

Mr. Richard Ho, RPM/OSC  
U.S. Environmental Protection Agency—Region 2  
Emergency and Remedial Response Division  
290 Broadway, Floor 19  
New York, NY 10007-1866

September 8, 2017

**Subject: Quanta Resources Corporation Superfund Site, Operable Unit 1 (OU1), Edgewater, New Jersey, Progress Report: August 2017**

Dear Mr. Ho,

This letter is the progress report required pursuant to the U.S. Environmental Protection Agency (EPA) Consent Decree (CD) for the Remedial Design (RD) and Remedial Action (RA) at the Quanta Resources Corporation Superfund Site, OU1, which was finalized with the courts on March 11, 2013.

### Health and Safety

- Through August, approximately 27,285 man-hours worked without a lost-time incident
- No recordables occurred in the month of August.

### Work Completed

The activities completed during August to comply with the Consent Decree are described in the following subsections. Figure 1 depicts the bulkhead and ISS activities completed as of the end of August.

**Figure 1. Bulkhead and ISS Progress through August 2017**

*ISS Areas shown are approximate and not drawn to scale*



## OU1 NAPL Recovery

- Completed biweekly NAPL pumping at RW4-2 and regular NAPL sentry well gauging
- Completed baildown test recovery measurements at RW4-2 and transmissivity calculations
- Continued with planning activities for installation of new sentry well at NAPL Zone 4 and for reinstallation of sentry well TW-01

## OU1 General Civil Work

- *Non-Remediation* – A waterline providing water to the 115 River Road and pier building broke multiple times during the month. No construction activities related to the OU1 remedy were being performed near the waterline break. Civil Contractor worked to stop the water leak and complete reconstruction of the water pipe. During the utility work, fire watch was performed by the Edgewater Fire Department for two days for personnel in both the 115 River Road and Pier Building however the building was not vacated during this time. The 115 Pier Restaurant was shut down for one day.
- Continued debris and concrete crushing operations
- Continued removal of the overburden in ISS Area 8
- Coordinated the relocation of utilities to the pier building with the developer
- Performed debris removal in ISS Areas 3, 5A, 5B, and 7 in preparation for ISS mixing
- Continued foaming of exposed areas and stockpiles for odor control
- Continued stockpile management as needed
- Continued dust suppression as needed

## OU1 Bulkhead Installation

- Completed installation of the steel bulkhead along the shoreline with the exception of Segments B and C around the 115 River Road Pier Building
- Steel bulkhead was cut down to appropriate elevation along the Quanta shoreline
- Installed bulkhead whalers in Segments D, E and F (partial)
- Prepared for installation of toe-pins
- Continued monitoring and recording turbidity readings

## OU1 In Situ Solidification/Stabilization

- ISS activities in Area 1 Block 93 are on hold until PSE&G gas line work can be completed
- Relocated and tested the grout plant on the main Quanta property
- Completed ISS in thirty-one (31) cells located with Areas 3B, 3C and 7A (see attached dashboards for maps)
- Started debris (concrete) removal in Area 5A/5B below 5-feet.

## OU1 Vibration and Air Monitoring

- Continued with vibration monitoring
- Continued perimeter air monitoring in accordance with the Perimeter Air Monitoring Plan

## OU1 Offsite Waste Disposal

- Hazardous
  - None this month
- Non-hazardous
  - Sixteen (16) 20-CY rollofs of asphalt to Reliable Wood, Inc.
  - Two (2) 30-CY rollofs and three (2) 20-CY rollofs of treated wood to C.E.C.S., Inc.

- Two (2) 30-CY rolloff of mixed metals to EverGreen Recycling Solutions
- 
- One 30-CY rolloff of empty plastic drums to EverGreen Recycling Solutions

## OU1 HCAA

- Initiated bench-scale testing in accordance with the HCAA ZVI Testing Bench-scale Testing Work Plan

## Site Security, Maintenance, and Inspections

- Completed weekly boom inspections and SWPPP inspections
- Realigned the hard boom and soft booms on August 4, 2017
- Repaired hard booms with new connection hardware on August 21, 2017
- Due to limited accessibility to the river due to the presence of the new bulkhead, the soft booms cannot be changed out. The team is working to provide new access. This is anticipated to be completed in September 2017 at which point new soft booms will be installed.

