



120 St. James Ave
Boston, MA 02116
United States
T +1.617.523.2260

www.jacobs.com

March 10, 2021

Attention: Mr. Shane Nelson, RPM/OSC
U.S. Environmental Protection Agency – Region 2
290 Broadway, Floor 19
New York, NY 10007-1866

Subject: Quanta Resources Corporation Superfund Site, Operable Unit 1 (OU1), Edgewater, New Jersey, Progress Report: February 2021

Dear Mr. Nelson

This letter is the progress report required pursuant to the U.S. Environmental Protection Agency (EPA) Consent Decree 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 February 28, 2021, approximately 329,500 labor hours worked.

During February, the efforts detailed in the March and April 2020 Progress Reports specific to preventing the spread of the COVID-19 virus during cleanup activities continued. These plans require best practices for site safety, including face covering, gloves, and other appropriate personal protective equipment (PPE) for employees and visitors, random temperature checks of employees, tracking employees who might be ill, and social distancing. Additional efforts have been taken to revise health and safety plans as well as best management practices on site as information becomes available in response to the COVID-19 pandemic. Onsite operations are continually evaluated to make sure onsite staff are safe in light of the current events. Additionally, the team is adhering to New Jersey travel restrictions to high-risk states.

Work Completed

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

OU1 General Civil Work

- Supported site contractor operations and continued general site maintenance activities.
- Managed Category 1 debris generated from ISS activities.



March 10, 2021

Subject: Quanta Resources Corporation Superfund Site, Operable Unit 1 (OU1), Edgewater, New Jersey, Progress Report:
February 2021

OU1 ISS

- Completed relocation of Tent 6-2 to the Tent 6-1 location in ISS Area 6C (southeastern portion of the Site) and began debris removal and ISS activities. Eight (8) partial cells and ten (10) full cells (1,572 CY of material) were treated.
- Completed disassembly and demobilization of Tent 4-2 from ISS Area 4 (southwestern portion of the Site).
- Completed debris removal and ISS activities in ISS Areas 5B and 5D (southcentral portion of the Site) outside of a tent. One (1) full cell (346 CY of material) was treated. Began loading out extra overburden following completion of ISS activities.
- Completed debris removal and ISS activities in ISS Area 4 (southwestern portion of the Site) outside of a tent. One (1) full cell and seven (7) partial cells (699 CY of material) were treated. Loaded out extra overburden and completed installation of temporary cap.
- Began demobilizing materials and equipment from the Site.

OU1 Bulkhead Installation

- None – Bulkhead installation is complete.

OU1 Vibration and Air Monitoring

- Continued with vibration and movement monitoring. Observed no vibrations outside the project limits during February.
- Continued perimeter air monitoring in accordance with the Perimeter Air Monitoring Plan and the applicable adjustments/addendums.

OU1 Offsite Waste Disposal

- Non-Hazardous
 - One (1) 30 CY roll-off of PPE debris to Fairless Landfill in Morrisville, PA.
 - Three (3) 30 CY roll-offs of treated wood debris to Fairless Landfill in Morrisville, PA.
 - Twenty-four (24) 25 CY dump trucks of soil to Fairless Landfill in Morrisville, PA.
 - Four (4) truckloads of used vapor phase carbon (total of seventy-five (75) 1,000-lb supersacks) to Evoqua Water Technologies in Darlington, PA.
- Hazardous
 - One (1) 55-gallon drum of NAPL-stained PPE to Cycle Chem in Lewisberry, PA.
 - Two (2) 55-gallon drums of NAPL to Cycle Chem in Lewisberry, PA.

OU1 NAPL Recovery

- Pumped approximately 36 gallons of NAPL from RW4-2
- Sentinel wells were measured on February 24.



March 10, 2021

Subject: Quanta Resources Corporation Superfund Site, Operable Unit 1 (OU1), Edgewater, New Jersey, Progress Report:
February 2021

High Concentration Arsenic Area (HCAA)

- Completed 2nd quarterly HCAA groundwater sampling event.

