CH2M
18 Tremont Street Ste 700
Boston, MA 02108
O +1 617 523 2260
www.ch2m.com

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

October 10, 2017

Subject: Quanta Resources Corporation Superfund Site, Operable Unit 1 (OU1), Edgewater, New Jersey, Progress Report: September 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 September, approximately 35,852 man-hours worked without a lost-time incident
- No recordables occurred in the month of September.

Work Completed

The activities completed during September to comply with the Consent Decree are described in the following subsections. Figure 1 depicts the work activities completed as of the end of September.

Figure 1. Bulkhead and ISS Progress through September 2017
ISS Areas shown are approximate and not drawn to scale

OU1 NAPL Recovery

- Completed regular NAPL sentry well gauging
- Ordered parts and troubleshot/repaired RW4-2 pump; returned to operation on Sept. 29, 2017
- 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* – Completed relocation of the PSE&G gas line and sanitary sewer force main on Block 93.
- 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 and 7 in preparation for ISS mixing
- Installed temporary restoration in ISS Area 5A
- 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 bulkhead walers.
- Completed installation of the bulkhead toe-pins
- Completed installation of the temporary deadmen
- Continued monitoring and recording turbidity readings

OU1 In Situ Solidification/Stabilization

- Completed installation of the grout line for Block 93
- Completed ISS in forty-three (43) cells located with Areas 3A, 3B, 3C, 5A and 7A (see attached dashboards for maps)
- Completed debris (concrete) removal in Area 5A below 5 feet bgs.
- Continued debris (concrete) removal in Area 5B below 5 feet bgs.
- Completed ISS in Area 5A
- Removal of hard tar
- Continued foaming of exposed areas and stockpiles for odor control

OU1 Vibration and Air Monitoring

- Continued with vibration monitoring
- Continued perimeter air monitoring in accordance with the Perimeter Air Monitoring Plan
  - Starting the week of September 18, air sample collection for VOCs was increased from a frequency of twice per week to daily.
  - An air survey at off-site locations using a HAPSITE real-time gas chromatograph/mass spectrometer (GC/MS) was performed from September 11th through the 15th.

OU1 Offsite Waste Disposal

- Hazardous
  - Two (2) drums of NAPL/water mixture to Veolia
  - Four (4) drums of NAPL-stained PPE to Cycle Chem

- Non-hazardous
  - Three (3) 20-CY rolloffs of asphalt to Reliable Wood, Inc.
  - Four (4) 30-CY rolloffs of treated wood to C.E.C.S., Inc.
  - Three (3) 30-CY rolloff of mixed metals to EverGreen Recycling Solutions
  - One 30-CY rolloff of PPE debris to EverGreen Recycling Solutions

OU1 HCAA

- Continued with 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
- Repaired hard booms with new connection hardware on September 13, 2017
- Due to limited accessibility to the river due to the presence of the new bulkhead, the soft booms cannot be changed out. The soft boom is scheduled to be changed out in October 2017

Two Week Look Ahead

- Complete ISS on Block 93, Area 1
- Continue with ISS on the main Quanta property in Areas 3 and Area 7
- Complete debris removal and start ISS in Area 5B
- Obtain access to offsite locations to perform air sampling based on odor complaints
- Install perimeter misting systems to evaluate the effect on odor emissions

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 Dashboards (Attachment A) present 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. Permeability results for samples collected in two cells (#1232 and #1302) were higher than the criterion of $1x10^{-6}$ cm/s. For these two cells, the backup cured cylinders will be tested at a total of approximately 60 days of curing time.

Air Monitoring Data Summary

Air monitoring data will be summarized within a quarterly data submittal planned to be submitted by end of October.

NAPL Recovery Data Summary

No NAPL was recovered from RW4-2 in September due to pump malfunctions. Troubleshooting resulted in ordering and installation of replacement pumps, and repairs were completed on September 29, 2017. All remaining NAPL recovery wells are in a gauging-only status or were abandoned in preparation for ISS activities. Baildown testing is schedule for late October at both RW4-1 and RW4-2.

Deliverables and Submittals

- Provided perimeter air monitoring data through August to EPA on September 8

- Submitted response to comments on the Block 93 Central redevelopment pile plan to EPA on September 27.