## Two Week Look Ahead

- Continue with ISS on the main Quanta property in Areas 3 and Area 7
- Complete debris removal and start ISS in Areas 5A and Areas 5B
- PSE&G is completing relocation of the gas line on the 115 River Road property. Once complete, the gas line on Block 93 will be capped and abandoned
- Start toe-pin installation along bulkhead

## Data and Submittals

### ISS Compliance Data Summary

All required samples to demonstrate ISS compliance with the unconfined compressive strength and permeability criteria, and the 90 percent leaching reduction goal have been collected as required by the approved remedial action work plan and QAPP this month. The ISS Results Dashboard (Attachment A) presents both results for 28-day cure time compliance samples and earlier conformance data results (that is, for cure times less than 28 days) where available for ISS Areas 1, 2, 3B/C, and 7A. All available compliance results meet applicable criteria.

### Air Monitoring Data Summary

Attached is an Air Monitoring Dashboard (Attachment B) summarizing August's air monitoring results.

### NAPL Recovery Data Summary

A total of 55 gallons of NAPL was recovered from RW4-2 during pumping in August. All remaining NAPL recovery wells are in a gauging-only status or were abandoned in preparation for ISS activities. Recovery measurements were taken in early August following the July 27, 2017 baildown test. Following evaluation, complete results will be transmitted to EPA in the Quarterly Data Transmittal for NAPL Recovery, covering May-July 2017.

## Deliverables and Submittals

- Submitted a quarterly *Data Report: Perimeter Air Monitoring Results during Remediation at the Quanta Site, April through June 2017* on August 7 to EPA.

## Issues and Corrective Actions

### Air Monitoring

See the air monitoring dashboard (Attachment B) that summarizes the results above alert or action levels during real-time monitoring, and for a graphical depiction of air sample results for naphthalene. When elevated real-time monitoring results were observed, measures were immediately taken to reduce dust and total volatile organic compound (TVOC) results to below alert/action levels. These included:

- Additional application of foam to reduce TVOC levels
- Application of water to reduce dust levels
- Adjust operational practices at the site to minimize subsurface disruption

Samples continue to be taken twice per week at two locations during each sampling event. Laboratory analytical results for air monitoring samples indicated naphthalene levels above the Risk Screening Level (RSL) of  $4.62 \mu\text{g}/\text{m}^3$  during August, with a running project average concentration of  $14.8 \mu\text{g}/\text{m}^3$ . The August average is running above the RSL because of elevated concentrations of naphthalene detected in one or both of the air samples during each day's sampling. Measures being evaluated and implemented at the site in response to these results include:

- Additional sampling and monitoring to be initiated in September to further characterize emissions sources, air concentrations and potential risks.
- Evaluation of additional control measures – identification of alternative foaming agents and use of plastic sheeting for emissions control.
- Additional application of foam on any area where soil is being managed, rather than initiating the foam application based on real-time monitoring results.

### Vibration Monitoring

Vibration measurements remain below the threshold values in August. Isolated spikes occurred on monitors S-3 and S-5 between August 17 and August 18, 2017. Those spikes have been accredited to electrical interference and were not construction related. The modem attached to S-3 shorted out and was subsequently replaced on August 23, 2017.

### Hard Tar

Hard tar has been identified at multiple areas of the site. The material is extremely difficult to remove which has slowed production onsite.

## Stakeholder Communication and Community Involvement

- Submitted the monthly progress report for July on August 10.
- On August 2, 2017, a tenant at the City Place property reported odors to EPA. EPA provided response on August 22, 2017.
- Hosted and attended biweekly calls on August 9, August 16, and August 30 with EPA, NJDEP, USACE, Honeywell, and CH2M
- Uploaded daily air monitoring results to [www.quantaremediation.com](http://www.quantaremediation.com)

## Activities Planned for Next 6 Weeks

- Complete overburden removal in ISS Area 8
- Complete the ISS on Block 93, Area 1 after the PSE&G gas line work is finished
- Continue ISS in Areas 3B and 7
- Complete the civil and ISS work in ISS Areas 5A and 5B
- Continue with steel bulkhead installation
- Continue regular NAPL recovery and monitoring, air monitoring, and vibration monitoring
- Continue bench-scale testing in accordance with the HCAA ZVI Testing Bench-scale Testing Work Plan

## Schedule Update and Delays

The overall schedule for the OU1 remediation has been extended a total of approximately six weeks as a result of the delays described in the following subsections and prior status reports. To keep the project moving forward, the ISS work sequencing has been modified to allow the Civil and ISS Contractors to continue working in other areas of OU1 while delays in specific portions of the site are resolved.