Site Security, Maintenance, and Inspections

- Completed weekly boom inspections on February 4, February 12, February 17, and February 26.
- Swapped out inner and outer absorbent boom on February 4.
- Completed weekly SWPPP inspections on February 3, February 12, February 17, and February 26.

Two-Week Look-Ahead

- Continue pumping RW4-2.
- Gauge sentry wells.
- Complete transportation and off-site disposal of HCAA and NAPL drums.
- Complete load-out of extra overburden and temporary cap installation outside of a tent in ISS Areas 5B and 5D (southcentral portion of the Site).
- Complete debris removal and ISS activities in Tent 6-1 located in ISS Area 6C (southeastern portion of the site). Load-out extra overburden, install temporary cap and complete final air clearance testing.
- Load-out remaining Area 7 overburden stockpile for offsite disposal.
- Complete final site grading activities.
- Continue demobilization of materials and equipment from the Site.

Data and Submittals

ISS Compliance Data Summary

All samples required 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. As defined by Section 2.6 of the EPA approved UFP-QAPP, conformance testing is performed on samples after a 28-day cure process. As defined by the EPA approved remedial design, conformance testing includes UCS, permeability, and leachability using EPA Method 1315. UCS and permeability tests provide results within 5-days after the 28-day cure process. EPA Method 1315M (the Semi-Dynamic Leaching Modified for Organics) provided as Attachment 2 of the UFP-QAPP, takes a total of 63-days to run (once the 28-day cure time has passed) followed by laboratory analysis, validation, and evaluation. Therefore, leaching results are available approximately 100-days after the 28-day cure time.

The attached ISS Results Dashboards (Attachment A) presents results for 28-day cure time conformance data results where available.



March 10, 2021

Subject: Quanta Resources Corporation Superfund Site, Operable Unit 1 (OU1), Edgewater, New Jersey, Progress Report:
February 2021

Air Monitoring

Provided perimeter and offsite air monitoring data when received (typically daily) to EPA. The website was updated in August to better show offsite results compared to the risk-based screening levels. These results were uploaded upon receipt to www.quantaremediation.com

Other Deliverables and Submittals

- Received approval from EPA on February 10, 2012 to terminate long-term vapor intrusion sampling at 163 Old River Road and 103 River Road.

Corrective Actions

No corrective actions were required during this reporting period.

Stakeholder Communication and Community Involvement

- Submitted the monthly progress report for January on February 8th.
- Reviewed and updated the Honeywell website as needed. Coordinated preparation of written updates and maps, and submitted progress photos and air analysis graphs.
- Tracked community concerns and complaints. No concerns were submitted through the hotline in February. Continue weekly notification of upcoming Saturday work.
- Provided weekly and as-needed progress updates for email distribution to pier tenants.
- Submitted weekly updates to EPA summarizing upcoming site activities.
- Uploaded daily air monitoring results to www.quantaremediation.com and updated weekly air data and trend graphs.

Activities Planned for Next 6 Weeks

- Continue with NAPL recovery operations.
- Continue weekly boom inspections and SWPPP inspections and associated maintenance.
- Complete disassembly and demobilization of Tent 6-1 from the Site.
- Complete demobilizing all materials and equipment from the Site following completion of all ISS activities.

Schedule Update and Delays

Revised schedule has been developed detailing the end of the project and was submitted with the September 2020 status report. As detailed in this schedule, intrusive activities are planned to be completed in early 2021 with all equipment demobilized by late winter 2021. Current demobilization is planned to be fully completed by end of March 2021.

Percent Complete

Work associated with the entire OU1 Remedial Action is approximately 95 percent complete.



March 10, 2021

Subject: Quanta Resources Corporation Superfund Site, Operable Unit 1 (OU1), Edgewater, New Jersey, Progress Report:
February 2021

Please feel free to contact me at 267-250-7387 or Helen Fahy, Honeywell Remediation Manager, at 814-571-4912 if you have any questions or comments regarding the Quanta project.