Issues and Corrective Actions

Air Monitoring

Starting the week of September 18, air sample collection for VOCs was increased from a frequency of twice per week to daily per discussions with EPA. An air survey at off-site locations using a HAPSITE real-time gas chromatograph/mass spectrometer (GC/MS) was performed from September 11th through the 15th. Preliminary results from that survey were presented in a teleconference with EPA and NJDEP on September 21st. As a follow-up from that call, additional off-site air sampling locations were proposed for collecting VOC samples. Arrangements are being made with property owners to obtain access to off-site sample locations. The results from these additional sampling activities will be summarized in a quarterly air monitoring report to be submitted to EPA later in October. Therefore, no air dashboard is included in this monthly report.

Measures being evaluated and implemented at the site to in response to elevated naphthalene results include:

- Increase in perimeter sampling
- Ongoing Evaluation of additional control measures – identification of alternative foaming agents, solvent based sprays, and use of plastic sheeting for emissions control.
- Installing perimeter misting systems in October

Vibration Monitoring

No vibration measurements were detected above threshold values in September.

Hard Tar

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

Stakeholder Communication and Community Involvement

- Submitted the monthly progress report for August on September 8.
- In September, CH2M logged 10 residential complaints of odors submitted to EPA or Honeywell (2 from The View at Edgewater Harbor, 3 from Independence Harbor, 1 guest at Homewood Suites, 1 from City Place, and 3 submitted by email with no physical address). EPA or Honeywell responded to all complaints.
- Hosted and attended biweekly calls on September 13 and September 27 with EPA, NJDEP, USACE, Honeywell, and CH2M
- Provided weekly email progress updates for distribution to pier tenants.
- Uploaded daily air monitoring results to www.quantaremediation.com

Activities Planned for Next 6 Weeks

- Complete the ISS on Block 93, Area 1 Continue ISS in Areas 3B and 7
- Complete the debris removal and ISS work in ISS Areas 5B
- Start ISS in Area 6A

- Continue with steel bulkhead installation – Segment B
- Continue regular NAPL recovery and monitoring, air monitoring, and vibration monitoring
- Complete the bench-scale testing in accordance with the HCAA ZVI Testing Bench-scale Testing Work Plan
- Submit the Quarterly NAPL Recovery report for period of May through July 2017.
- Conduct baildown testing for NAPL Recovery at RW4-2 and RW4-1
- Attend onsite meeting with EPA and NJDEP on October 18.

Schedule Update and Delays

The overall schedule for the OU1 remediation has been extended a total of approximately six to eight weeks as a result of the delays described in the following subsections (for this reporting period) 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 with reinforcement bars up to 2-inches in diameter. Removal of the reinforced concrete has taken longer than anticipated, which has resulted in delays to the ISS schedule.

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 30 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, ISS Results Dashboards, Areas 3A, 3B/C, 5, and 7A

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

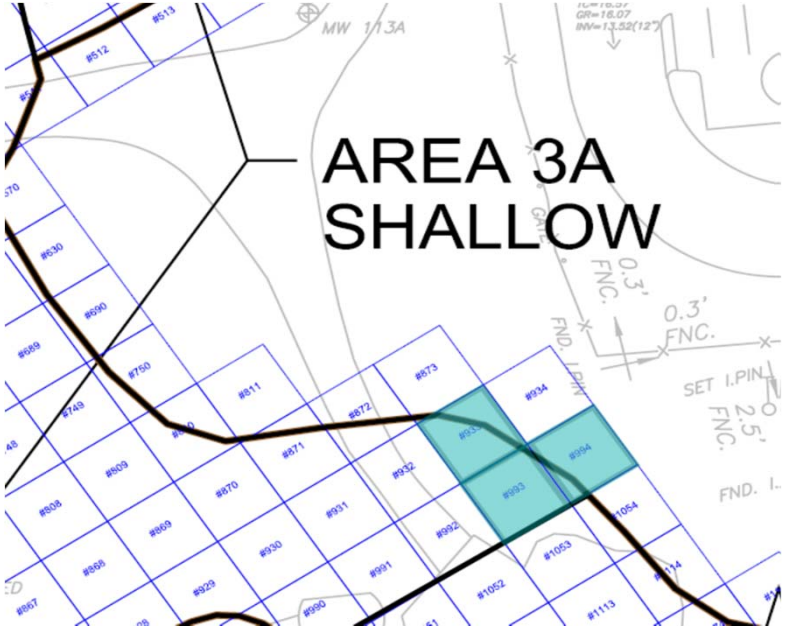
In Situ Solidification/Stabilization Results Dashboard; Area 3A