### Concrete Volume

Large volumes of reinforced concrete have been encountered in many of the ISS areas. The concrete has been noted to be 3-5 feet thick in some areas. Removal of the reinforced concrete has taken longer than anticipated, which has resulted in delays to the ISS schedule.

### PSE&G Gas Line

As detailed in the July 7 email to EPA and NJDEP, the team left approximately 25% of the required ISS work to be completed at a later date once PSE&G have abandoned a gas line on Block 93. Work is scheduled to be completed in September.

### Utility Easement Revision

Ongoing negotiations associated with the location of the utility corridor for the Pier Building are resulting in a delay. The newly proposed utility corridor is partially located under the 115 River Road Building, and the remaining portion currently contains the existing gas, electric and communication services for the Pier Building. Therefore, installation of the new utilities for the Pier Building may not be installed until 115 River Road is demolished and the ISS in that area has been completed. The sequencing in this area could thus result in a delay.

### 115 River Road Access

The demolition of the 115 River Road building may not start until late 2017/early 2018 and is expected to require 2-3 months to complete. Work will continue in accessible areas of the site as long as feasible.

### Percent Complete

Work associated with the OU1 ISS Remedial Action is approximately 25 percent complete based upon the baseline schedule provided on February 15, 2017, with a revised schedule showing construction starting on Block 93 provided on May 3, 2017.

### Schedule Update

A revised schedule will be provided as part of the October Status Report.

Please feel free to contact me at 267-250-7387 or Steve Coladonato, Honeywell Remediation Manager, at 302-791-6738 if you have any questions or comments regarding the Quanta project.

Sincerely,

CH2M HILL



Stephen J. Zarlinski  
Project Manager

Enclosures: Attachment A, Air Monitoring Results Dashboard, August 2017; Attachment B, ISS Results Dashboards, Areas 1, 2, 3B/C, and 7A; Attachment C, Updated Schedule

cc: Clay Monroe (EPA) Rich Puvogel (EPA)  
Steve Coladonato (Honeywell) John Mojka (Honeywell)  
Erica Bergman (NJDEP) Greg Franz (Borough of Edgewater)  
Helen Fahy (Fahy Associates) Jose Sananes (Ramboll)  
Neil Ravensbergen (USACE) Rich Gajdek (USACE)  
Behram Turan (CME)

## In Situ Solidification/Stabilization Results Dashboard, Area 1

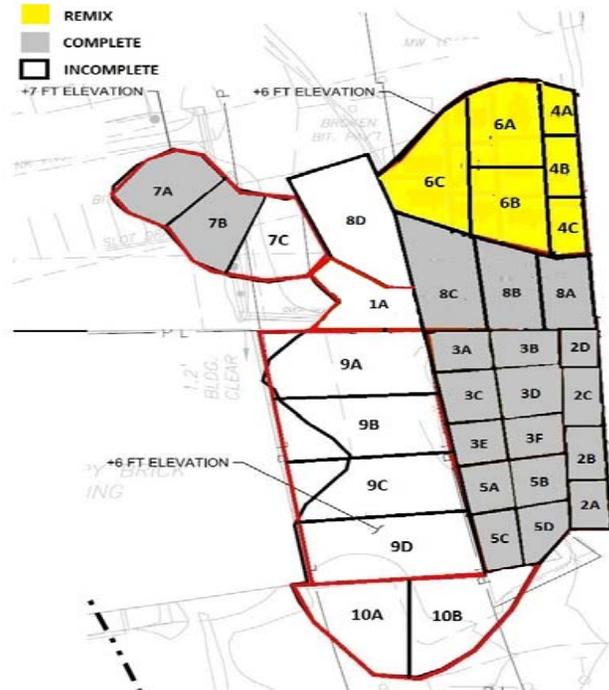
Quanta Resources Corporation Superfund Site, OU1