Sincerely,

Stephen J. Zarlinski
Project Manager

Attachment – Figure 1 - ISS Status Map
In Situ Solidification/Stabilization Results Dashboard
Waste Manifests

Copies to:

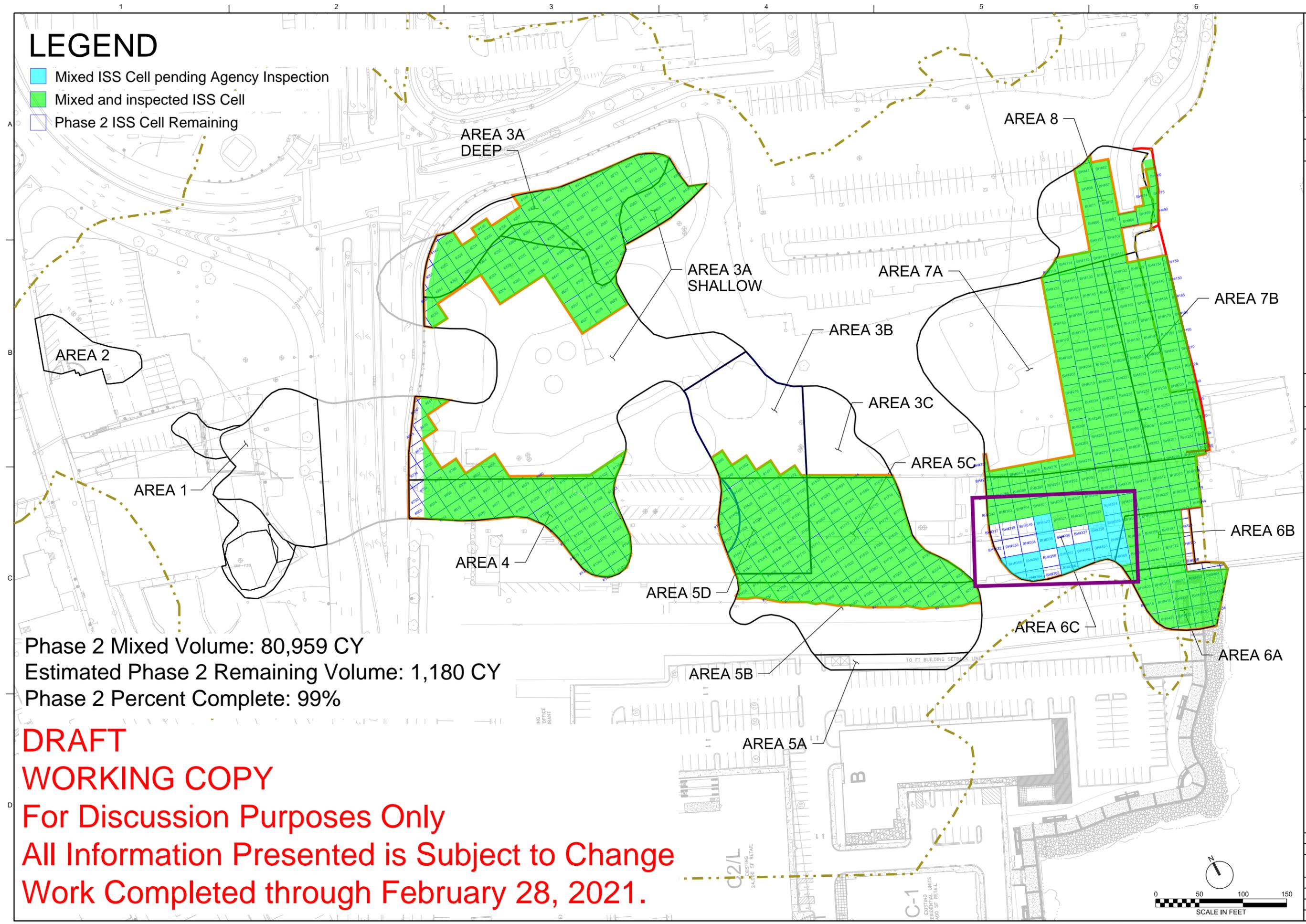
Clay Monroe (EPA)
John Mojka (Honeywell)
Erica Bergman (NJDEP)
Helen Fahy (Fahy Associates)
Neil Ravensbergen (USACE)
Frank Rossi (Boswell)
Michael Johnson (USACE)

