° 59′ 20.7″ **Latitude:** North 40° 48′ 16.1″

New Jersey State Plane Coordinates NAD 83 to nearest 10 feet:
North 718,375 feet East 633,554 feet

Elevation of Top of Inner Casing (cap off) at reference mark (nearest 0.01′): 4.46

Source of elevation datum (benchmark, number/description and elevation/datum. If an on-site datum is used, identify here, assume datum of 100', and give approximated actual elevation.)

Elevations are referenced to NAVD 1988, Horizontal datum is referenced NJSPC NAD 1983 based on NGS OPUS solution: 83431992.05o, dated 07/19/05. Base Stations used: NJI2 (PID AJ3348), SHK1 (PID AF9509), and LAMT (PID AJ4872.)

Significant observations and notes:

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(Please print or type)

P.O. Box 647, Franklinville, New Jersey 08322 856.694.1716
PROFESSIONAL LAND SURVEYOR'S ADDRESS AND PHONE NUMBER

APPENDIX M
Groundwater, Pore Water, and Surface Water Analytical Data for PAHs
Quanta Resources Superfund Site, OU1
Edgewater, New Jersey

Location ID		3Y-MW2	GWZ-1		GWZ-2		GWZ-3		GWZ-4		GWZ-5		
Field Sample ID		3Y-MW-2-122908	GWZ-1-PW-071808	GWZ-1-SW-071808	GWZ-2-PW-072108	GWZ-2-SW-072108	GWZ-3-PW-072208	GWZ-3-SW-072208	GWZ-4-PW-072408	GWZ-4-SW-072408	GWZ-5-PW-072508	DUP-072508	GWZ-5-SW-072508
Sample Date		12/29/2008	7/18/2008	7/18/2008	7/21/2008	7/21/2008	7/22/2008	7/22/2008	7/24/2008	7/24/2008	7/25/2008	7/25/2008	7/25/2008
Sample Interval		3 - 20 FT	1 - 2 FT	<1 FT ABOVE SED.	1 - 2 FT	<1 FT ABOVE SED.	1 - 2 FT	<1 FT ABOVE SED.	1 - 2 FT	<1 FT ABOVE SED.	1 - 2 FT	1 - 2 FT	<1 FT ABOVE SED.
Sample Matrix		Groundwater	Pore Water	Surface Water	Pore Water	Surface Water	Pore Water	Surface Water	Pore Water	Surface Water	Pore Water	Pore Water	Surface Water
	Units												
2-Methylnaphthalene	ug/L	2 U	**37.4**	2 U	—	2 U	2.2 U	2 U	2 U	2 U	2 U	2 U	2 U
Acenaphthene	ug/L	**2.27**	**31.2**	**0.918**	—	0.2 U	0.22 U	0.2 U	0.2 U	0.2 U	**0.547**	**0.494**	0.2 U
Acenaphthylene	ug/L	0.2 U	**0.588**	**0.422**	—	0.2 U	0.22 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Anthracene	ug/L	0.2 U	**5.6**	**1.23**	—	0.2 U	0.22 U	0.2 U	0.2 U	0.2 U	**0.612**	**0.495**	0.2 U
Benzo(a)anthracene	ug/L	**0.333**	**2.02**	**2.41**	—	0.1 U	0.11 U	0.1 U	0.1 U	0.1 U	**0.976 J**	**0.31 J**	**0.295**
Benzo(a)pyrene	ug/L	0.1 U	**1.11**	**2.2**	—	0.1 U	0.11 U	0.1 U	0.1 U	0.1 U	**0.705 J**	0.1 UJ	0.1 U
Benzo(b)fluoranthene	ug/L	0.2 U	**1.24**	**2.42**	—	0.2 U	0.22 U	0.2 U	0.2 U	0.2 U	**0.674 J**	0.2 UJ	**0.163 J**
Benzo(g,h,i)perylene	ug/L	0.2 U	**0.507**	**1.07**	—	0.2 U	0.22 U	0.2 U	0.2 U	0.2 U	**0.298**	0.2 U	0.2 U
Benzo(k)fluoranthene	ug/L	0.2 U	**0.88**	**1.41**	—	0.2 U	0.22 U	0.2 U	0.2 U	0.2 U	**0.703 J**	0.2 UJ	**0.291**
Chrysene	ug/L	**0.174 J**	**1.13**	**1.65**	—	0.2 U	0.22 U	0.2 U	0.2 U	0.2 U	**0.694 J**	**0.225 J**	**0.215**
Dibenzo(a,h)anthracene	ug/L	0.2 U	**0.216**	**0.468**	—	0.2 U	0.22 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Fluoranthene	ug/L	**1.54**	**11.5**	**5**	—	0.2 U	0.22 U	0.2 U	0.2 U	0.2 U	**1.94 J**	**0.904 J**	**0.624**
Fluorene	ug/L	0.2 U	**20**	**0.638**	—	0.2 U	0.22 U	0.2 U	0.2 U	0.2 U	**0.208**	0.2 U	0.2 U
Indeno(1,2,3-cd)pyrene	ug/L	0.2 U	**0.476**	**1.02**	—	0.2 U	0.22 U	0.2 U	0.2 U	0.2 U	**0.322**	0.2 U	0.2 U
Naphthalene	ug/L	**2.45**	**491**	**0.44**	—	0.2 U	0.22 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Phenanthrene	ug/L	0.2 U	**28.5**	**2.11**	—	0.2 U	0.22 U	0.2 U	0.2 U	0.2 U	**0.417 J**	0.2 UJ	0.2 U
Pyrene	ug/L	**1.38**	**8.1**	**4.14**	—	0.2 U	0.22 U	0.2 U	0.2 U	0.2 U	**1.89 J**	**0.859 J**	**0.473**

Detected concentrations are marked as shaded and bold.
FT - Feet
J - Estimated Concentration
U - Not Detected
ug/L - micrograms per liter
PAH - Polycyclic Aromatic Hydrocarbon

APPENDIX M
Groundwater, Pore Water, and Surface Water Analytical Data for PAHs
Quanta Resources Superfund Site, OU1
Edgewater, New Jersey

Location ID		MW-20	MW-30	MW-51A		MW-103A	MW-105A	MW-106A	MW-107A	MW-109	MW-111B	MW-113B
Field Sample ID		MW-20-121008	MW-30-120408	MW-51A-123008	Dup-123008	MW-103A-120208	MW-105A-121008	MW-106A-120408	MW-107A-121908	MW-109-120408	MW-111B-122308	MW-113B-120908
Sample Date		12/10/2008	12/4/2008	12/30/2008	12/30/2008	12/2/2008	12/10/2008	12/4/2008	12/19/2008	12/4/2008	12/23/2008	12/9/2008
Sample Interval		7 - 17 FT	2 - 12 FT	3 - 14 FT	3 - 14 FT	3 - 13 FT	3 - 13 FT	3 - 13 FT	3 - 13 FT	15 - 20 FT	3 - 13 FT	9 - 19 FT
Sample Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
	Units											
2-Methylnaphthalene	ug/L	2 U	2.2 U	**52.7**	**53.4**	**779**	**178**	**0.93 J**	**913**	**12.3 J**	2 U	**0.71 J**
Acenaphthene	ug/L	0.2 U	**2.28**	**36**	**35.9**	**154**	**81.1**	**4.88**	**203**	**31.1**	0.2 U	**0.671**
Acenaphthylene	ug/L	0.2 U	0.22 U	**2.28**	**3.25**	**1.3**	**1.09**	0.21 U	**16.1**	**0.346**	0.2 U	0.2 U
Anthracene	ug/L	0.2 U	0.22 U	**2.6 J**	**1.27 J**	**9.9**	**13**	**1.39**	**0.58**	**3.51**	0.2 U	**0.846**
Benzo(a)anthracene	ug/L	0.1 U	0.11 U	**0.995**	**0.217**	0.1 U	**0.464**	0.1 U	0.1 U	0.1 U	0.1 U	**0.215**
Benzo(a)pyrene	ug/L	0.1 U	0.11 U	**0.409**	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U
Benzo(b)fluoranthene	ug/L	0.2 U	0.22 U	**0.426**	0.2 U	0.2 U	0.2 U	0.21 U	0.2 U	0.2 U	0.2 U	0.2 U
Benzo(g,h,i)perylene	ug/L	0.2 U	0.22 U	**0.266**	0.2 U	0.2 U	0.2 U	0.21 U	0.2 U	0.2 U	0.2 U	0.2 U
Benzo(k)fluoranthene	ug/L	0.2 U	0.22 U	**0.305**	0.2 U	0.2 U	0.2 U	0.21 U	0.2 U	0.2 U	0.2 U	0.2 U
Chrysene	ug/L	0.2 U	0.22 U	**0.713 J**	0.2 U	0.2 U	**0.33**	0.21 U	0.2 U	0.2 U	0.2 U	**0.218**
Dibenzo(a,h)anthracene	ug/L	0.2 U	0.22 U	0.2 U	0.2 U	0.2 U	0.2 U	0.21 U	0.2 U	0.2 U	0.2 U	0.2 U
Fluoranthene	ug/L	0.2 U	**1.29**	**2.52**	**1.29**	**2.13**	**10.4**	**1.09**	**0.226**	**3.17**	0.2 U	**1.24**
Fluorene	ug/L	0.2 U	0.22 U	**14.6**	**11.1**	**75.2**	**59.1**	**4.07**	**69.7**	**19.9**	0.2 U	**0.913**
Indeno(1,2,3-cd)pyrene	ug/L	0.2 U	0.22 U	**0.288**	0.2 U	0.2 U	0.2 U	0.21 U	0.2 U	0.2 U	0.2 U	0.2 U
Naphthalene	ug/L	**1.63**	0.22 U	**770**	**866**	**9880**	**2060**	**1.55**	**9230**	**140**	**0.641**	**4.08**
Phenanthrene	ug/L	0.2 U	0.22 U	**15.5**	**11.8**	**58.9**	**65.7**	**7.7**	**15.3**	**29.9**	0.2 U	**2.43**
Pyrene	ug/L	0.2 U	**0.522**	**2.39**	**1.04**	**1.81**	**3.79**	**0.654**	0.2 U	**2.09**	0.2 U	**1.14**

Detected concentrations are marked as shaded and bold.
FT - Feet
J - Estimated Concentration
U - Not Detected
ug/L - micrograms per liter
PAH - Polycyclic Aromatic Hydrocarbon

APPENDIX M
Groundwater, Pore Water, and Surface Water Analytical Data for PAHs
Quanta Resources Superfund Site, OU1
Edgewater, New Jersey

Location ID		MW-114A	MW-114B	MW-115A	MW-115B	MW-117B	MW-117B	MW-121A	MW-121B	MW-123		MW-124	
Field Sample ID		MW-114A-010409	MW-114B-010409	MW-115A-121908	MW-115B-120808	MW-117B-120208	DUP-120208	MW-121A-010409	MW-121B-010409	MW-123-122908	MW-123-091409	MW-124-122408	MW-124-091509
Sample Date		1/4/2009	1/4/2009	12/19/2008	12/8/2008	12/2/2008	12/2/2008	1/4/2009	1/4/2009	12/29/2008	9/14/2009	12/24/2008	9/15/2009
Sample Interval		3 - 13 FT	15 - 25 FT	3 - 13 FT	15.5 - 25.5 FT	5 - 15 FT	5 - 15 FT	3 - 13 FT	12 - 22 FT	5 - 10 FT	5 - 10 FT	6 - 16 FT	6 - 16 FT
Sample Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
	Units												
2-Methylnaphthalene	ug/L	**3.6**	**317**	2 U	**1.5 J**	**190**	**200**	**15.2**	**224**	**710**	**949**	2 U	2 U
Acenaphthene	ug/L	**8.4**	**247**	0.2 U	**14.2**	**81.7**	**76.6**	**287**	**217**	**284**	**349**	0.2 U	0.1 U
Acenaphthylene	ug/L	**0.272**	**22.9**	0.2 U	**0.359**	**2.94**	**2.65**	0.2 U	**13.5**	**10.5**	**7.8**	0.2 U	0.1 U
Anthracene	ug/L	**1.16**	**10.4**	0.2 U	0.2 U	**10.6**	**7.6**	**9**	**24.4**	**20.9**	**23.5**	0.2 U	0.1 U
Benzo(a)anthracene	ug/L	0.1 U	0.1 U	0.1 U	0.1 U	**1.17**	**0.827**	**0.344**	**3.92**	**1.2 J**	**3.77**	0.1 U	0.1 U
Benzo(a)pyrene	ug/L	0.1 U	0.1 U	0.1 U	0.1 U	0.11 U	0.1 U	**0.259**	**3.53**	**0.629 J**	**2.83**	0.1 U	0.1 U
Benzo(b)fluoranthene	ug/L	0.2 U	0.21 U	0.2 U	0.2 U	0.21 U	0.2 U	**0.441**	**4.23**	**0.974 J**	**4**	0.2 U	0.1 U
Benzo(g,h,i)perylene	ug/L	0.2 U	0.21 U	0.2 U	0.2 U	0.21 U	0.2 U	**0.296**	**2.46**	**0.268 J**	**1.53**	0.2 U	0.1 U
Benzo(k)fluoranthene	ug/L	0.2 U	0.21 U	0.2 U	0.2 U	0.21 U	0.2 U	**0.34**	**1.93**	**0.509 J**	**1.49**	0.2 U	0.1 U
Chrysene	ug/L	0.2 U	0.21 U	0.2 U	0.2 U	**0.789**	**0.557**	**0.352**	**3.49**	**0.791 J**	**2.72**	0.2 U	0.1 U
Dibenzo(a,h)anthracene	ug/L	0.2 U	0.21 U	0.2 U	0.2 U	0.21 U	0.2 U	0.2 U	**0.848**	**0.212 J**	**0.402 J**	0.2 U	0.1 U
Fluoranthene	ug/L	**0.906**	**2.24**	0.2 U	0.2 U	**5.12**	**3.95**	**1.06**	**25.3**	**18.2**	**36.6**	0.2 U	0.1 U
Fluorene	ug/L	**4.16**	**94**	0.2 U	**0.311**	**50**	**40.9**	**75.8**	**81.1**	**171**	**225**	0.2 U	0.1 U
Indeno(1,2,3-cd)pyrene	ug/L	0.2 U	0.21 U	0.2 U	0.2 U	0.21 U	0.2 U	**0.301**	**2.24**	**0.379 J**	**1.54**	0.2 U	0.1 U
Naphthalene	ug/L	**58.1**	**3110**	0.2 U	**254**	**382**	**797**	**161**	**2330**	**10500**	**12700**	**0.724**	0.1 U
Phenanthrene	ug/L	**4.1**	**75**	0.2 U	**0.241**	**43.2**	**39**	**54.3**	**78.3**	**180**	**273**	0.2 U	0.1 U
Pyrene	ug/L	**0.917**	**1.74**	0.2 U	0.2 U	**4.51**	**3.5**	**0.84**	**19.3**	**13.7**	**25.8**	0.2 U	0.1 U

Detected concentrations are marked as shaded and bold.
FT - Feet
J - Estimated Concentration
U - Not Detected
ug/L - micrograms per liter
PAH - Polycyclic Aromatic Hydrocarbon

APPENDIX M
Groundwater, Pore Water, and Surface Water Analytical Data for PAHs
Quanta Resources Superfund Site, OU1
Edgewater, New Jersey

Location ID		MW-125		MW-126			MW-127		MW-128		MW-129	
Field Sample ID		MW-125-122308	MW-125-091509	MW-126-123108	Dup-123108	MW-126-091609	MW-127-122408	MW-127-091409	MW-128-031809	MW-128-091509	MW-129-031809	MW-129-091509
Sample Date		12/23/2008	9/15/2009	12/31/2008	12/31/2008	9/16/2009	12/24/2008	9/14/2009	3/18/2009	9/15/2009	3/18/2009	9/15/2009
Sample Interval		5 - 15 FT	5 - 15 FT	8 - 18 FT	8 - 18 FT	8 - 18 FT	6 - 16 FT	6 - 16 FT	5 - 15 FT	5 - 15 FT	5 - 15 FT	5 - 15 FT
Sample Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
	Units											
2-Methylnaphthalene	ug/L	**0.58 J**	2 U	**219**	**219**	**208**	2.1 U	2 U	2 U	2.1 U	2.1 U	2 U
Acenaphthene	ug/L	**0.533**	0.1 U	**—**	**132**	**170**	**2.58**	**1.34 J**	**7.4**	**5.02 J**	**4.38**	**0.241**
Acenaphthylene	ug/L	0.2 U	0.1 U	0.2 U	0.2 U	**1.72 J**	0.21 U	0.1 U	**0.232**	**0.296**	0.21 U	0.1 U
Anthracene	ug/L	0.2 U	0.1 U	**7.9**	**8.3**	**12.6**	**0.357**	**0.354**	0.2 U	**2.18**	**1.24**	**2.14**
Benzo(a)anthracene	ug/L	0.1 U	0.1 U	0.1 U	**0.287**	**0.848**	0.1 U	0.1 U	**0.281**	**4.27**	0.1 U	**0.48**
Benzo(a)pyrene	ug/L	0.1 U	0.1 U	0.1 U	0.1 U	**0.365**	0.1 U	0.1 U	0.1 U	**2.12**	0.1 U	0.1 U
Benzo(b)fluoranthene	ug/L	0.2 U	0.1 U	0.2 U	0.2 U	**0.604**	0.21 U	0.1 U	0.2 U	**3.25**	0.21 U	0.1 U
Benzo(g,h,i)perylene	ug/L	0.2 U	0.1 U	0.2 U	0.2 U	**0.289**	0.21 U	0.1 U	0.2 U	**1.22**	0.21 U	0.1 U
Benzo(k)fluoranthene	ug/L	0.2 U	0.1 U	0.2 U	0.2 U	**0.137**	0.21 U	0.1 U	0.2 U	**1.19**	0.21 U	0.1 U
Chrysene	ug/L	0.2 U	0.1 U	0.2 U	**0.213**	**0.429**	0.21 U	0.1 U	**0.189 J**	**2.06**	0.21 U	**0.0828 J**
Dibenzo(a,h)anthracene	ug/L	0.2 U	0.1 U	0.2 U	0.2 U	0.1 U	0.21 U	0.1 U	0.2 U	**0.377 J**	0.21 U	0.1 U
Fluoranthene	ug/L	**0.21**	0.1 U	**3.73**	**4.1**	**8.4**	**1.03**	**0.864**	**2.09**	**9.7**	**1.23**	**2.43**
Fluorene	ug/L	**0.333**	0.1 U	**56.5**	**57**	**84.7**	**0.747**	**0.322**	0.2 U	**0.726**	**2.93**	**0.328**
Indeno(1,2,3-cd)pyrene	ug/L	0.2 U	0.1 U	0.2 U	0.2 U	**0.242**	0.21 U	0.1 U	0.2 U	**1.26**	0.21 U	0.1 U
Naphthalene	ug/L	**3.84**	0.1 U	**3300**	**3310**	**3960**	**0.688**	**6.9**	0.2 U	**0.532**	**0.445**	2.19 U
Phenanthrene	ug/L	**0.773**	0.1 U	**47.7**	**47.6**	**84.5**	**0.895**	**0.224**	0.2 U	**3.61**	**1.17**	**4.7**
Pyrene	ug/L	0.2 U	0.1 U	**2.47**	**2.72**	**4.48**	**0.755**	**0.591**	**1.26**	**6.3**	**0.978**	**2.19**

Detected concentrations are marked as shaded and bold.
FT - Feet
J - Estimated Concentration
U - Not Detected
ug/L - micrograms per liter
PAH - Polycyclic Aromatic Hydrocarbon

APPENDIX M
Groundwater, Pore Water, and Surface Water Analytical Data for PAHs
Quanta Resources Superfund Site, OU1
Edgewater, New Jersey

Location ID		MW-130A		MW-130B		MW-131		MW-132		MW-133		MW-134	
Field Sample ID		MW-130A-121908	MW-130A-091709	MW-130B-122208	MW-130B-091709	MW-131-120808	MW-131-091709	MW-132-121808	MW-132-091709	MW-133-121008	MW-133-091609	MW-134-121008	MW-134-091609
Sample Date		12/19/2008	9/17/2009	12/22/2008	9/17/2009	12/8/2008	9/17/2009	12/18/2008	9/17/2009	12/10/2008	9/16/2009	12/10/2008	9/16/2009
Sample Interval		5 - 15 FT	5 - 15 FT	15 - 25 FT	15 - 25 FT	4 - 14 FT	4 - 14 FT	4 - 14 FT	4 - 14 FT	10 - 15 FT	10 - 15 FT	11 - 21 FT	11 - 21 FT
Sample Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
	Units												
2-Methylnaphthalene	ug/L	**5.7**	2.2 U	**878**	**1360**	2 U	1.6 U	2 U	2 U	2 U	2.1 U	**554**	**596**
Acenaphthene	ug/L	**56.8**	**58.8**	**281**	**450**	0.2 U	0.766 U	0.2 U	0.1 U	0.2 U	0.1 U	**124**	**86.4**
Acenaphthylene	ug/L	**1.04**	**0.99**	**30.2**	**40.4**	0.2 U	0.1 U	0.2 U	0.1 U	0.2 U	0.1 U	**4.94**	**5**
Anthracene	ug/L	**4.94**	**9.3**	**20.1**	**44.7**	**0.212 J**	**0.294**	0.2 U	0.1 U	**0.458**	0.1 U	**18.2**	**11.8**
Benzo(a)anthracene	ug/L	0.1 U	**0.664**	**1.18**	**8.7**	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	**0.458**	**0.683**
Benzo(a)pyrene	ug/L	0.1 U	0.11 U	**0.799**	**3.1**	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	0.1 U	**0.281**	**0.159**
Benzo(b)fluoranthene	ug/L	0.2 U	**0.134**	**1.37**	**3.9**	0.2 U	0.1 U	0.2 U	0.1 U	0.2 U	0.1 U	**0.252**	**0.251**
Benzo(g,h,i)perylene	ug/L	0.2 U	0.11 U	**0.454**	**1.35**	0.2 U	0.1 U	0.2 U	0.1 U	0.2 U	0.1 U	0.2 U	0.1 U
Benzo(k)fluoranthene	ug/L	0.2 U	**0.0361 J**	**0.452**	**2.8**	0.2 U	0.1 U	0.2 U	0.1 U	0.2 U	0.1 U	**0.238**	**0.0651 J**
Chrysene	ug/L	0.2 U	**0.231**	**0.784**	**3.31**	0.2 U	0.1 U	0.2 U	0.1 U	0.2 U	0.1 U	**0.253**	**0.159**
Dibenzo(a,h)anthracene	ug/L	0.2 U	0.11 U	**0.275**	**0.264**	0.2 U	0.1 U	0.2 U	0.1 U	0.2 U	0.1 U	0.2 U	0.1 U
Fluoranthene	ug/L	**3.97**	**10.2**	**17.4**	**59.6**	**0.237 J**	**0.369**	0.2 U	0.1 U	**0.277**	0.1 U	**10**	**3.94**
Fluorene	ug/L	**26.3**	**26.2**	**137**	**225**	**0.294 J**	0.16 U	0.2 U	0.1 U	0.2 U	0.1 U	**78.7**	**59.5**
Indeno(1,2,3-cd)pyrene	ug/L	0.2 U	0.11 U	**0.55**	**1.21**	0.2 U	0.1 U	0.2 U	0.1 U	0.2 U	0.1 U	0.2 U	0.1 U
Naphthalene	ug/L	**88.2**	0.795 U	**11700**	**12500**	0.2 U	0.49 U	0.2 U	0.1 U	**1.57**	0.1 U	**13500**	**12300**
Phenanthrene	ug/L	**34.7**	**30.8**	**154**	**359**	**0.918 J**	**0.276**	0.2 U	0.1 U	**0.291**	0.1 U	**76.3**	**55.5**
Pyrene	ug/L	**2.53**	**6.1**	**9.6**	**41**	0.2 U	**0.29**	0.2 U	0.1 U	**0.211**	0.1 U	**2.33**	**2.73**

Detected concentrations are marked as shaded and bold.
FT - Feet
J - Estimated Concentration
U - Not Detected
ug/L - micrograms per liter
PAH - Polycyclic Aromatic Hydrocarbon

APPENDIX M
Groundwater, Pore Water, and Surface Water Analytical Data for PAHs
Quanta Resources Superfund Site, OU1
Edgewater, New Jersey

Location ID		MW-135		MW-136		MW-A-2	MW-B	MW-C		MW-F	MW-L	MW-N-2
Field Sample ID		MW-135-120308	MW-135-091609	MW-136-122308	MW-136-091409	MW-A-2-123008	MW-B-120308	MW-C-121708	MW-C-091609	MW-F-121808	MW-L-122908	MW-N-2-123008
Sample Date		12/3/2008	9/16/2009	12/23/2008	9/14/2009	12/30/2008	12/3/2008	12/17/2008	9/16/2009	12/18/2008	12/29/2008	12/30/2008
Sample Interval		20 - 30 FT	20 - 30 FT	5 - 10 FT	5 - 10 FT	6 - 16 FT	9 - 19 FT	10 - 20 FT	10 - 20 FT	7 - 17 FT	17 - 27 FT	5 - 10 FT
Sample Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
	Units											
2-Methylnaphthalene	ug/L	**375 J**	**184**	**72.9**	**17.1**	**64.2**	**0.68 J**	**8.9**	2.1 U	2 U	2 U	2.2 U
Acenaphthene	ug/L	**243**	**241**	**142**	**180**	**73.3**	**1.2**	**26**	**22.1**	0.2 U	0.2 U	**23.3**
Acenaphthylene	ug/L	**27.5**	**18.3**	**1.65**	0.1 U	**1.11**	0.2 U	**0.845**	**0.662**	0.2 U	0.2 U	**0.41**
Anthracene	ug/L	**16.8**	**12.6**	**16.9**	**22.9**	**4.26 J**	**0.265**	**4.91**	**3.38**	0.2 U	0.2 U	**2.55 J**
Benzo(a)anthracene	ug/L	**0.239**	**0.611**	**1.75**	**2.34**	**0.461**	0.1 U	**2.28**	**0.976**	0.1 U	0.1 U	**0.244**
Benzo(a)pyrene	ug/L	0.1 U	0.1 U	**0.965**	**1.31**	0.1 U	0.1 U	**1.24**	**0.117**	0.1 U	0.1 U	0.11 U
Benzo(b)fluoranthene	ug/L	0.2 U	0.1 U	**1.18**	**1.73**	0.2 U	0.2 U	**1.63**	**0.194**	**0.299**	0.2 U	0.22 U
Benzo(g,h,i)perylene	ug/L	0.2 U	0.1 U	**0.712**	**0.91**	0.2 U	0.2 U	**0.938**	0.1 U	0.2 U	0.2 U	0.22 U
Benzo(k)fluoranthene	ug/L	0.2 U	0.1 U	**0.744**	**0.512**	0.2 U	0.2 U	**1.19**	**0.0633 J**	**0.153 J**	0.2 U	0.22 U
Chrysene	ug/L	0.2 U	**0.151**	**1.19**	**1.7**	**0.333 J**	0.2 U	**1.69**	**0.15**	0.2 U	0.2 U	**0.232 J**
Dibenzo(a,h)anthracene	ug/L	0.2 U	0.1 U	0.2 U	**0.189 J**	0.2 U	0.2 U	**0.369**	0.1 U	0.2 U	0.2 U	0.22 U
Fluoranthene	ug/L	**11.7**	**10.2**	**19.2**	**30.3**	**4.6**	0.2 U	**12.3**	**6.6**	**1.09**	0.2 U	**4.75**
Fluorene	ug/L	**96**	**66.2**	**59.3**	**52.3**	**42.2**	**0.535**	**8.8**	**7.7**	0.2 U	0.2 U	**15.4**
Indeno(1,2,3-cd)pyrene	ug/L	0.2 U	0.1 U	**0.775**	**0.803**	0.2 U	0.2 U	**1.04**	0.1 U	**0.22**	0.2 U	0.22 U
Naphthalene	ug/L	**5440**	**2960**	**488**	**135**	**1460**	**2.19**	**24.3**	7.1 U	0.2 U	**1.67**	**2.35**
Phenanthrene	ug/L	**98.1**	**80.4**	**83.3**	**88.4**	**33.7**	**0.535**	**1.12**	**1.08**	**0.563**	0.2 U	**0.998 J**
Pyrene	ug/L	**3.17**	**4.89**	**12**	**24.2**	**3.39**	0.2 U	**9.2**	**3.92**	**1.09**	0.2 U	**3.2**

Detected concentrations are marked as shaded and bold.
FT - Feet
J - Estimated Concentration
U - Not Detected
ug/L - micrograms per liter
PAH - Polycyclic Aromatic Hydrocarbon

APPENDIX M
Groundwater, Pore Water, and Surface Water Analytical Data for PAHs
Quanta Resources Superfund Site, OU1
Edgewater, New Jersey

Location ID		MW-O		PZ-1I	PZ-1D	PZ-2S	PZ-2I	PZ-2D
Field Sample ID		MW-O-121808	MW-O-091609	PZ1I-022509	PZ1D-022509	PZ2S-022709	PZ2I-022709	PZ2D-010609
Sample Date		12/18/2008	9/16/2009	2/25/2009	2/25/2009	2/27/2009	2/27/2009	1/6/2009
Sample Interval		9.52 - 19.52 FT	9.52 - 19.52 FT	15.82 - 16.32 FT	20.26 - 20.76 FT	4.28 - 4.78 FT	14.77 - 15.27 FT	20.86 - 21.36 FT
Sample Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
	Units							
2-Methylnaphthalene	ug/L	**59.7**	**24.7**	**10.3 J**	**2450 J**	40 U	**3.8**	**5.9**
Acenaphthene	ug/L	**86.2**	**56**	**70.4 J**	**1430 J**	**64.8**	**59.9**	**9.8**
Acenaphthylene	ug/L	**6.7**	**3.62**	**28.5 J**	**52.5 J**	**30.8**	**30**	0.21 U
Anthracene	ug/L	**9**	**4.31**	**114 J**	**496 J**	**118**	**43.6**	**2.38**
Benzo(a)anthracene	ug/L	**0.477 J**	0.11 U	**99.4 J**	**471 J**	**172**	**88.5**	**0.438**
Benzo(a)pyrene	ug/L	0.1 U	0.11 U	**79.4 J**	**312 J**	**154**	**81.2**	0.11 U
Benzo(b)fluoranthene	ug/L	0.2 U	0.11 U	**76.1 J**	**267 J**	**142**	**70.6**	0.21 U
Benzo(g,h,i)perylene	ug/L	0.2 U	0.11 U	**36.8 J**	**72.4 J**	**102**	**40.1**	0.21 U
Benzo(k)fluoranthene	ug/L	0.2 U	0.11 U	**50.9 J**	**236 J**	**126**	**49.6**	0.21 U
Chrysene	ug/L	**0.255 J**	0.11 U	**85.7 J**	**280 J**	**176**	**62.6**	0.21 U
Dibenzo(a,h)anthracene	ug/L	0.2 U	0.11 U	**14.7 J**	**30.5 J**	**44.2**	**13.4**	0.21 U
Fluoranthene	ug/L	**13**	**3.44**	**325 J**	**1600 J**	**500**	**322**	**3.44**
Fluorene	ug/L	**82.1**	**53**	**34.5 J**	**1180 J**	**52.8**	**26.7**	**5.22**
Indeno(1,2,3-cd)pyrene	ug/L	0.2 U	0.11 U	**37.2 J**	**74.8 J**	**107**	**37.5**	0.21 U
Naphthalene	ug/L	**2670**	**2540**	**57.5 J**	**16200 J**	**16.7**	**8.1**	**13.9**
Phenanthrene	ug/L	**122**	**69.6**	**109 J**	**2940 J**	**133**	**100**	**12.6**
Pyrene	ug/L	**8.6**	**2.02**	**194 J**	**1250 J**	**333**	**166**	**2.61**

Detected concentrations are marked as shaded and bold.
FT - Feet
J - Estimated Concentration
U - Not Detected
ug/L - micrograms per liter
PAH - Polycyclic Aromatic Hydrocarbon

APPENDIX M
Groundwater, Pore Water, and Surface Water Analytical Data for PAHs
Quanta Resources Superfund Site, OU1
Edgewater, New Jersey

Location ID		PZ-3S	PZ-3I	PZ-3D	PZ-4S	PZ-4I	PZ-5S	PZ-5I	PZ-5D
Field Sample ID		PZ3S-011309	PZ3I-010709	PZ3D-011309	PZ4S-010709	PZ4I-010709	PZ5S-022709	PZ5I-022509	PZ5D-022509
Sample Date		1/13/2009	1/7/2009	1/13/2009	1/7/2009	1/7/2009	2/27/2009	2/25/2009	2/25/2009
Sample Interval		4.4 - 4.9 FT	14.7 - 15.7 FT	23.4 - 24.4 FT	3.42 - 3.92 FT	14.63 - 15.13 FT	4.5 - 4.5 FT	13.7 - 13.7 FT	22.4 - 23.4 FT
Sample Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
	Units								
2-Methylnaphthalene	ug/L	**651**	**144 J**	**35**	2 U	**27.1**	4 U	**145 J**	**835 J**
Acenaphthene	ug/L	**242**	**41**	**11.7**	0.2 U	**31.2**	**7.29**	**83.6 J**	**371 J**
Acenaphthylene	ug/L	**103**	**38.5**	**5.85**	0.2 U	**0.845**	**0.537**	**3.43 J**	**18.3 J**
Anthracene	ug/L	**99.2**	**10.1**	2 U	0.2 U	**4.14**	**0.537**	**8.3 J**	**142 J**
Benzo(a)anthracene	ug/L	**63.3**	**0.663**	1 U	**0.262**	**4.62**	**1.62**	**5.7 J**	**80.5 J**
Benzo(a)pyrene	ug/L	**39.4**	0.12 U	1 U	0.1 U	**1.87**	**0.925**	**4.25 J**	**54.4 J**
Benzo(b)fluoranthene	ug/L	**33.8**	0.24 U	2 U	0.2 U	**2.73**	**1.42**	**4.56 J**	**42.7 J**
Benzo(g,h,i)perylene	ug/L	**28.9**	0.24 U	2 U	0.2 U	**1.32**	**0.639**	**3.1 J**	**19.7 J**
Benzo(k)fluoranthene	ug/L	**34.7**	0.24 U	2 U	0.2 U	**1.5**	**0.506**	**3.92 J**	**36.6 J**
Chrysene	ug/L	**43.2**	**0.301**	2 U	0.2 U	**3.9**	**0.906**	**4.78 J**	**54.2 J**
Dibenzo(a,h)anthracene	ug/L	**10.5**	0.24 U	2 U	0.2 U	**0.516**	0.4 U	**0.946 J**	**7.2 J**
Fluoranthene	ug/L	**202**	**5.41**	2 U	**1.22**	**19.1**	**6.22**	**28.8 J**	**329 J**
Fluorene	ug/L	**202**	**38**	**7.75**	0.2 U	**11.4**	**1.99**	**60.2 J**	**298 J**
Indeno(1,2,3-cd)pyrene	ug/L	**26.4**	0.24 U	2 U	0.2 U	**1.3**	**0.702**	**2.94 J**	**19.3 J**
Naphthalene	ug/L	**10300**	**1990**	**379**	0.2 U	**375**	**1.57**	**290 J**	**1710 J**
Phenanthrene	ug/L	**446**	**52.3**	**10.3**	**0.321**	**20.4**	**0.605**	**84 J**	**768 J**
Pyrene	ug/L	**145**	**4.02**	2 U	**0.787**	**16.4**	**4.92**	**16.2 J**	**252 J**