Quanta Resources Corporation Superfund Site, OU1

Data through: 10/2/2017

Area	Date	Actual Mix Cement	Actual Mix Slag	Daily Volume (CY)	Sample ID	28+ days UCS (psi)	28+ days Permeability (cm/s)
3A	14-Sep-17	2%	6%	455	RA-PS-993A3-(13)-20170914	220 (14d)	

	Site Constituent	Leaching Reduction, %
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	PENDING
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	



Data highlighted green indicate 28-day results meeting criteria of 40 psi for UCS and $<1x10^{-6}$ for permeability.

Blue shading indicates a cell which has been mixed.

In Situ Solidification/Stabilization Results Dashboard; Area 3B/3C

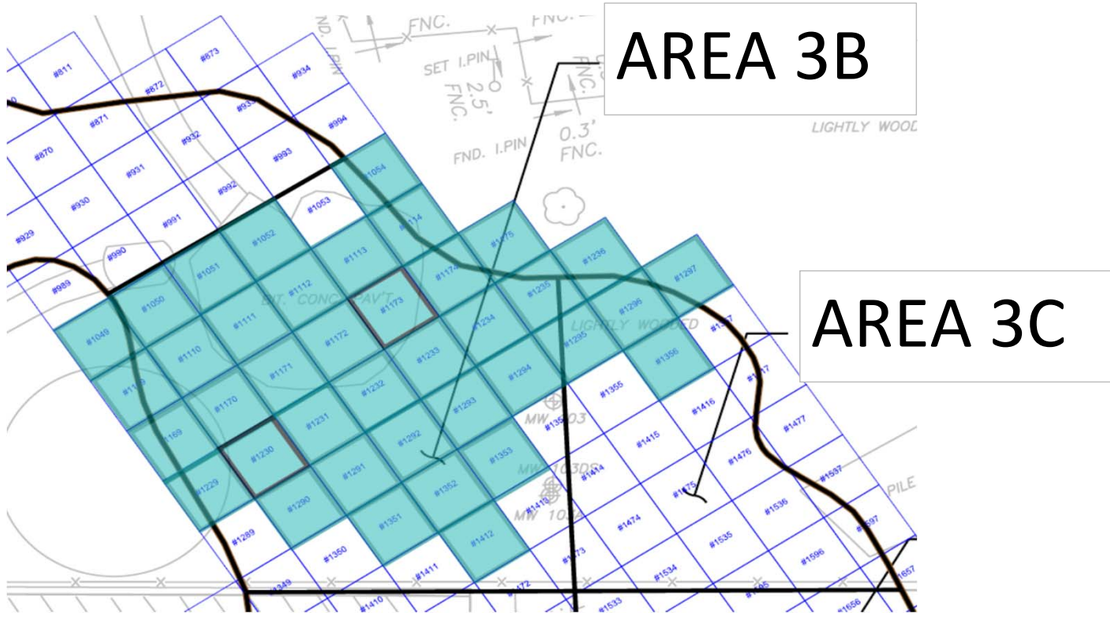
Quanta Resources Corporation Superfund Site, OU1