Data thro 9/6/2017

Area	Daily Mixed Cells	Date	Daily Volume (CY)	Actual Mix		Sample ID	28+ days UCS (psi)	28+ days Permeability (cm/s)
				Cement	Slag			
1	2A*, 2B	6-Jun-17	408	2%	5%	RA-PS-02-0.5-20170606	455	5.3E-07
1	3D	8-Jun-17	195	2%	6%	No sample collected - equipment breakdown		
1	3F*, 5B	9-Jun-17	391	2%	6%	RA-PS-03A1-(7)-20170609	60	7.0E-08
1	5D	12-Jun-17	186	3%	7%	No sample collected - equipment breakdown		
1	2C, 2D, 3B*	15-Jun-17	587	1%	2%	RA-PS-3BA1-(.65)-20170615	240	7.8E-08
1	3A, 3C*	16-Jun-17	297	2%	5%	RA-PS-3CA1-(4.0)-20170616	190	8.0E-08
1	3E, 5A, 5C*	19-Jun-17	163	2%	5%	RA-PS-5CA1-(.45)-20170619	435	1.4E-07
1	7A, 7B	21-Jun-17	75	3%	8%	RA-PS-6CA1-.95-20170621	455	4.0E-07
1	4A, 4B, 4C Remix	27-Jun-17	217	6%	10%	RA-PS-4A1-(1.6)-20170627	575	2.0E-08
1	6A, 6B, 6C* Remix	28-Jun-17	423	6%	9%	RA-PS-6CA1-1.5-20170628	835	1.2E-07
1	8A*, 8B	7-Jul-17	558	5%	7%	RS-PS-8AA1-(5.2)-20170707	74	4.6E-06 (14d)
1	8C*	10-Jul-17	333	6%	10%	RS-PS-8CA1-(4.0)-20170710	275	1.6E-07 (14d)

Site Constituent	Leaching Reduction, %	
	Area 1, Cell 2A	
1 Arsenic	96.6%	
2 Benzene	99.7%	
3 Toluene	99.8%	
4 Ethylbenzene	99.7%	
5 Total Xylenes	99.8%	
6 Naphthalene	87.1%	
7 Acenaphthene	98.2%	
8 Acenaphthylene	98.4%	
9 Anthracene	96.6%	
10 Benzo(a)anthracene	38.5%	
11 Benzo(a)pyrene	87.6%	
12 Benzo(b)fluoranthene	90.1%	
13 Benzo(g,h,i)perylene	90.9%	
14 Benzo(k)fluoranthene	NE	Not detected in baseline
15 Chrysene	90.2%	
16 Dibenz(a,h)anthracene	NE	Not detected in baseline
17 Fluoranthene	87.3%	
18 Fluorene	97.4%	
19 Indeno(1,2,3-cd)pyrene	NE	Not detected in baseline
20 Phenanthrene	95.7%	
21 Pyrene	86.9%	
<b>Target majority over 90%</b>	<b>14/18</b>	<b>PASS</b>