Rich Puvogel (EPA)

Greg Franz (Borough of Edgewater)
Tim Johnson (Anchor QEA)
Rich Gajdek (USACE)
Neil Kolb (USACE)

LEGEND

- Mixed ISS Cell pending Agency Inspection
- Mixed and inspected ISS Cell
- Phase 2 ISS Cell Remaining



Phase 2 Mixed Volume: 80,959 CY
 Estimated Phase 2 Remaining Volume: 1,180 CY
 Phase 2 Percent Complete: 99%

DRAFT
WORKING COPY
 For Discussion Purposes Only
 All Information Presented is Subject to Change
 Work Completed through February 28, 2021.

NO.	DATE	DR	REVISION	BY	APVD

HONEYWELL INTERNATIONAL INC.
 QUANTA RESOURCES CORPORATION
 SUPERFUND SITE
 Edgewater, New Jersey

JACOBS
 CIVIL
 PHASE 2 ISS CELLS

1"=50'
 VERIFY SCALE
 BAR IS ONE INCH ON ORIGINAL DRAWING.

DATE	
PROJ	428872
DWG	FIG-1
SHEET	of

In Situ Solidification/Stabilization Results Dashboard, Tent 6-1 and 6-2 (Leaching Batch 7)

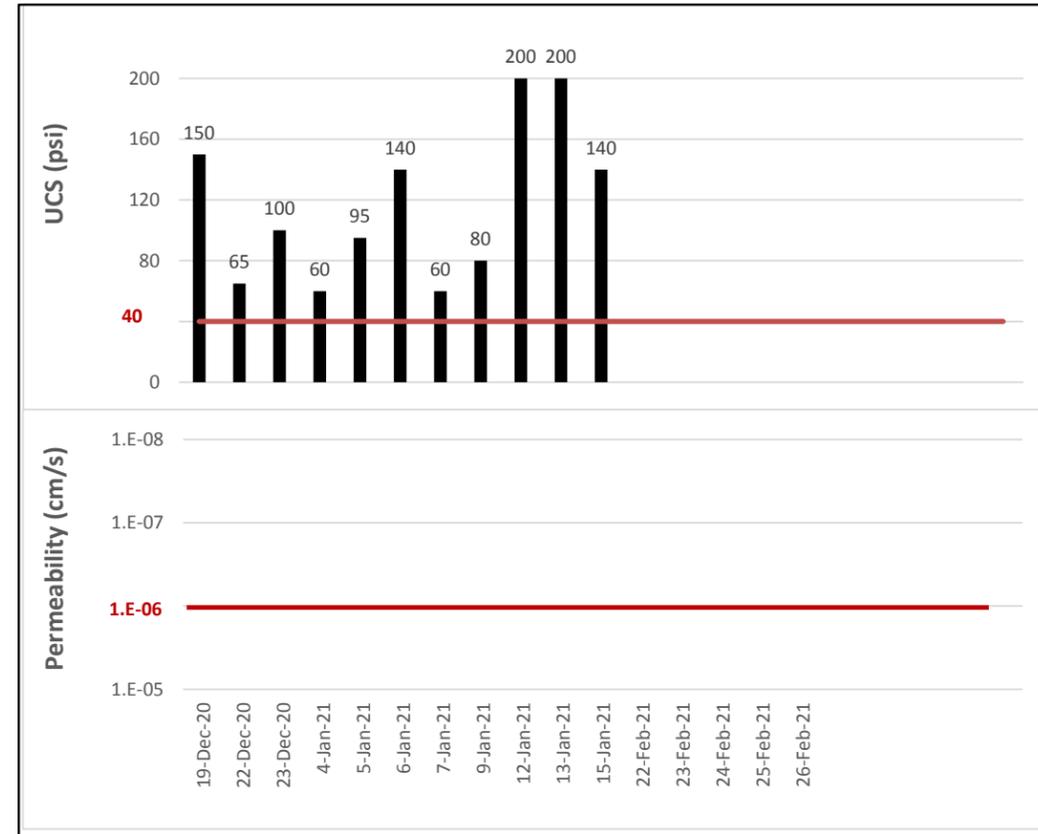
Quanta Resources Corporation Superfund Site, OU1