Detected concentrations are marked as shaded and bold.
FT - Feet
J - Estimated Concentration
U - Not Detected
ug/L - micrograms per liter
PAH - Polycyclic Aromatic Hydrocarbon

APPENDIX N
Groundwater, Pore Water, and Surface Water Analytical Data for Non-PAH SVOCs
Quanta Resources Superfund Site, OU1
Edgewater, New Jersey

Location ID		3Y-MW2	GWZ-1		GWZ-2		GWZ-3		GWZ-4		GWZ-5		
Field Sample ID		3Y-MW-2-122908	GWZ-1-PW-071808	GWZ-1-SW-071808	GWZ-2-PW-072108	GWZ-2-SW-072108	GWZ-3-PW-072208	GWZ-3-SW-072208	GWZ-4-PW-072408	GWZ-4-SW-072408	GWZ-5-PW-072508	DUP-072508	GWZ-5-SW-072508
Sample Date		12/29/2008	7/18/2008	7/18/2008	7/21/2008	7/21/2008	7/22/2008	7/22/2008	7/24/2008	7/24/2008	7/25/2008	7/25/2008	7/25/2008
Sample Interval		3 - 20 FT	1 - 2 FT	<1 FT ABOVE SED.	1 - 2 FT	<1 FT ABOVE SED.	1 - 2 FT	<1 FT ABOVE SED.	1 - 2 FT	<1 FT ABOVE SED.	1 - 2 FT	1 - 2 FT	<1 FT ABOVE SED.
Sample Matrix		Groundwater	Pore Water	Surface Water	Pore Water	Surface Water	Pore Water	Surface Water	Pore Water	Surface Water	Pore Water	Pore Water	Surface Water
	Units												
2,4,5-Trichlorophenol	ug/L	5 U	5 U	5 U	—	5 U	5.6 U	5 U	5 U	5 U	5 U	5 U	5 U
2,4,6-Trichlorophenol	ug/L	5 U	5 U	5 U	—	5 U	5.6 U	5 U	5 U	5 U	5 U	5 U	5 U
2,4-Dichlorophenol	ug/L	5 U	5 U	5 U	—	5 U	5.6 U	5 U	5 U	5 U	5 U	5 U	5 U
2,4-Dimethylphenol	ug/L	5 U	5 U	5 U	—	5 U	5.6 U	5 U	5 U	5 U	5 U	5 U	5 U
2,4-Dinitrophenol	ug/L	20 U	20 UJ	20 UJ	—	20 U	22 U	20 U	20 U	20 U	20 U	20 U	20 U
2,4-Dinitrotoluene	ug/L	2 U	2 U	2 U	—	2 U	2.2 U	2 U	2 U	2 U	2 U	2 U	2 U
2,6-Dinitrotoluene	ug/L	2 U	2 U	2 U	—	2 U	2.2 U	2 U	2 U	2 U	2 U	2 U	2 U
2-Chloronaphthalene	ug/L	5 U	5 U	5 U	—	5 U	5.6 U	5 U	5 U	5 U	5 U	5 U	5 U
2-Chlorophenol	ug/L	5 U	5 U	5 U	—	5 U	5.6 U	5 U	5 U	5 U	5 U	5 U	5 U
2-Methylphenol	ug/L	2 U	2 U	2 U	—	2 U	2.2 U	2 U	2 U	2 U	2 U	2 U	2 U
2-Nitroaniline	ug/L	5 U	5 U	5 U	—	5 U	5.6 U	5 U	5 U	5 U	5 U	5 U	5 U
2-Nitrophenol	ug/L	5 U	5 U	5 U	—	5 U	5.6 U	5 U	5 U	5 U	5 U	5 U	5 U
3&4-Methylphenol	ug/L	2 U	—	—	—	—	—	—	—	—	—	—	—
3,3-Dichlorobenzidine	ug/L	5 U	5 U	5 U	—	5 U	5.6 U	5 U	5 U	5 U	5 U	5 U	5 U
3-Nitroaniline	ug/L	5 U	5 U	5 U	—	5 U	5.6 U	5 U	5 U	5 U	5 U	5 U	5 U
4,6-Dinitro-2-methylphenol	ug/L	20 U	20 UJ	20 UJ	—	20 U	22 U	20 U	20 U	20 U	20 U	20 U	20 U
4-Bromophenyl phenyl ether	ug/L	2 U	2 U	2 U	—	2 U	2.2 U	2 U	2 U	2 U	2 U	2 U	2 U
4-Chloro-3-methyl phenol	ug/L	5 U	5 U	5 U	—	5 U	5.6 U	5 U	5 U	5 U	5 U	5 U	5 U
4-Chloroaniline	ug/L	5 U	5 UJ	5 UJ	—	5 UJ	5.6 UJ	5 UJ	5 U	5 U	5 U	5 U	5 U
4-Chlorophenyl phenyl ether	ug/L	2 U	2 U	2 U	—	2 U	2.2 U	2 U	2 U	2 U	2 U	2 U	2 U
4-Nitroaniline	ug/L	5 U	5 U	5 U	—	5 UJ	5.6 UJ	5 U	5 UJ	5 UJ	5 UJ	5 U	5 U
4-Nitrophenol	ug/L	10 U	20 UJ	20 UJ	—	20 U	22 U	20 U	20 U	20 U	20 U	20 U	20 U
Acetophenone	ug/L	—	5 U	5 U	—	5 U	5.6 U	5 U	5 U	5 U	5 U	5 U	5 U
Atrazine	ug/L	5 U	5 U	5 U	—	5 U	5.6 U	5 U	5 U	5 U	5 U	5 U	5 U
Benzaldehyde	ug/L	5 U	—	—	—	—	—	—	—	—	—	—	—
Biphenyl	ug/L	2 U	**4.8**	2 U	—	2 U	2.2 U	2 U	2 U	2 U	2 U	2 U	2 U
bis(2-Chloroethoxy)methane	ug/L	2 U	2 U	2 U	—	2 U	2.2 U	2 U	2 U	2 U	2 U	2 U	2 U
bis(2-Chloroethyl)ether	ug/L	2 U	2 U	2 U	—	2 U	2.2 U	2 U	2 U	2 U	2 U	2 U	2 U
bis(2-Chloroisopropyl)ether	ug/L	2 U	2 U	2 U	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
bis(2-Ethylhexyl)phthalate	ug/L	2 U	2 U	**2.3**	—	**1.2 J**	**1.6 J**	**1.1 J**	2 U	2 U	2 U	2 U	**1.2 J**
Butylbenzylphthalate	ug/L	2 U	2 U	2 U	—	2 U	2.2 U	2 U	2 U	2 U	2 U	2 U	2 U
Caprolactam	ug/L	2 U	2 U	2 U	—	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Carbazole	ug/L	2 U	**30.9**	**0.45 J**	—	2 U	2.2 U	2 U	2 U	2 U	2 U	2 U	2 U
Dibenzofuran	ug/L	5 U	**18.1**	5 U	—	5 U	5.6 U	5 U	5 U	5 U	5 U	5 U	5 U
Diethylphthalate	ug/L	2 U	2 U	2 U	—	2 U	2.2 U	2 U	2 U	2 U	2 U	2 U	2 U
Dimethylphthalate	ug/L	2 U	2 U	2 U	—	2 U	2.2 U	2 U	2 U	2 U	2 U	2 U	2 U
Di-n-butyl phthalate	ug/L	2 U	2 U	2 U	—	2 U	2.2 U	2 U	2 U	2 U	2 U	2 U	2 U
Di-n-octyl phthalate	ug/L	2 U	2 U	2 U	—	2 U	2.2 U	2 U	2 U	2 U	2 U	2 U	2 U
Hexachlorobenzene	ug/L	0.02 U	0.02 U	0.02 U	—	0.02 U	0.022 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Hexachlorobutadiene	ug/L	1 U	2 U	2 U	—	2 U	2.2 U	2 U	2 U	2 U	2 U	2 U	2 U
Hexachlorocyclopentadiene	ug/L	20 U	20 UJ	20 UJ	—	20 U	22 U	20 U	20 U	20 U	20 U	20 U	20 U
Hexachloroethane	ug/L	5 U	5 U	5 U	—	5 U	5.6 U	5 U	5 U	5 U	5 U	5 U	5 U
Isophorone	ug/L	2 U	2 U	2 U	—	2 U	2.2 U	2 U	2 U	2 U	2 U	2 U	2 U
Nitrobenzene	ug/L	2 U	2 U	2 U	—	2 U	2.2 U	2 U	2 U	2 U	2 U	2 U	2 U
N-Nitroso-di-n-propylamine	ug/L	2 U	2 U	2 U	—	2 U	2.2 U	2 U	2 U	2 U	2 U	2 U	2 U
N-Nitroso-di-phenylamine	ug/L	5 U	5 U	5 U	—	5 U	5.6 U	5 U	5 U	5 U	5 U	5 U	5 U
Pentachlorophenol	ug/L	0.3 U	0.3 U	0.3 U	—	0.3 U	0.33 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U
Phenol	ug/L	2 U	2 U	2 U	—	2 U	2.2 U	2 U	2 U	2 U	2 U	2 U	2 U

Detected concentrations are marked as shaded and bold.
FT - Feet
J - Estimated Concentration
U - Not Detected
ug/L - micrograms per liter
R - Rejected
SVOC - Semi-Volatile Organic Compound

APPENDIX N
Groundwater, Pore Water, and Surface Water Analytical Data for Non-PAH SVOCs
Quanta Resources Superfund Site, OU1
Edgewater, New Jersey

Location ID		MW-20	MW-30	MW-51A		MW-103A	MW-105A	MW-106A	MW-107A	MW-109	MW-111B	MW-113B	MW-114A
Field Sample ID		MW-20-121008	MW-30-120408	MW-51A-123008	Dup-123008	MW-103A-120208	MW-105A-121008	MW-106A-120408	MW-107A-121908	MW-109-120408	MW-111B-122308	MW-113B-120908	MW-114A-010409
Sample Date		12/10/2008	12/4/2008	12/30/2008	12/30/2008	12/2/2008	12/10/2008	12/4/2008	12/19/2008	12/4/2008	12/23/2008	12/9/2008	1/4/2009
Sample Interval		7 - 17 FT	2 - 12 FT	3 - 14 FT	3 - 14 FT	3 - 13 FT	3 - 13 FT	3 - 13 FT	3 - 13 FT	15 - 20 FT	3 - 13 FT	9 - 19 FT	3 - 13 FT
Sample Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
	Units												
2,4,5-Trichlorophenol	ug/L	5 U	5.4 U	5 U	5 U	5 UJ	5 U	5 U	5.1 U	5 U	5 U	5 U	5 U
2,4,6-Trichlorophenol	ug/L	5 U	5.4 U	5 U	5 U	5 UJ	5 U	5 U	5.1 U	5 U	5 U	5 U	5 U
2,4-Dichlorophenol	ug/L	5 U	5.4 U	5 U	5 U	5 U	5 U	5 U	5.1 U	5 U	5 U	5 U	5 U
2,4-Dimethylphenol	ug/L	5 U	5.4 U	**723**	**836**	**171**	**20.1**	5 U	**306**	5 U	5 U	5 U	5 U
2,4-Dinitrophenol	ug/L	20 U	22 U	20 U	20 U	20 UJ	20 U	20 U	20 U	20 U	20 UJ	20 UJ	20 U
2,4-Dinitrotoluene	ug/L	2 U	2.2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
2,6-Dinitrotoluene	ug/L	2 U	2.2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
2-Chloronaphthalene	ug/L	5 U	5.4 U	5 U	5 U	5 U	5 U	5 U	5.1 U	5 U	5 U	5 U	5 U
2-Chlorophenol	ug/L	5 U	5.4 U	5 U	5 U	5 U	5 U	5 U	5.1 U	5 U	5 U	5 U	5 U
2-Methylphenol	ug/L	2 U	2.2 U	**143**	**168**	**59.9**	**3.4**	2 U	**26.4**	2 U	2 U	2 U	2 U
2-Nitroaniline	ug/L	5 U	5.4 U	5 U	5 U	5 U	5 U	5 U	5.1 U	5 U	5 U	5 U	5 U
2-Nitrophenol	ug/L	5 U	5.4 U	5 U	5 U	5 U	5 U	5 U	5.1 U	5 U	5 U	5 U	5 U
3&4-Methylphenol	ug/L	2 U	2.2 U	**162**	**188**	2 U	2 U	2 U	**38.1**	2 U	2 U	2 U	2 U
3,3-Dichlorobenzidine	ug/L	5 U	5.4 U	5 U	5 U	5 U	5 U	5 U	5.1 U	5 U	5 U	5 U	5 U
3-Nitroaniline	ug/L	5 U	5.4 U	5 U	5 U	5 U	5 U	5 U	5.1 U	5 U	5 U	5 U	5 U
4,6-Dinitro-2-methylphenol	ug/L	20 U	22 U	20 U	20 U	20 UJ	20 U	20 U	20 U	20 U	20 U	20 U	20 U
4-Bromophenyl phenyl ether	ug/L	2 U	2.2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
4-Chloro-3-methyl phenol	ug/L	5 U	5.4 U	5 U	5 U	5 U	5 U	5 U	5.1 U	5 U	5 U	5 U	5 U
4-Chloroaniline	ug/L	5 U	5.4 U	5 U	5 U	5 U	5 U	5 U	5.1 U	5 U	5 U	5 U	5 U
4-Chlorophenyl phenyl ether	ug/L	2 U	2.2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
4-Nitroaniline	ug/L	5 U	5.4 U	5 U	5 U	5 U	5 U	5 U	5.1 U	5 U	5 U	5 U	5 U
4-Nitrophenol	ug/L	10 UJ	11 U	10 U	10 U	10 U	10 UJ	10 U	10 U	10 U	10 UJ	10 UJ	10 U
Acetophenone	ug/L	—	—	—	—	—	—	—	—	—	—	—	—
Atrazine	ug/L	5 U	5.4 U	5 U	5 U	5 U	5 U	5 U	5.1 U	5 U	5 U	5 U	5 U
Benzaldehyde	ug/L	5 U	5.4 U	5 U	5 U	—	5 U	5 U	5.1 U	5 U	5 U	5 U	5 U
Biphenyl	ug/L	2 U	2.2 U	**10.5**	**10.4**	**79.9**	**7.9**	2 U	**80.1**	**1.5 J**	2 U	2 U	2 U
bis(2-Chloroethoxy)methane	ug/L	2 U	2.2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
bis(2-Chloroethyl)ether	ug/L	2 U	2.2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
bis(2-Chloroisopropyl)ether	ug/L	2 U	2.2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
bis(2-Ethylhexyl)phthalate	ug/L	2 U	2.2 UJ	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	**1.3 J**
Butylbenzylphthalate	ug/L	2 U	2.2 UJ	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Caprolactam	ug/L	2 UJ	2.2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 UJ	2 U
Carbazole	ug/L	2 U	2.2 U	**7**	**5.6**	**51.6**	**132**	**4.2**	**68.7**	**16.7**	2 U	**1 J**	**4.1**
Dibenzofuran	ug/L	5 U	5.4 U	**14.5**	**13.8**	**49**	**59.4**	**5**	**80.2**	**12.4**	5 U	**0.8 J**	**2.8 J**
Diethylphthalate	ug/L	2 U	2.2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Dimethylphthalate	ug/L	2 U	2.2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Di-n-butyl phthalate	ug/L	2 U	2.2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Di-n-octyl phthalate	ug/L	2 U	2.2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Hexachlorobenzene	ug/L	0.02 U	0.022 U	0.02 U	0.02 U	0.02 U	0.02 U	0.021 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U
Hexachlorobutadiene	ug/L	1 U	1.1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Hexachlorocyclopentadiene	ug/L	20 U	22 U	20 U	20 U	20 U	20 UJ	20 U	20 U	20 U	20 UJ	20 U	20 U
Hexachloroethane	ug/L	5 U	5.4 U	5 U	5 U	5 U	5 U	5 U	5.1 U	5 U	5 U	5 U	5 U
Isophorone	ug/L	2 U	2.2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Nitrobenzene	ug/L	2 U	2.2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
N-Nitroso-di-n-propylamine	ug/L	2 U	2.2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
N-Nitroso-di-phenylamine	ug/L	5 U	5.4 U	5 U	5 U	5 U	5 U	5 U	5.1 U	5 U	5 U	5 U	5 U
Pentachlorophenol	ug/L	0.3 U	0.33 U	0.3 U	0.3 U	0.3 U	**0.688**	0.31 U	0.31 U	0.3 U	0.3 U	0.3 U	0.3 U
Phenol	ug/L	2 U	2.2 U	**16.8 J**	**17.1 J**	2 U	2 U	2 U	**4**	2 U	2 U	2 U	2 U

Detected concentrations are marked as shaded and bold.
FT - Feet
J - Estimated Concentration
U - Not Detected
ug/L - micrograms per liter
R - Rejected
SVOC - Semi-Volatile Organic Compound

APPENDIX N
Groundwater, Pore Water, and Surface Water Analytical Data for Non-PAH SVOCs
Quanta Resources Superfund Site, OU1
Edgewater, New Jersey

Location ID		MW-114B	MW-115A	MW-115B	MW-117B		MW-121A	MW-121B	MW-123		MW-124	
Field Sample ID		MW-114B-010409	MW-115A-121908	MW-115B-120808	MW-117B-120208	DUP-120208	MW-121A-010409	MW-121B-010409	MW-123-122908	MW-123-091409	MW-124-122408	MW-124-091509
Sample Date		1/4/2009	12/19/2008	12/8/2008	12/2/2008	12/2/2008	1/4/2009	1/4/2009	12/29/2008	9/14/2009	12/24/2008	9/15/2009
Sample Interval		15 - 25 FT	3 - 13 FT	15.5 - 25.5 FT	5 - 15 FT	5 - 15 FT	3 - 13 FT	12 - 22 FT	5 - 10 FT	5 - 10 FT	6 - 16 FT	6 - 16 FT
Sample Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
	Units											
2,4,5-Trichlorophenol	ug/L	5.2 U	5 U	5 U	5.3 U	5 U	5 U	5.4 U	5 U	5 U	5 U	5 U
2,4,6-Trichlorophenol	ug/L	5.2 U	5 U	5 U	5.3 U	5 U	5 U	5.4 U	5 U	5 U	5 U	5 U
2,4-Dichlorophenol	ug/L	5.2 U	5 U	5 U	5.3 U	5 U	5 U	5.4 U	5 U	5 U	5 U	5 U
2,4-Dimethylphenol	ug/L	**20.8**	5 U	**604**	**871**	**764**	**10.5**	**20.8**	**155**	**95.1**	5 U	5 U
2,4-Dinitrophenol	ug/L	21 U	20 U	20 UJ	21 UJ	20 UJ	20 U	22 U	20 U	20 U	20 U	20 U
2,4-Dinitrotoluene	ug/L	2.1 U	2 U	2 U	2.1 U	2 U	2 U	2.2 U	2 U	2 U	2 U	2 U
2,6-Dinitrotoluene	ug/L	2.1 U	2 U	2 U	2.1 U	2 U	2 U	2.2 U	2 U	2 U	2 U	2 U
2-Chloronaphthalene	ug/L	5.2 U	5 U	5 U	5.3 U	5 U	5 U	5.4 U	5 U	5 U	5 U	5 U
2-Chlorophenol	ug/L	5.2 U	5 U	5 U	5.3 U	5 U	5 U	5.4 U	5 U	5 U	5 U	5 U
2-Methylphenol	ug/L	2.1 U	2 U	2 U	**125**	**93.3**	2 U	2.2 U	**7.5**	**3.9**	2 U	2 U
2-Nitroaniline	ug/L	5.2 U	5 U	5 U	5.3 U	5 U	5 U	5.4 U	5 U	5 U	5 U	5 U
2-Nitrophenol	ug/L	5.2 U	5 U	5 U	5.3 U	5 U	5 U	5.4 U	5 U	5 U	5 U	5 U
3&4-Methylphenol	ug/L	**5.5**	2 U	2 U	2.1 U	2 U	2 U	**4.8**	**13.9**	**15.1**	2 U	2 U
3,3-Dichlorobenzidine	ug/L	5.2 U	5 U	5 U	5.3 U	5 U	5 U	5.4 U	5 U	5 U	5 U	5 U
3-Nitroaniline	ug/L	5.2 U	5 U	5 U	5.3 U	5 U	5 U	5.4 U	5 U	5 U	5 U	5 U
4,6-Dinitro-2-methylphenol	ug/L	21 U	20 U	20 U	21 U	20 U	20 U	22 U	20 U	20 U	20 U	20 U
4-Bromophenyl phenyl ether	ug/L	2.1 U	2 U	2 U	2.1 U	2 U	2 U	2.2 U	2 U	2 U	2 U	2 U
4-Chloro-3-methyl phenol	ug/L	5.2 U	5 U	5 U	5.3 U	5 U	5 U	5.4 U	5 U	5 U	5 U	5 U
4-Chloroaniline	ug/L	5.2 U	5 U	5 U	5.3 U	5 U	5 U	5.4 U	5 U	5 U	5 U	5 U
4-Chlorophenyl phenyl ether	ug/L	2.1 U	2 U	2 U	2.1 U	2 U	2 U	2.2 U	2 U	2 U	2 U	2 U
4-Nitroaniline	ug/L	5.2 U	5 U	5 U	5.3 U	5 U	5 U	5.4 U	5 U	5 U	5 U	5 U
4-Nitrophenol	ug/L	10 U	10 U	10 UJ	11 U	10 U	10 U	11 U	10 U	10 U	10 U	10 U
Acetophenone	ug/L	—	—	—	—	—	—	—	—	5 U	—	5 U
Atrazine	ug/L	5.2 U	5 U	5 U	5.3 U	5 U	5 U	5.4 U	5 U	5 U	5 U	5 U
Benzaldehyde	ug/L	5.2 U	5 U	5 U	5.3 U	5 U	5 U	5.4 U	5 U	5 U	5 U	5 U
Biphenyl	ug/L	**60.5**	2 U	**1 J**	**21.9**	**20.7**	**2.1**	**34.8**	**80.1**	**88.5**	2 U	2 U
bis(2-Chloroethoxy)methane	ug/L	2.1 U	2 U	2 U	2.1 U	2 U	2 U	2.2 U	2 U	2 U	2 U	2 U
bis(2-Chloroethyl)ether	ug/L	2.1 U	2 U	2 U	2.1 U	2 U	2 U	2.2 U	2 U	2 U	2 U	2 U
bis(2-Chloroisopropyl)ether	ug/L	2.1 U	2 U	2 U	2.1 U	2 U	2 U	2.2 U	2 U	2 U	2 U	2 U
bis(2-Ethylhexyl)phthalate	ug/L	2.1 U	2 U	2 U	2.1 U	2 U	**1.9 J**	**2.7**	2 U	2 U	2 U	2 U
Butylbenzylphthalate	ug/L	2.1 U	2 U	2 U	2.1 U	2 U	2 U	2.2 U	2 U	2 U	2 U	2 U
Caprolactam	ug/L	2.1 U	2 U	2 UJ	2.1 U	2 U	2 U	2.2 U	2 U	2 U	2 U	2 U
Carbazole	ug/L	**146**	2 U	**5.2**	**94.1**	**81.8**	**136**	**143**	**358**	**484**	2 U	2 U
Dibenzofuran	ug/L	**153**	5 U	5 U	**43.6**	**39.4**	**58.6**	**68.6**	**196**	**252**	5 U	5 U
Diethylphthalate	ug/L	2.1 U	2 U	2 U	2.1 U	2 U	2 U	2.2 U	2 U	2 U	2 U	2 U
Dimethylphthalate	ug/L	2.1 U	2 U	2 U	2.1 U	2 U	2 U	2.2 U	2 U	2 U	2 U	2 U
Di-n-butyl phthalate	ug/L	2.1 U	2 U	2 U	2.1 U	2 U	2 U	2.2 U	2 U	2 U	2 U	2 U
Di-n-octyl phthalate	ug/L	2.1 U	2 U	2 U	2.1 U	2 U	2 U	2.2 U	2 U	2 U	2 U	2 U
Hexachlorobenzene	ug/L	0.021 U	0.02 U	0.02 U	0.021 U	0.02 U	0.02 U	0.022 U	0.02 U	0.02 U	0.02 U	0.02 U
Hexachlorobutadiene	ug/L	1 U	1 U	1 U	1.1 U	1 U	1 U	1.1 U	1 U	1 U	1 U	1 U
Hexachlorocyclopentadiene	ug/L	21 U	20 U	20 U	21 U	20 U	20 U	22 U	20 U	20 U	20 U	20 U
Hexachloroethane	ug/L	5.2 U	5 U	5 U	5.3 U	5 U	5 U	5.4 U	5 U	5 U	5 U	5 U
Isophorone	ug/L	2.1 U	2 U	2 U	2.1 U	2 U	2 U	2.2 U	2 U	2 U	2 U	2 U
Nitrobenzene	ug/L	2.1 U	2 U	2 U	2.1 U	2 U	2 U	2.2 U	2 U	2 U	2 U	2 U
N-Nitroso-di-n-propylamine	ug/L	2.1 U	2 U	2 U	2.1 U	2 U	2 U	2.2 U	2 U	2 U	2 U	2 U
N-Nitroso-di-phenylamine	ug/L	5.2 U	5 U	5 U	5.3 U	5 U	5 U	5.4 U	5 U	5 U	5 U	5 U
Pentachlorophenol	ug/L	0.31 U	0.3 U	0.3 U	0.32 U	0.3 U	0.3 U	0.33 U	0.3 U	0.3 U	0.3 U	0.3 U
Phenol	ug/L	2.1 U	2 U	2 U	**3.2**	**2.9**	**1.8 J**	2.2 U	2 U	2 U	2 U	2 U

Detected concentrations are marked as shaded and bold.
FT - Feet
J - Estimated Concentration
U - Not Detected
ug/L - micrograms per liter
R - Rejected
SVOC - Semi-Volatile Organic Compound

APPENDIX N
Groundwater, Pore Water, and Surface Water Analytical Data for Non-PAH SVOCs
Quanta Resources Superfund Site, OU1
Edgewater, New Jersey

Location ID		MW-125		MW-126			MW-127		MW-128		MW-129	
Field Sample ID		MW-125-122308	MW-125-091509	MW-126-123108	Dup-123108	MW-126-091609	MW-127-122408	MW-127-091409	MW-128-031809	MW-128-091509	MW-129-031809	MW-129-091509
Sample Date		12/23/2008	9/15/2009	12/31/2008	12/31/2008	9/16/2009	12/24/2008	9/14/2009	3/18/2009	9/15/2009	3/18/2009	9/15/2009
Sample Interval		5 - 15 FT	5 - 15 FT	8 - 18 FT	8 - 18 FT	8 - 18 FT	6 - 16 FT	6 - 16 FT	5 - 15 FT	5 - 15 FT	5 - 15 FT	5 - 15 FT
Sample Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
	Units											
2,4,5-Trichlorophenol	ug/L	5 U	5 U	5.3 U	5 U	5 U	5.1 U	5 U	5 U	5.3 U	5.2 U	5 U
2,4,6-Trichlorophenol	ug/L	5 U	5 U	5.3 U	5 U	5 U	5.1 U	5 U	5 U	5.3 U	5.2 U	5 U
2,4-Dichlorophenol	ug/L	5 U	5 U	5.3 U	5 U	5 U	5.1 U	5 U	5 U	5.3 U	5.2 U	5 U
2,4-Dimethylphenol	ug/L	5 U	5 U	**29.5**	5 U	**6.2**	5.1 U	5 U	5 U	5.3 U	5.2 U	5 U
2,4-Dinitrophenol	ug/L	20 UJ	20 U	21 U	20 U	20 U	21 U	20 U	20 U	21 U	21 U	20 U
2,4-Dinitrotoluene	ug/L	2 U	2 U	2.1 U	2 U	2 U	2.1 U	2 U	2 U	2.1 U	2.1 U	2 U
2,6-Dinitrotoluene	ug/L	2 U	2 U	2.1 U	2 U	2 U	2.1 U	2 U	2 U	2.1 U	2.1 U	2 U
2-Chloronaphthalene	ug/L	5 U	5 U	5.3 U	5 U	5 U	5.1 U	5 U	5 U	5.3 U	5.2 U	5 U
2-Chlorophenol	ug/L	5 U	5 U	5.3 U	5 U	5 U	5.1 U	5 U	5 U	5.3 U	5.2 U	5 U
2-Methylphenol	ug/L	2 U	2 U	**3.3**	**3.5**	**2.3**	2.1 U	2 U	2 U	2.1 U	2.1 U	2 U
2-Nitroaniline	ug/L	5 U	5 U	5.3 U	5 U	5 U	5.1 U	5 U	5 U	5.3 U	5.2 U	5 U
2-Nitrophenol	ug/L	5 U	5 U	5.3 U	5 U	5 U	5.1 U	5 U	5 U	5.3 U	5.2 U	5 U
3&4-Methylphenol	ug/L	2 U	2 U	**3**	**3.1**	2 U	2.1 U	2 U	2 U	2.1 U	2.1 U	2 U
3,3-Dichlorobenzidine	ug/L	5 U	5 U	5.3 U	5 U	R	5.1 U	5 U	5 U	5.3 U	5.2 U	5 U
3-Nitroaniline	ug/L	5 U	5 U	5.3 U	5 U	5 U	5.1 U	5 U	5 U	5.3 U	5.2 U	5 U
4,6-Dinitro-2-methylphenol	ug/L	20 U	20 U	21 U	20 U	20 U	21 U	20 U	20 U	21 U	21 U	20 U
4-Bromophenyl phenyl ether	ug/L	2 U	2 U	2.1 U	2 U	2 U	2.1 U	2 U	2 U	2.1 U	2.1 U	2 U
4-Chloro-3-methyl phenol	ug/L	5 U	5 U	5.3 U	5 U	5 U	5.1 U	5 U	**4.6 J**	**2.2 J**	5.2 U	5 U
4-Chloroaniline	ug/L	5 U	5 U	5.3 U	5 U	5 U	5.1 U	5 U	5 U	5.3 U	5.2 U	5 U
4-Chlorophenyl phenyl ether	ug/L	2 U	2 U	2.1 U	2 U	2 U	2.1 U	2 U	2 U	2.1 U	2.1 U	2 U
4-Nitroaniline	ug/L	5 U	5 U	5.3 U	5 U	5 U	5.1 U	5 U	5 U	5.3 U	5.2 U	5 U
4-Nitrophenol	ug/L	10 UJ	10 U	11 U	10 U	10 U	10 U	10 U	10 U	11 U	10 U	10 U
Acetophenone	ug/L	—	5 U	—	—	5 U	—	5 U	—	5.3 U	—	5 U
Atrazine	ug/L	5 U	5 U	5.3 U	5 U	5 U	5.1 U	5 U	5 U	5.3 U	5.2 U	5 U
Benzaldehyde	ug/L	5 U	5 U	5.3 U	5 U	5 U	5.1 U	5 U	5 U	5.3 U	5.2 U	5 U
Biphenyl	ug/L	2 U	2 U	**53.3**	**54**	**73.9**	2.1 U	2 U	2 U	2.1 U	2.1 U	2 U
bis(2-Chloroethoxy)methane	ug/L	2 U	2 U	2.1 U	2 U	2 U	2.1 U	2 U	2 U	2.1 U	2.1 U	2 U
bis(2-Chloroethyl)ether	ug/L	2 U	2 U	2.1 U	2 U	2 U	2.1 U	2 U	2 U	2.1 U	2.1 U	2 U
bis(2-Chloroisopropyl)ether	ug/L	2 U	2 U	2.1 U	2 U	2 U	2.1 U	2 U	2 U	2.1 U	2.1 U	2 U
bis(2-Ethylhexyl)phthalate	ug/L	2 U	2 U	2.1 U	2 U	2 U	2.1 U	**4.1**	2 U	2.1 U	2.1 U	2 U
Butylbenzylphthalate	ug/L	2 U	2 U	2.1 U	2 U	2 U	2.1 U	2 U	2 U	2.1 U	2.1 U	2 U
Caprolactam	ug/L	2 U	2 U	2.1 U	2 U	**72.4**	2.1 U	2 U	2 U	2.1 U	2.1 U	2 U
Carbazole	ug/L	2 U	2 U	**9.6**	**9.5**	**14.5**	**0.51 J**	2 U	2 U	**0.49 J**	**2 J**	**1 J**
Dibenzofuran	ug/L	5 U	5 U	**86.2**	**86.4**	**124**	**0.56 J**	5 U	5 U	**0.61 J**	**1.9 J**	**1.1 J**
Diethylphthalate	ug/L	2 U	2 U	2.1 U	2 U	2 U	2.1 U	2 U	2 U	2.1 U	2.1 U	2 U
Dimethylphthalate	ug/L	2 U	2 U	2.1 U	2 U	2 U	2.1 U	2 U	2 U	2.1 U	2.1 U	2 U
Di-n-butyl phthalate	ug/L	2 U	2 U	2.1 U	2 U	2 U	2.1 U	2 U	2 U	2.1 U	2.1 U	2 U
Di-n-octyl phthalate	ug/L	2 U	2 U	2.1 U	2 U	2 U	2.1 U	2 U	2 U	2.1 U	2.1 U	2 U
Hexachlorobenzene	ug/L	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.021 U	0.02 U	0.02 U	0.021 U	0.021 U	0.02 U
Hexachlorobutadiene	ug/L	1 U	1 U	1.1 U	1 U	1 U	1 U	1 U	1 U	1.1 U	1 U	1 U
Hexachlorocyclopentadiene	ug/L	20 UJ	20 U	21 U	20 U	20 U	21 U	20 U	20 U	21 U	21 U	20 U
Hexachloroethane	ug/L	5 U	5 U	5.3 U	5 U	5 U	5.1 U	5 U	5 U	5.3 U	5.2 U	5 U
Isophorone	ug/L	2 U	2 U	2.1 U	2 U	2 U	2.1 U	2 U	2 U	2.1 U	2.1 U	2 U
Nitrobenzene	ug/L	2 U	2 U	2.1 U	2 U	2 U	2.1 U	2 U	2 U	2.1 U	2.1 U	2 U
N-Nitroso-di-n-propylamine	ug/L	2 U	2 U	2.1 U	2 U	2 U	2.1 U	2 U	2 U	2.1 U	2.1 U	2 U
N-Nitroso-di-phenylamine	ug/L	5 U	5 U	5.3 U	5 U	5 U	5.1 U	5 U	5 U	5.3 U	5.2 U	5 U
Pentachlorophenol	ug/L	0.3 U	0.3 U	—	0.3 U	0.3 U	0.31 U	0.3 U	0.3 U	0.32 U	0.31 U	0.3 U
Phenol	ug/L	2 U	2 U	2.1 U	2 U	2 U	2.1 U	2 U	2 U	2.1 U	2.1 U	2 U