PRELIMINARY - need final 3 time steps



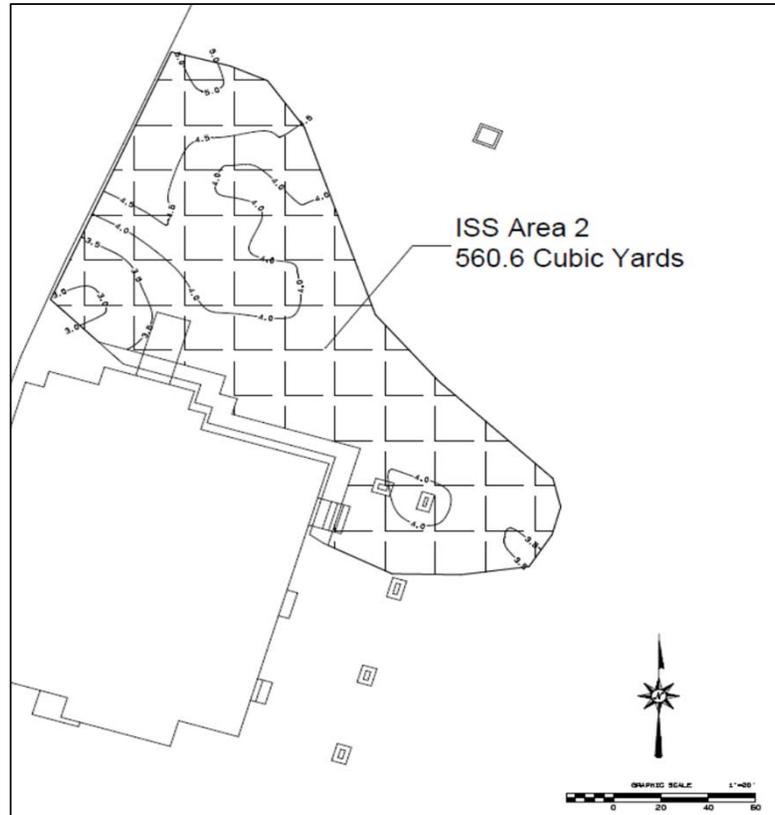
**Notes**  
 Sample is representative of cells that were not remixed. Blue shading indicates a cell at which leaching samples were collected. Data shown represent 28+ days curing results unless otherwise indicated in parentheses. Green highlighting indicates 28+ day data meeting criteria of 40+ psi for UCS and <math>1 \times 10^{-6}</math> cm/s for permeability.

## In Situ Solidification/Stabilization Results Dashboard; Area 2

Quanta Resources Corporation Superfund Site, OU1

Data through: 9/6/2017

Area	Date	Actual Mix		Daily Volume (CY)	Sample ID	28+ days UCS (psi)	28+ days Permeability (cm/s)
2	22-May-17	9% Cement	14% Slag	560.6 CY	RA-PS-2A-4.8-20170522	839	6.7E-08



Map adapted from preliminary as-built by Northstar.

Site Constituent		Leaching Reduction, %	
		Area 2	
1	Arsenic	96.7%	
2	Benzene	NE	Not detected in baseline
3	Toluene	NE	Not detected in baseline
4	Ethylbenzene	NE	Not detected in baseline
5	Total Xylenes	NE	Not detected in baseline
6	Naphthalene	97.6%	
7	Acenaphthene	99.3%	
8	Acenaphthylene	95.1%	
9	Anthracene	98.4%	
10	Benzo(a)anthracene	88.0%	
11	Benzo(a)pyrene	94.9%	
12	Benzo(b)fluoranthene	92.6%	
13	Benzo(g,h)perylene	NE	Not detected in baseline
14	Benzo(k)fluoranthene	92.5%	
15	Chrysene	94.9%	
16	Dibenz(a,h)anthracene	NE	Not detected in baseline
17	Fluoranthene	93.5%	
18	Fluorene	99.0%	
19	Indeno(1,2,3-cd)pyrene	90.6%	
20	Phenanthrene	98.7%	
21	Pyrene	94.1%	
<b>Target majority over 90%</b>		<b>14/15</b>	<b>PASS</b>