Data through: 3/3/2021

Tent	Date	Volume (CY)	Mix Design		UCS (≥40 psi)	Permeability (≤1E-6 cm/s)
			Cement	Slag		
6-2	19-Dec-20	256	2%	6%	150	
6-2	22-Dec-20	329	2%	6%	65	
6-2	23-Dec-20	236	2%	6%	100	
6-2	4-Jan-21	150	4%	6%	60	
6-2	5-Jan-21	345	2%	6%	95	
6-2	6-Jan-21	345	2%	6%	140	
6-2	7-Jan-21	244	2%	6%	60	
6-2	9-Jan-21	245	2%	6%	80	
6-2	12-Jan-21	331	4%	6%	200	
6-2	13-Jan-21	234	2%	6%	200	
6-2	15-Jan-21	30	2%	6%	140	
6-1	22-Feb-21	515	2%	6%		
6-1	23-Feb-21	299	2%	6%		
6-1	24-Feb-21	295	2%	6%		
6-1	25-Feb-21	253	2%	6%		
6-1	26-Feb-21	210	2%	6%		

Total CY Mixed: **4315**

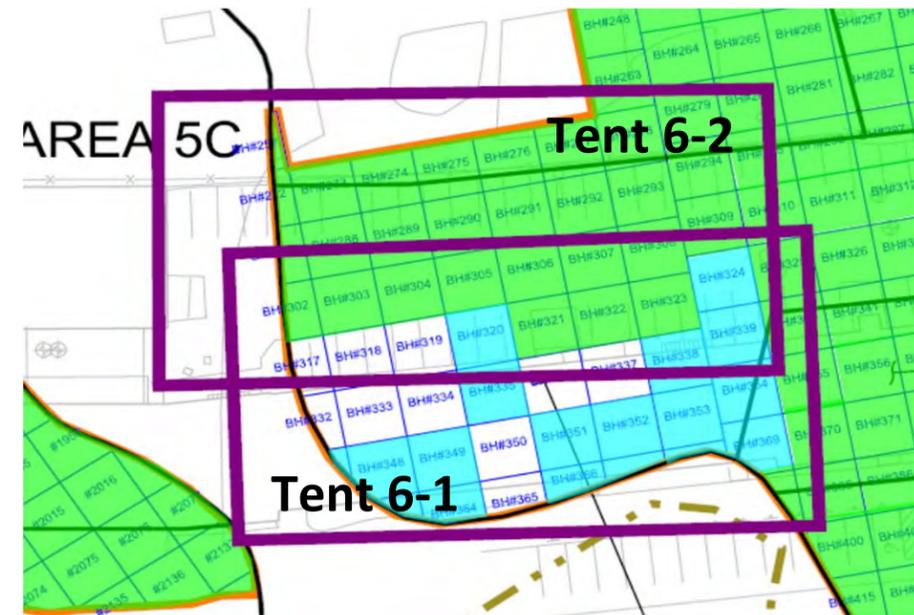
Data Pending



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

Sample Collected Jan. 7, 2021; Analysis Pending

Constituents Passing:



Note: Mixed areas awaiting EPA inspection indicated with blue shading. Green cells are mixed