Detected concentrations are marked as shaded and bold.
FT - Feet
J - Estimated Concentration
U - Not Detected
ug/L - micrograms per liter
R - Rejected
SVOC - Semi-Volatile Organic Compound

APPENDIX N
Groundwater, Pore Water, and Surface Water Analytical Data for Non-PAH SVOCs
Quanta Resources Superfund Site, OU1
Edgewater, New Jersey

Location ID		MW-130A		MW-130B		MW-131		MW-132		MW-133		MW-134	
Field Sample ID		MW-130A-121908	MW-130A-091709	MW-130B-122208	MW-130B-091709	MW-131-120808	MW-131-091709	MW-132-121808	MW-132-091709	MW-133-121008	MW-133-091609	MW-134-121008	MW-134-091609
Sample Date		12/19/2008	9/17/2009	12/22/2008	9/17/2009	12/8/2008	9/17/2009	12/18/2008	9/17/2009	12/10/2008	9/16/2009	12/10/2008	9/16/2009
Sample Interval		5 - 15 FT	5 - 15 FT	15 - 25 FT	15 - 25 FT	4 - 14 FT	4 - 14 FT	4 - 14 FT	4 - 14 FT	10 - 15 FT	10 - 15 FT	11 - 21 FT	11 - 21 FT
Sample Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
	Units												
2,4,5-Trichlorophenol	ug/L	5 U	5.5 U	5 U	5 U	5 UJ	5 U	5 U	5 U	5 U	5.2 U	5 U	5 U
2,4,6-Trichlorophenol	ug/L	5 U	5.5 U	5 U	5 U	5 UJ	5 U	5 U	5 U	5 U	5.2 U	5 U	5 U
2,4-Dichlorophenol	ug/L	5 U	5.5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.2 U	5 U	5 U
2,4-Dimethylphenol	ug/L	5 U	5.5 U	**1660**	**1040**	5 U	5 U	5 U	5 U	5 U	5.2 U	**30.9**	**16.3**
2,4-Dinitrophenol	ug/L	20 U	22 U	20 U	20 U	20 UJ	20 U	20 U	20 U	20 U	21 U	20 U	20 U
2,4-Dinitrotoluene	ug/L	2 U	2.2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2.1 U	2 U	2 U
2,6-Dinitrotoluene	ug/L	2 U	2.2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2.1 U	2 U	2 U
2-Chloronaphthalene	ug/L	5 U	5.5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.2 U	5 U	5 U
2-Chlorophenol	ug/L	5 U	5.5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.2 U	5 U	5 U
2-Methylphenol	ug/L	2 U	2.2 U	**21.7**	**33.6**	2 U	2 U	2 U	2 U	2 U	2.1 U	**8.4**	**6.6**
2-Nitroaniline	ug/L	5 U	5.5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.2 U	5 U	5 U
2-Nitrophenol	ug/L	5 U	5.5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.2 U	5 U	5 U
3&4-Methylphenol	ug/L	2 U	2.2 U	**43.6**	**35.5**	2 U	2 U	2 U	2 U	2 U	2.1 U	**37.7**	**16.5**
3,3-Dichlorobenzidine	ug/L	5 U	5.5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.2 U	5 U	5 U
3-Nitroaniline	ug/L	5 U	5.5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.2 U	5 U	5 U
4,6-Dinitro-2-methylphenol	ug/L	20 U	22 U	20 U	20 U	20 U	20 U	20 U	20 U	20 U	21 U	20 U	20 U
4-Bromophenyl phenyl ether	ug/L	2 U	2.2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2.1 U	2 U	2 U
4-Chloro-3-methyl phenol	ug/L	5 U	5.5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.2 U	5 U	5 U
4-Chloroaniline	ug/L	5 U	5.5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.2 U	5 U	5 U
4-Chlorophenyl phenyl ether	ug/L	2 U	2.2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2.1 U	2 U	2 U
4-Nitroaniline	ug/L	5 U	5.5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.2 U	5 U	5 U
4-Nitrophenol	ug/L	10 U	11 U	10 UJ	10 U	10 UJ	10 U	10 U	10 U	10 UJ	10 U	10 UJ	10 U
Acetophenone	ug/L	—	5.5 U	—	5 U	—	5 U	—	5 U	—	5.2 U	—	5 U
Atrazine	ug/L	5 U	5.5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.2 U	5 U	5 U
Benzaldehyde	ug/L	5 U	5.5 U	—	5 U	5 U	5 U	5 U	5 U	5 U	5.2 U	5 U	5 U
Biphenyl	ug/L	**3**	**0.93 J**	**83.2**	**155**	2 U	2 U	2 U	2 U	2 U	2.1 U	**57.3**	**47.6**
bis(2-Chloroethoxy)methane	ug/L	2 U	2.2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2.1 U	2 U	2 U
bis(2-Chloroethyl)ether	ug/L	2 U	2.2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2.1 U	2 U	2 U
bis(2-Chloroisopropyl)ether	ug/L	2 U	2.2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2.1 U	2 U	2 U
bis(2-Ethylhexyl)phthalate	ug/L	2 U	2.2 U	**1.3 J**	2 U	2 U	2 U	2 U	2 U	2 U	2.1 U	2 U	2 U
Butylbenzylphthalate	ug/L	2 U	2.2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2.1 U	2 U	2 U
Caprolactam	ug/L	2 U	2.2 U	2 U	2 U	2 UJ	**51.9**	2 U	**9.5**	2 UJ	2.1 U	2 UJ	2 U
Carbazole	ug/L	**20.7**	**21.4**	**191**	**254**	2 U	2 U	2 U	2 U	2 U	2.1 U	**163**	**86.4**
Dibenzofuran	ug/L	**23.3**	**11.5**	**189**	**336**	5 U	5 U	5 U	5 U	5 U	5.2 U	**79.7**	**59.1**
Diethylphthalate	ug/L	2 U	2.2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2.1 U	2 U	2 U
Dimethylphthalate	ug/L	2 U	2.2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2.1 U	2 U	2 U
Di-n-butyl phthalate	ug/L	2 U	2.2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2.1 U	2 U	2 U
Di-n-octyl phthalate	ug/L	2 U	2.2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2.1 U	2 U	2 U
Hexachlorobenzene	ug/L	0.02 U	0.022 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.021 U	0.02 U	0.02 U
Hexachlorobutadiene	ug/L	1 U	1.1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Hexachlorocyclopentadiene	ug/L	20 U	22 U	20 UJ	20 U	20 U	20 U	20 U	20 U	20 U	21 U	20 U	20 U
Hexachloroethane	ug/L	5 U	5.5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.2 U	5 U	5 U
Isophorone	ug/L	2 U	2.2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2.1 U	2 U	2 U
Nitrobenzene	ug/L	2 U	2.2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2.1 U	2 U	2 U
N-Nitroso-di-n-propylamine	ug/L	2 U	2.2 U	2 UJ	2 U	2 U	2 U	2 U	2 U	2 U	2.1 U	2 U	2 U
N-Nitroso-di-phenylamine	ug/L	5 U	5.5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5.2 U	5 U	5 U
Pentachlorophenol	ug/L	0.3 U	0.33 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.31 U	0.3 U	0.3 U
Phenol	ug/L	2 U	2.2 U	**2.1**	2 U	2 U	2 U	2 U	2 U	2 U	2.1 U	**7.6**	**2.6**

Detected concentrations are marked as shaded and bold.
FT - Feet
J - Estimated Concentration
U - Not Detected
ug/L - micrograms per liter
R - Rejected
SVOC - Semi-Volatile Organic Compound

APPENDIX N
Groundwater, Pore Water, and Surface Water Analytical Data for Non-PAH SVOCs
Quanta Resources Superfund Site, OU1
Edgewater, New Jersey

Location ID		MW-135		MW-136		MW-A-2	MW-B	MW-C		MW-F	MW-L	MW-N-2
Field Sample ID		MW-135-120308	MW-135-091609	MW-136-122308	MW-136-091409	MW-A-2-123008	MW-B-120308	MW-C-121708	MW-C-091609	MW-F-121808	MW-L-122908	MW-N-2-123008
Sample Date		12/3/2008	9/16/2009	12/23/2008	9/14/2009	12/30/2008	12/3/2008	12/17/2008	9/16/2009	12/18/2008	12/29/2008	12/30/2008
Sample Interval		20 - 30 FT	20 - 30 FT	5 - 10 FT	5 - 10 FT	6 - 16 FT	9 - 19 FT	10 - 20 FT	10 - 20 FT	7 - 17 FT	17 - 27 FT	5 - 10 FT
Sample Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
	Units											
2,4,5-Trichlorophenol	ug/L	5.1 U	5.2 U	5 U	5 U	5 U	5 U	5 U	5.2 U	5.1 U	5 U	5.6 U
2,4,6-Trichlorophenol	ug/L	5.1 U	5.2 U	5 U	5 U	5 U	5 U	5 U	5.2 U	5.1 U	5 U	5.6 U
2,4-Dichlorophenol	ug/L	5.1 U	5.2 U	5 U	5 U	5 U	5 U	5 U	5.2 U	5.1 U	5 U	5.6 U
2,4-Dimethylphenol	ug/L	**2.9 J**	5.2 U	5 U	5 U	**4.8 J**	5 U	**4.8 J**	5.2 U	5.1 U	5 U	5.6 U
2,4-Dinitrophenol	ug/L	20 UJ	21 U	20 UJ	20 U	20 U	20 UJ	20 U	21 U	20 U	20 U	22 U
2,4-Dinitrotoluene	ug/L	2 U	2.1 U	2 U	2 U	2 U	2 U	2 U	2.1 U	2 U	2 U	2.2 U
2,6-Dinitrotoluene	ug/L	2 U	2.1 U	2 U	2 U	2 U	2 U	2 U	2.1 U	2 U	2 U	2.2 U
2-Chloronaphthalene	ug/L	5.1 U	5.2 U	5 U	5 U	5 U	5 U	5 U	5.2 U	5.1 U	5 U	5.6 U
2-Chlorophenol	ug/L	5.1 U	5.2 U	5 U	5 U	5 U	5 U	5 U	5.2 U	5.1 U	5 U	5.6 U
2-Methylphenol	ug/L	2 U	2.1 U	2 U	2 U	**2.3**	2 U	2 U	2.1 U	2 U	2 U	2.2 U
2-Nitroaniline	ug/L	5.1 U	5.2 U	5 U	5 U	5 U	5 U	5 U	5.2 U	5.1 U	5 U	5.6 U
2-Nitrophenol	ug/L	5.1 U	5.2 U	5 U	5 U	5 U	5 U	5 U	5.2 U	5.1 U	5 U	5.6 U
3&4-Methylphenol	ug/L	2 U	2.1 U	2 U	2 U	**4.5**	**15.8**	2 U	2.1 U	2 U	2 U	2.2 U
3,3-Dichlorobenzidine	ug/L	5.1 UJ	5.2 U	5 U	5 U	5 U	5 UJ	5 U	5.2 U	5.1 U	5 U	5.6 U
3-Nitroaniline	ug/L	5.1 U	5.2 U	5 U	5 U	5 U	5 U	5 U	5.2 U	5.1 U	5 U	5.6 U
4,6-Dinitro-2-methylphenol	ug/L	20 U	21 U	20 U	20 U	20 U	20 U	20 U	21 U	20 U	20 U	22 U
4-Bromophenyl phenyl ether	ug/L	2 U	2.1 U	2 U	2 U	2 U	2 U	2 U	2.1 U	2 U	2 U	2.2 U
4-Chloro-3-methyl phenol	ug/L	5.1 U	5.2 U	5 U	5 U	5 U	5 U	5 U	5.2 U	5.1 U	5 U	5.6 U
4-Chloroaniline	ug/L	5.1 U	5.2 U	5 U	5 U	5 U	5 U	5 U	5.2 U	5.1 U	5 U	5.6 U
4-Chlorophenyl phenyl ether	ug/L	2 U	2.1 U	2 U	2 U	2 U	2 U	2 U	2.1 U	2 U	2 U	2.2 U
4-Nitroaniline	ug/L	5.1 U	5.2 U	5 U	5 U	5 U	5 U	5 U	5.2 U	5.1 U	5 U	5.6 U
4-Nitrophenol	ug/L	10 UJ	10 U	10 UJ	10 U	10 U	10 UJ	10 U	10 U	10 U	10 U	11 U
Acetophenone	ug/L	—	5.2 U	—	5 U	—	—	—	5.2 U	—	—	—
Atrazine	ug/L	5.1 U	5.2 U	5 U	5 U	5 U	5 U	5 U	5.2 U	5.1 U	5 U	5.6 U
Benzaldehyde	ug/L	5.1 U	5.2 U	5 U	5 U	5 U	5 U	5 U	5.2 U	5.1 U	5 U	5.6 U
Biphenyl	ug/L	**80.6**	**61**	**11.3**	**5.8**	**21.3**	2 U	**3.1**	2.1 U	2 U	2 U	**0.89 J**
bis(2-Chloroethoxy)methane	ug/L	2 U	2.1 U	2 U	2 U	2 U	2 U	2 U	2.1 U	2 U	2 U	2.2 U
bis(2-Chloroethyl)ether	ug/L	2 U	2.1 U	2 U	2 U	2 U	2 U	2 U	2.1 U	2 U	2 U	2.2 U
bis(2-Chloroisopropyl)ether	ug/L	2 U	2.1 U	2 U	2 U	2 U	2 U	2 U	2.1 U	2 U	2 U	2.2 U
bis(2-Ethylhexyl)phthalate	ug/L	2 U	1.1 U	2 U	2 U	2 U	2 U	2 U	2.1 U	2 U	2 U	**1.2 J**
Butylbenzylphthalate	ug/L	2 U	2.1 U	2 U	2 U	2 U	2 U	2 U	2.1 U	2 U	2 U	2.2 U
Caprolactam	ug/L	2 U	2.1 U	2 U	2 U	2 U	2 U	2 U	2.1 U	2 U	2 U	2.2 U
Carbazole	ug/L	**144**	**68.5**	**24.5**	**10.2**	**23**	2 U	**19.8**	**20.3**	2 U	2 U	**6.2**
Dibenzofuran	ug/L	**165**	**100**	**51.1**	**56.7**	**38.2**	5 U	**16.9**	**15.2**	5.1 U	5 U	**12**
Diethylphthalate	ug/L	2 U	2.1 U	2 U	2 U	2 U	2 U	2 U	2.1 U	2 U	2 U	2.2 U
Dimethylphthalate	ug/L	2 U	2.1 U	2 U	2 U	2 U	2 U	2 U	2.1 U	2 U	2 U	2.2 U
Di-n-butyl phthalate	ug/L	2 U	2.1 U	2 U	2 U	2 U	2 U	2 U	2.1 U	2 U	2 U	2.2 U
Di-n-octyl phthalate	ug/L	2 U	2.1 U	2 U	2 U	2 U	2 U	2 U	2.1 U	2 U	2 U	2.2 U
Hexachlorobenzene	ug/L	0.02 U	0.021 U	0.02 U	0.02 U	0.02 U	0.02 U	0.02 U	0.021 U	0.02 U	0.02 U	0.022 U
Hexachlorobutadiene	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1.1 U
Hexachlorocyclopentadiene	ug/L	20 UJ	21 U	20 UJ	20 U	20 U	20 UJ	20 U	21 U	20 U	20 U	22 U
Hexachloroethane	ug/L	5.1 U	5.2 U	5 U	5 U	5 U	5 U	5 U	5.2 U	5.1 U	5 U	5.6 U
Isophorone	ug/L	2 U	2.1 U	2 U	2 U	2 U	2 U	2 U	2.1 U	2 U	2 U	2.2 U
Nitrobenzene	ug/L	2 U	2.1 U	2 U	2 U	2 U	2 U	2 U	2.1 U	2 U	2 U	2.2 U
N-Nitroso-di-n-propylamine	ug/L	2 U	2.1 U	2 U	2 U	2 U	2 U	2 U	2.1 U	2 U	2 U	2.2 U
N-Nitroso-di-phenylamine	ug/L	5.1 U	5.2 U	5 U	5 U	5 U	5 U	5 U	5.2 U	5.1 U	5 U	5.6 U
Pentachlorophenol	ug/L	0.31 U	0.31 U	0.3 U	0.3 U	0.3 U	0.3 U	0.3 U	0.31 U	0.31 U	0.3 U	0.33 U
Phenol	ug/L	2 U	2.1 U	2 U	2 U	2 U	**2.7**	**2.7**	**2.8**	2 U	2 U	2.2 U

Detected concentrations are marked as shaded and bold.
FT - Feet
J - Estimated Concentration
U - Not Detected
ug/L - micrograms per liter
R - Rejected
SVOC - Semi-Volatile Organic Compound

APPENDIX N
Groundwater, Pore Water, and Surface Water Analytical Data for Non-PAH SVOCs
Quanta Resources Superfund Site, OU1
Edgewater, New Jersey

Location ID		MW-O		PZ-1I	PZ-1D	PZ-2S	PZ-2I	PZ-2D	PZ-3S	PZ-3I	PZ-3D	PZ-4S	PZ-4I
Field Sample ID		MW-O-121808	MW-O-091609	PZ1I-022509	PZ1D-022509	PZ2S-022709	PZ2I-022709	PZ2D-010609	PZ3S-011309	PZ3I-010709	PZ3D-011309	PZ4S-010709	PZ4I-010709
Sample Date		12/18/2008	9/16/2009	2/25/2009	2/25/2009	2/27/2009	2/27/2009	1/6/2009	1/13/2009	1/7/2009	1/13/2009	1/7/2009	1/7/2009
Sample Interval		9.52 - 19.52 FT	9.52 - 19.52 FT	15.82 - 16.32 FT	20.26 - 20.76 FT	4.28 - 4.78 FT	14.77 - 15.27 FT	20.86 - 21.36 FT	4.4 - 4.9 FT	14.7 - 15.7 FT	23.4 - 24.4 FT	3.42 - 3.92 FT	14.63 - 15.13 FT
Sample Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
	Units												
2,4,5-Trichlorophenol	ug/L	5 U	5.6 U	17 UJ	8.3 UJ	100 U	9.1 U	5.3 U	50 U	6.1 U	50 U	5 U	5 U
2,4,6-Trichlorophenol	ug/L	5 U	5.6 U	17 UJ	8.3 UJ	100 U	9.1 U	5.3 U	50 U	6.1 U	50 U	5 U	5 U
2,4-Dichlorophenol	ug/L	5 U	5.6 U	17 UJ	8.3 UJ	100 U	9.1 U	5.3 U	50 U	6.1 U	50 U	5 U	5 U
2,4-Dimethylphenol	ug/L	**49**	**74.4**	**235 J**	**1700 J**	**1740**	**1140**	5.3 U	**2770**	**5950**	50 U	5 U	5 U
2,4-Dinitrophenol	ug/L	20 U	22 U	67 UJ	33 UJ	400 U	36 U	21 U	200 U	24 U	200 U	20 U	20 U
2,4-Dinitrotoluene	ug/L	2 U	2.2 U	6.7 UJ	3.3 UJ	40 U	3.6 U	2.1 U	20 U	2.4 U	20 U	2 U	2 U
2,6-Dinitrotoluene	ug/L	2 U	2.2 U	6.7 UJ	3.3 UJ	40 U	3.6 U	2.1 U	20 U	2.4 U	20 U	2 U	2 U
2-Chloronaphthalene	ug/L	5 U	5.6 U	17 UJ	8.3 UJ	100 U	9.1 U	5.3 U	50 U	6.1 U	50 U	5 U	5 U
2-Chlorophenol	ug/L	5 U	5.6 U	17 UJ	8.3 UJ	100 U	9.1 U	5.3 U	50 U	6.1 U	50 U	5 U	5 U
2-Methylphenol	ug/L	**9.9**	**24.5**	**112 J**	**147 J**	40 U	**52.2**	2.1 U	**215**	**383**	20 U	2 U	2 U
2-Nitroaniline	ug/L	5 U	5.6 U	17 UJ	8.3 UJ	100 U	9.1 U	5.3 U	50 U	6.1 U	50 U	5 U	5 U
2-Nitrophenol	ug/L	5 U	5.6 U	17 UJ	8.3 UJ	100 U	9.1 U	5.3 U	50 U	6.1 U	50 U	5 U	5 U
3&4-Methylphenol	ug/L	2 U	**4.4**	**44.1 J**	**1890 J**	40 U	**4.9**	2.1 U	**4220**	**7260**	20 U	2 U	2 U
3,3-Dichlorobenzidine	ug/L	5 U	5.6 U	17 UJ	8.3 UJ	100 U	9.1 U	5.3 U	50 U	—	50 U	5 U	5 U
3-Nitroaniline	ug/L	5 U	5.6 U	17 UJ	8.3 UJ	100 U	9.1 U	5.3 U	50 U	6.1 U	50 U	5 U	5 U
4,6-Dinitro-2-methylphenol	ug/L	20 U	22 U	67 UJ	33 UJ	400 U	36 U	21 U	200 U	24 U	200 U	20 U	20 U
4-Bromophenyl phenyl ether	ug/L	2 U	2.2 U	6.7 UJ	3.3 UJ	40 U	3.6 U	2.1 U	20 U	2.4 U	20 U	2 U	2 U
4-Chloro-3-methyl phenol	ug/L	5 U	5.6 U	17 UJ	8.3 UJ	100 U	9.1 U	5.3 U	50 U	6.1 U	50 U	5 U	5 U
4-Chloroaniline	ug/L	5 U	5.6 U	17 UJ	8.3 UJ	100 U	9.1 U	5.3 U	50 U	6.1 U	50 U	5 U	5 U
4-Chlorophenyl phenyl ether	ug/L	2 U	2.2 U	6.7 UJ	3.3 UJ	40 U	3.6 U	2.1 U	20 U	2.4 U	20 U	2 U	2 U
4-Nitroaniline	ug/L	5 U	5.6 U	17 UJ	8.3 UJ	100 U	9.1 U	5.3 U	50 U	6.1 U	50 U	5 U	5 U
4-Nitrophenol	ug/L	10 U	11 U	33 UJ	17 UJ	200 U	18 U	11 U	100 U	12 U	100 U	10 U	10 U
Acetophenone	ug/L	—	5.6 U	—	—	—	—	—	—	—	—	—	—
Atrazine	ug/L	5 U	5.6 U	17 UJ	8.3 UJ	100 U	9.1 U	5.3 U	50 U	6.1 U	50 U	5 U	5 U
Benzaldehyde	ug/L	5 U	5.6 U	17 UJ	8.3 UJ	100 U	9.1 U	5.3 U	50 U	6.1 U	50 U	5 U	5 U
Biphenyl	ug/L	**40.8**	**25**	**5.6 J**	**341 J**	40 U	**2.8 J**	**1.4 J**	**80.7**	**16.5**	20 U	2 U	**1.7 J**
bis(2-Chloroethoxy)methane	ug/L	2 U	2.2 U	6.7 UJ	3.3 UJ	40 U	3.6 U	2.1 U	20 U	2.4 U	20 U	2 U	2 U
bis(2-Chloroethyl)ether	ug/L	2 U	2.2 U	6.7 UJ	3.3 UJ	40 U	3.6 U	2.1 U	20 U	2.4 U	20 U	2 U	2 U
bis(2-Chloroisopropyl)ether	ug/L	2 U	2.2 U	6.7 UJ	3.3 UJ	40 U	3.6 U	2.1 U	20 U	2.4 U	20 U	2 U	2 U
bis(2-Ethylhexyl)phthalate	ug/L	2 U	2.2 U	6.7 UJ	3.3 UJ	40 U	3.6 U	2.1 U	20 U	2.4 U	20 U	2 U	2 U
Butylbenzylphthalate	ug/L	2 U	2.2 U	6.7 UJ	3.3 UJ	40 U	3.6 U	2.1 U	20 U	2.4 U	20 U	2 U	2 U
Caprolactam	ug/L	2 U	2.2 U	6.7 UJ	**3.3 NJ**	40 U	3.6 U	2.1 U	20 U	2.4 U	20 U	2 U	2 U
Carbazole	ug/L	**132**	**95.4**	**164 J**	**714 J**	**137**	**11.2**	**2.2**	**275**	**85.4**	**44.5**	2 U	**8.9**
Dibenzofuran	ug/L	**118**	**70.7**	**7.2 J**	**773 J**	**24.6 J**	**10.4**	**6.5**	**172**	**35.7**	**8.2 J**	5 U	**10.3**
Diethylphthalate	ug/L	2 U	2.2 U	6.7 UJ	3.3 UJ	40 U	3.6 U	2.1 U	20 U	2.4 U	20 U	2 U	2 U
Dimethylphthalate	ug/L	2 U	2.2 U	6.7 UJ	3.3 UJ	40 U	3.6 U	2.1 U	20 U	2.4 U	20 U	2 U	2 U
Di-n-butyl phthalate	ug/L	2 U	2.2 U	6.7 UJ	3.3 UJ	40 U	3.6 U	2.1 U	20 U	2.4 U	20 U	2 U	2 U
Di-n-octyl phthalate	ug/L	2 U	2.2 U	6.7 UJ	3.3 UJ	40 U	3.6 U	2.1 U	20 U	2.4 U	20 U	2 U	2 U
Hexachlorobenzene	ug/L	0.02 U	0.022 U	0.067 UJ	0.033 UJ	0.4 U	0.036 U	0.021 U	0.2 U	0.024 U	0.2 U	0.02 U	0.02 U
Hexachlorobutadiene	ug/L	1 U	1.1 U	3.3 UJ	1.7 UJ	20 U	1.8 U	1.1 U	10 U	1.2 U	10 U	1 U	1 U
Hexachlorocyclopentadiene	ug/L	20 U	22 U	67 UJ	33 UJ	400 U	36 U	21 U	200 U	24 U	200 U	20 U	20 U
Hexachloroethane	ug/L	5 U	5.6 U	17 UJ	8.3 UJ	100 U	9.1 U	5.3 U	50 U	6.1 U	50 U	5 U	5 U
Isophorone	ug/L	2 U	2.2 U	6.7 UJ	3.3 UJ	40 U	3.6 U	2.1 U	20 U	2.4 U	20 U	2 U	2 U
Nitrobenzene	ug/L	2 U	2.2 U	6.7 UJ	3.3 UJ	40 U	3.6 U	2.1 U	20 U	2.4 U	20 U	2 U	2 U
N-Nitroso-di-n-propylamine	ug/L	2 U	2.2 U	6.7 UJ	3.3 UJ	40 U	3.6 U	2.1 U	20 U	2.4 U	20 U	2 U	2 U
N-Nitroso-di-phenylamine	ug/L	5 U	5.6 U	17 UJ	8.3 UJ	100 U	9.1 U	5.3 U	50 U	6.1 U	50 U	5 U	5 U
Pentachlorophenol	ug/L	0.3 U	0.33 U	1 UJ	0.5 UJ	6 U	0.55 U	0.32 U	3 U	0.37 U	3 U	0.3 U	0.3 U
Phenol	ug/L	2 U	**3.1**	**26.3 J**	**129 J**	40 U	3.6 U	2.1 U	**31.6 J**	**56.4**	20 U	2 U	2 U

Detected concentrations are marked as shaded and bold.
FT - Feet
J - Estimated Concentration
U - Not Detected
ug/L - micrograms per liter
R - Rejected
SVOC - Semi-Volatile Organic Compound

APPENDIX N
Groundwater, Pore Water, and Surface Water Analytical Data for Non-PAH SVOCs
Quanta Resources Superfund Site, OU1
Edgewater, New Jersey

Location ID		PZ-5S	PZ-5I	PZ-5D
Field Sample ID		PZ5S-022709	PZ5I-022509	PZ5D-022509
Sample Date		2/27/2009	2/25/2009	2/25/2009
Sample Interval		4.5 - 4.5 FT	13.7 - 13.7 FT	22.4 - 23.4 FT
Sample Matrix		Groundwater	Groundwater	Groundwater
	Units			
2,4,5-Trichlorophenol	ug/L	10 U	8.3 UJ	5.4 UJ
2,4,6-Trichlorophenol	ug/L	10 U	8.3 UJ	5.4 UJ
2,4-Dichlorophenol	ug/L	10 U	8.3 UJ	5.4 UJ
2,4-Dimethylphenol	ug/L	**165**	**1140 J**	**1050 J**
2,4-Dinitrophenol	ug/L	40 U	33 UJ	22 UJ
2,4-Dinitrotoluene	ug/L	4 U	3.3 UJ	2.2 UJ
2,6-Dinitrotoluene	ug/L	4 U	3.3 UJ	2.2 UJ
2-Chloronaphthalene	ug/L	10 U	8.3 UJ	5.4 UJ
2-Chlorophenol	ug/L	10 U	8.3 UJ	5.4 UJ
2-Methylphenol	ug/L	**11.4**	**93.3 J**	**144 J**
2-Nitroaniline	ug/L	10 U	8.3 UJ	5.4 UJ
2-Nitrophenol	ug/L	10 U	8.3 UJ	5.4 UJ
3&4-Methylphenol	ug/L	**7.8**	3.3 UJ	**855 J**
3,3-Dichlorobenzidine	ug/L	10 U	8.3 UJ	5.4 UJ
3-Nitroaniline	ug/L	10 U	8.3 UJ	5.4 UJ
4,6-Dinitro-2-methylphenol	ug/L	40 U	33 UJ	22 UJ
4-Bromophenyl phenyl ether	ug/L	4 U	3.3 UJ	2.2 UJ
4-Chloro-3-methyl phenol	ug/L	10 U	8.3 UJ	5.4 UJ
4-Chloroaniline	ug/L	10 U	8.3 UJ	5.4 UJ
4-Chlorophenyl phenyl ether	ug/L	4 U	3.3 UJ	2.2 UJ
4-Nitroaniline	ug/L	10 U	8.3 UJ	5.4 UJ
4-Nitrophenol	ug/L	20 U	17 UJ	11 UJ
Acetophenone	ug/L	—	—	—
Atrazine	ug/L	10 U	8.3 UJ	5.4 UJ
Benzaldehyde	ug/L	10 U	8.3 UJ	5.4 UJ
Biphenyl	ug/L	4 U	**22.8 J**	**87.1 J**
bis(2-Chloroethoxy)methane	ug/L	4 U	3.3 UJ	2.2 UJ
bis(2-Chloroethyl)ether	ug/L	4 U	3.3 UJ	2.2 UJ
bis(2-Chloroisopropyl)ether	ug/L	4 U	3.3 UJ	2.2 UJ
bis(2-Ethylhexyl)phthalate	ug/L	4 U	3.3 UJ	2.2 UJ
Butylbenzylphthalate	ug/L	4 U	3.3 UJ	2.2 UJ
Caprolactam	ug/L	4 U	3.3 UJ	2.2 UJ
Carbazole	ug/L	4 U	3.3 UJ	**243 J**
Dibenzofuran	ug/L	**1.9 J**	**49.7 J**	**217 J**
Diethylphthalate	ug/L	4 U	3.3 UJ	2.2 UJ
Dimethylphthalate	ug/L	4 U	3.3 UJ	2.2 UJ
Di-n-butyl phthalate	ug/L	4 U	3.3 UJ	2.2 UJ
Di-n-octyl phthalate	ug/L	4 U	3.3 UJ	2.2 UJ
Hexachlorobenzene	ug/L	0.04 U	0.033 UJ	0.022 UJ
Hexachlorobutadiene	ug/L	2 U	1.7 UJ	1.1 UJ
Hexachlorocyclopentadiene	ug/L	40 U	33 UJ	22 UJ
Hexachloroethane	ug/L	10 U	8.3 UJ	5.4 UJ
Isophorone	ug/L	4 U	3.3 UJ	2.2 UJ
Nitrobenzene	ug/L	4 U	3.3 UJ	2.2 UJ
N-Nitroso-di-n-propylamine	ug/L	4 U	3.3 UJ	2.2 UJ
N-Nitroso-di-phenylamine	ug/L	10 U	8.3 UJ	5.4 UJ
Pentachlorophenol	ug/L	0.6 U	0.5 UJ	0.32 UJ
Phenol	ug/L	4 U	**3.6 J**	**16.2 J**

Detected concentrations are marked as shaded and bold.
FT - Feet
J - Estimated Concentration
U - Not Detected
ug/L - micrograms per liter
R - Rejected
SVOC - Semi-Volatile Organic Compound

APPENDIX O

Groundwater, Pore Water, and Surface Water Analytical Data for Volatile Organic Compounds (VOCs)

Quanta Resources Superfund Site, OU1

Edgewater, New Jersey

Location ID		3Y-MW2	GWZ-1		GWZ-2		GWZ-3		GWZ-4		GWZ-5		
Field Sample ID		3Y-MW-2-122908	GWZ-1-PW-071808	GWZ-1-SW-071808	GWZ-2-PW-072108	GWZ-2-SW-072108	GWZ-3-PW-072208	GWZ-3-SW-072208	GWZ-4-PW-072408	GWZ-4-SW-072408	GWZ-5-PW-072508	DUP-072508	GWZ-5-SW-072508
Sample Date		12/29/2008	7/18/2008	7/18/2008	7/21/2008	7/21/2008	7/22/2008	7/22/2008	7/24/2008	7/24/2008	7/25/2008	7/25/2008	7/25/2008
Sample Interval		3 - 20 FT	1 - 2 FT	<1 FT ABOVE SED.	1 - 2 FT	<1 FT ABOVE SED.	1 - 2 FT	<1 FT ABOVE SED.	1 - 2 FT	<1 FT ABOVE SED.	1 - 2 FT	1 - 2 FT	<1 FT ABOVE SED.
Sample Matrix		Groundwater	Pore Water	Surface Water	Pore Water	Surface Water	Pore Water	Surface Water	Pore Water	Surface Water	Pore Water	Pore Water	Surface Water
	Units												
1,1,1-Trichloroethane	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2,2-Tetrachloroethane	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2-Trichloroethane	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2-Trichlorotrifluoroethane	ug/L	—	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,1-Dichloroethane	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1-Dichloroethene	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2,4-Trichlorobenzene	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2,4-Trimethylbenzene	ug/L	5 U	**5.5**	**12 J**	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2-Dibromo-3-chloropropane	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
1,2-Dibromoethane	ug/L	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,2-Dichlorobenzene	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethane	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethene, cis-	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethene, trans-	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloropropane	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,3,5-Trimethylbenzene	ug/L	5 U	**0.95 J**	**0.8 J**	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,3-Dichlorobenzene	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,3-Dichloropropene, cis-	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,3-Dichloropropene, trans-	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,4-Dichlorobenzene	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Butanone (MEK)	ug/L	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-Hexanone	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
4-Methyl-2-pentanone (MIBK)	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Acetone	ug/L	10 U	**7.6 J**	10 U	**24.4**	10 U	**111**	**20.6**	**60**	**9.7 J**	10 U	10 U	10 U
Acrolein	ug/L	50 U	—	—	—	—	—	—	—	—	—	—	—
Benzene	ug/L	1 U	**28**	**0.83 J**	**5.3**	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromodichloromethane	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromoform	ug/L	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U
Bromomethane	ug/L	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Carbon disulfide	ug/L	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Carbon tetrachloride	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chlorobenzene	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chlorodibromomethane	ug/L	—	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloroethane	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloroform	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Chloromethane	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Cyclohexane	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Dibromochloromethane	ug/L	1 U	—	—	—	—	—	—	—	—	—	—	—
Dichlorodifluoromethane	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Ethylbenzene	ug/L	1 U	**7.6**	**1.4**	**1.5**	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Freon 113	ug/L	5 U	—	—	—	—	—	—	—	—	—	—	—
Isopropylbenzene	ug/L	2 U	**2.1**	**0.26 J**	**0.44 J**	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Methyl Acetate	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Methylcyclohexane	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Methylene chloride	ug/L	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Methyl-tert butyl ether (MTBE)	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Propylbenzene, n-	ug/L	5 U	**0.53 J**	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Styrene	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Tetrachloroethene	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Toluene	ug/L	1 U	1.8 U	0.39 U	**0.32 J**	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Trichloroethene	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Trichlorofluoromethane	ug/L	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Vinyl chloride	ug/L	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Xylene, o-	ug/L	1 U	**4.1**	**0.77 J**	**0.7 J**	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Xylenes, m/p-	ug/L	1 U	**4.4**	1.6 U	**0.87 J**	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Xylenes, Total	ug/L	1 U	**8.5**	2.4 U	**1.6**	1 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U

Detected concentrations are marked as shaded and bold.