*PRELIMINARY; need final time step*

### In Situ Solidification/Stabilization Results Dashboard; Area 3

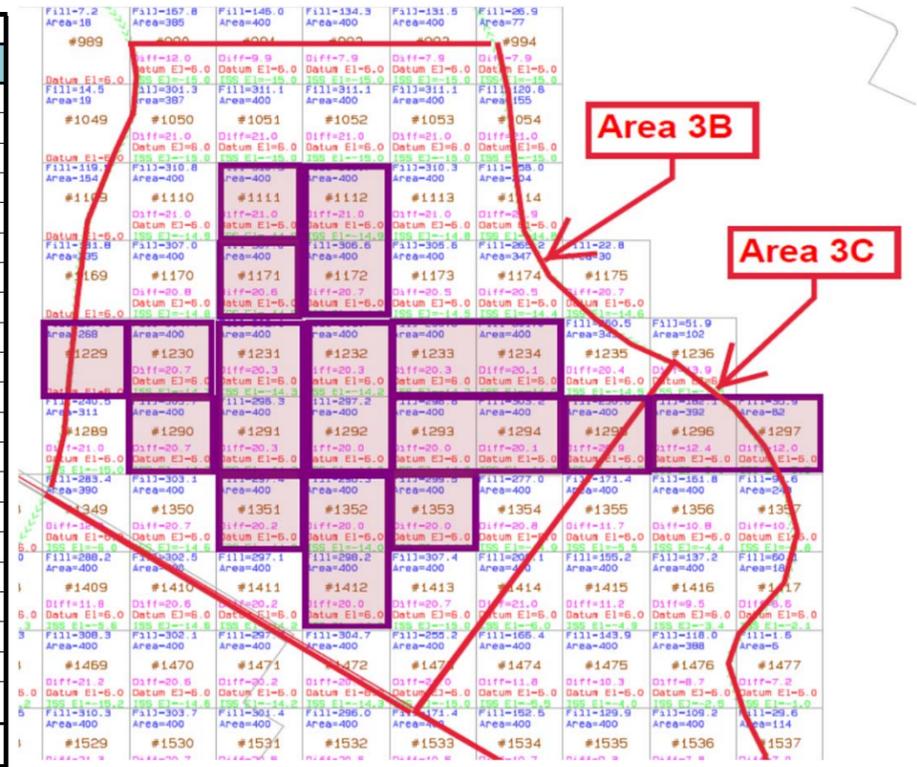
Quanta Resources Corporation Superfund Site, OU1

Data through: 9/6/2017

Area	Date	Actual Mix		Daily Volume (CY)	Sample ID	28+ days UCS (psi)	28+ days Permeability (cm/s)
		Cement	Slag				
3B	24-Jul-17	3%	8%	237	RA-PS-1290A3-(10)-20170724	153	3.30E-07
3B	26-Jul-17	2%	6%	526	RA-PS-1230A3-(8.1)-20170726	95 (14d)	
3B	27-Jul-17	2%	6%	518	RA-PS-1412A3-(12)-20170727	105 (14d)	
3B	28-Jul-17	2%	6%	555	RA-PS-1231A3-(12)-20170728	225	2.00E-07
3B	1-Aug-17	2%	6%	355	RA-PS-1232A3-(12)-20170801	79	2.10E-06 Backup to be analyzed
3B	3-Aug-17	2%	6%	311	(see Area 7A dashboard, Aug 3)		
3B	4-Aug-17	2%	6%	296	RA-PS-1353A3-(12)-20170804	188	
3B/3C	7-Aug-17	2%	6%	521	RA-PS-1111A3-(12.9)-20170807	42 (14d)	
3B	14-Aug-17	2%	6%	592	RA-PS-1294A3-(12.9)-20170814	145 (14d)	
3B	24-Aug-17	2%	6%	237	RA-PS-1295A3-(8)-20170824	111 (5d)	
3B	29-Aug-17	2%	6%	592	RA-PS-1233A3-(12)-20170829		
3B	30-Aug-17	2%	6%	208	RA-PS-1229A3-(12)-20170830		
3B	31-Aug-17	2%	6%	622	RA-PS-1172A3-(13)-20170831		

Site Constituent	Leaching Reduction, %	
	Area 3B (Cell 1230)	
1	Arsenic	
2	Benzene	
3	Toluene	
4	Ethylbenzene	
5	Total Xylenes	
6	Naphthalene	
7	Acenaphthene	
8	Acenaphthylene	
9	Anthracene	
10	Benzo(a)anthracene	
11	Benzo(a)pyrene	
12	Benzo(b)fluoranthene	
13	Benzo(g,h,i)perylene	
14	Benzo(k)fluoranthene	
15	Chrysene	
16	Dibenz(a,h)anthracene	
17	Fluoranthene	
18	Fluorene	
19	Indeno(1,2,3-cd)pyrene	
20	Phenanthrene	
21	Pyrene	
<b>Target &gt;10 over 90%</b>		

PENDING



Map adapted from preliminary cell map by Northstar.

Data highlighted green indicate 28-day results meeting criteria of 40 psi for UCS and  $<1 \times 10^{-6}$  for permeability.