In Situ Solidification/Stabilization Results Dashboard, Area 4 (Leaching Batch 9, page 2)

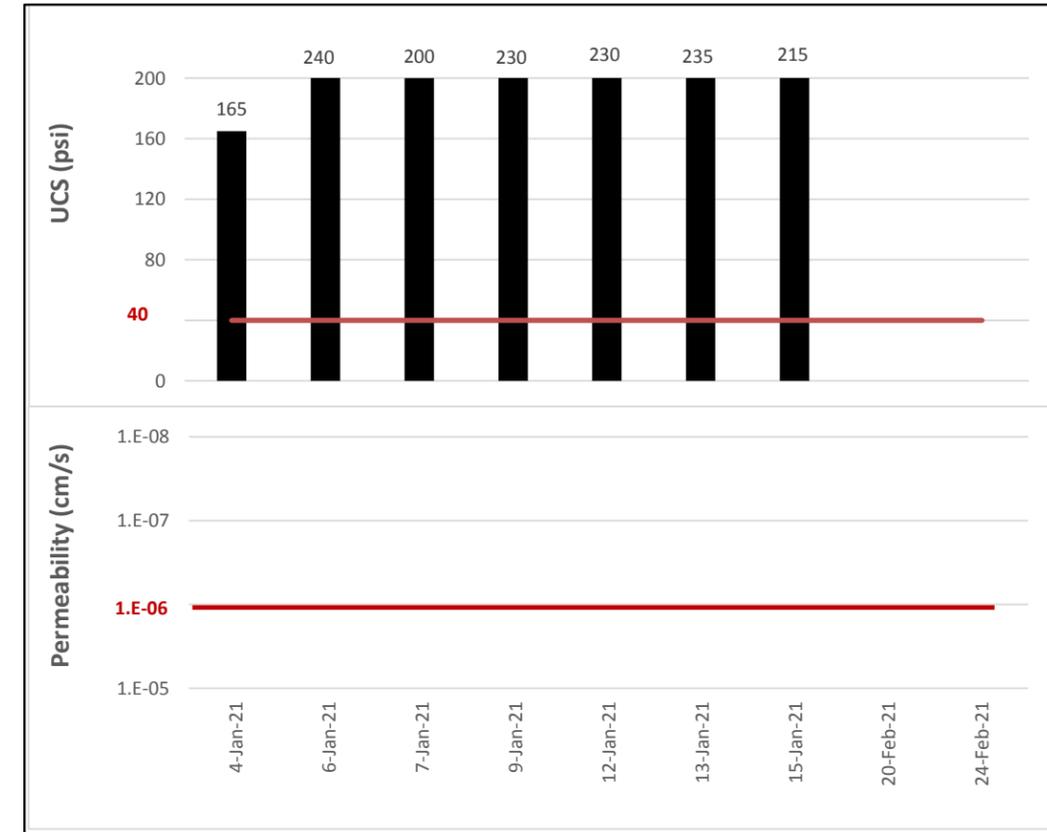
Quanta Resources Corporation Superfund Site, OU1

Data through: 3/3/2021

Area	Date	Volume (CY)	Mix Design		UCS (≥40 psi)	Permeability (≤1E-6 cm/s)
			Cement	Slag		
4-2	4-Jan-21	188	2%	6%	165	
4-2	6-Jan-21	164	2%	6%	240	
4-2	7-Jan-21	167	2%	6%	200	
4-2	9-Jan-21	199	2%	6%	230	
4-2	12-Jan-21	163	2%	6%	230	
4-2	13-Jan-21	140	2%	6%	235	
4-2	15-Jan-21	163	2%	6%	215	
NT-41	20-Feb-21	439	2%	6%		
NT-41	24-Feb-21	260	2%	6%		