FT - Feet

J - Estimated Concentration

U - Not Detected

ug/L - micrograms per liter

APPENDIX O
Groundwater, Pore Water, and Surface Water Analytical Data for Volatile Organic Compounds (VOCs)
Quanta Resources Superfund Site, OU1
Edgewater, New Jersey

Location ID		MW-20	MW-30	MW-51A		MW-103A	MW-105A	MW-106A	MW-107A	MW-109	MW-111B	MW-113B	MW-114A
Field Sample ID		MW-20-121008	MW-30-120408	MW-51A-123008	Dup-123008	MW-103A-120208	MW-105A-121008	MW-106A-120408	MW-107A-121908	MW-109-120408	MW-111B-122308	MW-113B-120908	MW-114A-010409
Sample Date		12/10/2008	12/4/2008	12/30/2008	12/30/2008	12/2/2008	12/10/2008	12/4/2008	12/19/2008	12/4/2008	12/23/2008	12/9/2008	1/4/2009
Sample Interval		7 - 17 FT	2 - 12 FT	3 - 14 FT	3 - 14 FT	3 - 13 FT	3 - 13 FT	3 - 13 FT	3 - 13 FT	15 - 20 FT	3 - 13 FT	9 - 19 FT	3 - 13 FT
Sample Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
	Units												
1,1,1-Trichloroethane	ug/L	1 U	1 U	5 U	5 U	5 U	5 U	1 U	20 U	1 U	1 U	1 U	1 U
1,1,2,2-Tetrachloroethane	ug/L	1 U	1 U	5 U	5 U	5 U	5 U	1 U	20 U	1 U	1 U	1 U	1 U
1,1,2-Trichloroethane	ug/L	1 U	1 U	5 U	5 U	5 U	5 U	1 U	20 U	1 U	1 U	1 U	1 U
1,1,2-Trichlorotrifluoroethane	ug/L	—	—	—	—	—	—	—	—	—	—	—	—
1,1-Dichloroethane	ug/L	**3.2**	1 U	5 U	5 U	5 U	5 U	1 U	20 U	1 U	1 U	1 U	1 U
1,1-Dichloroethene	ug/L	1 U	1 U	5 U	5 U	5 U	5 U	1 U	20 U	1 U	1 U	1 U	1 U
1,2,4-Trichlorobenzene	ug/L	5 U	5 U	25 U	25 U	25 U	25 U	5 U	100 U	5 U	5 U	5 U	5 U
1,2,4-Trimethylbenzene	ug/L	5 U	5 U	**40.7**	**31**	**738**	**403**	**19.3**	**352**	**8.3**	5 U	5 U	**2.2 J**
1,2-Dibromo-3-chloropropane	ug/L	10 U	10 U	50 U	50 U	50 U	50 U	10 U	200 U	10 U	10 U	10 U	10 U
1,2-Dibromoethane	ug/L	2 U	2 U	10 U	10 U	10 U	10 U	2 U	40 U	2 U	2 U	2 U	2 U
1,2-Dichlorobenzene	ug/L	1 U	1 U	5 U	5 U	5 U	5 U	1 U	20 U	1 U	1 U	**0.42 J**	1 U
1,2-Dichloroethane	ug/L	1 U	1 U	5 U	5 U	5 U	5 U	1 U	20 U	1 U	1 U	1 U	1 U
1,2-Dichloroethene, cis-	ug/L	1 U	1 U	5 U	5 U	5 U	5 U	1 U	20 U	1 U	1 U	1 U	1 U
1,2-Dichloroethene, trans-	ug/L	1 U	1 U	5 U	5 U	5 U	5 U	1 U	20 U	1 U	1 U	1 U	1 U
1,2-Dichloropropane	ug/L	1 U	1 U	5 U	5 U	5 U	5 U	1 U	20 U	1 U	1 U	1 U	1 U
1,3,5-Trimethylbenzene	ug/L	5 U	5 U	**10.5 J**	**8 J**	**216**	**350**	**18.4**	**131**	**1.9 J**	5 U	5 U	5 U
1,3-Dichlorobenzene	ug/L	1 U	1 U	5 U	5 U	5 U	5 U	1 U	20 U	1 U	1 U	1 U	1 U
1,3-Dichloropropene, cis-	ug/L	1 U	1 U	5 U	5 U	5 U	5 U	1 U	20 U	1 U	1 U	1 U	1 U
1,3-Dichloropropene, trans-	ug/L	1 U	1 U	5 U	5 U	5 U	5 U	1 U	20 U	1 U	1 U	1 U	1 U
1,4-Dichlorobenzene	ug/L	1 U	1 U	5 U	5 U	5 U	5 U	1 U	20 U	1 U	1 U	**1.6**	1 U
2-Butanone (MEK)	ug/L	10 U	10 U	50 U	50 U	50 U	50 U	10 U	200 U	10 U	10 U	10 U	10 U
2-Hexanone	ug/L	5 U	5 U	25 U	25 U	25 U	25 U	5 U	100 U	5 U	5 U	5 U	5 U
4-Methyl-2-pentanone (MIBK)	ug/L	5 U	5 U	25 U	25 U	25 U	25 U	5 U	100 U	5 U	5 U	5 U	5 U
Acetone	ug/L	10 U	10 U	50 U	50 U	50 U	50 U	10 U	200 U	10 U	**8.5 J**	10 U	10 U
Acrolein	ug/L	50 UJ	50 UJ	250 UJ	250 UJ	250 U	250 U	50 UJ	1000 UJ	50 UJ	50 UJ	50 UJ	50 U
Benzene	ug/L	**0.68 J**	1 U	**1380**	**1300**	**146**	**71.5**	**25.3**	**1270**	**7.6**	1 U	**1.5**	**16.6**
Bromodichloromethane	ug/L	1 U	1 U	5 U	5 U	5 U	5 U	1 U	20 U	1 U	1 U	1 U	1 U
Bromoform	ug/L	4 U	4 U	20 U	20 U	20 U	20 U	4 U	80 U	4 U	4 U	4 U	4 U
Bromomethane	ug/L	2 U	2 U	10 U	10 U	10 U	10 U	2 U	40 U	2 U	2 U	2 U	2 U
Carbon disulfide	ug/L	2 U	2 U	10 U	10 U	10 U	10 U	2 U	40 U	2 U	2 U	2 U	2 U
Carbon tetrachloride	ug/L	1 U	1 U	5 U	5 U	5 U	5 U	1 U	20 U	1 U	1 U	1 U	1 U
Chlorobenzene	ug/L	1 U	**0.26 J**	5 U	5 U	5 U	5 U	1 U	20 U	1 U	1 U	1 U	1 U
Chlorodibromomethane	ug/L	—	—	—	—	—	—	—	—	—	—	—	—
Chloroethane	ug/L	1 U	1 U	5 U	5 U	5 U	5 U	1 U	20 U	1 U	1 U	1 U	1 U
Chloroform	ug/L	**0.57 J**	1 U	5 U	5 U	5 U	5 U	1 U	20 U	1 U	1 U	1 U	1 U
Chloromethane	ug/L	1 U	1 U	5 U	5 U	5 U	5 U	1 U	20 U	1 U	1 U	1 U	1 U
Cyclohexane	ug/L	5 U	5 U	25 U	25 U	25 U	25 U	**26.1**	100 U	5 U	5 U	5 U	5 U
Dibromochloromethane	ug/L	1 U	1 U	5 U	5 U	5 U	5 U	1 U	20 U	1 U	1 U	1 U	1 U
Dichlorodifluoromethane	ug/L	5 U	5 U	25 U	25 U	25 U	25 U	5 U	100 U	5 U	5 U	5 UJ	5 U
Ethylbenzene	ug/L	1 U	1 U	**124**	**97.3**	**813**	**100**	**26.2**	**415**	**2.4**	1 U	**0.39 J**	**9.2**
Freon 113	ug/L	5 U	5 U	25 U	25 U	25 U	25 U	5 U	100 U	5 U	5 U	5 U	5 U
Isopropylbenzene	ug/L	2 U	**0.47 J**	**10.1**	**7.7 J**	**104**	**88.3**	**6.3**	**40**	**2.1**	2 U	2 U	**1.3 J**
Methyl Acetate	ug/L	5 U	5 U	25 U	25 U	25 U	25 U	5 U	100 U	5 U	5 U	5 U	5 U
Methylcyclohexane	ug/L	5 U	5 U	25 U	25 U	25 U	25 U	**108**	100 U	5 U	5 U	5 U	5 U
Methylene chloride	ug/L	2 U	2 U	10 U	10 U	10 U	10 U	2 U	40 U	2 U	2 U	2 U	2 U
Methyl-tert butyl ether (MTBE)	ug/L	1 U	1 U	5 U	5 U	5 U	5 U	1 U	20 U	1 U	1 U	1 U	1 U
Propylbenzene, n-	ug/L	5 U	5 U	**7.7 J**	**5.9 J**	**56.8**	**14.5 J**	**3.3 J**	**22.9 J**	**0.72 J**	5 U	5 U	**0.42 J**
Styrene	ug/L	5 U	5 U	25 U	25 U	25 U	25 U	5 U	100 U	5 U	5 U	5 U	5 U
Tetrachloroethene	ug/L	**0.29 J**	1 U	5 U	5 U	5 U	5 U	1 U	20 U	1 U	1 U	1 U	1 U
Toluene	ug/L	1 U	1 U	**256**	**198**	**53.8**	**6.6**	**1.3**	**1100**	**1**	1 U	**0.44 J**	1 U
Trichloroethene	ug/L	**0.35 J**	1 U	5 U	5 U	5 U	5 U	1 U	20 U	1 U	1 U	1 U	1 U
Trichlorofluoromethane	ug/L	5 U	5 U	25 U	25 U	25 U	25 U	5 U	100 U	5 U	5 U	5 U	5 U
Vinyl chloride	ug/L	1 U	1 U	5 U	5 U	5 U	5 U	1 U	20 U	1 U	1 U	1 U	1 U
Xylene, o-	ug/L	1 U	1 U	**66.1**	**50.7**	**615**	**45.4**	**17.5**	**374**	**3.4**	1 U	**0.59 J**	**0.63 J**
Xylenes, m/p-	ug/L	1 U	1 U	**111**	**85.1**	**1020**	**14.8**	**213**	**793**	**3.8**	1 U	**0.49 J**	**0.76 J**
Xylenes, Total	ug/L	1 U	1 U	**177**	**136**	**1630**	**60.3**	**230**	**1170**	**7.2**	1 U	**1.1**	**1.4**

Detected concentrations are marked as shaded and bold.
FT - Feet
J - Estimated Concentration
U - Not Detected
ug/L - micrograms per liter

APPENDIX O

Groundwater, Pore Water, and Surface Water Analytical Data for Volatile Organic Compounds (VOCs)

Quanta Resources Superfund Site, OU1

Edgewater, New Jersey

Location ID		MW-114B	MW-115A	MW-115B	MW-117B		MW-121A	MW-121B	MW-123		MW-124	
Field Sample ID		MW-114B-010409	MW-115A-121908	MW-115B-120808	MW-117B-120208	DUP-120208	MW-121A-010409	MW-121B-010409	MW-123-122908	MW-123-091409	MW-124-122408	MW-124-091509
Sample Date		1/4/2009	12/19/2008	12/8/2008	12/2/2008	12/2/2008	1/4/2009	1/4/2009	12/29/2008	9/14/2009	12/24/2008	9/15/2009
Sample Interval		15 - 25 FT	3 - 13 FT	15.5 - 25.5 FT	5 - 15 FT	5 - 15 FT	3 - 13 FT	12 - 22 FT	5 - 10 FT	5 - 10 FT	6 - 16 FT	6 - 16 FT
Sample Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
	Units											
1,1,1-Trichloroethane	ug/L	10 U	1 U	2 U	1 U	1 U	1 U	5 U	5 U	10 U	1 U	1 U
1,1,2,2-Tetrachloroethane	ug/L	10 U	1 U	2 U	1 U	1 U	1 U	5 U	5 U	10 U	1 U	1 U
1,1,2-Trichloroethane	ug/L	10 U	1 U	2 U	1 U	1 U	1 U	5 U	5 U	10 U	1 U	1 U
1,1,2-Trichlorotrifluoroethane	ug/L	—	—	—	—	—	—	—	—	—	—	—
1,1-Dichloroethane	ug/L	10 U	1 U	2 U	1 U	1 U	1 U	5 U	5 U	10 U	**0.35 J**	**0.34 J**
1,1-Dichloroethene	ug/L	10 U	1 U	2 U	1 U	1 U	1 U	5 U	5 U	10 U	**0.86 J**	**0.81 J**
1,2,4-Trichlorobenzene	ug/L	50 U	5 U	10 U	5 U	5 U	5 U	25 U	25 U	50 U	5 U	5 U
1,2,4-Trimethylbenzene	ug/L	**190**	5 U	**11.8**	**124**	**119**	**25.6**	**210**	**278**	—	5 U	—
1,2-Dibromo-3-chloropropane	ug/L	100 U	10 U	20 U	10 U	10 U	10 U	50 U	50 U	100 U	10 U	10 U
1,2-Dibromoethane	ug/L	20 U	2 U	4 U	2 U	2 U	2 U	10 U	10 U	20 U	2 U	2 U
1,2-Dichlorobenzene	ug/L	10 U	1 U	2 U	1 U	1 U	1 U	5 U	5 U	10 U	1 U	1 U
1,2-Dichloroethane	ug/L	10 U	1 U	2 U	1 U	1 U	1 U	5 U	5 U	10 U	1 U	1 U
1,2-Dichloroethene, cis-	ug/L	10 U	1 U	2 U	1 U	1 U	1 U	5 U	5 U	10 U	**4.9**	**4.6**
1,2-Dichloroethene, trans-	ug/L	10 U	1 U	2 U	1 U	1 U	1 U	5 U	5 U	10 U	1 U	1 U
1,2-Dichloropropane	ug/L	10 U	1 U	2 U	1 U	1 U	1 U	5 U	5 U	10 U	1 U	1 U
1,3,5-Trimethylbenzene	ug/L	**61.3**	5 U	**18.9**	**42.8**	**41.6**	5 U	**67.9**	**91.3**	—	5 U	—
1,3-Dichlorobenzene	ug/L	10 U	1 U	2 U	1 U	1 U	1 U	5 U	5 U	10 U	1 U	1 U
1,3-Dichloropropene, cis-	ug/L	10 U	1 U	2 U	1 U	1 U	1 U	5 U	5 U	10 U	1 U	1 U
1,3-Dichloropropene, trans-	ug/L	10 U	1 U	2 U	1 U	1 U	1 U	5 U	5 U	10 U	1 U	1 U
1,4-Dichlorobenzene	ug/L	10 U	1 U	2 U	1 U	1 U	1 U	5 U	5 U	10 U	1 U	1 U
2-Butanone (MEK)	ug/L	100 U	10 U	20 U	10 U	10 U	10 U	50 U	50 U	100 U	10 U	10 U
2-Hexanone	ug/L	50 U	5 U	10 U	5 U	5 U	5 U	25 U	25 U	50 U	5 U	5 U
4-Methyl-2-pentanone (MIBK)	ug/L	50 U	5 U	10 U	5 U	5 U	5 U	25 U	25 U	50 U	5 U	5 U
Acetone	ug/L	100 U	10 U	20 U	**8.8 J**	**8.1 J**	10 U	50 U	50 U	100 U	10 U	10 U
Acrolein	ug/L	500 U	50 UJ	100 UJ	50 U	50 U	50 U	250 U	250 U	—	50 U	—
Benzene	ug/L	**135**	1 U	**82.1**	**184**	**173**	**242**	**547**	**423**	**377**	1 U	1 U
Bromodichloromethane	ug/L	10 U	1 U	2 U	1 U	1 U	1 U	5 U	5 U	10 U	1 U	1 U
Bromoform	ug/L	40 U	4 U	8 U	4 U	4 U	4 U	20 U	20 U	40 U	4 U	4 U
Bromomethane	ug/L	20 U	2 U	4 U	2 U	2 U	2 U	10 U	10 U	20 U	2 U	2 U
Carbon disulfide	ug/L	20 U	2 U	4 U	2 U	2 U	2 U	10 U	10 U	20 U	2 U	2 U
Carbon tetrachloride	ug/L	10 U	1 U	2 U	1 U	1 U	1 U	5 U	5 U	10 U	1 U	1 U
Chlorobenzene	ug/L	10 U	1 U	**0.59 J**	1 U	1 U	1 U	5 U	5 U	10 U	1 U	1 U
Chlorodibromomethane	ug/L	—	—	—	—	—	—	—	—	—	—	—
Chloroethane	ug/L	10 U	1 U	2 U	1 U	1 U	1 U	5 U	5 U	10 U	1 U	1 U
Chloroform	ug/L	10 U	1 U	2 U	1 U	1 U	1 U	5 U	5 U	10 U	1 U	1 U
Chloromethane	ug/L	10 U	1 U	2 U	1 U	1 U	1 U	5 U	5 U	10 UJ	1 U	1 UJ
Cyclohexane	ug/L	50 U	5 U	10 U	5 U	5 U	5 U	25 U	25 U	50 U	5 U	5 U
Dibromochloromethane	ug/L	10 U	1 U	2 U	1 U	1 U	1 U	5 U	5 U	10 U	1 U	1 U
Dichlorodifluoromethane	ug/L	50 U	5 U	10 U	5 U	5 U	5 U	25 U	25 U	50 U	5 U	5 U
Ethylbenzene	ug/L	**290**	1 U	**203**	**173**	**153**	**47.6**	**520**	**655**	**566**	1 U	1 U
Freon 113	ug/L	50 U	5 U	10 U	5 U	5 U	5 U	25 U	25 U	50 U	5 U	5 U
Isopropylbenzene	ug/L	**63.7**	2 U	**19**	**11**	**7.2 J**	**35.5**	**42.4**	**47**	**32**	2 U	2 U
Methyl Acetate	ug/L	50 U	5 U	10 U	5 U	5 U	5 U	25 U	25 U	50 UJ	5 U	5 UJ
Methylcyclohexane	ug/L	50 U	5 U	10 U	5 U	5 U	**1.6 J**	25 U	25 U	50 U	5 U	5 U
Methylene chloride	ug/L	20 U	2 U	4 U	2 U	2 U	2 U	10 U	10 U	20 U	2 U	2 U
Methyl-tert butyl ether (MTBE)	ug/L	10 U	1 U	2 U	1 U	1 U	1 U	5 U	5 U	10 U	1 U	**0.52 J**
Propylbenzene, n-	ug/L	**14.1 J**	5 U	**9.5 J**	**3.5 J**	**3.3 J**	**16**	**23.1 J**	**12.2 J**	—	5 U	—
Styrene	ug/L	50 U	5 U	10 U	5 U	5 U	5 U	25 U	25 U	50 U	5 U	5 U
Tetrachloroethene	ug/L	10 U	1 U	2 U	1 U	1 U	1 U	5 U	5 U	10 U	**2**	**2.1**
Toluene	ug/L	**71.6**	1 U	**14**	**140**	**133**	**2.5**	**621**	**490**	**230**	1 U	1 U
Trichloroethene	ug/L	10 U	1 U	2 U	1 U	1 U	1 U	5 U	5 U	10 U	**103**	**89.7**
Trichlorofluoromethane	ug/L	50 U	5 U	10 U	5 U	5 U	5 U	25 U	25 U	50 U	5 U	5 U
Vinyl chloride	ug/L	10 U	1 U	2 U	1 U	1 U	1 U	5 U	5 U	10 U	1 U	1 U
Xylene, o-	ug/L	**138**	1 U	**22.1**	**193**	**179**	**27.3**	**427**	**400**	**276**	1 U	1 U
Xylenes, m/p-	ug/L	**257**	**10.5**	**19.2**	**327**	**300**	**12.8**	**764**	**699**	**538**	1 U	1 U
Xylenes, Total	ug/L	**395**	**10.5**	**41.3**	**519**	**479**	**40.1**	**1190**	**1100**	**814**	1 U	1 U

Detected concentrations are marked as shaded and bold.

FT - Feet

J - Estimated Concentration

U - Not Detected

ug/L - micrograms per liter

APPENDIX O

Groundwater, Pore Water, and Surface Water Analytical Data for Volatile Organic Compounds (VOCs)

Quanta Resources Superfund Site, OU1

Edgewater, New Jersey

Location ID		MW-125		MW-126			MW-127		MW-128		MW-129	
Field Sample ID		MW-125-122308	MW-125-091509	MW-126-123108	Dup-123108	MW-126-091609	MW-127-122408	MW-127-091409	MW-128-031809	MW-128-091509	MW-129-031809	MW-129-091509
Sample Date		12/23/2008	9/15/2009	12/31/2008	12/31/2008	9/16/2009	12/24/2008	9/14/2009	3/18/2009	9/15/2009	3/18/2009	9/15/2009
Sample Interval		5 - 15 FT	5 - 15 FT	8 - 18 FT	8 - 18 FT	8 - 18 FT	6 - 16 FT	6 - 16 FT	5 - 15 FT	5 - 15 FT	5 - 15 FT	5 - 15 FT
Sample Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
	Units											
1,1,1-Trichloroethane	ug/L	1 U	1 U	5 U	2 U	1 U	1 U	1 U	**2.9**	**4.1**	1 U	1 U
1,1,2,2-Tetrachloroethane	ug/L	1 U	1 U	5 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2-Trichloroethane	ug/L	1 U	1 U	5 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2-Trichlorotrifluoroethane	ug/L	—	—	—	—	—	—	—	—	—	—	—
1,1-Dichloroethane	ug/L	1 U	1 U	5 U	2 U	1 U	1 U	1 U	1 U	**0.49 J**	1 U	1 U
1,1-Dichloroethene	ug/L	1 U	1 U	5 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2,4-Trichlorobenzene	ug/L	5 U	5 U	25 U	10 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2,4-Trimethylbenzene	ug/L	5 U	—	**17.9 J**	**22**	—	5 U	—	**1.4 J**	—	5 U	—
1,2-Dibromo-3-chloropropane	ug/L	10 U	10 U	50 U	20 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
1,2-Dibromoethane	ug/L	2 U	2 U	10 U	4 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
1,2-Dichlorobenzene	ug/L	1 U	1 U	5 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethane	ug/L	1 U	1 U	5 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethene, cis-	ug/L	1 U	1 U	5 U	2 U	1 U	1 U	**0.35 J**	**1.3**	**2.2**	**1.6**	**1.4**
1,2-Dichloroethene, trans-	ug/L	1 U	1 U	5 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloropropane	ug/L	1 U	1 U	5 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,3,5-Trimethylbenzene	ug/L	5 U	—	**5.2 J**	**6.8 J**	—	5 U	—	**1.4 J**	—	5 U	—
1,3-Dichlorobenzene	ug/L	1 U	1 U	5 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,3-Dichloropropene, cis-	ug/L	1 U	1 U	5 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,3-Dichloropropene, trans-	ug/L	1 U	1 U	5 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
1,4-Dichlorobenzene	ug/L	1 U	1 U	5 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Butanone (MEK)	ug/L	10 U	10 U	50 U	20 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
2-Hexanone	ug/L	5 U	5 U	25 U	10 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
4-Methyl-2-pentanone (MIBK)	ug/L	5 U	5 U	25 U	10 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Acetone	ug/L	10 U	10 U	50 U	20 U	**5.5 J**	10 U	10 U	**3.9 J**	10 U	10 U	10 U
Acrolein	ug/L	50 UJ	—	250 UJ	100 UJ	—	50 U	—	50 U	—	50 U	—
Benzene	ug/L	1 U	1 U	**8.6**	**11.1**	**18.8**	1 U	1 U	1 U	1 U	1 U	1 U
Bromodichloromethane	ug/L	1 U	1 U	5 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromoform	ug/L	4 U	4 U	20 U	8 U	4 U	4 U	4 U	4 U	4 U	4 U	4 U
Bromomethane	ug/L	2 U	2 U	10 U	4 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Carbon disulfide	ug/L	2 U	2 U	10 U	4 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Carbon tetrachloride	ug/L	1 U	1 U	5 U	2 U	1 U	1 U	1 U	**0.48 J**	**0.92 J**	1 U	1 U
Chlorobenzene	ug/L	1 U	1 U	5 U	2 U	1 U	**0.44 J**	**0.43 J**	1 U	1 U	1 U	1 U
Chlorodibromomethane	ug/L	—	—	—	—	—	—	—	—	—	—	—
Chloroethane	ug/L	1 U	1 U	5 U	2 U	1 U	1 U	1 UJ	1 U	1 U	1 U	1 U
Chloroform	ug/L	1 U	1 U	5 U	2 U	1 U	1 U	1 U	**0.38 J**	**0.51 J**	1 U	1 U
Chloromethane	ug/L	1 U	1 UJ	5 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Cyclohexane	ug/L	5 U	5 U	25 U	10 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Dibromochloromethane	ug/L	1 U	1 U	5 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Dichlorodifluoromethane	ug/L	5 U	5 U	25 U	10 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Ethylbenzene	ug/L	1 U	1 U	**5.5**	**7.1**	**13**	1 U	1 U	**1.4**	1 U	1 U	1 U
Freon 113	ug/L	5 U	5 U	25 U	10 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Isopropylbenzene	ug/L	2 U	2 U	**2.3 J**	**3.6 J**	**4.6**	2 U	2 U	2 U	2 U	2 U	2 U
Methyl Acetate	ug/L	5 U	5 UJ	25 U	10 U	5 U	5 U	5 UJ	5 U	5 U	5 U	5 U
Methylcyclohexane	ug/L	5 U	5 U	25 U	10 U	5 U	5 U	5 U	**0.51 J**	5 U	5 U	5 U
Methylene chloride	ug/L	2 U	2 U	10 U	4 U	2 U	2 U	2 U	2 U	2 U	2 U	2 U
Methyl-tert butyl ether (MTBE)	ug/L	1 U	1 U	5 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Propylbenzene, n-	ug/L	5 U	—	**1.3 J**	**1.8 J**	—	5 U	—	5 U	—	5 U	—
Styrene	ug/L	5 U	5 U	25 U	10 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Tetrachloroethene	ug/L	1 U	1 U	5 U	2 U	1 U	1 U	1 U	**10.5**	**21**	**2.4**	**2.7**
Toluene	ug/L	**0.19 J**	1 U	**2.4 J**	**3**	**5.4**	1 U	1 U	**0.62 J**	1 U	1 U	1 U
Trichloroethene	ug/L	1 U	1 U	5 U	2 U	1 U	1 U	1 U	**52.3**	**86**	**9**	**9.6**
Trichlorofluoromethane	ug/L	5 U	5 U	25 U	10 U	5 U	5 U	5 U	5 U	5 U	5 U	5 U
Vinyl chloride	ug/L	1 U	1 U	5 U	2 U	1 U	1 U	1 U	1 U	1 U	1 U	1 U
Xylene, o-	ug/L	1 U	1 U	**5.8**	**7.2**	**11.4**	1 U	1 U	**3.5**	**1.1**	1 U	1 U
Xylenes, m/p-	ug/L	1 U	1 U	**9.3**	**11.9**	**17.6**	1 U	1 U	**7.5**	**0.39 J**	1 U	1 U
Xylenes, Total	ug/L	1 U	1 U	**15.1**	**19.1**	**29.1**	1 U	1 U	**11**	**1.5**	1 U	1 U

Detected concentrations are marked as shaded and bold.