Data through: 10/2/2017

Area	Date	Actual Mix Cement	Actual Mix Slag	Daily Volume (CY)	Sample ID	28+ days UCS (psi)	28+ days Permeability (cm/s)
3B	24-Jul-17	3%	8%	237	RA-PS-1350A3-(13)-20170724	155	3.3E-07
3B	26-Jul-17	2%	6%	526	RA-PS-1230A3-(8.1)-20170726	160	pending
3B	27-Jul-17	2%	6%	518	RA-PS-1412A3-(12)-20170727	145	1.5E-07
3B	28-Jul-17	2%	6%	555	RA-PS-1231A3-(12)-20170728	225	2.0E-07
3B	1-Aug-17	2%	6%	355	RA-PS-1232A3-(12)-20170801	80	2.1E-06 Backup to be analyzed
3B	3-Aug-17	2%	6%	311	RA-PS-1365A7-(2.4)-20170803	295	9.6E-08
3B	4-Aug-17	2%	6%	296	RA-PS-1353A3-(12)-20170804	190	2.4E-07
3B/3C	7-Aug-17	2%	6%	521	RA-PS-1111A3-(12.9)-20170807	110	1.1E-07
3B	14-Aug-17	2%	6%	592	RA-PS-1294A3-(12.9)-20170814	195	1.2E-07
3B	24-Aug-17	2%	6%	237	RA-PS-1295A3-(8)-20170824	460	7.0E-07
3B	29-Aug-17	2%	6%	592	RA-PS-1233A3-(12)-20170829	185	4.9E-08
3B	30-Aug-17	2%	6%	208	RA-PS-1229A3-(12)-20170830	85	
3B	31-Aug-17	2%	6%	622	RA-PS-1172A3-(13)-20170831	445	
3B	5-Sep-17	2%	6%	449	RA-PS-1170A3-(13)-20170905	205 (14d)	
3B	6-Sep-17	2%	6%	126	RA-PS-1543A7-(3.5)-20170906	265 (14 day)	
3B	7-Sep-17	2%	6%	622	RA-PS-1173A3-(13)-20170907	125 (14d)	
3B/3C	11-Sep-17	2%	6%	712	RA-PS-1235A3-(13)-20170911	2 (14d)	
3B	12-Sep-17	2%	6%	573	RA-PS-1174A3-(13)-20170912	210 (14d)	
3B	13-Sep-17	2%	6%	622	RA-PS-1051A3-(13)-20170913	275 (14d)	
3B	14-Sep-17	2%	6%	326	RA-PS-993A3-(13)-20170914	220 (14d)	
3B	15-Sep-17	2%	6%	326	RA-PS-1050A3-(13)-20170915	155 (14d)	

Data highlighted green indicate 28-day results meeting criteria of 40 psi for UCS and <1x10^{-6} for permeability.

	Site Constituent	Leaching Reduction, % Area 3B (Cell 1230)	Leaching Reduction, % Area 3B (Cell 1173)
1	Arsenic		
2	Benzene		
3	Toluene		
4	Ethylbenzene		
5	Total Xylenes		
6	Naphthalene		
7	Acenaphthene		
8	Acenaphthylene		
9	Anthracene		
10	Benzo(a)anthracene	PENDING	PENDING
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		
Target majority over 90%			



Blue shading indicates a cell which has been mixed.

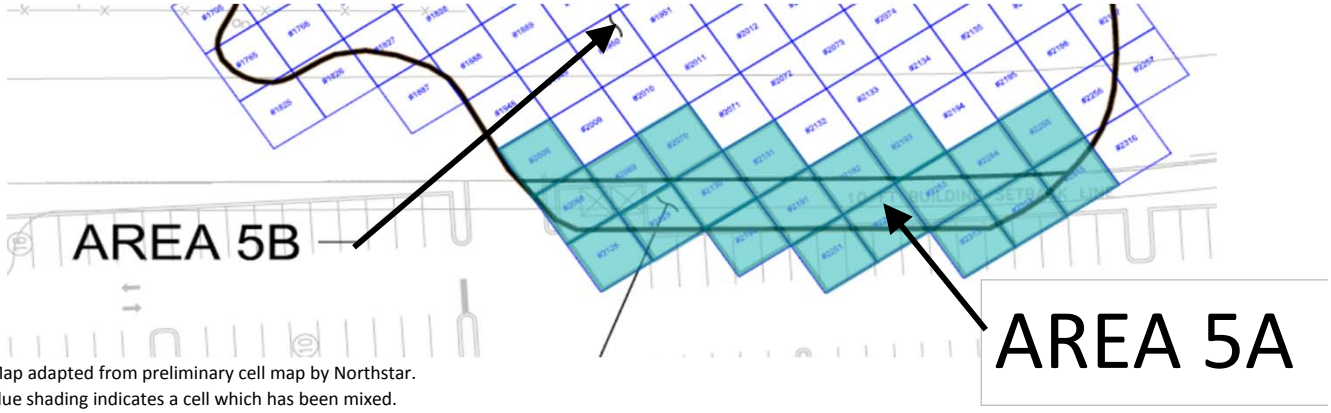
In Situ Solidification/Stabilization Results Dashboard; Area 5