Total CY Mixed: **1884**

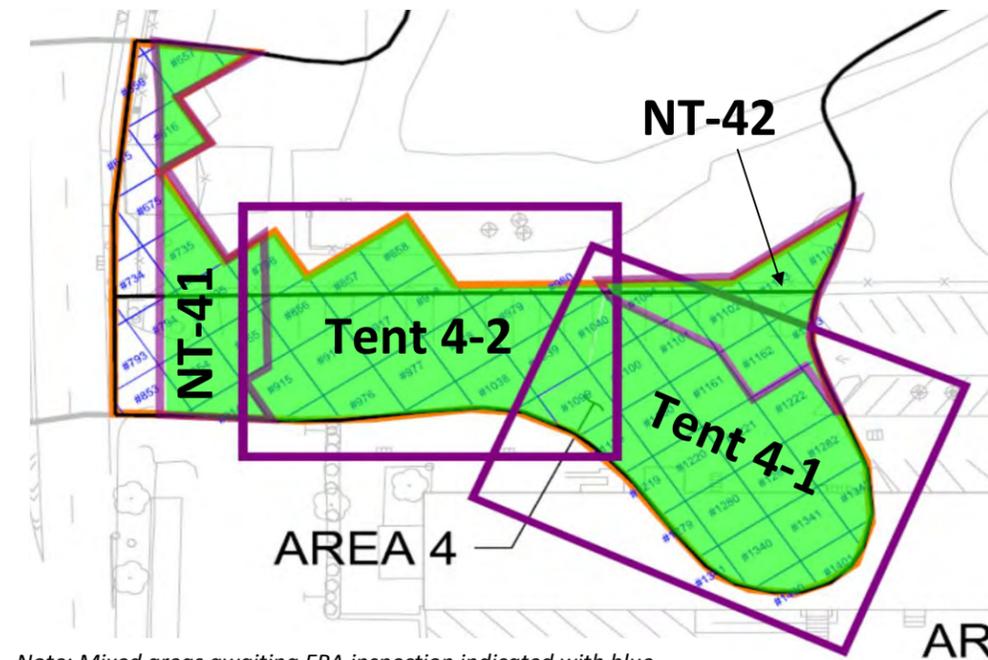
Data Pending



Leaching Reduction by Constituent		Aug 14 2020 Sample. Dec 14 2020 Sample Held.	
Site Constituent		Site Constituent	
1 Arsenic		12 Benzo(b)fluoranthene	
2 Benzene		13 Benzo(k)fluoranthene	
3 Toluene		14 Benzo(a,h,i)perylene	
4 Ethylbenzene		15 Benzo(a)fluoranthene	
5 Total Xylenes		16 Benzo(a)anthracene	
6 Naphthalene		17 Benzo(e)pyrene	
7 Acenaphthene		18 Indeno(1,2,3-cd)pyrene	
8 Acenaphthylene		19 Phenanthrene	
9 Anthracene		20 Pyrene	
10 Benzo(a)anthracene			
11 Benzo(a)pyrene			

Held Samples, See Tent Area 4 Batch 9 (page 1) Dashboard for Batch 9

Constituents Passing



Note: Mixed areas awaiting EPA inspection indicated with blue

In Situ Solidification/Stabilization Results Dashboard, Area 4 (Leaching Batch 9, page 1)