FT - Feet

J - Estimated Concentration

U - Not Detected

ug/L - micrograms per liter

APPENDIX O
Groundwater, Pore Water, and Surface Water Analytical Data for Volatile Organic Compounds (VOCs)
Quanta Resources Superfund Site, OU1
Edgewater, New Jersey

Location ID		MW-130A		MW-130B		MW-131		MW-132		MW-133		MW-134	
Field Sample ID		MW-130A-121908	MW-130A-091709	MW-130B-122208	MW-130B-091709	MW-131-120808	MW-131-091709	MW-132-121808	MW-132-091709	MW-133-121008	MW-133-091609	MW-134-121008	MW-134-091609
Sample Date		12/19/2008	9/17/2009	12/22/2008	9/17/2009	12/8/2008	9/17/2009	12/18/2008	9/17/2009	12/10/2008	9/16/2009	12/10/2008	9/16/2009
Sample Interval		5 - 15 FT	5 - 15 FT	15 - 25 FT	15 - 25 FT	4 - 14 FT	4 - 14 FT	4 - 14 FT	4 - 14 FT	10 - 15 FT	10 - 15 FT	11 - 21 FT	11 - 21 FT
Sample Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
	Units												
1,1,1-Trichloroethane	ug/L	1 U	1 U	20 U	50 U	1 U	1 U	1 U	1 U	1 U	1 U	5 U	10 U
1,1,2,2-Tetrachloroethane	ug/L	1 U	1 U	20 U	50 U	1 U	1 U	1 U	1 U	1 U	1 U	5 U	10 U
1,1,2-Trichloroethane	ug/L	1 U	1 U	20 U	50 U	1 U	1 U	1 U	1 U	1 U	1 U	5 U	10 U
1,1,2-Trichlorotrifluoroethane	ug/L	—	—	—	—	—	—	—	—	—	—	—	—
1,1-Dichloroethane	ug/L	1 U	1 U	20 U	50 U	**1.6**	**2.7**	1 U	1 U	**0.57 J**	**0.62 J**	5 U	10 U
1,1-Dichloroethene	ug/L	1 U	1 U	20 U	50 U	1 U	1 U	1 U	1 U	1 U	1 U	5 U	10 U
1,2,4-Trichlorobenzene	ug/L	5 U	5 U	100 U	250 U	5 U	5 U	5 U	5 U	5 U	5 U	25 U	50 U
1,2,4-Trimethylbenzene	ug/L	**6.4**	—	**437**	—	5 U	—	5 U	—	5 U	—	**385**	—
1,2-Dibromo-3-chloropropane	ug/L	10 U	10 U	200 U	500 U	10 U	10 U	10 U	10 U	10 U	10 U	50 U	100 U
1,2-Dibromoethane	ug/L	2 U	2 U	40 U	100 U	2 U	2 U	2 U	2 U	2 U	2 U	10 U	20 U
1,2-Dichlorobenzene	ug/L	1 U	1 U	20 U	50 U	**4.7**	**7.8**	1 U	1 U	1 U	1 U	5 U	10 U
1,2-Dichloroethane	ug/L	1 U	1 U	20 U	50 U	1 U	1 U	1 U	1 U	1 U	1 U	5 U	10 U
1,2-Dichloroethene, cis-	ug/L	1 U	1 U	20 U	50 U	1 U	1 U	1 U	1 U	1 U	1 U	5 U	10 U
1,2-Dichloroethene, trans-	ug/L	1 U	1 U	20 U	50 U	1 U	1 U	1 U	1 U	1 U	1 U	5 U	10 U
1,2-Dichloropropane	ug/L	1 U	1 U	20 U	50 U	1 U	1 U	1 U	1 U	1 U	1 U	5 U	10 U
1,3,5-Trimethylbenzene	ug/L	**2.4 J**	—	**152**	—	5 U	—	5 U	—	5 U	—	**93.8**	—
1,3-Dichlorobenzene	ug/L	1 U	1 U	20 U	50 U	1 U	**0.25 J**	1 U	1 U	1 U	1 U	5 U	10 U
1,3-Dichloropropene, cis-	ug/L	1 U	1 U	20 U	50 U	1 U	1 U	1 U	1 U	1 U	1 U	5 U	10 U
1,3-Dichloropropene, trans-	ug/L	1 U	1 U	20 U	50 U	1 U	1 U	1 U	1 U	1 U	1 U	5 U	10 U
1,4-Dichlorobenzene	ug/L	1 U	1 U	20 U	50 U	**0.64 J**	0.85 U	1 U	1 U	1 U	1 U	5 U	10 U
2-Butanone (MEK)	ug/L	10 U	10 U	200 U	500 U	10 U	10 U	10 U	10 U	10 U	10 U	50 U	100 U
2-Hexanone	ug/L	5 U	5 U	100 U	250 U	5 U	5 U	5 U	5 U	5 U	5 U	25 U	50 U
4-Methyl-2-pentanone (MIBK)	ug/L	5 U	5 U	100 U	250 U	5 U	5 U	5 U	5 U	5 U	5 U	25 U	50 U
Acetone	ug/L	10 U	**9.7 J**	200 U	500 U	10 U	10 U	10 U	10 U	10 U	10 U	**11.9 J**	100 U
Acrolein	ug/L	50 UJ	—	1000 UJ	—	50 UJ	—	50 UJ	—	50 UJ	—	250 UJ	—
Benzene	ug/L	**36.2**	**8.4**	**3630**	**3180**	**9.1**	1 U	1 U	1 U	1 U	1 U	**876 J**	**1270**
Bromodichloromethane	ug/L	1 U	1 U	20 U	50 U	1 U	1 U	1 U	1 U	1 U	1 U	5 U	10 U
Bromoform	ug/L	4 U	4 U	80 U	200 U	4 U	4 U	4 U	4 U	4 U	4 U	20 U	40 U
Bromomethane	ug/L	2 U	2 U	40 U	100 U	2 U	2 U	2 U	2 U	2 U	2 U	10 U	20 U
Carbon disulfide	ug/L	2 U	2 U	40 U	100 U	2 U	2 U	2 U	2 U	2 U	2 U	**5.7 J**	**20.3**
Carbon tetrachloride	ug/L	1 U	1 U	20 U	50 U	1 U	1 U	1 U	1 U	1 U	1 U	5 U	10 U
Chlorobenzene	ug/L	1 U	1 U	20 U	50 U	**3.5**	**5.6**	1 U	1 U	1 U	1 U	5 U	10 U
Chlorodibromomethane	ug/L	—	—	—	—	—	—	—	—	—	—	—	—
Chloroethane	ug/L	1 U	1 U	20 U	50 U	1 U	1 U	1 U	1 U	1 U	1 U	5 U	10 U
Chloroform	ug/L	1 U	1 U	20 U	50 U	1 U	1 U	1 U	1 U	1 U	1 U	5 U	10 U
Chloromethane	ug/L	1 U	**0.77 J**	20 U	50 U	1 U	1 U	1 U	1 U	1 U	1 U	5 U	10 U
Cyclohexane	ug/L	**1.4 J**	5 U	100 U	250 U	5 U	5 U	5 U	5 U	5 U	5 U	**4.9 J**	50 U
Dibromochloromethane	ug/L	1 U	1 U	20 U	50 U	1 U	1 U	1 U	1 U	1 U	1 U	5 U	10 U
Dichlorodifluoromethane	ug/L	5 U	5 U	100 U	250 U	5 UJ	5 U	5 U	5 U	5 U	5 U	25 U	50 U
Ethylbenzene	ug/L	**34.6**	**3.6**	**600**	**593**	1 U	1 U	1 U	1 U	1 U	1 U	**331**	**439**
Freon 113	ug/L	5 U	5 U	100 U	250 U	5 U	5 U	5 U	5 U	5 U	5 U	25 U	50 U
Isopropylbenzene	ug/L	**9.1**	**3.4**	**46.3**	**41.1 J**	2 U	2 U	2 U	2 U	2 U	2 U	**32.1**	**32.9**
Methyl Acetate	ug/L	5 U	5 U	100 U	250 U	5 U	5 U	5 U	5 U	5 U	5 U	25 U	50 U
Methylcyclohexane	ug/L	**5.3**	**2.4 J**	100 U	250 U	5 U	5 U	5 U	5 U	5 U	5 U	**2 J**	50 U
Methylene chloride	ug/L	2 U	2 U	40 U	100 U	2 U	2 U	2 U	2 U	2 U	2 U	10 U	20 U
Methyl-tert butyl ether (MTBE)	ug/L	1 U	1 U	20 U	50 U	1 U	1 U	**0.32 J**	1 U	1 U	1 U	**2.3 J**	10 U
Propylbenzene, n-	ug/L	**3.3 J**	—	**17.4 J**	—	5 U	—	5 U	—	5 U	—	**20.2 J**	—
Styrene	ug/L	5 U	5 U	100 U	**183 J**	5 U	5 U	5 U	5 U	5 U	5 U	25 U	50 U
Tetrachloroethene	ug/L	1 U	1 U	20 U	50 U	1 U	1 U	1 U	1 U	1 U	1 U	5 U	10 U
Toluene	ug/L	**5.2**	**0.86 J**	**2870**	**2560**	1 U	1 U	1 U	1 U	1 U	1 U	**90.9**	**136**
Trichloroethene	ug/L	1 U	1 U	20 U	50 U	1 U	1 U	1 U	1 U	1 U	1 U	5 U	10 U
Trichlorofluoromethane	ug/L	5 U	5 U	100 U	250 U	5 U	5 U	5 U	5 U	5 U	5 U	25 U	50 U
Vinyl chloride	ug/L	1 U	1 U	20 U	50 U	1 U	1 U	1 U	1 U	1 U	1 U	5 U	10 U
Xylene, o-	ug/L	**6.4**	**1.1**	**674**	**607**	1 U	1 U	1 U	1 U	1 U	1 U	**299**	**358**
Xylenes, m/p-	ug/L	**6.5**	**2**	**1610**	**1460**	1 U	1 U	1 U	1 U	1 U	1 U	**509**	**548**
Xylenes, Total	ug/L	**13**	**3.1**	**2290**	**2070**	1 U	1 U	1 U	1 U	1 U	1 U	**808**	**906**

Detected concentrations are marked as shaded and bold.
FT - Feet
J - Estimated Concentration
U - Not Detected
ug/L - micrograms per liter

APPENDIX O
Groundwater, Pore Water, and Surface Water Analytical Data for Volatile Organic Compounds (VOCs)
Quanta Resources Superfund Site, OU1
Edgewater, New Jersey

Location ID		MW-135		MW-136		MW-A-2	MW-B	MW-C		MW-F	MW-L	MW-N-2
Field Sample ID		MW-135-120308	MW-135-091609	MW-136-122308	MW-136-091409	MW-A-2-123008	MW-B-120308	MW-C-121708	MW-C-091609	MW-F-121808	MW-L-122908	MW-N-2-123008
Sample Date		12/3/2008	9/16/2009	12/23/2008	9/14/2009	12/30/2008	12/3/2008	12/17/2008	9/16/2009	12/18/2008	12/29/2008	12/30/2008
Sample Interval		20 - 30 FT	20 - 30 FT	5 - 10 FT	5 - 10 FT	6 - 16 FT	9 - 19 FT	10 - 20 FT	10 - 20 FT	7 - 17 FT	17 - 27 FT	5 - 10 FT
Sample Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
	Units											
1,1,1-Trichloroethane	ug/L	5 U	5 U	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2,2-Tetrachloroethane	ug/L	5 U	5 U	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2-Trichloroethane	ug/L	5 U	5 U	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U
1,1,2-Trichlorotrifluoroethane	ug/L	—	—	—	—	—	—	—	—	—	—	—
1,1-Dichloroethane	ug/L	5 U	5 U	1 U	1 U	5 U	**21.8**	**0.91 J**	**0.9 J**	1 U	1 U	1 U
1,1-Dichloroethene	ug/L	5 U	5 U	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2,4-Trichlorobenzene	ug/L	25 U	25 U	5 U	5 U	25 U	5 U	5 U	5 U	5 U	5 U	5 U
1,2,4-Trimethylbenzene	ug/L	**383**	—	**17.2**	—	**6.8 J**	5 U	**15.7**	—	5 U	5 U	**0.61 J**
1,2-Dibromo-3-chloropropane	ug/L	50 U	50 U	10 U	10 U	50 U	10 U	10 U	10 U	10 U	10 U	10 U
1,2-Dibromoethane	ug/L	10 U	10 U	2 U	2 U	10 U	2 U	2 U	2 U	2 U	2 U	2 U
1,2-Dichlorobenzene	ug/L	5 U	5 U	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethane	ug/L	5 U	5 U	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethene, cis-	ug/L	5 U	**1.6 J**	1 U	1 U	5 U	**1**	1 U	1 U	1 U	1 U	1 U
1,2-Dichloroethene, trans-	ug/L	5 U	5 U	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U
1,2-Dichloropropane	ug/L	5 U	5 U	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U
1,3,5-Trimethylbenzene	ug/L	**126**	—	**7.4**	—	25 U	5 U	5 U	—	5 U	5 U	5 U
1,3-Dichlorobenzene	ug/L	5 U	5 U	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U
1,3-Dichloropropene, cis-	ug/L	5 U	5 U	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U
1,3-Dichloropropene, trans-	ug/L	5 U	5 U	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U
1,4-Dichlorobenzene	ug/L	5 U	5 U	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U
2-Butanone (MEK)	ug/L	50 U	50 U	10 U	10 U	50 U	10 U	10 U	10 U	10 U	10 U	10 U
2-Hexanone	ug/L	25 U	25 U	5 U	5 U	25 U	5 U	5 U	5 U	5 U	5 U	5 U
4-Methyl-2-pentanone (MIBK)	ug/L	25 U	25 U	5 U	5 U	25 U	5 U	5 U	5 U	5 U	5 U	5 U
Acetone	ug/L	50 U	50 U	10 U	10 U	50 U	**5.2 J**	10 UJ	10 U	10 U	10 U	10 U
Acrolein	ug/L	250 UJ	—	50 UJ	—	250 UJ	50 UJ	50 U	—	50 U	50 U	50 UJ
Benzene	ug/L	**321**	**236**	**2.4**	**1.2**	**12.1**	**2.2**	**215**	**195**	1 U	1 U	1 U
Bromodichloromethane	ug/L	5 U	5 U	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U
Bromoform	ug/L	20 U	20 U	4 U	4 U	20 U	4 U	4 U	4 U	4 U	4 U	4 U
Bromomethane	ug/L	10 U	10 U	2 U	2 U	10 U	2 U	2 U	2 U	2 U	2 U	2 U
Carbon disulfide	ug/L	10 U	**6.1 J**	2 U	2 U	10 U	2 U	2 U	2 U	2 U	2 U	2 U
Carbon tetrachloride	ug/L	5 U	5 U	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U
Chlorobenzene	ug/L	5 U	5 U	1 U	1 U	5 U	**0.4 J**	1 U	1 U	1 U	1 U	1 U
Chlorodibromomethane	ug/L	—	—	—	—	—	—	—	—	—	—	—
Chloroethane	ug/L	5 U	5 U	1 U	1 U	5 U	**0.79 J**	1 U	1 U	1 U	1 U	1 U
Chloroform	ug/L	5 U	5 U	1 U	1 U	5 U	**0.31 J**	1 U	1 U	1 U	1 U	1 U
Chloromethane	ug/L	5 U	5 U	1 U	1 UJ	5 U	1 U	1 U	1 U	1 U	1 U	1 U
Cyclohexane	ug/L	25 U	25 U	5 U	5 U	25 U	5 U	**3.2 J**	5 U	5 U	5 U	5 U
Dibromochloromethane	ug/L	5 U	5 U	1 U	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U
Dichlorodifluoromethane	ug/L	25 U	25 U	5 U	5 U	25 U	5 U	5 U	5 U	5 U	5 U	5 U
Ethylbenzene	ug/L	**609**	**652**	**11.7**	**2.4**	**4.2 J**	**0.4 J**	**277**	**85.8**	1 U	1 U	**0.39 J**
Freon 113	ug/L	25 U	25 U	5 U	5 U	25 U	5 U	5 U	5 U	5 U	5 U	5 U
Isopropylbenzene	ug/L	**38.6**	**37.2**	**6**	**2.3**	10 U	2 U	**81.8**	**60.9**	2 U	2 U	2 U
Methyl Acetate	ug/L	25 U	25 U	5 U	5 UJ	25 U	5 U	5 U	5 U	5 U	5 U	5 U
Methylcyclohexane	ug/L	**3.8 J**	**4.7 J**	5 U	5 U	25 U	5 U	5 U	5 U	5 U	5 U	5 U
Methylene chloride	ug/L	10 U	10 U	2 U	2 U	10 U	2 U	2 U	2 U	2 U	2 U	2 U
Methyl-tert butyl ether (MTBE)	ug/L	5 U	5 U	**0.35 J**	1 U	5 U	1 U	1 U	1 U	1 U	1 U	1 U
Propylbenzene, n-	ug/L	**15 J**	—	**1.6 J**	—	25 U	5 U	**146**	—	5 U	5 U	5 U
Styrene	ug/L	25 U	25 U	5 U	5 U	25 U	5 U	5 U	5 U	5 U	5 U	5 U
Tetrachloroethene	ug/L	5 U	5 U	1 U	1 U	5 U	**0.42 J**	1 U	1 U	1 U	1 U	1 U
Toluene	ug/L	**551**	**441**	**1.1**	**0.32 J**	**2.6 J**	1 U	**9.2**	**2.5**	1 U	1 U	1 U
Trichloroethene	ug/L	**4.4 J**	**4.1 J**	1 U	1 U	5 U	**0.56 J**	1 U	**1.4**	1 U	**0.66 J**	1 U
Trichlorofluoromethane	ug/L	25 U	25 U	5 U	5 U	25 U	5 U	5 U	5 U	5 U	5 U	5 U
Vinyl chloride	ug/L	5 U	5 U	1 U	1 U	5 U	**1.1**	1 U	1 U	1 U	1 U	1 U
Xylene, o-	ug/L	**384**	**379**	**9.3**	**1.9**	**6.4**	1 U	**6.3**	**0.85 J**	1 U	1 U	1 U
Xylenes, m/p-	ug/L	**867**	**779**	**13.2**	**2.2**	**4.4 J**	1 U	**7.4**	**2**	1 U	1 U	1 U
Xylenes, Total	ug/L	**1250**	**1160**	**22.4**	**4.1**	**10.8**	**0.52 J**	**13.7**	**2.8**	1 U	1 U	1 U

Detected concentrations are marked as shaded and bold.
FT - Feet
J - Estimated Concentration
U - Not Detected
ug/L - micrograms per liter

APPENDIX O

Groundwater, Pore Water, and Surface Water Analytical Data for Volatile Organic Compounds (VOCs)

Quanta Resources Superfund Site, OU1

Edgewater, New Jersey

Location ID		MW-O		PZ-1I	PZ-1D	PZ-2S	PZ-2I	PZ-2D	PZ-3S	PZ-3I	PZ-3D	PZ-4S	PZ-4I
Field Sample ID		MW-O-121808	MW-O-091609	PZ1I-010909	PZ1D-010809	PZ2S-010809	PZ2I-010709	PZ2D-010609	PZ3S-010709	PZ3I-010709	PZ3D-010709	PZ4S-010709	PZ4I-010709
Sample Date		12/18/2008	9/16/2009	1/9/2009	1/8/2009	1/8/2009	1/7/2009	1/6/2009	1/7/2009	1/7/2009	1/7/2009	1/7/2009	1/7/2009
Sample Interval		9.52 - 19.52 FT	9.52 - 19.52 FT	15.82 - 16.32 FT	20.26 - 20.76 FT	4.28 - 4.78 FT	14.77 - 15.27 FT	20.86 - 21.36 FT	4.4 - 4.9 FT	14.7 - 15.7 FT	23.4 - 24.4 FT	3.42 - 3.92 FT	14.63 - 15.13 FT
Sample Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
	Units												
1,1,1-Trichloroethane	ug/L	1 U	10 U	5 U	10 U	2 U	10 U	1 U	20 U	20 U	1 U	1 U	1 U
1,1,2,2-Tetrachloroethane	ug/L	1 U	10 U	5 U	10 U	2 U	10 U	1 U	20 U	20 U	1 U	1 U	1 U
1,1,2-Trichloroethane	ug/L	1 U	10 U	5 U	10 U	2 U	10 U	1 U	20 U	20 U	1 U	1 U	1 U
1,1,2-Trichlorotrifluoroethane	ug/L	—	—	—	—	—	—	—	—	—	—	—	—
1,1-Dichloroethane	ug/L	**1.4**	10 U	5 U	10 U	2 U	10 U	**0.31 J**	20 U	20 U	1 U	1 U	1 U
1,1-Dichloroethene	ug/L	1 U	10 U	5 U	10 U	2 U	10 U	**0.47 J**	20 U	20 U	1 U	1 U	1 U
1,2,4-Trichlorobenzene	ug/L	5 U	50 U	25 U	50 U	10 U	50 U	5 U	100 U	100 U	5 U	5 U	5 U
1,2,4-Trimethylbenzene	ug/L	**154**	—	**74.5**	**51.3**	**13.5**	**34 J**	5 U	**1570**	**148**	**12.6**	5 U	**3.2 J**
1,2-Dibromo-3-chloropropane	ug/L	10 U	100 U	50 U	100 U	20 U	100 U	10 U	200 U	200 U	10 U	10 U	10 U
1,2-Dibromoethane	ug/L	2 U	20 U	10 U	20 U	4 U	20 U	2 U	40 U	40 U	2 U	2 U	2 U
1,2-Dichlorobenzene	ug/L	1 U	10 U	5 U	10 U	2 U	10 U	1 U	20 U	20 U	1 U	1 U	1 U
1,2-Dichloroethane	ug/L	1 U	10 U	5 U	10 U	2 U	10 U	1 U	20 U	20 U	1 U	1 U	1 U
1,2-Dichloroethene, cis-	ug/L	**0.76 J**	10 U	5 U	10 U	2 U	10 U	**0.62 J**	20 U	20 U	1 U	1 U	1 U
1,2-Dichloroethene, trans-	ug/L	1 U	10 U	5 U	10 U	2 U	10 U	1 U	20 U	20 U	1 U	1 U	1 U
1,2-Dichloropropane	ug/L	1 U	10 U	5 U	10 U	2 U	10 U	1 U	20 U	20 U	1 U	1 U	1 U
1,3,5-Trimethylbenzene	ug/L	**22.7**	—	**37.4**	**19.3 J**	**5.1 J**	**12 J**	5 U	**598**	**51.7 J**	**4.8 J**	5 U	**0.84 J**
1,3-Dichlorobenzene	ug/L	1 U	10 U	5 U	10 U	2 U	10 U	1 U	20 U	20 U	1 U	1 U	1 U
1,3-Dichloropropene, cis-	ug/L	1 U	10 U	5 U	10 U	2 U	10 U	1 U	20 U	20 U	1 U	1 U	1 U
1,3-Dichloropropene, trans-	ug/L	1 U	10 U	5 U	10 U	2 U	10 U	1 U	20 U	20 U	1 U	1 U	1 U
1,4-Dichlorobenzene	ug/L	1 U	10 U	5 U	10 U	2 U	10 U	1 U	20 U	20 U	1 U	1 U	1 U
2-Butanone (MEK)	ug/L	10 U	100 U	50 U	100 U	20 U	100 U	10 U	200 U	200 U	10 U	10 U	10 U
2-Hexanone	ug/L	5 U	50 U	25 U	50 U	10 U	50 U	5 U	100 U	100 U	5 U	5 U	5 U
4-Methyl-2-pentanone (MIBK)	ug/L	5 U	50 U	25 U	50 U	10 U	50 U	5 U	100 U	100 U	5 U	5 U	5 U
Acetone	ug/L	10 U	100 U	50 U	100 U	**19.5 J**	100 U	10 U	**84.9 J**	**141 J**	**36.6**	10 U	10 U
Acrolein	ug/L	50 U	—	250 U	500 U	100 U	500 U	50 U	1000 U	1000 U	50 U	50 U	50 U
Benzene	ug/L	**521**	**1100**	**192**	**427**	**268**	**367**	1 U	**2270**	**3790**	**12**	1 U	**7**
Bromodichloromethane	ug/L	1 U	10 U	5 U	10 U	2 U	10 U	1 U	20 U	20 U	1 U	1 U	1 U
Bromoform	ug/L	4 U	40 U	20 U	40 U	8 U	40 U	4 U	80 U	80 U	4 U	4 U	4 U
Bromomethane	ug/L	2 U	20 U	10 U	20 U	4 U	20 U	2 U	40 U	40 U	2 U	2 U	2 U
Carbon disulfide	ug/L	2 U	20 U	10 U	20 U	4 U	20 U	2 U	40 U	40 U	**0.57 J**	2 U	2 U
Carbon tetrachloride	ug/L	1 U	10 U	5 U	10 U	2 U	10 U	1 U	20 U	20 U	1 U	1 U	1 U
Chlorobenzene	ug/L	1 U	10 U	5 U	10 U	2 U	10 U	1 U	20 U	20 U	1 U	1 U	1 U
Chlorodibromomethane	ug/L	—	—	—	—	—	—	—	—	—	—	—	—
Chloroethane	ug/L	1 U	10 U	5 U	10 U	2 U	10 U	1 U	20 U	20 U	1 U	1 U	1 U
Chloroform	ug/L	1 U	10 U	5 U	10 U	2 U	10 U	1 U	20 U	20 U	1 U	1 U	1 U
Chloromethane	ug/L	1 U	10 U	5 U	10 U	2 U	10 U	1 U	20 U	20 U	1 U	1 U	1 U
Cyclohexane	ug/L	**1.2 J**	50 U	25 U	50 U	10 U	50 U	5 U	100 U	100 U	5 U	5 U	5 U
Dibromochloromethane	ug/L	1 U	10 U	5 U	10 U	2 U	10 U	1 U	20 U	20 U	1 U	1 U	1 U
Dichlorodifluoromethane	ug/L	5 U	50 U	25 U	50 U	10 U	50 U	5 U	100 U	100 U	5 U	5 U	5 U
Ethylbenzene	ug/L	**305**	**487**	**52.6**	**136**	**27.9**	**111**	1 U	**2180**	**590**	**19.4**	1 U	**12.3**
Freon 113	ug/L	5 U	50 U	25 U	50 U	10 U	50 U	5 U	100 U	100 U	5 U	5 U	5 U
Isopropylbenzene	ug/L	**49.3**	**50.6**	**12.2**	**10.7 J**	**4.6**	**7.3 J**	2 U	**152**	**8 J**	**1.4 J**	2 U	**4.5**
Methyl Acetate	ug/L	5 U	50 U	25 U	50 U	10 U	50 U	5 U	100 U	100 U	5 U	5 U	5 U
Methylcyclohexane	ug/L	**1.8 J**	**3.6 J**	25 U	50 U	10 U	50 U	5 U	**5.3 J**	100 U	5 U	5 U	**2.3 J**
Methylene chloride	ug/L	2 U	20 U	10 U	20 U	4 U	20 U	2 U	40 U	40 U	2 U	2 U	2 U
Methyl-tert butyl ether (MTBE)	ug/L	1 U	10 U	5 U	10 U	2 U	10 U	1 U	20 U	20 U	1 U	1 U	1 U
Propylbenzene, n-	ug/L	**28**	—	25 U	50 U	10 U	50 U	5 U	**94.2 J**	**5.2 J**	**0.71 J**	5 U	**1.4 J**
Styrene	ug/L	5 U	50 U	25 U	50 U	10 U	50 U	5 U	100 U	100 U	5 U	5 UJ	5 U
Tetrachloroethene	ug/L	**0.35 J**	10 U	5 U	10 U	2 U	10 U	1 U	20 U	20 U	1 U	1 U	1 U
Toluene	ug/L	**37**	**57.8**	**75.4**	**304**	**4.2**	**8.3 J**	1 U	**3560**	**2450**	**23**	1 U	**0.55 J**
Trichloroethene	ug/L	**2.1**	10 U	5 U	10 U	2 U	10 U	**9.4**	20 U	20 U	1 U	1 U	1 U
Trichlorofluoromethane	ug/L	5 U	50 U	25 U	50 U	10 U	50 U	5 U	100 U	100 U	5 U	5 U	5 U
Vinyl chloride	ug/L	1 U	10 U	5 U	10 U	2 U	10 U	1 U	20 U	20 U	1 U	1 U	1 U
Xylene, o-	ug/L	**82**	**105**	**120**	**114**	**23**	**78.5**	1 U	**1390**	**348**	**13.6**	1 U	**4.1**
Xylenes, m/p-	ug/L	**143**	**181**	**111**	**154**	**39.8**	**133**	1 U	**3200**	**766**	**24**	1 U	**3.2**
Xylenes, Total	ug/L	**225**	**286**	**232**	**268**	**62.8**	**211**	**0.55 J**	**4590**	**1110**	**37.6**	1 U	**7.4**

Detected concentrations are marked as shaded and bold.

FT - Feet

J - Estimated Concentration

U - Not Detected

ug/L - micrograms per liter

APPENDIX O

Groundwater, Pore Water, and Surface Water Analytical Data for Volatile Organic Compounds (VOCs)

Quanta Resources Superfund Site, OU1

Edgewater, New Jersey

Location ID		PZ-5S	PZ-5I	PZ-5D
Field Sample ID		PZ5S-010809	PZ5I-010809	PZ5D-010809
Sample Date		1/8/2009	1/8/2009	1/8/2009
Sample Interval		4.5 - 4.5 FT	13.7 - 13.7 FT	22.4 - 23.4 FT
Sample Matrix		Groundwater	Groundwater	Groundwater
	Units			
1,1,1-Trichloroethane	ug/L	2 U	10 U	10 U
1,1,2,2-Tetrachloroethane	ug/L	2 U	10 U	10 U
1,1,2-Trichloroethane	ug/L	2 U	10 U	10 U
1,1,2-Trichlorotrifluoroethane	ug/L	—	—	—
1,1-Dichloroethane	ug/L	2 U	10 U	10 U
1,1-Dichloroethene	ug/L	2 U	10 U	10 U
1,2,4-Trichlorobenzene	ug/L	10 U	50 U	50 U
1,2,4-Trimethylbenzene	ug/L	**12.8**	**41.5 J**	**49.8 J**
1,2-Dibromo-3-chloropropane	ug/L	20 U	100 U	100 U
1,2-Dibromoethane	ug/L	4 U	20 U	20 U
1,2-Dichlorobenzene	ug/L	2 U	10 U	10 U
1,2-Dichloroethane	ug/L	2 U	10 U	10 U
1,2-Dichloroethene, cis-	ug/L	2 U	10 U	10 U
1,2-Dichloroethene, trans-	ug/L	2 U	10 U	10 U
1,2-Dichloropropane	ug/L	2 U	10 U	10 U
1,3,5-Trimethylbenzene	ug/L	**4.9 J**	**16.9 J**	**16.6 J**
1,3-Dichlorobenzene	ug/L	2 U	10 U	10 U
1,3-Dichloropropene, cis-	ug/L	2 U	10 U	10 U
1,3-Dichloropropene, trans-	ug/L	2 U	10 U	10 U
1,4-Dichlorobenzene	ug/L	2 U	10 U	10 U
2-Butanone (MEK)	ug/L	20 U	100 U	100 U
2-Hexanone	ug/L	10 U	50 U	50 U
4-Methyl-2-pentanone (MIBK)	ug/L	10 U	50 U	50 U
Acetone	ug/L	20 U	100 U	100 U
Acrolein	ug/L	100 U	500 U	500 U
Benzene	ug/L	**27.6**	**932**	**363**
Bromodichloromethane	ug/L	2 U	10 U	10 U
Bromoform	ug/L	8 U	40 U	40 U
Bromomethane	ug/L	4 U	20 U	20 U
Carbon disulfide	ug/L	4 U	20 U	20 U
Carbon tetrachloride	ug/L	2 U	10 U	10 U
Chlorobenzene	ug/L	**1.2 J**	10 U	10 U
Chlorodibromomethane	ug/L	—	—	—
Chloroethane	ug/L	2 U	10 U	10 U
Chloroform	ug/L	2 U	10 U	10 U
Chloromethane	ug/L	2 U	10 U	10 U
Cyclohexane	ug/L	10 U	50 U	50 U
Dibromochloromethane	ug/L	2 U	10 U	10 U
Dichlorodifluoromethane	ug/L	10 U	50 U	50 U
Ethylbenzene	ug/L	**6.9**	**104**	**147**
Freon 113	ug/L	10 U	50 U	50 U
Isopropylbenzene	ug/L	**14.4**	**17.2 J**	**10.2 J**
Methyl Acetate	ug/L	10 U	50 U	50 U
Methylcyclohexane	ug/L	10 U	50 U	50 U
Methylene chloride	ug/L	4 U	20 U	20 U
Methyl-tert butyl ether (MTBE)	ug/L	2 U	10 U	10 U
Propylbenzene, n-	ug/L	10 U	50 U	50 U
Styrene	ug/L	10 U	50 U	50 U
Tetrachloroethene	ug/L	2 U	10 U	10 U
Toluene	ug/L	**269**	**59.2**	**270**
Trichloroethene	ug/L	2 U	10 U	10 U
Trichlorofluoromethane	ug/L	10 U	50 U	50 U
Vinyl chloride	ug/L	2 U	10 U	10 U
Xylene, o-	ug/L	**30.2**	**73**	**80.8**
Xylenes, m/p-	ug/L	**34.9**	**169**	**149**
Xylenes, Total	ug/L	**65.1**	**242**	**230**

Detected concentrations are marked as shaded and bold.