Quanta Resources Corporation Superfund Site, OU1

Data through: 10/2/2017

Area	Date	Actual Mix Cement	Actual Mix Slag	Daily Volume (CY)	Sample ID	28+ days UCS (psi)	28+ days Permeability (cm/s)
5A	19-Sep-17	1%	6%	466	RA-PS-2254A5-0-20170919	825 (5d)	
5A	21-Sep-17	2%	6%	595	RA-PS-2068A5-0-20170921	140 (5d)	
5A	25-Sep-17	2%	6%	518	RA-PS-2191A5-0-20170925		

	Site Constituent	Leaching Reduction, % Area 5B
1	Arsenic	
2	Benzene	
3	Toluene	
4	Ethylbenzene	
5	Total Xylenes	
6	Naphthalene	
7	Acenaphthene	
8	Acenaphthylene	
9	Anthracene	
10	Benzo(a)anthracene	PENDING
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	
Target majority over 90%		



Map adapted from preliminary cell map by Northstar.

Blue shading indicates a cell which has been mixed.

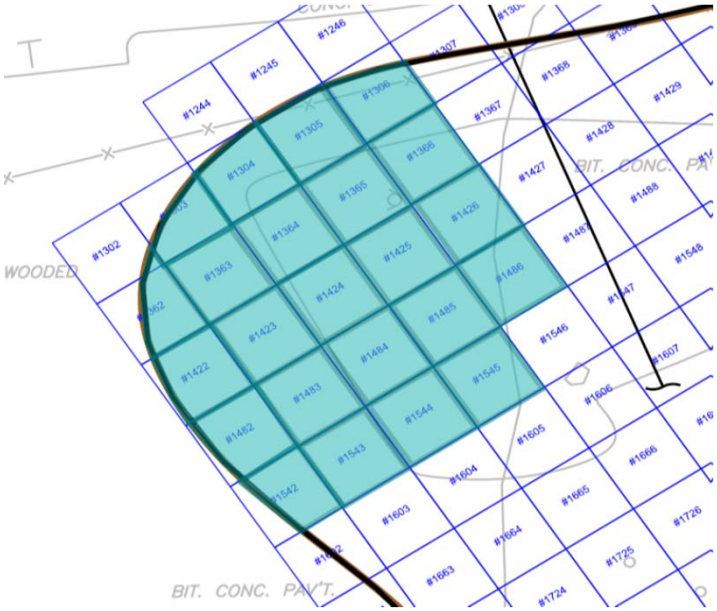
Data highlighted green indicate 28-day results meeting criteria of 40 psi for UCS and $<1x10^{-6}$ for permeability.

In Situ Solidification/Stabilization Results Dashboard; Area 7

Quanta Resources Corporation Superfund Site, OU1

Data through: 10/2/2017

Area	Date	Actual Mix Cement	Actual Mix Slag	Daily Volume (CY)	Sample ID	28+ days UCS (psi)	28+ days Permeability (cm/s)
7A	31-Jul-17	2%	6%	665	RA-PS-1305A7-.10-20170731	220	7.6E-08
7A	2-Aug-17	2%	6%	341	RA-PS-1423A7-(4.2)-20170802	155	4.2E-08
7A	3-Aug-17	2%	6%	178	RA-PS-1365A7-(2.4)-20170803	295	9.6E-08
7A	15-Aug-17	5%	14%	105	RA-PS-1302A7-(10)-20170815	48	3.1E-6 backup to be analyzed
7A	23-Aug-17	2%	6%	465	RA-PS-1424A7-(3.9)-20170823	600	1.6E-07
7A	24-Aug-17	2%	6%	178	*RA-PS-1295A3-(8)-20170824*	460	7.0E-07
7A	25-Aug-17	2%	6%	534	RA-PS-1426A7-(3)-20170825	320	2.8E-07
7A	28-Aug-17	2%	6%	534	RA-PS-1485A7-(3)-20170828	400	3.0E-07
7A	6-Sep-17	2%	6%	609	RA-PS-1543A7-(3.5)-20170906	265 (14 day)	



	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

Map adapted from preliminary cell map by Northstar.

Blue shading indicates a cell which has been mixed.

Data highlighted green indicate 28-day results meeting criteria of 40 psi for UCS and $<1x10^{-6}$ for permeability.