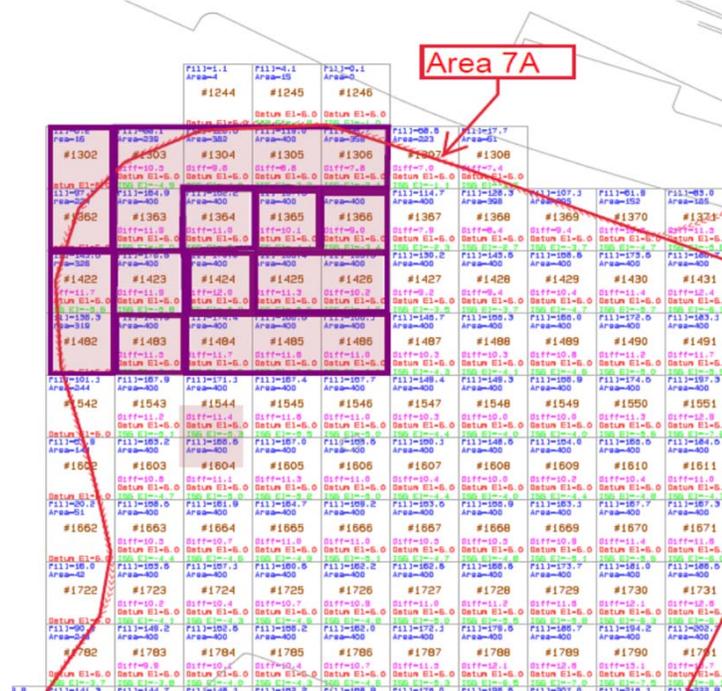
Purple outlines indicate a cell which has been mixed.

# In Situ Solidification/Stabilization Results Dashboard; Area 7

Quanta Resources Corporation Superfund Site, OU1

Data through: 9/6/2017

Area	Date	Actual Mix		Daily Volume (CY)	Sample ID	28+ days	28+ days
		Cement	Slag			UCS (psi)	Permeability (cm/s)
7A	31-Jul-17	2%	6%	665	RA-PS-1305A7-.10-20170731	219	7.30E-08
7A	2-Aug-17	2%	6%	341	RA-PS-1423A7-(4.2)-20170802	152	
7A	3-Aug-17	2%	6%	178	RA-PS-1365A7-(2.4)-20170803	294	
7A	15-Aug-17	5%	14%	105	RA-PS-1302A7-(10)-20170815	35 (14d)	
7A	23-Aug-17	2%	6%	465	RA-PS-1424A7-(3.9)-20170823	137 (5d)	
7A	24-Aug-17	2%	6%	178	<i>(see Area 3 dashboard, Aug 24)</i>		
7A	25-Aug-17	2%	6%	534	RA-PS-1426A7-(3)-20170825	68 (5d)	
7A	28-Aug-17	2%	6%	534	RA-PS-1485A7-(3)-20170828		



Site Constituent		Leaching Reduction, %	
		Area 7	
1	Arsenic		
2	Benzene		
3	Toluene		
4	Ethylbenzene		
5	Total Xylenes		
6	Naphthalene		
7	Acenaphthene		
8	Acenaphthylene		
9	Anthracene		
10	Benzo(a)anthracene		
11	Benzo(a)pyrene		
12	Benzo(b)fluoranthene		
13	Benzo(g,h,i)perylene		
14	Benzo(k)fluoranthene		
15	Chrysene		
16	Dibenz(a,h)anthracene		
17	Fluoranthene		
18	Fluorene		
19	Indeno(1,2,3-cd)pyrene		
20	Phenanthrene		
21	Pyrene		

PENDING

Target >10 over 90%

Map adapted from preliminary cell map by Northstar.

Purple outlines indicate a cell which has been mixed.

Data highlighted green indicate 28-day results meeting criteria of 40 psi for UCS and <math>1 \times 10^{-6}</math> for permeability.