FT - Feet

J - Estimated Concentration

U - Not Detected

ug/L - micrograms per liter

APPENDIX P
Groundwater, Pore Water, and Surface Water Analytical Data for Total/Dissolved Inorganics
Quanta Resources Superfund Site, OU1
Edgewater, New Jersey

Location ID		3Y-MW2	ACMW-3	GWZ-1		GWZ-2		GWZ-3		GWZ-4	
Field Sample ID		3Y-MW-2-122908	ACMW-3-121708	GWZ-1-PW-071808	GWZ-1-SW-071808	GWZ-2-PW-072108	GWZ-2-SW-072108	GWZ-3-PW-072208	GWZ-3-SW-072208	GWZ-4-PW-072408	GWZ-4-SW-072408
Sample Date		12/29/2008	12/17/2008	7/18/2008	7/18/2008	7/21/2008	7/21/2008	7/22/2008	7/22/2008	7/24/2008	7/24/2008
Sample Interval		3 - 20 FT	3 - 23 FT	1 - 2 FT	<1 FT ABOVE SED.	1 - 2 FT	<1 FT ABOVE SED.	1 - 2 FT	<1 FT ABOVE SED.	1 - 2 FT	<1 FT ABOVE SED.
Sample Matrix		Groundwater	Groundwater	Pore Water	Surface Water	Pore Water	Surface Water	Pore Water	Surface Water	Pore Water	Surface Water
Inorganics, Total	**Units**										
Aluminum	ug/L	30 U	**200**	**636**	—	**2020**	—	**9910**	—	**3300**	—
Antimony	ug/L	**3.3 J**	6 U	6 U	—	4.5 U	—	2.1 U	—	6 U	—
Arsenic	ug/L	**34.2**	3 U	11.9 U	2.4 U	**14.7 J**	3 U	6.1 U	3 U	6.7 U	5.8 U
Barium	ug/L	**187 J**	**77.8 J**	**83.5 J**	—	**61.4 J**	—	**95.7 J**	—	**49.8 J**	—
Beryllium	ug/L	0.3 U	1 U	1 U	—	1 U	—	0.2 U	—	0.2 U	—
Cadmium	ug/L	0.5 U	**1.8 J**	4 U	—	4 U	—	0.9 U	—	4 U	—
Calcium	ug/L	**218000**	**91600**	**196000**	—	**999000**	—	**130000 J**	—	**135000**	—
Chromium	ug/L	1.1 U	**0.9 J**	**14.8**	—	10.2 U	—	**49.2**	—	**17.4**	—
Cobalt	ug/L	50 U	**0.6 J**	5.1 U	—	2.4 U	—	**8.8 J**	—	**3.5 J**	—
Copper	ug/L	10 U	**86.3**	25 U	—	**17.4 J**	—	**69.7**	—	25.5 U	—
Iron	ug/L	**11800**	**4960**	**24000**	—	**3600**	—	**22500**	—	**7920**	—
Lead	ug/L	3 U	**647**	**4**	—	**26**	—	**44.8**	—	**15.9**	—
Magnesium	ug/L	**25700**	**8380**	**431000**	—	**520000**	—	**348000**	—	**351000**	—
Manganese	ug/L	**2390**	**149**	**6990**	—	**762**	—	**4240**	—	**4740 J**	—
Mercury	ug/L	0.2 U	0.2 U	0.2 U	—	0.2 U	—	**0.29**	—	0.2 U	—
Nickel	ug/L	**1.4 J**	**3.7 J**	**25.1 J**	—	7.3 U	—	**300**	—	**13.9 J**	—
Potassium	ug/L	**24200**	**51600**	**153000**	—	**168000**	—	**133000 J**	—	**150000**	—
Selenium	ug/L	10 U	**9.1 J**	1.7 U	—	5.9 U	—	3.6 U	—	10 U	—
Silver	ug/L	10 U	10 U	**1.1 J**	—	10 U	—	1.1 U	—	10 U	—
Sodium	ug/L	**211000**	**34100**	**3180000**	—	**4040000**	—	**2870000**	—	**2880000 J**	—
Thallium	ug/L	1.3 U	**1.6 J**	2 U	—	7.9 U	—	2 U	—	5 U	5 U
Vanadium	ug/L	1.8 U	**2.9 J**	4.7 U	—	1.6 U	—	**23.7 J**	—	9.8 U	—
Zinc	ug/L	20 U	**103 J**	10.8 U	—	28.7 U	—	**284**	—	**61.1 J**	—
Inorganics, Dissolved											
Aluminum, Dissolved	ug/L	200 U	**88.2 J**	200 U	—	2000 U	—	200 U	—	200 U	—
Antimony, Dissolved	ug/L	**3.2 J**	6 U	2 U	—	6 U	—	6 U	—	6 U	—
Arsenic, Dissolved	ug/L	**37**	3 U	**15.3**	3 U	**33.8 J**	3 U	3 U	4.3 U	6.6 U	3.7 U
Barium, Dissolved	ug/L	**183 J**	**78.1 J**	**138 J**	—	**91.3 J**	—	**22.9 J**	—	**21.7 J**	—
Beryllium, Dissolved	ug/L	0.4 U	1 U	1 U	—	1 U	—	1 U	—	0.2 U	—
Cadmium, Dissolved	ug/L	0.5 U	**1.1 J**	4 U	—	4 U	—	4 U	—	4 U	—
Calcium, Dissolved	ug/L	**215000**	**93700**	**197000**	—	**1120000**	—	**181000 J**	—	**135000**	—
Chromium, Dissolved	ug/L	0.6 U	10 U	**8.8 J**	—	8.8 U	—	6.3 U	—	5.9 U	—
Cobalt, Dissolved	ug/L	50 U	**1.3 J**	6.8 U	—	50 U	—	50 U	—	1.7 U	—
Copper, Dissolved	ug/L	10 U	**21.6**	14.4 U	—	25 U	—	**7.9 J**	—	3.1 U	—
Iron, Dissolved	ug/L	**11400**	**437**	**2820**	—	100 U	—	57.1 U	—	82.2 U	—
Lead, Dissolved	ug/L	3 U	**9.1**	3 U	—	30 U	—	6 U	—	1.4 U	—
Magnesium, Dissolved	ug/L	**25100**	**8830**	**432000**	—	**557000**	—	**405000**	—	**354000**	—
Manganese, Dissolved	ug/L	**2380**	**186**	**5920**	—	**654**	—	**23.6**	—	**6290 J**	—
Mercury, Dissolved	ug/L	0.2 U	0.2 U	0.2 U	—	0.2 UJ	—	0.2 U	—	0.2 U	—
Nickel, Dissolved	ug/L	**1.7 J**	**3.3 J**	**26.4 J**	—	40 U	—	3.3 U	—	4.2 U	—
Potassium, Dissolved	ug/L	**24000**	**50200**	**154000**	—	**181000**	—	**178000 J**	—	**153000**	—
Selenium, Dissolved	ug/L	10 U	**7.4 J**	10 U	—	100 U	—	10 U	—	10 U	—
Silver, Dissolved	ug/L	10 U	10 U	10 U	—	10 U	—	10 U	—	10 U	—
Sodium, Dissolved	ug/L	**211000**	**37100**	**3260000**	—	**4340000**	—	**3340000**	—	**2880000**	—
Thallium, Dissolved	ug/L	2 U	2 U	2 U	—	5 U	—	2 U	—	5 U	5 U
Vanadium, Dissolved	ug/L	2.2 U	50 U	4.4 U	—	2.3 U	—	50 U	—	4.1 U	—
Zinc, Dissolved	ug/L	20 U	**103**	8.1 U	—	20 U	—	4.4 U	—	11 U	—

Detected concentrations are marked as shaded and bold.
FT - Feet
J - Estimated Concentration
U - Not Detected
ug/L - micrograms per liter

APPENDIX P
Groundwater, Pore Water, and Surface Water Analytical Data for Total/Dissolved Inorganics
Quanta Resources Superfund Site, OU1
Edgewater, New Jersey

Location ID		GWZ-5			MW-20	MW-30	MW-51A		MW-101A	MW-103A	MW-105A	MW-106A
Field Sample ID		GWZ-5-PW-072508	DUP-072508	GWZ-5-SW-072508	MW-20-121008	MW-30-120408	MW-51A-123008	Dup-123008	MW-101A-121808	MW-103A-120208	MW-105A-121008	MW-106A-120408
Sample Date		7/25/2008	7/25/2008	7/25/2008	12/10/2008	12/4/2008	12/30/2008	12/30/2008	12/18/2008	12/2/2008	12/10/2008	12/4/2008
Sample Interval		1 - 2 FT	1 - 2 FT	<1 FT ABOVE SED.	7 - 17 FT	2 - 12 FT	3 - 14 FT	3 - 14 FT	4 - 19 FT	3 - 13 FT	3 - 13 FT	3 - 13 FT
Sample Matrix		Pore Water	Pore Water	Surface Water	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Inorganics, Total	**Units**											
Aluminum	ug/L	**1100 J**	**712 J**	—	**4080**	**34.1 J**	**543**	**540**	**411**	**25.3 J**	200 U	200 U
Antimony	ug/L	4.4 U	3 U	—	6 U	6 U	**2.7 J**	6 U	**1.8 J**	6 U	6 U	6 U
Arsenic	ug/L	**121**	**110**	6.5 U	**40**	**50.8**	**782**	**769**	**34.5**	**2.4 J**	**1.7 J**	**19.5**
Barium	ug/L	**130 J**	**122 J**	—	**135 J**	**311**	**36.2 J**	**35.6 J**	**203**	**60.4 J**	**140 J**	**279**
Beryllium	ug/L	1 U	1 U	—	**3.1**	1 U	0.9 U	0.7 U	**5.7**	**0.5 J**	**0.3 J**	1 U
Cadmium	ug/L	4 U	4 U	—	**18.4**	0.6 U	0.7 U	**1.1 J**	1.4 U	0.4 U	3 U	0.5 U
Calcium	ug/L	**169000**	**173000**	—	**198000**	**261000**	**320000**	**313000**	**223000**	**151000**	**118000**	**146000**
Chromium	ug/L	**9.3 J**	7.1 U	—	1.2 U	**0.7 J**	10 U	10 U	10 U	**1.8 J**	**0.7 J**	10 U
Cobalt	ug/L	1.7 U	1.3 U	—	**29.1 J**	**0.8 J**	**11.5 J**	**11.5 J**	**6.1 J**	50 U	50 U	**3.6 J**
Copper	ug/L	15.2 U	3.7 U	—	**656**	**1.1 J**	10 U	10 U	**13.4**	10 U	**1.2 J**	10 U
Iron	ug/L	**2960 J**	**1990 J**	—	**38900**	**157**	**198000**	**196000**	**47200**	**514**	**594**	**15100**
Lead	ug/L	**31.2 J**	**15.4 J**	—	**2.3 J**	3 U	**4.2**	**4.6**	3.1 U	3 U	3 U	3 U
Magnesium	ug/L	**371000**	**383000**	—	**37500**	**221000**	**142000**	**140000**	**18500**	**15900**	**10600**	**44100**
Manganese	ug/L	**482**	**451**	—	**2400**	**607**	**11200**	**11000**	**4070**	**567**	**292**	**831**
Mercury	ug/L	**0.31**	**0.21**	—	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Nickel	ug/L	**40**	**26.5 J**	—	**48**	**1.9 J**	2.7 U	1.5 U	3.7 U	10 U	10 U	**2.9 J**
Potassium	ug/L	**153000**	**156000**	—	**29900**	**83900**	**38400**	**37800**	**13300**	**4220 J**	**4100 J**	**23300**
Selenium	ug/L	10 U	10 U	—	**2.7 J**	1.7 U	**2.8 J**	**3.2 J**	10 U	1.9 U	10 U	1.9 U
Silver	ug/L	10 U	10 U	—	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Sodium	ug/L	**3130000**	**3250000**	—	**150000**	**1730000**	**467000**	**461000**	**115000**	**13400**	**18100**	**141000**
Thallium	ug/L	5 U	5 U	5 U	2 U	2 U	1.7 U	2 U	2 U	2 U	2 U	2 U
Vanadium	ug/L	6.7 U	5.1 U	—	**5.5 J**	**17.7 J**	4 U	4.1 U	**9.3 J**	**4.5 J**	50 U	**2.3 J**
Zinc	ug/L	**31**	**21.4**	—	**2040**	4.1 U	**108 J**	**110**	10.4 U	20 U	20 U	20 U
Inorganics, Dissolved												
Aluminum, Dissolved	ug/L	**582**	**435**	—	**5910**	200 U	**465**	**449**	**154 J**	200 U	200 U	200 U
Antimony, Dissolved	ug/L	4.7 U	6 U	—	6 U	6 U	6 U	6 U	6 U	6 U	6 U	6 U
Arsenic, Dissolved	ug/L	**46.2**	**37.4**	7.3 U	**49**	**127**	**731**	**700**	**14.4**	**2 J**	3 U	**14.3**
Barium, Dissolved	ug/L	**127 J**	**133 J**	—	**152 J**	**314**	**34.6 J**	**34 J**	**205**	**55.3 J**	**132 J**	**265**
Beryllium, Dissolved	ug/L	1 U	1 U	—	**4.2**	1 U	**0.8 J**	**0.6 J**	**6.2**	**0.3 J**	**0.3 J**	1 U
Cadmium, Dissolved	ug/L	4 U	4 U	—	**18.9**	3 U	**0.8 J**	**1.2 J**	1.3 U	0.5 U	3 U	0.5 U
Calcium, Dissolved	ug/L	**170000**	**173000**	—	**227000**	**261000**	**310000**	**307000**	**230000**	**150000**	**112000**	**148000**
Chromium, Dissolved	ug/L	8.3 U	6.9 U	—	1.8 U	**0.6 J**	10 U	10 U	10 U	**2 J**	10 U	10 U
Cobalt, Dissolved	ug/L	1.4 U	1.4 U	—	**34.9 J**	50 U	**10.4 J**	**10.2 J**	**6.1 J**	50 U	50 U	**3.8 J**
Copper, Dissolved	ug/L	8.9 U	3.2 U	—	**930**	**1.1 J**	10 U	10 U	**2.5 J**	10 U	**1.2 J**	10 U
Iron, Dissolved	ug/L	**1730**	**1250**	—	**46800**	24.3 U	**186000**	**180000**	**39800**	**333**	**550**	**13600**
Lead, Dissolved	ug/L	**17 J**	8.8 UJ	—	**1.8 J**	3 U	**2.2 J**	**2.8 J**	3 U	3 U	3 U	3 U
Magnesium, Dissolved	ug/L	**346000**	**345000**	—	**43800**	**221000**	**134000**	**131000**	**19700**	**15000**	**10100**	**45000**
Manganese, Dissolved	ug/L	**154**	**124**	—	**2780**	**608**	**10500**	**10300**	**4390**	**579**	**276**	**843**
Mercury, Dissolved	ug/L	0.2 U	0.2 U	—	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U
Nickel, Dissolved	ug/L	**25.4 J**	**19.5 J**	—	**57**	**1.6 J**	**1.7 J**	**1.9 J**	3.1 U	10 U	10 U	**2.4 J**
Potassium, Dissolved	ug/L	**150000**	**149000**	—	**34200**	**83700**	**36600**	**35900**	**13800**	**4020 J**	**3940 J**	**23400**
Selenium, Dissolved	ug/L	10 U	10 U	—	**1.7 J**	10 U	10 U	10 U	10 U	10 U	10 U	5.5 U
Silver, Dissolved	ug/L	10 U	1.2 U	—	10 U	10 U	10 U	10 U	10 U	10 U	10 U	10 U
Sodium, Dissolved	ug/L	**3020000**	**3100000**	—	**175000**	**1720000**	**438000**	**430000**	**123000**	**12300**	**17400**	**144000**
Thallium, Dissolved	ug/L	5 U	5 U	5 U	1.9 U	2 U	2 U	2 U	2 U	1.9 U	2 U	**1.9 J**
Vanadium, Dissolved	ug/L	6.7 U	6.2 U	—	**6.5 J**	**15.3 J**	**3.4 J**	**3.3 J**	3 U	**4.7 J**	**0.5 J**	**2.3 J**
Zinc, Dissolved	ug/L	**18.6 J**	15.2 U	—	**2400**	20 U	**95.3 J**	**90**	4.6 U	20 U	20 U	20 U

Detected concentrations are marked as shaded and bold.
FT - Feet
J - Estimated Concentration
U - Not Detected
ug/L - micrograms per liter

APPENDIX P
Groundwater, Pore Water, and Surface Water Analytical Data for Total/Dissolved Inorganics
Quanta Resources Superfund Site, OU1
Edgewater, New Jersey

Location ID		MW-107	MW-107A	MW-109		MW-109A	MW-111B		MW-112A	MW-112B	MW-113A	MW-113B
Field Sample ID		MW-107-091709	MW-107A-121908	MW-109-120408	MW-109-011309	MW-109A-091709	MW-111B-122308	MW-111B-091509	MW-112A-121708	MW-112B-120908	MW-113A-120108	MW-113B-120908
Sample Date		9/17/2009	12/19/2008	12/4/2008	1/13/2009	9/17/2009	12/23/2008	9/15/2009	12/17/2008	12/9/2008	12/1/2008	12/9/2008
Sample Interval		13 - 23 FT	3 - 13 FT	15 - 20 FT	15 - 20 FT	3 - 13 FT	3 - 13 FT	3 - 13 FT	3 - 10 FT	2 - 12 FT	3 - 13 FT	9 - 19 FT
Sample Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Inorganics, Total	**Units**											
Aluminum	ug/L	**27400**	**34100**	**93.6 J**	**796**	200 U	**574**	—	**844**	200 U	400 U	**7700**
Antimony	ug/L	6 U	6 U	**14**	—	**8.8**	**34.1**	—	**3 J**	12 U	**2.7 J**	6 U
Arsenic	ug/L	**9620**	**17900**	**21**	—	**135**	**32400**	**58900**	**355**	**32600**	**859**	**7850**
Barium	ug/L	**11.9 J**	**7.9 J**	**1100**	—	**220**	**30.5 J**	—	**27.7 J**	**44.3 J**	**17.7 J**	**10.9 J**
Beryllium	ug/L	**4.4**	**8.8**	1 U	—	1 U	1 U	—	**0.18 J**	1.3 U	1 U	**3.1**
Cadmium	ug/L	3 U	**10**	**4.7**	—	3 U	**9.9**	—	3 U	**73.3**	**0.4 J**	**7.2**
Calcium	ug/L	**295000**	**382000**	**248000**	—	**377000**	**137000**	—	**74100**	**504000**	**630000**	**447000**
Chromium	ug/L	**5 J**	3.1 U	10 U	—	1.7 U	2.1 U	—	1.4 U	20 U	10 U	2.6 U
Cobalt	ug/L	**49.8 J**	**104**	**9.2 J**	—	50 U	**4.1 J**	—	2.5 U	**5 J**	**4.3 J**	**16 J**
Copper	ug/L	**8.3 J**	10 U	10 U	—	**2.4 J**	**19.8 J**	—	**17.9**	20 U	**16.7**	**8.9 J**
Iron	ug/L	**333000 J**	**370000**	**373000**	**391000**	**1330**	**61000**	**116000**	**2310**	**766000**	**104000**	**128000**
Lead	ug/L	**5.1**	**3.8**	**7.6**	—	3 U	**56.4**	**272**	**13.2**	**16.8**	6 U	**8.8**
Magnesium	ug/L	**43400**	**81500**	**325000**	—	**213000**	**11200**	—	**4080 J**	**37400**	**27600**	**39200**
Manganese	ug/L	**2170**	**6250**	**6540**	**6990**	**121**	**506**	—	**103**	**387**	**621**	**1860**
Mercury	ug/L	0.2 U	0.2 U	0.2 U	—	0.2 U	0.2 U	—	0.1 U	0.2 U	0.2 U	0.2 U
Nickel	ug/L	**75.3**	**171**	**2.6 J**	—	**10.7**	**5.6 J**	—	2.2 U	20 U	**2.8 J**	**36.8**
Potassium	ug/L	**18400**	**29700**	**133000**	—	**69700**	**19100**	—	**5430 J**	**228000**	**36400**	**32400**
Selenium	ug/L	10 U	10 U	8.1 U	—	**4.7 J**	10 U	—	10 U	**25.1**	20 U	**4.2 J**
Silver	ug/L	**11.2**	0.8 U	10 U	10 U	**2.4 J**	10 U	—	10 U	4.8 U	10 U	10 U
Sodium	ug/L	**107000**	**125000**	**2760000**	**3000000**	**1860000**	**293000**	—	**7790 J**	**173000**	**48900**	**115000**
Thallium	ug/L	2 U	**1.9 J**	2 U	—	2 U	2 U	—	2 U	4 U	**3.8 J**	**15.1 J**
Vanadium	ug/L	**40.2 J**	**64.1**	**40.3 J**	—	**1 J**	**2.7 J**	—	3.8 U	**4 J**	**14.8 J**	**17.7 J**
Zinc	ug/L	**3010**	**4260**	**98.5**	**75.9**	18.3 U	**184**	—	**101**	10.5 U	**51.9**	**570**
Inorganics, Dissolved												
Aluminum, Dissolved	ug/L	**26000**	**33100**	200 U	—	200 U	200 U	—	**79.2 J**	200 U	400 U	**5370**
Antimony, Dissolved	ug/L	6 U	6 U	**14.2**	—	**8.6**	**3.9 J**	—	**3 J**	12 U	**2.2 J**	6 U
Arsenic, Dissolved	ug/L	**9460**	**17400**	**19.7**	—	**134**	**4460**	**63200**	**462**	**35200**	**808**	**6080**
Barium, Dissolved	ug/L	**10.9 J**	**7.7 J**	**1060**	—	**226**	**17.8 J**	—	**21.6 J**	**23.1 J**	**17 J**	**10.6 J**
Beryllium, Dissolved	ug/L	**4.3**	**8.5**	1 U	—	1 U	1 U	—	1 U	1.3 U	1 U	**2.9**
Cadmium, Dissolved	ug/L	3 U	**9.4**	**4.5**	—	3 U	**3**	—	3 U	**88.6**	**0.3 J**	**5.1**
Calcium, Dissolved	ug/L	**289000**	**371000**	**248000**	—	**381000**	**27600**	—	**73200**	**519000**	**633000**	**477000**
Chromium, Dissolved	ug/L	**4.1 J**	2.7 U	10 U	—	1.4 U	10 U	—	0.8 U	20 U	10 U	**1.2 J**
Cobalt, Dissolved	ug/L	**49.5 J**	**102**	**8.4 J**	—	50 U	**1.7 J**	—	50 U	**5 J**	**4.9 J**	**16 J**
Copper, Dissolved	ug/L	**7.6 J**	10 U	10 U	—	10 U	**5.4 J**	—	**2.3 J**	20 U	**1.4 J**	**5.5 J**
Iron, Dissolved	ug/L	**326000**	**364000**	**363000**	—	**1250**	**7200**	**118000**	**583**	**816000**	**104000**	**126000**
Lead, Dissolved	ug/L	**5.7**	**4.9**	3.4 U	—	3 U	3 U	3 U	3 U	**18.4**	6 U	**6.7**
Magnesium, Dissolved	ug/L	**42300**	**79200**	**322000**	—	**214000**	**2450 J**	—	**3710 J**	**39200**	**28100**	**40000**
Manganese, Dissolved	ug/L	**2110**	**6080**	**6650**	—	**121**	**115**	—	**92.1**	**405**	**635**	**1760**
Mercury, Dissolved	ug/L	0.2 U	0.2 U	0.2 U	—	0.2 U	0.2 U	—	0.2 U	0.2 U	0.2 U	0.2 U
Nickel, Dissolved	ug/L	**74.6**	**168**	10 U	—	**10.8**	**3.6 J**	—	1.4 U	20 U	**2.5 J**	**36.9**
Potassium, Dissolved	ug/L	**18200**	**28600**	**131000**	—	**71300**	**5530 J**	—	**5890 J**	**244000**	**37400**	**31600**
Selenium, Dissolved	ug/L	10 U	10 U	7.8 U	—	**3.9 J**	10 U	—	10 U	20 U	20 U	**4.6 J**
Silver, Dissolved	ug/L	**10.4**	10 U	10 U	—	**2.3 J**	10 U	—	10 U	5.5 U	10 U	10 U
Sodium, Dissolved	ug/L	**107000**	**121000**	**2760000**	—	**1830000**	**339000**	—	**8080 J**	**183000**	**50100**	**115000**
Thallium, Dissolved	ug/L	2 U	**1.3 J**	2 U	—	2 U	2 U	—	2 U	4 U	4 U	**19.8 J**
Vanadium, Dissolved	ug/L	**38.2 J**	**61.9**	**39.8 J**	—	**2.4 J**	**1.1 J**	—	2.2 U	**4.8 J**	**15.3 J**	**8.7 J**
Zinc, Dissolved	ug/L	**2900**	**4170**	**36.3**	—	**22.8**	**70.4**	—	**8 J**	40 U	**34.8**	**568**

Detected concentrations are marked as shaded and bold.
FT - Feet
J - Estimated Concentration
U - Not Detected
ug/L - micrograms per liter

APPENDIX P
Groundwater, Pore Water, and Surface Water Analytical Data for Total/Dissolved Inorganics
Quanta Resources Superfund Site, OU1
Edgewater, New Jersey

Location ID		MW-113C	MW-114A	MW-114B	MW-115A	MW-115B	MW-117B			MW-121A	MW-121B
Field Sample ID		MW-113C-120108	MW-114A-010409	MW-114B-010409	MW-115A-121908	MW-115B-120808	MW-117B-120208	DUP-120208	MW-117B-010809	MW-121A-010409	MW-121B-010409
Sample Date		12/1/2008	1/4/2009	1/4/2009	12/19/2008	12/8/2008	12/2/2008	12/2/2008	1/8/2009	1/4/2009	1/4/2009
Sample Interval		25 - 30 FT	3 - 13 FT	15 - 25 FT	3 - 13 FT	15.5 - 25.5 FT	5 - 15 FT	5 - 15 FT	5 - 15 FT	3 - 13 FT	12 - 22 FT
Sample Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Inorganics, Total	**Units**										
Aluminum	ug/L	**5240**	**37.1 J**	**1950**	62.1 U	**741**	200 U	**27.9 J**	200 U	**190 J**	**394**
Antimony	ug/L	**13.7**	6 U	**2.4 J**	6 U	60 U	6 U	1.9 U	—	6 U	**2 J**
Arsenic	ug/L	**1650**	5.1 U	**10000**	**85.9**	30 U	3 U	**2.1 J**	—	1.9 U	6 U
Barium	ug/L	**8.1 J**	**22.1 J**	**22.9 J**	**5.9 J**	**29.7 J**	**112 J**	**118 J**	—	**20.8 J**	**52 J**
Beryllium	ug/L	5.5 U	1 U	1.7 U	1 U	0.7 U	**0.3 J**	**0.2 J**	—	0.2 U	0.5 U
Cadmium	ug/L	3 UJ	0.8 U	**2.3 J**	0.3 U	30 U	0.3 U	0.5 U	—	1 U	**7.3**
Calcium	ug/L	**345000**	**40000**	**234000**	**129000**	**331000**	**86100**	**91700**	—	**45000**	**143000**
Chromium	ug/L	10 U	1.2 U	6.1 U	10 U	10 U	**1.1 J**	**1.2 J**	—	2.6 U	2.4 U
Cobalt	ug/L	**45.6 J**	50 U	**51.8**	50 U	500 U	50 U	50 U	—	50 U	50 U
Copper	ug/L	10 U	2.7 U	2.5 U	**1.9 J**	100 U	10 U	10 U	—	**5.5 J**	**3.6 J**
Iron	ug/L	**267000**	**785**	**158000**	**1660**	**2370000**	**6890**	**7070**	**8350**	**452**	**2480**
Lead	ug/L	**6.1**	3 U	3 U	3 U	**46.7**	3 U	3 U	—	**2.9 J**	**7**
Magnesium	ug/L	**79000**	**4530 J**	**135000**	**17000**	**982000**	**15800**	**15600**	—	**21100**	**46900**
Manganese	ug/L	**10900**	**84.1**	**15600**	**287**	**79700**	**731**	**769**	**870**	**305**	**574**
Mercury	ug/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	—	0.2 U	**0.055 J**
Nickel	ug/L	**90.1**	10 U	**78.3**	1.2 U	100 U	10 U	10 U	—	1.4 U	10 U
Potassium	ug/L	**19400**	**4310 J**	**52800**	**11800**	**201000**	**5190 J**	**5240 J**	—	**11300**	**5750 J**
Selenium	ug/L	10 U	10 U	**18.4**	1.9 U	100 U	10 U	10 U	—	10 U	10 U
Silver	ug/L	10 U	10 U	**1.9 J**	10 U	**25.2 J**	10 U	10 U	10 U	10 U	10 U
Sodium	ug/L	**130000**	**37400**	**404000**	**155000**	**3920000**	**13400**	**13400**	**11500**	**79000**	**126000**
Thallium	ug/L	2 U	2 U	2 U	2 U	20 U	2 U	2 U	—	2 U	2 U
Vanadium	ug/L	**59.2**	**5.7 J**	**10.9 J**	2.3 U	**29.1 J**	0.5 U	0.6 U	—	**8.8 J**	**3.9 J**
Zinc	ug/L	**892**	**9.6 J**	**1030**	5.8 U	200 U	5.7 U	4.7 U	20 U	**25.5**	**26.4**
Inorganics, Dissolved											
Aluminum, Dissolved	ug/L	**4050**	200 U	**712**	**62.6 J**	**548**	200 U	200 U	—	200 U	200 U
Antimony, Dissolved	ug/L	**13**	6 U	**3.6 J**	6 U	30 U	6 U	3 U	—	6 U	6 U
Arsenic, Dissolved	ug/L	**1460**	3.8 U	**10700**	**80.4**	15 U	3 U	3 U	—	3.4 U	6.3 U
Barium, Dissolved	ug/L	**8.2 J**	**22 J**	**21.9 J**	**5 J**	**26.9 J**	**116 J**	**118 J**	—	**19.5 J**	**37.3 J**
Beryllium, Dissolved	ug/L	**2.7**	1 U	**1**	1 U	0.7 U	**0.3 J**	**0.2 J**	—	1 U	0.3 U
Cadmium, Dissolved	ug/L	**9.4 J**	3 U	6 U	3 U	15 U	3 U	0.3 U	—	3 U	3 U
Calcium, Dissolved	ug/L	**343000**	**39900**	**238000**	**130000**	**340000**	**92100**	**93400**	—	**45300**	**143000**
Chromium, Dissolved	ug/L	10 U	1.1 U	4.8 U	10 U	10 U	**1.2 J**	**1.8 J**	—	1.5 U	1.6 U
Cobalt, Dissolved	ug/L	**39.9 J**	50 U	**30.7 J**	50 U	250 U	50 U	50 U	—	50 U	50 U
Copper, Dissolved	ug/L	10 U	10 U	2.3 U	10 U	50 U	10 U	10 U	—	10 U	10 U
Iron, Dissolved	ug/L	**264000**	**678**	**140000**	**1560**	**2240000**	**4740**	**4940**	—	**306**	**177**
Lead, Dissolved	ug/L	**9**	3 U	3 U	3 U	**58**	3 U	3 U	—	3 U	**2.2 J**
Magnesium, Dissolved	ug/L	**77400**	**4500 J**	**119000**	**17100**	**981000**	**14300**	**14200**	—	**21200**	**46700**
Manganese, Dissolved	ug/L	**10700**	**89.9**	**13600**	**303**	**80100**	**746**	**755**	—	**307**	**553**
Mercury, Dissolved	ug/L	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	0.2 U	—	0.2 U	0.2 U
Nickel, Dissolved	ug/L	**78.1**	10 U	**48.1**	10 U	50 U	10 U	10 U	—	10 U	10 U
Potassium, Dissolved	ug/L	**18900**	**4230 J**	**52000**	**11900**	**201000**	**4900 J**	**4770 J**	—	**11400**	**5660 J**
Selenium, Dissolved	ug/L	10 U	10 U	**17.3**	2.9 U	50 U	10 U	10 U	—	10 U	10 U
Silver, Dissolved	ug/L	10 U	10 U	**2.3 J**	10 U	**20.8 J**	10 U	10 U	—	10 U	10 U
Sodium, Dissolved	ug/L	**133000**	**36100**	**375000**	**162000**	**3480000**	**12800**	**12600**	—	**80000**	**126000**
Thallium, Dissolved	ug/L	2 U	2 U	2 U	2 U	10 U	2 U	2 U	—	2 U	2 U
Vanadium, Dissolved	ug/L	**58.3**	**4.9 J**	**9.2 J**	2.2 U	**29.1 J**	50 U	50 U	—	**8.5 J**	1.8 U
Zinc, Dissolved	ug/L	**838**	20 U	**467**	7.1 U	100 U	4.5 U	20 U	—	**8.6 J**	20 U

Detected concentrations are marked as shaded and bold.
FT - Feet
J - Estimated Concentration
U - Not Detected
ug/L - micrograms per liter

APPENDIX P
Groundwater, Pore Water, and Surface Water Analytical Data for Total/Dissolved Inorganics
Quanta Resources Superfund Site, OU1
Edgewater, New Jersey

Location ID		MW-123		MW-124			MW-125			
Field Sample ID		MW-123-122908	MW-123-091409	MW-124-122408	MW-124-010909	MW-124-091509	MW-125-122308	MW-125-010909	DUP-010909	MW-125-091509
Sample Date		12/29/2008	9/14/2009	12/24/2008	1/9/2009	9/15/2009	12/23/2008	1/9/2009	1/9/2009	9/15/2009
Sample Interval		5 - 10 FT	5 - 10 FT	6 - 16 FT	6 - 16 FT	6 - 16 FT	5 - 15 FT	5 - 15 FT	5 - 15 FT	5 - 15 FT
Sample Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Inorganics, Total	**Units**									
Aluminum	ug/L	200 U	—	200 U	200 U	—	**234**	**135 J**	**113 J**	—
Antimony	ug/L	6 U	—	6 U	—	—	6 U	—	—	—
Arsenic	ug/L	**82.5**	**430**	3 U	—	3 U	**2.6 J**	—	—	3 U
Barium	ug/L	**92.8 J**	—	**17.9 J**	—	—	**87.4 J**	—	—	—
Beryllium	ug/L	0.4 U	—	1 U	—	—	1 U	—	—	—
Cadmium	ug/L	0.4 U	—	0.5 U	—	—	0.6 U	—	—	—
Calcium	ug/L	**134000**	—	**82000**	—	—	**115000**	—	—	—
Chromium	ug/L	1.3 U	—	10 U	—	—	1.5 U	—	—	—
Cobalt	ug/L	50 U	—	50 U	—	—	**0.7 J**	—	—	—
Copper	ug/L	10 U	—	**1.4 J**	—	—	**3.5 J**	—	—	—
Iron	ug/L	**1480**	**1210**	19.1 U	**19.8 J**	100 U	**463**	**207**	**174**	**154**
Lead	ug/L	3 U	3 U	3 U	—	3 U	**3.7**	—	—	2.5 U
Magnesium	ug/L	**17700**	—	**33900**	—	—	**18300**	—	—	—
Manganese	ug/L	**606**	—	**17.7**	**20.6 J**	—	**127**	**143**	**156**	—
Mercury	ug/L	0.2 U	—	0.2 U	—	—	0.2 U	—	—	—
Nickel	ug/L	10 U	—	10 U	—	—	**1.4 J**	—	—	—
Potassium	ug/L	**14900**	—	**9650 J**	—	—	**10500 J**	—	—	—
Selenium	ug/L	10 U	—	10 U	—	—	10 U	—	—	—
Silver	ug/L	10 U	—	10 U	10 U	—	10 U	10 U	10 U	—
Sodium	ug/L	**115000**	—	**134000**	**150000**	—	**180000**	**184000**	**179000**	—
Thallium	ug/L	2 U	—	2 U	—	—	2 U	—	—	—
Vanadium	ug/L	2.5 U	—	**0.6 J**	—	—	**1.9 J**	—	—	—
Zinc	ug/L	**790**	—	9.4 U	20 U	—	5.6 U	20 U	20 U	—
Inorganics, Dissolved										
Aluminum, Dissolved	ug/L	200 U	—	200 U	—	—	**30.4 J**	—	—	—
Antimony, Dissolved	ug/L	6 U	—	6 U	—	—	6 U	—	—	—
Arsenic, Dissolved	ug/L	**326**	**424**	3 U	—	3 U	**3.5**	—	—	3 U
Barium, Dissolved	ug/L	**92.7 J**	—	**19.9 J**	—	—	**93 J**	—	—	—
Beryllium, Dissolved	ug/L	0.4 U	—	1 U	—	—	1 U	—	—	—
Cadmium, Dissolved	ug/L	0.7 U	—	0.4 U	—	—	0.7 U	—	—	—
Calcium, Dissolved	ug/L	**133000**	—	**81900**	—	—	**129000**	—	—	—
Chromium, Dissolved	ug/L	1.5 U	—	10 U	—	—	0.6 U	—	—	—
Cobalt, Dissolved	ug/L	50 U	—	50 U	—	—	**0.6 J**	—	—	—
Copper, Dissolved	ug/L	10 U	—	10 U	—	—	**2.8 J**	—	—	—
Iron, Dissolved	ug/L	**1280**	**1040**	9.4 U	—	100 U	100 U	—	—	100 U
Lead, Dissolved	ug/L	3 U	3 U	3 U	—	3 U	3 U	—	—	3 U
Magnesium, Dissolved	ug/L	**17700**	—	**34000**	—	—	**17500**	—	—	—
Manganese, Dissolved	ug/L	**600**	—	**17.2**	—	—	**160**	—	—	—
Mercury, Dissolved	ug/L	0.2 U	—	0.2 U	—	—	0.2 U	—	—	—
Nickel, Dissolved	ug/L	10 U	—	10 U	—	—	10 U	—	—	—
Potassium, Dissolved	ug/L	**15000**	—	**8900 J**	—	—	**11000**	—	—	—
Selenium, Dissolved	ug/L	10 U	—	10 U	—	—	10 U	—	—	—
Silver, Dissolved	ug/L	10 U	—	10 U	—	—	**1 J**	—	—	—
Sodium, Dissolved	ug/L	**116000**	—	**134000**	—	—	**186000**	—	—	—
Thallium, Dissolved	ug/L	2 U	—	2 U	—	—	2 U	—	—	—
Vanadium, Dissolved	ug/L	3 U	—	**1 J**	—	—	**1.1 J**	—	—	—
Zinc, Dissolved	ug/L	20 U	—	20 U	—	—	20 U	—	—	—

Detected concentrations are marked as shaded and bold.
FT - Feet
J - Estimated Concentration
U - Not Detected
ug/L - micrograms per liter

307916

APPENDIX P
Groundwater, Pore Water, and Surface Water Analytical Data for Total/Dissolved Inorganics
Quanta Resources Superfund Site, OU1
Edgewater, New Jersey

Location ID		MW-126			MW-127		MW-128		MW-129		MW-130A	
Field Sample ID		MW-126-123108	Dup-123108	MW-126-091609	MW-127-122408	MW-127-091409	MW-128-031809	MW-128-091509	MW-129-031809	MW-129-091509	MW-130A-121908	MW-130A-091709
Sample Date		12/31/2008	12/31/2008	9/16/2009	12/24/2008	9/14/2009	3/18/2009	9/15/2009	3/18/2009	9/15/2009	12/19/2008	9/17/2009
Sample Interval		8 - 18 FT	8 - 18 FT	8 - 18 FT	6 - 16 FT	6 - 16 FT	5 - 15 FT	5 - 15 FT	5 - 15 FT	5 - 15 FT	5 - 15 FT	5 - 15 FT
Sample Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Inorganics, Total	**Units**											
Aluminum	ug/L	200 U	200 U	—	**87.6 J**	—	200 U	—	**165 J**	—	**119 J**	—
Antimony	ug/L	4.1 U	3.8 U	—	6 U	—	6 U	—	6 U	—	6 U	—
Arsenic	ug/L	**9**	**8.9**	8.1 U	3 U	3 U	3 U	**5.2**	3 U	3 U	**156**	**15.4**
Barium	ug/L	**270**	**262**	—	**79.1 J**	—	**217**	—	**78.4 J**	—	**50.5 J**	—
Beryllium	ug/L	0.4 U	0.2 U	—	1 U	—	0.8 U	—	0.5 U	—	1 U	—
Cadmium	ug/L	0.3 U	3 U	—	1 U	—	3.1 U	—	3 U	—	3 U	—
Calcium	ug/L	**182000**	**174000**	—	**238000**	—	**165000**	—	**78500**	—	**93700**	—
Chromium	ug/L	2.5 U	1.3 U	—	0.9 U	—	10 U	—	10 U	—	10 U	—
Cobalt	ug/L	50 U	50 U	—	50 U	—	1.8 U	—	1 U	—	50 U	—
Copper	ug/L	10 U	10 U	—	**1.1 J**	—	10 U	—	10 U	—	10 U	—
Iron	ug/L	**29900**	**28800**	**23000**	**742**	**501**	**122**	**311**	**217**	**241**	**3610**	**1950**
Lead	ug/L	1.9 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U
Magnesium	ug/L	**21800**	**21100**	—	**26600**	—	**64200**	—	**21800**	—	**29900**	—
Manganese	ug/L	**709**	**688**	—	**1560**	—	**548**	—	**767**	—	**331**	—
Mercury	ug/L	0.2 U	0.2 U	—	0.2 U	—	0.2 U	—	0.2 U	—	0.2 U	—
Nickel	ug/L	3.9 U	3 U	—	10 U	—	6.8 U	—	1.7 U	—	10 U	—
Potassium	ug/L	**37900**	**36800**	—	**14900**	—	**6990 J**	—	**7310 J**	—	**27500**	—
Selenium	ug/L	**2.8 J**	10 U	—	10 U	—	**12.4**	—	10 U	—	10 U	—
Silver	ug/L	10 U	10 U	—	10 U	—	10 U	—	10 U	—	10 U	—
Sodium	ug/L	**395000**	**385000**	—	**104000**	—	**135000**	—	**136000**	—	**150000**	—
Thallium	ug/L	2 U	2 U	—	2 U	—	2 U	—	2 U	—	2 U	—
Vanadium	ug/L	2.9 U	3.4 U	—	**1.7 J**	—	50 U	—	50 U	—	4.7 U	—
Zinc	ug/L	**8.1 J**	5.4 U	—	20 U	—	**212**	—	6.4 U	—	20 U	—
Inorganics, Dissolved												
Aluminum, Dissolved	ug/L	200 U	200 U	—	**126 J**	—	200 U	—	200 U	—	**56.4 J**	—
Antimony, Dissolved	ug/L	2.9 U	4.3 U	—	6 U	—	6 U	—	6 U	—	6 U	—
Arsenic, Dissolved	ug/L	**7.7**	**7.1**	9 U	**4.1**	3 U	3 U	**11.4**	3 U	**2.9 J**	**181**	**18.2**
Barium, Dissolved	ug/L	**271**	**263**	—	**84.5 J**	—	**221**	—	**80.1 J**	—	**52.6 J**	—
Beryllium, Dissolved	ug/L	0.2 U	0.4 U	—	1 U	—	**0.8 J**	—	**0.5 J**	—	1 U	—
Cadmium, Dissolved	ug/L	0.3 U	0.4 U	—	1.1 U	—	**3.1**	—	3 U	—	3 U	—
Calcium, Dissolved	ug/L	**187000**	**178000**	—	**270000**	—	**167000**	—	**81400**	—	**100000**	—
Chromium, Dissolved	ug/L	1.1 U	1.6 U	—	3.1 U	—	10 U	—	10 U	—	10 U	—
Cobalt, Dissolved	ug/L	50 U	50 U	—	50 U	—	**2.3 J**	—	**0.6 J**	—	50 U	—
Copper, Dissolved	ug/L	10 U	10 U	—	**1.2 J**	—	10 U	—	10 U	—	10 U	—
Iron, Dissolved	ug/L	**27400**	**27100**	**22700**	**1680**	**384**	**84.9 J**	**36.8 J**	**24.1 J**	100 U	**4210**	**682**
Lead, Dissolved	ug/L	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	3 U	**1.4 J**	3 U
Magnesium, Dissolved	ug/L	**22400**	**21400**	—	**32700**	—	**65600**	—	**22900**	—	**31000**	—
Manganese, Dissolved	ug/L	**703**	**684**	—	**1770**	—	**539**	—	**796**	—	**371**	—
Mercury, Dissolved	ug/L	0.2 U	0.2 U	—	0.2 U	—	0.2 U	—	0.2 U	—	0.2 U	—
Nickel, Dissolved	ug/L	**4.3 J**	3.1 U	—	**2.7 J**	—	**6.9 J**	—	**1.7 J**	—	10 U	—
Potassium, Dissolved	ug/L	**38900**	**37400**	—	**16100**	—	**7170 J**	—	**7510 J**	—	**27300**	—
Selenium, Dissolved	ug/L	10 U	10 U	—	10 U	—	**11.7**	—	10 U	—	10 U	—
Silver, Dissolved	ug/L	10 U	10 U	—	10 U	—	10 U	—	10 U	—	10 U	—
Sodium, Dissolved	ug/L	**399000**	**388000**	—	**136000**	—	**138000**	—	**139000**	—	**147000**	—
Thallium, Dissolved	ug/L	2 U	2 U	—	**1.3 J**	—	2 U	—	2 U	—	2 U	—
Vanadium, Dissolved	ug/L	3.2 U	3.4 U	—	**2.1 J**	—	50 U	—	50 U	—	4.2 U	—
Zinc, Dissolved	ug/L	5.4 U	20 U	—	**14.4 J**	—	**235**	—	**7 J**	—	20 U	—

Detected concentrations are marked as shaded and bold.
FT - Feet
J - Estimated Concentration
U - Not Detected
ug/L - micrograms per liter

APPENDIX P
Groundwater, Pore Water, and Surface Water Analytical Data for Total/Dissolved Inorganics
Quanta Resources Superfund Site, OU1
Edgewater, New Jersey

Location ID		MW-130B		MW-131		MW-132		MW-133		MW-134	
Field Sample ID		MW-130B-122208	MW-130B-091709	MW-131-120808	MW-131-091709	MW-132-121808	MW-132-091709	MW-133-121008	MW-133-091609	MW-134-121008	MW-134-091609
Sample Date		12/22/2008	9/17/2009	12/8/2008	9/17/2009	12/18/2008	9/17/2009	12/10/2008	9/16/2009	12/10/2008	9/16/2009
Sample Interval		15 - 25 FT	15 - 25 FT	4 - 14 FT	4 - 14 FT	4 - 14 FT	4 - 14 FT	10 - 15 FT	10 - 15 FT	11 - 21 FT	11 - 21 FT
Sample Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Inorganics, Total	**Units**										
Aluminum	ug/L	**37100**	—	200 U	—	**218**	—	200 U	—	200 U	—
Antimony	ug/L	6 U	—	6 U	—	6 U	—	6 U	—	6 U	—
Arsenic	ug/L	**11100**	**10900**	**66.8**	**45.5**	**116**	**22.7**	**3540**	**2420**	**839**	**3300**
Barium	ug/L	**36.7 J**	—	**92.9 J**	—	**144 J**	—	**25.5 J**	—	**369**	—
Beryllium	ug/L	**5.8**	—	0.3 U	—	1 U	—	1.2 U	—	0.9 U	—
Cadmium	ug/L	150 U	—	3 U	—	0.8 U	—	**11**	—	2.2 U	—
Calcium	ug/L	**369000**	—	**329000**	—	**291000**	—	**406000**	—	**415000**	—
Chromium	ug/L	**11**	—	10 U	—	0.8 U	—	10 U	—	2.1 U	—
Cobalt	ug/L	**116**	—	50 U	—	50 U	—	**15 J**	—	50 U	—
Copper	ug/L	10 U	—	10 U	—	**1.1 J**	—	**4.9 J**	—	10 U	—
Iron	ug/L	**410000**	**351000**	**79500**	**61700**	**151**	**2060**	**78000**	**83700**	**143**	**106**
Lead	ug/L	6.3 U	**6.2**	**4.8**	3 U	3 U	**4.1**	**7.9**	**8.8**	3 U	**4.6**
Magnesium	ug/L	**78800**	—	**147000**	—	**71800**	—	**55900**	—	**135000**	—
Manganese	ug/L	**4550**	—	**8270**	—	**534**	—	**4620**	—	**1540**	—
Mercury	ug/L	0.2 U	—	0.2 U	—	0.2 U	—	**0.18 J**	—	**0.053 J**	—
Nickel	ug/L	**213**	—	2.1 U	—	10 U	—	7.4 U	—	10 U	—
Potassium	ug/L	**23500**	—	**48300**	—	**38100**	—	**46600**	—	**274000**	—
Selenium	ug/L	10 U	—	**3.6 J**	—	10 U	—	**6.8 J**	—	**1.7 J**	—
Silver	ug/L	10 U	—	10 U	—	10 U	—	**1.2 J**	—	10 U	—
Sodium	ug/L	**91700**	—	**627000**	—	**530000**	—	**256000**	—	**779000**	—
Thallium	ug/L	**98.6 J**	—	2 U	—	**1.6 J**	—	2 U	—	2 U	—
Vanadium	ug/L	**98.4**	—	0.9 U	—	1.2 U	—	1 U	—	**5.7 J**	—
Zinc	ug/L	**4280**	—	4.5 U	—	20 U	—	**85.1**	—	4.7 U	—
Inorganics, Dissolved											
Aluminum, Dissolved	ug/L	**29700**	—	200 U	—	**189 J**	—	200 U	—	200 U	—
Antimony, Dissolved	ug/L	6 U	—	6 U	—	6 U	—	6 U	—	6 U	—
Arsenic, Dissolved	ug/L	**10900**	**10700**	**64.6**	**42.5**	**85.6**	**30.2**	**3380**	**2420**	**4320**	**3310**
Barium, Dissolved	ug/L	**34.9 J**	—	**92.3 J**	—	**144 J**	—	**27.9 J**	—	**387**	—
Beryllium, Dissolved	ug/L	**5.2**	—	0.3 U	—	1 U	—	1.3 U	—	0.8 U	—
Cadmium, Dissolved	ug/L	150 U	—	3 U	—	0.9 U	—	**10.6**	—	**13.1**	—
Calcium, Dissolved	ug/L	**366000**	—	**331000**	—	**285000**	—	**444000**	—	**430000**	—
Chromium, Dissolved	ug/L	**8.8 J**	—	10 U	—	1.7 U	—	10 U	—	**2.8 J**	—
Cobalt, Dissolved	ug/L	**113**	—	50 U	—	50 U	—	**14.6 J**	—	50 U	—
Copper, Dissolved	ug/L	10 U	—	10 U	—	**1.8 J**	—	2.8 U	—	10 U	—
Iron, Dissolved	ug/L	**402000**	**342000**	**77500**	**59300**	**123**	**315**	**73000**	**83500**	**32.3 J**	23.6 U
Lead, Dissolved	ug/L	4.4 U	**4.5**	**4.3**	3 U	3 U	3 U	**2.8 J**	**5.3**	3 U	**1.7 J**
Magnesium, Dissolved	ug/L	**76700**	—	**148000**	—	**73000**	—	**57900**	—	**140000**	—
Manganese, Dissolved	ug/L	**4320**	—	**8190**	—	**526**	—	**4950**	—	**1580**	—
Mercury, Dissolved	ug/L	0.2 U	—	0.2 U	—	0.2 U	—	0.2 U	—	0.2 U	—
Nickel, Dissolved	ug/L	**207**	—	2.4 U	—	10 U	—	7.3 U	—	1.2 U	—
Potassium, Dissolved	ug/L	**22400**	—	**48100**	—	**38100**	—	**47700**	—	**292000**	—
Selenium, Dissolved	ug/L	10 U	—	**3.7 J**	—	10 U	—	**10.5**	—	**3 J**	—
Silver, Dissolved	ug/L	10 U	—	10 U	—	10 U	—	**1.5 J**	—	10 U	—
Sodium, Dissolved	ug/L	**87200**	—	**631000**	—	**528000**	—	**257000**	—	**786000**	—
Thallium, Dissolved	ug/L	**65.1 J**	—	2 U	—	2 U	—	2 U	—	2 U	—
Vanadium, Dissolved	ug/L	**81.6**	—	0.6 U	—	0.9 U	—	0.7 U	—	**5.8 J**	—
Zinc, Dissolved	ug/L	**4120**	—	5.5 U	—	6.5 U	—	**84.6**	—	20 U	—

Detected concentrations are marked as shaded and bold.
FT - Feet
J - Estimated Concentration
U - Not Detected
ug/L - micrograms per liter

APPENDIX P
Groundwater, Pore Water, and Surface Water Analytical Data for Total/Dissolved Inorganics
Quanta Resources Superfund Site, OU1
Edgewater, New Jersey

Location ID		MW-135		MW-136		MW-A-1		MW-A-2	MW-B	MW-C		MW-F
Field Sample ID		MW-135-120308	MW-135-091609	MW-136-122308	MW-136-091409	MW-A-1-120308	MW-A-1-091609	MW-A-2-123008	MW-B-120308	MW-C-121708	MW-C-091609	MW-F-121808
Sample Date		12/3/2008	9/16/2009	12/23/2008	9/14/2009	12/3/2008	9/16/2009	12/30/2008	12/3/2008	12/17/2008	9/16/2009	12/18/2008
Sample Interval		20 - 30 FT	20 - 30 FT	5 - 10 FT	5 - 10 FT	24 - 28 FT	24 - 28 FT	6 - 16 FT	9 - 19 FT	10 - 20 FT	10 - 20 FT	7 - 17 FT
Sample Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Inorganics, Total	**Units**											
Aluminum	ug/L	200 U	—	**47.4 J**	—	**65900**	—	**399 J**	**11500**	**550**	—	**393**
Antimony	ug/L	6 U	—	6 U	—	**28.1**	—	**59.7**	**4.6 J**	6 U	—	6 U
Arsenic	ug/L	3 U	3 U	**104**	**613**	**4890**	**2840**	**136000**	**1700**	**460**	**1040**	**47.3**
Barium	ug/L	**56.5 J**	—	**96.9 J**	—	**15.2 J**	—	**53.8 J**	**15.3 J**	**45.3 J**	—	**43.1 J**
Beryllium	ug/L	**0.2 J**	—	1 U	—	**14.9**	—	1 U	**3.2**	1 U	—	**0.72 J**
Cadmium	ug/L	3 U	—	0.6 U	—	**5.7 J**	—	**146**	3 U	**2.9 J**	—	**9**
Calcium	ug/L	**136000**	—	**92000**	—	**290000**	—	**555000**	**251000**	**299000**	—	**232000**
Chromium	ug/L	10 U	—	0.9 U	—	**25**	—	10 U	**1.4 J**	**1.9 J**	—	10 U
Cobalt	ug/L	50 U	—	50 U	—	**223**	—	**24.9 J**	**49 J**	50 U	—	50 U
Copper	ug/L	10 U	—	10 U	—	20 U	—	5.7 U	**536**	10 U	—	**8.5 J**
Iron	ug/L	**948**	**321**	**8150**	**3430**	**692000**	**434000**	**384000**	**104000**	**5210**	**3250**	**5190**
Lead	ug/L	3 U	3 U	3 U	8 U	**36.2**	9 U	**1180**	**24.7**	**5.1**	**3.4**	**20.9**
Magnesium	ug/L	**92200**	—	**26700**	—	**140000**	—	**45200**	**63200**	**70400**	—	**60300**
Manganese	ug/L	**3890**	—	**772**	—	**23700**	—	**4570**	**4220**	**1280**	—	**484**
Mercury	ug/L	0.2 U	—	0.2 U	—	0.2 U	—	**10.1**	**0.11 J**	**0.076 J**	—	**1.1**
Nickel	ug/L	10 U	—	10 U	—	**319**	—	**38.3**	**61.8**	**2.5 J**	—	1.6 U
Potassium	ug/L	**11500**	—	**16700**	—	**48700**	—	**44900**	**37000**	**285000**	—	**122000**
Selenium	ug/L	10 U	—	10 U	—	**5.2 J**	—	**25.7**	**4.3 J**	10 U	—	10 U
Silver	ug/L	10 U	—	10 U	—	10 U	—	10 U	10 U	10 U	—	10 U
Sodium	ug/L	**330000**	—	**141000**	—	**214000**	—	**225000**	**343000**	**336000**	—	**444000**
Thallium	ug/L	2 U	—	2 U	—	20 U	—	4 U	**33.7**	2 U	—	1.6 U
Vanadium	ug/L	**0.9 J**	—	**0.7 J**	—	**236**	—	7.3 U	**42.4 J**	**7.1 J**	—	2.2 U
Zinc	ug/L	20 U	—	4.7 U	—	**1470**	—	**81.1**	**2180**	**15.9 J**	—	**28.3 J**
Inorganics, Dissolved												
Aluminum, Dissolved	ug/L	200 U	—	200 U	—	**64500**	—	**334 J**	**6110**	**313**	—	**176 J**
Antimony, Dissolved	ug/L	6 U	—	6 U	—	**29.4**	—	**26.8**	**3.6 J**	6 U	—	6 U
Arsenic, Dissolved	ug/L	3 U	6.3 U	**83.2**	**652**	**4630**	**2810**	**136000**	**1290**	**452**	**996**	**28.5**
Barium, Dissolved	ug/L	**52.1 J**	—	**97.3 J**	—	**15.2 J**	—	**42.7 J**	**11.9 J**	**41.2 J**	—	**37.2 J**
Beryllium, Dissolved	ug/L	**0.2 J**	—	1 U	—	**15**	—	1 U	**2.9**	1 U	—	**0.71 J**
Cadmium, Dissolved	ug/L	3 U	—	0.7 U	—	**1.6 J**	—	**129**	**2.4 J**	**2.5 J**	—	0.7 U
Calcium, Dissolved	ug/L	**132000**	—	**95000**	—	**285000**	—	**558000**	**253000**	**299000**	—	**236000**
Chromium, Dissolved	ug/L	10 U	—	10 U	—	**24.3**	—	10 U	10 U	**0.7 J**	—	10 U
Cobalt, Dissolved	ug/L	50 U	—	50 U	—	**224**	—	**24.3 J**	**50**	50 U	—	50 U
Copper, Dissolved	ug/L	10 U	—	10 U	—	20 U	—	10 U	**440**	10 U	—	**1.9 J**
Iron, Dissolved	ug/L	**919**	**234**	**7280**	**2510**	**685000**	**445000**	**393000**	**103000**	**4080**	**3150**	**1610**
Lead, Dissolved	ug/L	3 U	3 U	3 U	3 U	**14.4**	9 U	**117**	**9.6**	3 U	3 U	3 U
Magnesium, Dissolved	ug/L	**89700**	—	**27400**	—	**139000**	—	**45700**	**64500**	**69400**	—	**58900**
Manganese, Dissolved	ug/L	**3800**	—	**782**	—	**23500**	—	**4500**	**4300**	**1260**	—	**478**
Mercury, Dissolved	ug/L	0.2 U	—	0.2 U	—	0.2 U	—	0.2 U	0.2 U	0.2 U	—	0.2 U
Nickel, Dissolved	ug/L	10 U	—	10 U	—	**317**	—	**37.4**	**63.2**	**1.2 J**	—	1.5 U
Potassium, Dissolved	ug/L	**12200**	—	**16900**	—	**48000**	—	**45100**	**40100**	**281000**	—	**119000**
Selenium, Dissolved	ug/L	**2.6 J**	—	10 U	—	20 U	—	**20.4**	10 U	10 U	—	10 U
Silver, Dissolved	ug/L	10 U	—	10 U	—	10 U	—	10 U	10 U	10 U	—	10 U
Sodium, Dissolved	ug/L	**322000**	—	**146000**	—	**211000**	—	**225000**	**344000**	**328000**	—	**419000**
Thallium, Dissolved	ug/L	2 U	—	2 U	—	4 U	—	6 U	**37.9**	**1.7 J**	—	2 U
Vanadium, Dissolved	ug/L	**0.9 J**	—	**0.5 J**	—	**229**	—	**6.9 J**	**30.7 J**	**5.8 J**	—	1.2 U
Zinc, Dissolved	ug/L	20 U	—	5.6 U	—	**1470**	—	**78.1**	**2330**	20 U	—	20 UJ

Detected concentrations are marked as shaded and bold.
FT - Feet
J - Estimated Concentration
U - Not Detected
ug/L - micrograms per liter

APPENDIX P
Groundwater, Pore Water, and Surface Water Analytical Data for Total/Dissolved Inorganics
Quanta Resources Superfund Site, OU1
Edgewater, New Jersey

Location ID		MW-J	MW-L		MW-M	MW-N-1	MW-N-2		MW-O	MW-O	PZ-2D	PZ-3S
Field Sample ID		MW-J-011309	MW-L-122908	MW-L-091809	MW-M-011309	MW-N-1-122908	MW-N-2-123008	MW-N2-091809	MW-O-121808	MW-O-091609	PZ2D-010609	PZ3S-011309
Sample Date		1/13/2009	12/29/2008	9/18/2009	1/13/2009	12/29/2008	12/30/2008	9/18/2009	12/18/2008	9/16/2009	1/6/2009	1/13/2009
Sample Interval		8 - 18 FT	17 - 27 FT	17 - 27 FT	18 - 23 FT	18.45 - 23.45 FT	5 - 10 FT	5 - 10 FT	9.52 - 19.52 FT	9.52 - 19.52 FT	20.86 - 21.36 FT	4.4 - 4.9 FT
Sample Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Inorganics, Total	**Units**											
Aluminum	ug/L	1000 U	200 U	—	200 U	99.1 U	**78.4 J**	—	**249**	—	**779**	**143 J**
Antimony	ug/L	—	6 U	—	—	**44.9**	**11.1**	—	6 U	—	6 U	**4 J**
Arsenic	ug/L	—	**2.7 J**	**495**	—	**1510000**	**16100**	**52400**	**132**	**164**	2.3 U	**100**
Barium	ug/L	—	**31.2 J**	—	—	**155 J**	**166 J**	—	**70.8 J**	—	**23.5 J**	**151 J**
Beryllium	ug/L	—	0.2 U	—	—	0.5 U	1 U	—	**6.6**	—	1 U	1 U
Cadmium	ug/L	—	**3.2**	—	—	**16300**	**18.3**	—	0.9 U	—	3 U	3 U
Calcium	ug/L	—	**156000**	—	—	**300000**	**97500**	—	**250000**	—	**67500**	**11300**
Chromium	ug/L	—	1 U	—	—	10 U	10 U	—	0.6 U	—	2.2 U	**2.8 J**
Cobalt	ug/L	—	**3.1 J**	—	—	**2.1 J**	**1.6 J**	—	2.7 U	—	0.6 U	0.6 U
Copper	ug/L	—	**5 J**	—	—	**3 J**	**25.1**	—	**4.1 J**	—	2.6 U	**6.6 J**
Iron	ug/L	**744**	**295**	104 U	**171**	**34400**	**8590**	**7110**	**6570**	**3810**	**943**	**916**
Lead	ug/L	—	3 U	3 U	—	**349**	**158**	**31000**	3 U	3 U	2.4 U	3 U
Magnesium	ug/L	—	**31100**	—	—	**52500**	**11800**	—	**85300**	—	**59100**	**265000**
Manganese	ug/L	**466**	**3420**	—	**149**	**10300**	**1280**	—	**4010**	—	**650**	**9 J**
Mercury	ug/L	—	0.2 U	—	—	**0.67**	**0.86**	—	0.059 U	—	0.2 U	0.2 U
Nickel	ug/L	—	**4.1 J**	—	—	**7.7 J**	**16.5**	—	**5.7 J**	—	1.3 U	**6.5 J**
Potassium	ug/L	—	**10500**	—	—	**49100**	**125000**	—	**243000**	—	**10700**	**87600**
Selenium	ug/L	—	10 U	—	—	**1500**	10 U	—	10 U	—	10 U	10 U
Silver	ug/L	**1.1 J**	10 U	—	10 U	10 U	10 U	—	10 U	—	10 U	10 U
Sodium	ug/L	**1340000**	**149000**	—	**208000**	**254000**	**450000**	—	**299000**	—	**316000**	**1830000**
Thallium	ug/L	—	2 U	—	—	**163 J**	2 U	—	2 U	—	2 U	2 U
Vanadium	ug/L	—	1.4 U	—	—	3.3 U	2.9 U	—	5.3 U	—	5.6 U	**14.6 J**
Zinc	ug/L	**23.8**	**72.9**	—	20 U	**25.3**	**64.8**	—	19.8 U	—	5 U	14.3 U
Inorganics, Dissolved												
Aluminum, Dissolved	ug/L	—	200 U	—	—	200 U	200 U	—	**186 J**	—	200 U	—
Antimony, Dissolved	ug/L	—	6 U	—	—	**41.8**	**4.5 J**	—	6 U	—	6 U	—
Arsenic, Dissolved	ug/L	—	**3.2**	**524**	—	**1480000**	**14200**	**66400**	**225**	**144**	3 U	—
Barium, Dissolved	ug/L	—	28.3 U	—	—	**152 J**	**168 J**	—	**78.2 J**	—	**19.5 J**	—
Beryllium, Dissolved	ug/L	—	0.2 U	—	—	0.3 U	1 U	—	**5.9**	—	1 U	—
Cadmium, Dissolved	ug/L	—	**2.9 J**	—	—	**15400**	**11**	—	0.6 U	—	3 U	—
Calcium, Dissolved	ug/L	—	**155000**	—	—	**281000**	**108000**	—	**264000**	—	**66600**	—
Chromium, Dissolved	ug/L	—	10 U	—	—	10 U	10 U	—	10 U	—	10 U	—
Cobalt, Dissolved	ug/L	—	**2.4 J**	—	—	**1.8 J**	**1.4 J**	—	2.4 U	—	50 U	—
Copper, Dissolved	ug/L	—	**3.3 J**	—	—	10 U	**1.5 J**	—	10 U	—	10 U	—
Iron, Dissolved	ug/L	—	**220**	139 U	—	**32600**	**9860**	**2780**	**5790**	**3350**	23.9 U	—
Lead, Dissolved	ug/L	—	3 U	3 U	—	**2.7 J**	3 U	**6.6**	3 U	3 U	1.8 U	—
Magnesium, Dissolved	ug/L	—	**30400**	—	—	**49700**	**13300**	—	**83900**	—	**58200**	—
Manganese, Dissolved	ug/L	—	**3300**	—	—	**9850**	**1570**	—	**3710**	—	**594**	—
Mercury, Dissolved	ug/L	—	0.2 U	—	—	0.2 U	0.2 U	—	0.2 U	—	0.2 U	—
Nickel, Dissolved	ug/L	—	**4.1 J**	—	—	**7.2 J**	**2.8 J**	—	**4.1 J**	—	10 U	—
Potassium, Dissolved	ug/L	—	**10400**	—	—	**46500**	**125000**	—	**277000**	—	**10300**	—
Selenium, Dissolved	ug/L	—	10 U	—	—	**1530**	10 U	—	10 U	—	10 U	—
Silver, Dissolved	ug/L	—	10 U	—	—	10 U	10 U	—	10 U	—	10 U	—
Sodium, Dissolved	ug/L	—	**149000**	—	—	**243000**	**453000**	—	**313000**	—	**303000**	—
Thallium, Dissolved	ug/L	—	2 U	—	—	200 U	2 U	—	2 U	—	2 U	—
Vanadium, Dissolved	ug/L	—	1.1 U	—	—	3.7 U	**2.9 J**	—	5.1 U	—	3.3 U	—
Zinc, Dissolved	ug/L	—	**66.6**	—	—	**22.9**	**15 J**	—	20 U	—	20 U	—

Detected concentrations are marked as shaded and bold.
FT - Feet
J - Estimated Concentration
U - Not Detected
ug/L - micrograms per liter

APPENDIX P
Groundwater, Pore Water, and Surface Water Analytical Data for Total/Dissolved Inorganics
Quanta Resources Superfund Site, OU1
Edgewater, New Jersey