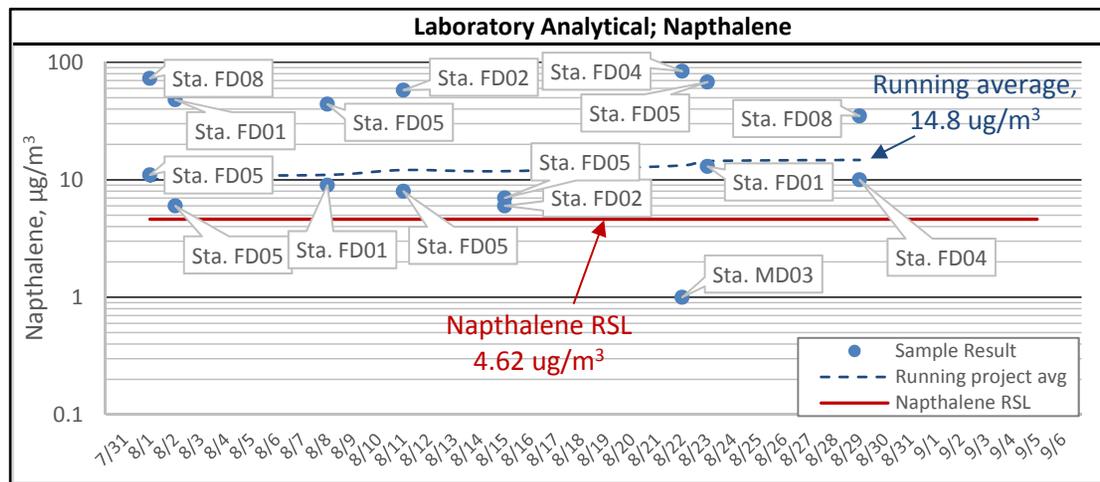
# Quanta Air Monitoring Results Dashboard

August 2017

Real-Time Monitoring									
Work Day	Maximum Detected		Wind Direc.	Notes/ Actions Taken	Work Day	Maximum Detected		Wind Direc.	Notes/ Actions Taken
	Dust as PM <sub>10</sub> $\mu\text{g}/\text{m}^3$	TVOCs ppm				Dust as PM <sub>10</sub> $\mu\text{g}/\text{m}^3$	TVOCs ppm		
1-Aug-17	117	0.6	ESE	Dust 84 after bkgd	17-Aug-17	42	0.8	ESE	
2-Aug-17	184	0.2	S	Dust 99 after bkgd	18-Aug-17	64	0.1	S	
3-Aug-17	83	1	SSE		21-Aug-17	<i>no intrusive work; no monitoring</i>			
4-Aug-17	79	0.4	ESE		22-Aug-17	105	0.2	S	Dust 40 after bkgd
7-Aug-17	N/A	0.4	N		23-Aug-17	38	0.1	NW	
8-Aug-17	40	0.3	NE		24-Aug-17	45	0.5	NW	Foamed area
9-Aug-17	50	0.6	SSE		25-Aug-17	47	0.9	ENE	Foamed area
10-Aug-17	69	0.4	SSE		28-Aug-17	55	1.8	E	Foamed area
11-Aug-17	45	0.3	SSE		29-Aug-17	98	0.4	E	Foamed area
14-Aug-17	40	1.3	SE	Increased foaming	30-Aug-17	40	0.8	NNW	Foamed area
15-Aug-17	69	0.6	SSE		31-Aug-17	60	0.5	WNW	Foamed area
16-Aug-17	50	0.5	N						

**Note:** Orange shading indicates initial result above action level.

Dust alert level = 100  $\mu\text{g}/\text{m}^3$ ; Dust action level = 150  $\mu\text{g}/\text{m}^3$ . TVOC alert level = 1.0 ppm; TVOC action level = 1.5 ppm.



### General Notes:

Complete data results, discussion of all excursions above alert/action levels, potential causes, and corrective actions will be detailed in the quarterly air monitoring data report.

Napthalene is the only COC that has been detected above the risk screening level (RSL\*) in daily samples. Samples are collected periodically in accordance with the Perimeter Air Monitoring Plan (PAMP). An objective of the PAMP is to protect human health from exposure to unacceptable risk levels of contaminants in the soil to be remediated. A project average concentration compared to an RSL is one metric for assessing intrusive work.

\*The RSLs are based on the lowest end of USEPA's target cancer risk range ( $1 \times 10^{-6}$  to  $1 \times 10^{-4}$ ) and a 1.5 year exposure duration. RSLs for non-cancer effects are based on a Hazard Quotient of one.