Location ID		PZ-3S	PZ-3I	PZ-3I	PZ-3D	PZ-3D	PZ-4S	PZ-4I
Field Sample ID		PZ3S-022509	PZ3I-011109	PZ3I-011309	PZ3D-011309	PZ3D-022509	PZ4S-010709	PZ4I-010709
Sample Date		2/25/2009	1/8/2009	1/13/2009	1/13/2009	2/25/2009	1/7/2009	1/7/2009
Sample Interval		4.4 - 4.9 FT	14.7 - 15.7 FT	14.7 - 15.7 FT	23.4 - 24.4 FT	23.4 - 24.4 FT	3.42 - 3.92 FT	14.63 - 15.13 FT
Sample Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
Inorganics, Total	**Units**							
Aluminum	ug/L	—	**8000**	—	200 U	—	200 U	**140 J**
Antimony	ug/L	—	6 U	—	**2.5 J**	—	6 U	6 U
Arsenic	ug/L	—	**359**	—	**3.1**	—	**3.2**	**2.6 J**
Barium	ug/L	—	**95.9 J**	—	**28.7 J**	—	**168 J**	**795**
Beryllium	ug/L	—	0.4 U	—	0.4 U	—	1 U	1 U
Cadmium	ug/L	—	2.7 U	—	3 U	—	0.8 U	1.4 U
Calcium	ug/L	—	**238000**	—	**66700**	—	**147000**	**184000**
Chromium	ug/L	—	**51.4**	—	**2.3 J**	—	0.6 U	2.2 U
Cobalt	ug/L	—	**6.8 J**	—	50 U	—	50 U	2 U
Copper	ug/L	—	**87.1**	—	**3.3 J**	—	5.7 U	4.1 U
Iron	ug/L	—	**16900**	—	**159**	—	**481**	**7120**
Lead	ug/L	—	**113**	—	**1.4 J**	—	**3.2**	**5.7**
Magnesium	ug/L	—	**279000**	—	**92400**	—	**234000**	**288000**
Manganese	ug/L	—	**356**	—	**433**	—	**103**	**118**
Mercury	ug/L	—	**1.5**	—	0.2 U	—	0.2 U	0.2 U
Nickel	ug/L	—	**40**	—	10 U	—	**5.3 J**	2.1 U
Potassium	ug/L	—	**83900**	—	**37600**	—	**86300**	**103000**
Selenium	ug/L	—	10 U	—	10 U	—	10 U	10 U
Silver	ug/L	—	**1.5 J**	—	10 U	—	10 U	10 U
Sodium	ug/L	—	**1910000**	—	**1040000**	—	**2070000**	**2220000**
Thallium	ug/L	—	**1.9 J**	—	2 U	—	1.9 U	2 U
Vanadium	ug/L	—	**23.7 J**	—	1.4 U	—	**9.8 J**	**13.9 J**
Zinc	ug/L	—	**151**	—	10.3 U	—	4.4 U	11.9 U
Inorganics, Dissolved								
Aluminum, Dissolved	ug/L	200 U	—	200 U	—	**589**	200 U	200 U
Antimony, Dissolved	ug/L	**4.6 J**	—	**5.7 J**	—	**5.6 J**	6 U	6 U
Arsenic, Dissolved	ug/L	**5.1**	—	**340**	—	**134**	**2.5 J**	3 U
Barium, Dissolved	ug/L	**24.8 J**	—	**17.7 J**	—	**134 J**	**166 J**	**766**
Beryllium, Dissolved	ug/L	1.4 U	—	1 U	—	1 U	1 U	1 U
Cadmium, Dissolved	ug/L	3 U	—	3 U	—	3 U	0.5 U	1.4 U
Calcium, Dissolved	ug/L	**60600**	—	**22700**	—	**27100**	**145000**	**173000**
Chromium, Dissolved	ug/L	2.5 U	—	**5.6 J**	—	4.4 U	0.6 U	1.4 U
Cobalt, Dissolved	ug/L	0.4 U	—	**1.2 J**	—	1.2 U	50 U	1.7 U
Copper, Dissolved	ug/L	10 U	—	10 U	—	**3.9 J**	1.7 U	1.3 U
Iron, Dissolved	ug/L	48.4 U	—	**1090**	—	**1590**	**220**	**4850**
Lead, Dissolved	ug/L	9 U	—	3 U	—	**5.3**	3 U	3 U
Magnesium, Dissolved	ug/L	**88400**	—	**277000**	—	**308000**	**232000**	**274000**
Manganese, Dissolved	ug/L	**303**	—	**31.1**	—	**23.4**	**101**	**103**
Mercury, Dissolved	ug/L	0.2 U	—	0.2 U	—	0.2 U	0.2 U	0.2 U
Nickel, Dissolved	ug/L	0.8 U	—	**18.6**	—	**10.5**	10 U	10 U
Potassium, Dissolved	ug/L	**34900**	—	**84200**	—	**89000**	**85300**	**98200**
Selenium, Dissolved	ug/L	10 U	—	10 U	—	10 U	10 U	10 U
Silver, Dissolved	ug/L	10 U	—	10 U	—	10 U	10 U	10 U
Sodium, Dissolved	ug/L	**1020000**	—	**1860000**	—	**1730000**	**2030000**	**2090000**
Thallium, Dissolved	ug/L	2 U	—	2 U	—	2 U	1.8 U	2 U
Vanadium, Dissolved	ug/L	2 U	—	**5 J**	—	**18.5 J**	**9 J**	**11.6 J**
Zinc, Dissolved	ug/L	**10.5 J**	—	5.5 U	—	**27.1**	20 U	20 U

Detected concentrations are marked as shaded and bold.
FT - Feet
J - Estimated Concentration
U - Not Detected
ug/L - micrograms per liter

APPENDIX Q

Groundwater Analytical Data for Polychlorinated Biphenyls (PCBs)

Quanta Resources Superfund Site, OU1

Edgewater, New Jersey

Location ID		MW-123	MW-124	MW-125	MW-126	MW-126	MW-127
Field Sample ID		**MW-123-122908**	**MW-124-122408**	**MW-125-122308**	**MW-126-123108**	**Dup-123108**	**MW-127-122408**
Sample Date		**12/29/2008**	**12/24/2008**	**12/23/2008**	**12/31/2008**	**12/31/2008**	**12/24/2008**
Sample Interval		**5 - 10 FT**	**6 - 16 FT**	**5 - 15 FT**	**8 - 18 FT**	**8 - 18 FT**	**6 - 16 FT**
Sample Matrix		**Groundwater**	**Groundwater**	**Groundwater**	**Groundwater**	**Groundwater**	**Groundwater**
	Units						
Aroclor 1016	ug/L	0.5 U	0.5 U	0.5 U	0.52 U	0.5 U	0.5 U
Aroclor 1221	ug/L	0.5 U	0.5 U	0.5 U	0.52 U	0.5 U	0.5 U
Aroclor 1232	ug/L	0.5 U	0.5 U	0.5 U	0.52 U	0.5 U	0.5 U
Aroclor 1242	ug/L	0.5 U	0.5 U	0.5 U	0.52 U	0.5 U	0.5 U
Aroclor 1248	ug/L	0.5 U	0.5 U	0.5 U	0.52 U	0.5 U	0.5 U
Aroclor 1254	ug/L	0.5 U	0.5 U	0.5 U	0.52 U	0.5 U	0.5 U
Aroclor 1260	ug/L	0.5 U	0.5 U	0.5 U	0.52 U	0.5 U	0.5 U

Detected concentrations are marked as shaded and bold.

FT - Feet

U - Not Detected

ug/L - micrograms per liter

APPENDIX Q
Groundwater Analytical Data for Polychlorinated Biphenyls (PCBs)
Quanta Resources Superfund Site, OU1
Edgewater, New Jersey

Location ID		MW-128	MW-129	MW-130A	MW-130B	MW-131	MW-132
Field Sample ID		MW-128-031809	MW-129-031809	MW-130A-121908	MW-130B-122208	MW-131-120808	MW-132-121808
Sample Date		3/18/2009	3/18/2009	12/19/2008	12/22/2008	12/8/2008	12/18/2008
Sample Interval		5 - 15 FT	5 - 15 FT	5 - 15 FT	15 - 25 FT	4 - 14 FT	4 - 14 FT
Sample Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
	Units						
Aroclor 1016	ug/L	0.5 U	0.52 U	0.5 U	0.51 U	0.5 U	0.53 U
Aroclor 1221	ug/L	0.5 U	0.52 U	0.5 U	0.51 U	0.5 U	0.53 U
Aroclor 1232	ug/L	0.5 U	0.52 U	0.5 U	0.51 U	0.5 U	0.53 U
Aroclor 1242	ug/L	0.5 U	0.52 U	0.5 U	0.51 U	0.5 U	0.53 U
Aroclor 1248	ug/L	0.5 U	0.52 U	0.5 U	0.51 U	0.5 U	0.53 U
Aroclor 1254	ug/L	0.5 U	0.52 U	0.5 U	0.51 U	0.5 U	0.53 U
Aroclor 1260	ug/L	0.5 U	0.52 U	0.5 U	0.51 U	0.5 U	0.53 U

Detected concentrations are marked as shaded and bold.
FT - Feet
U - Not Detected
ug/L - micrograms per liter

APPENDIX Q
Groundwater Analytical Data for Polychlorinated Biphenyls (PCBs)
Quanta Resources Superfund Site, OU1
Edgewater, New Jersey

Location ID		MW-133	MW-134	MW-135	MW-136
Field Sample ID		MW-133-121008	MW-134-121008	MW-135-120308	MW-136-122308
Sample Date		12/10/2008	12/10/2008	12/3/2008	12/23/2008
Sample Interval		10 - 15 FT	11 - 21 FT	20 - 30 FT	5 - 10 FT
Sample Matrix		Groundwater	Groundwater	Groundwater	Groundwater
	Units				
Aroclor 1016	ug/L	0.51 U	0.5 U	0.52 U	0.5 U
Aroclor 1221	ug/L	0.51 U	0.5 U	0.52 U	0.5 U
Aroclor 1232	ug/L	0.51 U	0.5 U	0.52 U	0.5 U
Aroclor 1242	ug/L	0.51 U	0.5 U	0.52 U	0.5 U
Aroclor 1248	ug/L	0.51 U	0.5 U	0.52 U	0.5 U
Aroclor 1254	ug/L	0.51 U	0.5 U	0.52 U	0.5 U
Aroclor 1260	ug/L	0.51 U	0.5 U	0.52 U	0.5 U

Detected concentrations are marked as shaded and bold.
FT - Feet
U - Not Detected
ug/L - micrograms per liter

APPENDIX R
Groundwater and Pore Water Analytical Data for Water Chemistry
Quanta Resources Superfund Site, OU1
Edgewater, New Jersey

Location ID		3Y-MW2	ACMW-3	GWZ-1	GWZ-2	GWZ-3	GWZ-4	GWZ-5		MW-20	MW-30
Field Sample ID		3Y-MW-2-122908	ACMW-3-121708	GWZ-1-PW-071808	GWZ-2-PW-072108	GWZ-3-PW-072208	GWZ-4-PW-072408	GWZ-5-PW-072508	DUP-072508	MW-20-121008	MW-30-120408
Sample Date		12/29/2008	12/17/2008	39647	39650	39651	39653	39654	39654	12/10/2008	12/4/2008
Sample Interval		3 - 20 FT	3 - 23 FT	1 - 2 FT	1 - 2 FT	1 - 2 FT	1 - 2 FT	1 - 2 FT	1 - 2 FT	7 - 17 FT	2 - 12 FT
Sample Matrix		Groundwater	Groundwater	Pore Water	Pore Water	Pore Water	Pore Water	Pore Water	Pore Water	Groundwater	Groundwater
	Units										
Alkalinity, Total as CaCO3	ug/L	**618000**	**249000**	—	—	—	—	—	—	**8200**	**1240000**
Arsenate, Dissolved	ug/L	—	—	**7.83 J**	**2.26 J**	**10.4 J**	**18.9**	**12.5 J**	**9.99 J**	**33.2**	—
Arsenite, Dissolved	ug/L	—	—	**14**	**3.59 J**	**5.95 J**	**6.9 J**	**24.7**	**13.7**	**29.6**	—
Chloride	ug/L	**308000**	**51000**	—	—	—	—	—	—	**386000**	**3300000**
Dissolved Organic Carbon	ug/L	**14500**	**2000**	—	—	—	—	—	—	**4800**	**30600**
Fluoride	ug/L	—	—	—	—	—	—	—	—	—	—
Hardness, Total as CaCO3	ug/L	—	—	—	—	—	—	—	—	—	—
Nitrogen, Nitrate	ug/L	210 U	**300**	—	—	—	—	—	—	110 U	110 U
Nitrogen, Nitrate + Nitrite	ug/L	200 U	**300**	—	—	—	—	—	—	**45 J**	100 U
Nitrogen, Nitrite	ug/L	4.9 U	**4.1 J**	—	—	—	—	—	—	2.4 U	1.5 U
Phosphate, Ortho	ug/L	—	—	—	—	—	—	—	—	—	—
Phosphorus, Total	ug/L	**220**	**22 J**	—	—	—	—	—	—	12 U	**1400**
Solids, Total Dissolved	ug/L	—	—	—	—	—	—	—	—	—	—
Solids, Total Suspended	ug/L	—	—	—	—	—	—	—	—	—	—
Sulfate	ug/L	**149000**	**111000**	—	—	—	—	—	—	**585000**	**194000**
Sulfide	ug/L	2000 U	2000 U	—	—	—	—	—	—	2000 U	**47200**
Surfactants, MBAS as LAS	ug/L	—	—	—	—	—	—	—	—	—	—

Detected concentrations are marked as shaded and bold.
FT - Feet
J - Estimated Concentration
U - Not Detected
ug/L - micrograms per liter

APPENDIX R
Groundwater and Pore Water Analytical Data for Water Chemistry
Quanta Resources Superfund Site, OU1
Edgewater, New Jersey

Location ID		MW-51A		MW-101A	MW-103A	MW-105A	MW-106A	MW-107	MW-107A	MW-109	
Field Sample ID		MW-51A-123008	Dup-123008	MW-101A-121808	MW-103A-120208	MW-105A-121008	MW-106A-120408	MW-107-091709	MW-107A-121908	MW-109-120408	MW-109-011309
Sample Date		12/30/2008	12/30/2008	12/18/2008	12/2/2008	12/10/2008	12/4/2008	9/17/2009	12/19/2008	12/4/2008	1/13/2009
Sample Interval		3 - 14 FT	3 - 14 FT	4 - 19 FT	3 - 13 FT	3 - 13 FT	3 - 13 FT	13 - 23 FT	3 - 13 FT	15 - 20 FT	15 - 20 FT
Sample Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
	Units										
Alkalinity, Total as CaCO3	ug/L	**458000**	**460000**	**155000**	**472000**	**351000**	**815000**	5000 U	5000 U	**99500**	—
Arsenate, Dissolved	ug/L	**94**	**85.8**	—	—	**1.06 J**	—	—	**6600**	—	—
Arsenite, Dissolved	ug/L	**518**	**532**	—	—	**0.23 J**	—	—	**10200**	—	—
Chloride	ug/L	**643000**	**596000**	**249000**	**13100**	**28500**	**132000**	**292000**	**149000**	**6610000**	**7080000**
Dissolved Organic Carbon	ug/L	**18600**	**14800**	9700 U	**12100**	**7500**	**58200**	**11900**	**21400**	**19500**	—
Fluoride	ug/L	—	—	—	—	—	—	**1100**	—	—	**320**
Hardness, Total as CaCO3	ug/L	—	—	—	—	—	—	—	—	—	**1960000**
Nitrogen, Nitrate	ug/L	200 U	200 U	110 U	110 U	110 U	110 U	—	110 U	210 U	—
Nitrogen, Nitrate + Nitrite	ug/L	100 U	100 U	100 U	100 U	100 U	100 U	—	100 U	200 U	—
Nitrogen, Nitrite	ug/L	**15 J**	**15 J**	1.5 U	10 U	**3.9 J**	6.1 U	—	2.2 U	1.5 U	—
Phosphate, Ortho	ug/L	—	—	—	—	—	—	**24 J**	—	—	—
Phosphorus, Total	ug/L	**110**	**320**	**800**	**300**	**200**	**6700**	—	**50**	**1400**	—
Solids, Total Dissolved	ug/L	—	—	—	—	—	—	—	—	—	**9070000**
Solids, Total Suspended	ug/L	—	—	—	—	—	—	—	—	—	**233000**
Sulfate	ug/L	**1500000**	**1370000**	**324000**	**21500**	**4800 J**	**69000**	**1940000**	**3480000**	**310 J**	**6900 J**
Sulfide	ug/L	**710 J**	**740 J**	2000 U	**5500**	**1900 J**	**370 J**	**2800**	**4100**	2000 U	—
Surfactants, MBAS as LAS	ug/L	—	—	—	—	—	—	—	—	—	**560**

Detected concentrations are marked as shaded and bold.
FT - Feet
J - Estimated Concentration
U - Not Detected
ug/L - micrograms per liter

APPENDIX R
Groundwater and Pore Water Analytical Data for Water Chemistry
Quanta Resources Superfund Site, OU1
Edgewater, New Jersey

Location ID		MW-109A	MW-111B		MW-112A	MW-112B	MW-113A	MW-113B	MW-113C	MW-114A	MW-114B
Field Sample ID		MW-109A-091709	MW-111B-122308	MW-111B-091509	MW-112A-121708	MW-112B-120908	MW-113A-120108	MW-113B-120908	MW-113C-120108	MW-114A-010409	MW-114B-010409
Sample Date		9/17/2009	12/23/2008	9/15/2009	12/17/2008	12/9/2008	12/1/2008	12/9/2008	12/1/2008	1/4/2009	1/4/2009
Sample Interval		3 - 13 FT	3 - 13 FT	3 - 13 FT	3 - 10 FT	2 - 12 FT	3 - 13 FT	9 - 19 FT	25 - 30 FT	3 - 13 FT	15 - 25 FT
Sample Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
	Units										
Alkalinity, Total as CaCO3	ug/L	**313000**	**57300**	—	**150000 J**	**427000**	**257000**	**3500 J**	**8200**	**121000**	**327000**
Arsenate, Dissolved	ug/L	—	**1130**	—	—	**16400**	—	**2230**	—	12 U	**958**
Arsenite, Dissolved	ug/L	—	**26200**	—	—	**10500**	—	**5540**	—	8.9 U	**9050**
Chloride	ug/L	**3850000**	**744000**	—	**3800**	**81800**	**32600**	**162000**	**136000**	**61800**	**509000**
Dissolved Organic Carbon	ug/L	**6300**	**4800**	—	4700 U	**15400**	**7700**	**8300**	**2000**	**4800**	**16900**
Fluoride	ug/L	**320**	—	—	—	—	—	—	—	—	—
Hardness, Total as CaCO3	ug/L	—	—	—	—	—	—	—	—	—	—
Nitrogen, Nitrate	ug/L	—	**270**	—	110 U	300 U	110 U	110 U	110 U	110 U	120 U
Nitrogen, Nitrate + Nitrite	ug/L	—	**280**	—	100 U	200 U	**22 J**	100 U	100 U	100 U	**77 J**
Nitrogen, Nitrite	ug/L	—	**13**	—	2.7 U	15 U	10 U	2 U	**1.2 J**	1.5 U	2.9 U
Phosphate, Ortho	ug/L	**190**	—	**94**	—	—	—	—	—	—	—
Phosphorus, Total	ug/L	—	**1500**	**11800**	**26 J**	**3600**	**200**	**2300**	**250**	**290**	**3200**
Solids, Total Dissolved	ug/L	—	—	—	—	—	—	—	—	—	—
Solids, Total Suspended	ug/L	—	—	—	—	—	—	—	—	—	—
Sulfate	ug/L	**704000**	**78600**	—	**89900**	**3280000**	**1590000**	**1950000**	**2050000**	**13400**	**1480000**
Sulfide	ug/L	2000 U	**3100**	—	**1300 J**	**9900**	**440 J**	**2000**	**1800 J**	2000 U	**4500**
Surfactants, MBAS as LAS	ug/L	—	—	—	—	—	—	—	—	—	—

Detected concentrations are marked as shaded and bold.
FT - Feet
J - Estimated Concentration
U - Not Detected
ug/L - micrograms per liter

APPENDIX R
Groundwater and Pore Water Analytical Data for Water Chemistry
Quanta Resources Superfund Site, OU1
Edgewater, New Jersey

Location ID		MW-115A	MW-115B	MW-117B			MW-121A	MW-121B	MW-123	MW-124	
Field Sample ID		MW-115A-121908	MW-115B-120808	MW-117B-120208	DUP-120208	MW-117B-010809	MW-121A-010409	MW-121B-010409	MW-123-122908	MW-124-122408	MW-124-010909
Sample Date		12/19/2008	12/8/2008	12/2/2008	12/2/2008	1/8/2009	1/4/2009	1/4/2009	12/29/2008	12/24/2008	1/9/2009
Sample Interval		3 - 13 FT	15.5 - 25.5 FT	5 - 15 FT	5 - 15 FT	5 - 15 FT	3 - 13 FT	12 - 22 FT	5 - 10 FT	6 - 16 FT	6 - 16 FT
Sample Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
	Units										
Alkalinity, Total as CaCO3	ug/L	**435000**	**254000**	**364000**	**174000**	—	**408000**	**392000**	**415000**	**102000**	—
Arsenate, Dissolved	ug/L	**22 J**	—	—	—	—	—	—	—	—	—
Arsenite, Dissolved	ug/L	**42.2 J**	—	—	—	—	—	—	—	—	—
Chloride	ug/L	**87400**	**4740000**	**9100**	**9100**	**11900**	**48400**	**230000**	**205000**	**397000**	**389000**
Dissolved Organic Carbon	ug/L	**23200**	**182000**	**17000**	**18300**	—	**11300**	**14500**	**12900**	**800 J**	—
Fluoride	ug/L	—	—	—	—	**320**	—	—	—	—	**45 J**
Hardness, Total as CaCO3	ug/L	—	—	—	—	**259000**	—	—	—	—	**338000**
Nitrogen, Nitrate	ug/L	110 U	500 U	110 U	110 U	—	110 U	110 U	210 U	**3000**	—
Nitrogen, Nitrate + Nitrite	ug/L	100 U	95 U	100 U	100 U	—	100 U	100 U	200 U	**3000**	—
Nitrogen, Nitrite	ug/L	1.5 U	**15 J**	10 U	10 U	—	4.1 U	4.6 U	2 U	6.3 U	—
Phosphate, Ortho	ug/L	—	—	—	—	—	—	—	—	—	—
Phosphorus, Total	ug/L	**5200**	50 U	**200**	**170**	—	**1500**	**390**	**1500**	**24 J**	—
Solids, Total Dissolved	ug/L	—	—	—	—	**321000**	—	—	—	—	**858000**
Solids, Total Suspended	ug/L	—	—	—	—	**13000**	—	—	—	—	**3000 J**
Sulfate	ug/L	**209000**	**12100000**	**4100 J**	**2700 J**	**780 J**	10000 U	**7000 J**	**1900 J**	**64700**	**63900**
Sulfide	ug/L	**360 J**	2000 U	**1600 J**	**3400**	—	2000 U	**300 J**	**12400**	2000 U	—
Surfactants, MBAS as LAS	ug/L	—	—	—	—	**90 J**	—	—	—	—	**13 J**

Detected concentrations are marked as shaded and bold.
FT - Feet
J - Estimated Concentration
U - Not Detected
ug/L - micrograms per liter

APPENDIX R
Groundwater and Pore Water Analytical Data for Water Chemistry
Quanta Resources Superfund Site, OU1
Edgewater, New Jersey

Location ID		MW-125			MW-126		MW-127	MW-128	MW-129	MW-130A	
Field Sample ID		MW-125-122308	MW-125-010909	DUP-010909	MW-126-123108	Dup-123108	MW-127-122408	MW-128-031809	MW-129-031809	MW-130A-121908	MW-130A-091709
Sample Date		12/23/2008	1/9/2009	1/9/2009	12/31/2008	12/31/2008	12/24/2008	3/18/2009	3/18/2009	12/19/2008	9/17/2009
Sample Interval		5 - 15 FT	5 - 15 FT	5 - 15 FT	8 - 18 FT	8 - 18 FT	6 - 16 FT	5 - 15 FT	5 - 15 FT	5 - 15 FT	5 - 15 FT
Sample Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
	Units										
Alkalinity, Total as CaCO3	ug/L	**198000**	—	—	**293000**	**167000**	**556000**	**81800**	**158000**	**443000**	—
Arsenate, Dissolved	ug/L	—	—	—	12 U	—	—	0.184 U	—	11 U	—
Arsenite, Dissolved	ug/L	—	—	—	8.9 U	—	—	**0.415 J**	—	**242**	—
Chloride	ug/L	**413000**	**360000**	**349000**	**681000**	**660000**	**208000**	**636000**	**273000**	**126000**	—
Dissolved Organic Carbon	ug/L	**4300**	—	—	**20200**	**20000**	**7300**	**1900**	**1900**	**11300**	—
Fluoride	ug/L	—	**110 J**	**100 J**	—	—	—	—	—	—	—
Hardness, Total as CaCO3	ug/L	—	**274000**	**259000**	—	—	—	—	—	—	—
Nitrogen, Nitrate	ug/L	**1700**	—	—	200 U	200 U	110 U	**1400**	**520**	110 U	—
Nitrogen, Nitrate + Nitrite	ug/L	**1700**	—	—	**30 J**	100 U	**19 J**	**1400**	**570**	100 U	—
Nitrogen, Nitrite	ug/L	7.1 U	—	—	**15 J**	**15 J**	1.5 U	**14**	**49**	4.1 U	—
Phosphate, Ortho	ug/L	—	—	—	—	—	—	—	—	—	**510**
Phosphorus, Total	ug/L	**92**	—	—	**200**	**190**	**1400**	50 U	50 U	**430**	**420**
Solids, Total Dissolved	ug/L	—	**815000**	**827000**	—	—	—	—	—	—	—
Solids, Total Suspended	ug/L	—	**6000**	**9000**	—	—	—	—	—	—	—
Sulfate	ug/L	**68800**	**54300**	**55800**	**393000**	**393000**	**269000**	**40800**	**32100**	**115000**	—
Sulfide	ug/L	2000 U	—	—	2000 U	2000 U	**10600**	2000 U	2000 U	**330 J**	—
Surfactants, MBAS as LAS	ug/L	—	100 U	**13 J**	—	—	—	—	—	—	—

Detected concentrations are marked as shaded and bold.
FT - Feet
J - Estimated Concentration
U - Not Detected
ug/L - micrograms per liter

APPENDIX R
Groundwater and Pore Water Analytical Data for Water Chemistry
Quanta Resources Superfund Site, OU1
Edgewater, New Jersey

Location ID		MW-130B		MW-131		MW-132		MW-133		MW-134	
Field Sample ID		MW-130B-122208	MW-130B-091709	MW-131-120808	MW-131-091709	MW-132-121808	MW-132-091709	MW-133-121008	MW-133-091609	MW-134-121008	MW-134-091609
Sample Date		12/22/2008	9/17/2009	12/8/2008	9/17/2009	12/18/2008	9/17/2009	12/10/2008	9/16/2009	12/10/2008	9/16/2009
Sample Interval		15 - 25 FT	15 - 25 FT	4 - 14 FT	4 - 14 FT	4 - 14 FT	4 - 14 FT	10 - 15 FT	10 - 15 FT	11 - 21 FT	11 - 21 FT
Sample Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
	Units										
Alkalinity, Total as CaCO3	ug/L	5000 U	—	**536000**	—	**1050000**	—	**243000**	—	**1160000**	—
Arsenate, Dissolved	ug/L	**3770**	—	—	—	11 U	—	**526**	—	**7.2**	—
Arsenite, Dissolved	ug/L	**5010**	—	—	—	5.7 U	—	**1940**	—	**311**	—
Chloride	ug/L	**107000**	—	**885000**	—	**798000**	—	**543000**	—	**1630000**	—
Dissolved Organic Carbon	ug/L	**34400**	—	**11200**	—	**11700**	—	**30400**	—	**30400**	—
Fluoride	ug/L	—	—	—	—	—	—	—	—	—	—
Hardness, Total as CaCO3	ug/L	—	—	—	—	—	—	—	—	—	—
Nitrogen, Nitrate	ug/L	210 U	—	150 U	—	110 U	—	110 U	—	150 U	—
Nitrogen, Nitrate + Nitrite	ug/L	**56 J**	—	100 U	—	100 U	—	100 U	—	100 U	—
Nitrogen, Nitrite	ug/L	1.5 U	—	7.3 U	—	1.5 U	—	1.5 U	—	7.3 U	—
Phosphate, Ortho	ug/L	—	50 U	—	**39 J**	—	**2100**	—	**210**	—	**780**
Phosphorus, Total	ug/L	**59**	**550**	**720**	**940**	**950**	**2500**	**980**	**950**	**910**	**890**
Solids, Total Dissolved	ug/L	—	—	—	—	—	—	—	—	—	—
Solids, Total Suspended	ug/L	—	—	—	—	—	—	—	—	—	—
Sulfate	ug/L	**3550000**	—	**1100000**	—	**301000**	—	**972000**	—	**98400**	—
Sulfide	ug/L	**3200**	—	2000 U	—	**5200**	—	2000 U	—	**56300**	—
Surfactants, MBAS as LAS	ug/L	—	—	—	—	—	—	—	—	—	—

Detected concentrations are marked as shaded and bold.
FT - Feet
J - Estimated Concentration
U - Not Detected
ug/L - micrograms per liter

APPENDIX R
Groundwater and Pore Water Analytical Data for Water Chemistry
Quanta Resources Superfund Site, OU1
Edgewater, New Jersey

Location ID		MW-135		MW-136	MW-A-1		MW-A-2	MW-B	MW-C		MW-F
Field Sample ID		MW-135-120308	MW-135-091609	MW-136-122308	MW-A-1-120308	MW-A-1-091609	MW-A-2-123008	MW-B-120308	MW-C-121708	MW-C-091609	MW-F-121808
Sample Date		12/3/2008	9/16/2009	12/23/2008	12/3/2008	9/16/2009	12/30/2008	12/3/2008	12/17/2008	9/16/2009	12/18/2008
Sample Interval		20 - 30 FT	20 - 30 FT	5 - 10 FT	24 - 28 FT	24 - 28 FT	6 - 16 FT	9 - 19 FT	10 - 20 FT	10 - 20 FT	7 - 17 FT
Sample Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
	Units										
Alkalinity, Total as CaCO3	ug/L	**254000**	—	**439000**	5000 U	—	**102000**	**8200**	**714000**	—	**304000**
Arsenate, Dissolved	ug/L	—	—	—	—	—	**27100**	—	—	—	11 U
Arsenite, Dissolved	ug/L	—	—	—	—	—	**104000**	—	—	—	**25.3 J**
Chloride	ug/L	**496000**	—	**241000**	**235000**	—	**541000**	**830000**	**785000**	—	**934000**
Dissolved Organic Carbon	ug/L	**2400**	—	**4800**	**18200**	—	**34900**	**9000**	**17400**	—	**30300**
Fluoride	ug/L	—	—	—	—	—	—	—	—	—	—
Hardness, Total as CaCO3	ug/L	—	—	—	—	—	—	—	—	—	—
Nitrogen, Nitrate	ug/L	110 U	—	110 U	110 U	—	110 U	110 U	110 U	—	**150**
Nitrogen, Nitrate + Nitrite	ug/L	100 U	—	100 U	100 U	—	100 U	100 U	100 U	—	**160**
Nitrogen, Nitrite	ug/L	10 U	—	1.5 U	**1.2 J**	—	1.5 U	**1.2 J**	**2.4 J**	—	**10**
Phosphate, Ortho	ug/L	—	**200**	—	—	**71**	—	—	—	**1600**	—
Phosphorus, Total	ug/L	**200**	**270**	**1400**	**59**	**16 J**	**46400**	**610**	**1400**	**1500**	**28 J**
Solids, Total Dissolved	ug/L	—	—	—	—	—	—	—	—	—	—
Solids, Total Suspended	ug/L	—	—	—	—	—	—	—	—	—	—
Sulfate	ug/L	**642000**	—	**1700 J**	**4710000**	—	**2060000**	**1050000**	**379000**	—	**322000**
Sulfide	ug/L	**480 J**	—	2000 U	2000 U	—	**7200**	**370 J**	**1200 J**	—	2000 U
Surfactants, MBAS as LAS	ug/L	—	—	—	—	—	—	—	—	—	—

Detected concentrations are marked as shaded and bold.
FT - Feet
J - Estimated Concentration
U - Not Detected
ug/L - micrograms per liter

APPENDIX R
Groundwater and Pore Water Analytical Data for Water Chemistry
Quanta Resources Superfund Site, OU1
Edgewater, New Jersey

Location ID		MW-J	MW-L		MW-M	MW-N-1	MW-N-2		MW-O	
Field Sample ID		MW-J-011309	MW-L-122908	MW-L-091809	MW-M-011309	MW-N-1-122908	MW-N-2-123008	MW-N2-091809	MW-O-121808	MW-O-091609
Sample Date		1/13/2009	12/29/2008	9/18/2009	1/13/2009	12/29/2008	12/30/2008	9/18/2009	12/18/2008	9/16/2009
Sample Interval		8 - 18 FT	17 - 27 FT	17 - 27 FT	18 - 23 FT	18.45 - 23.45 FT	5 - 10 FT	5 - 10 FT	9.52 - 19.52 FT	9.52 - 19.52 FT
Sample Matrix		Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater	Groundwater
	Units									
Alkalinity, Total as CaCO3	ug/L	—	**176000**	—	—	**336000**	**540000**	—	**633000**	—
Arsenate, Dissolved	ug/L	—	—	—	—	—	**4620**	—	11 U	—
Arsenite, Dissolved	ug/L	—	—	—	—	—	**8580**	—	**144**	—
Chloride	ug/L	**5650000**	**315000**	—	**267000**	**479000**	**620000**	—	**771000**	—
Dissolved Organic Carbon	ug/L	—	**3700**	—	—	**35200**	**21900**	—	11400 U	—
Fluoride	ug/L	**260**	—	—	**450**	—	—	—	—	—
Hardness, Total as CaCO3	ug/L	**4220000**	—	—	**567000**	—	—	—	—	—
Nitrogen, Nitrate	ug/L	—	210 U	—	—	300 U	110 U	—	110 U	—
Nitrogen, Nitrate + Nitrite	ug/L	—	**63 J**	—	—	200 U	**90 J**	—	**19 J**	—
Nitrogen, Nitrite	ug/L	—	2.7 U	—	—	**15 J**	7.5 U	—	1.5 U	—
Phosphate, Ortho	ug/L	—	—	**200**	—	—	—	**1500**	—	**680**
Phosphorus, Total	ug/L	—	50 U	**180**	—	**804000**	**6100**	**15000**	**130**	**660**
Solids, Total Dissolved	ug/L	**8800000**	—	—	**1350000**	—	—	—	—	—
Solids, Total Suspended	ug/L	**3000 J**	—	—	**2000 J**	—	—	—	—	—
Sulfate	ug/L	**621000**	**296000**	—	**425000**	**772000**	**141000**	—	**399000**	—
Sulfide	ug/L	—	2000 U	—	—	**23600**	**3900**	—	**2900**	—
Surfactants, MBAS as LAS	ug/L	**360**	—	—	**220**	—	—	—	—	—

Detected concentrations are marked as shaded and bold.
FT - Feet
J - Estimated Concentration
U - Not Detected
ug/L - micrograms per liter