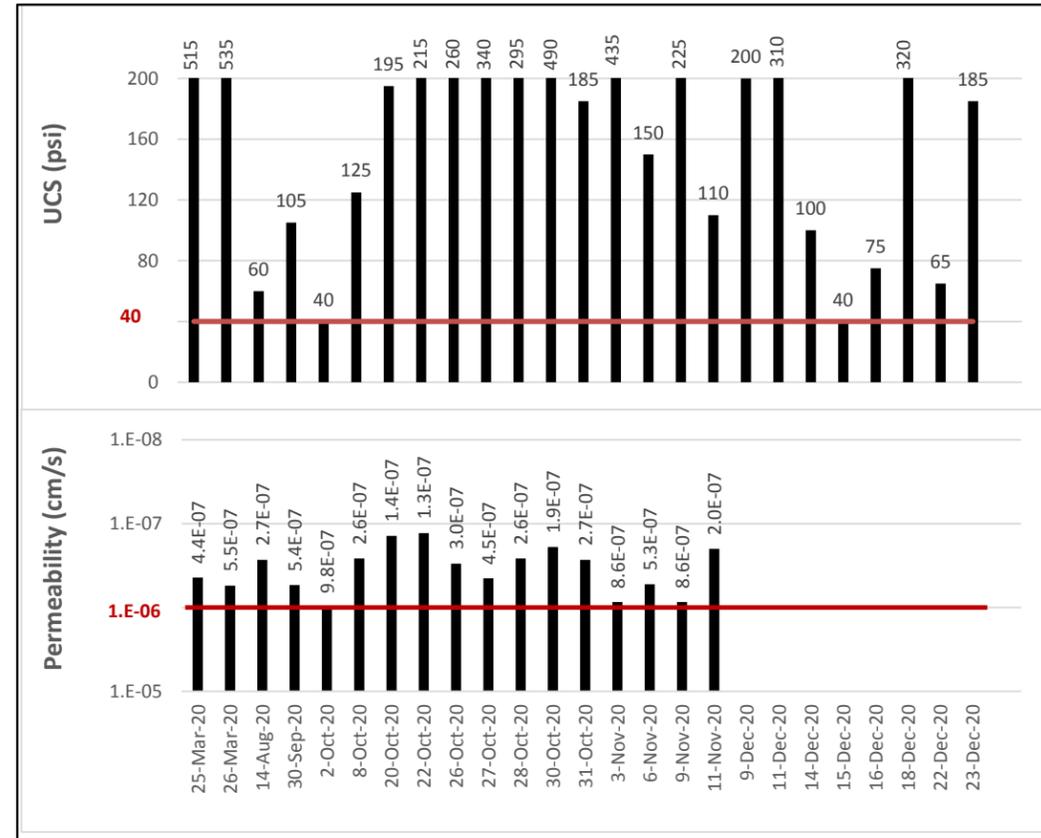
Quanta Resources Corporation Superfund Site, OU1

Data through: 3/3/2021

Area	Date	Volume (CY)	Mix Design		UCS (≥40 psi)	Permeability (≤1E-6 cm/s)
			Cement	Slag		
NT-41	25-Mar-20	249	2%	6%	515	4.4E-07
NT-41	26-Mar-20	317	2%	6%	535	5.5E-07
NT-42	14-Aug-20	372	4%	6%	60	2.7E-07
NT-42	30-Sep-20	300	4%	6%	105	5.4E-07
4-1	2-Oct-20	341	2%	6%	40	9.8E-07
4-1	8-Oct-20	142	2%	6%	125	2.6E-07
4-1	20-Oct-20	138	2%	6%	195	1.4E-07
4-1	22-Oct-20	164	2%	6%	215	1.3E-07
4-1	26-Oct-20	328	2%	6%	260	3.0E-07
4-1	27-Oct-20	273	2%	6%	340	4.5E-07
4-1	28-Oct-20	420	2%	6%	295	2.6E-07
4-1	30-Oct-20	162	2%	6%	490	1.9E-07
4-1	31-Oct-20	396	2%	6%	185	2.7E-07
4-1	3-Nov-20	363	2%	6%	435	8.6E-07
4-1	6-Nov-20	396	2%	6%	150	5.3E-07
4-1	9-Nov-20	378	2%	6%	225	8.6E-07
4-1	11-Nov-20	208	2%	6%	110	2.0E-07
4-2	9-Dec-20	83	2%	6%	200	
4-2	11-Dec-20	335	2%	6%	310	
4-2	14-Dec-20	283	4%	6%	100	
4-2	15-Dec-20	160	2%	6%	40	
4-2	16-Dec-20	159	2%	6%	75	
4-2	18-Dec-20	187	2%	6%	320	
4-2	22-Dec-20	176	2%	6%	65	
4-2	23-Dec-20	248	2%	6%	185	

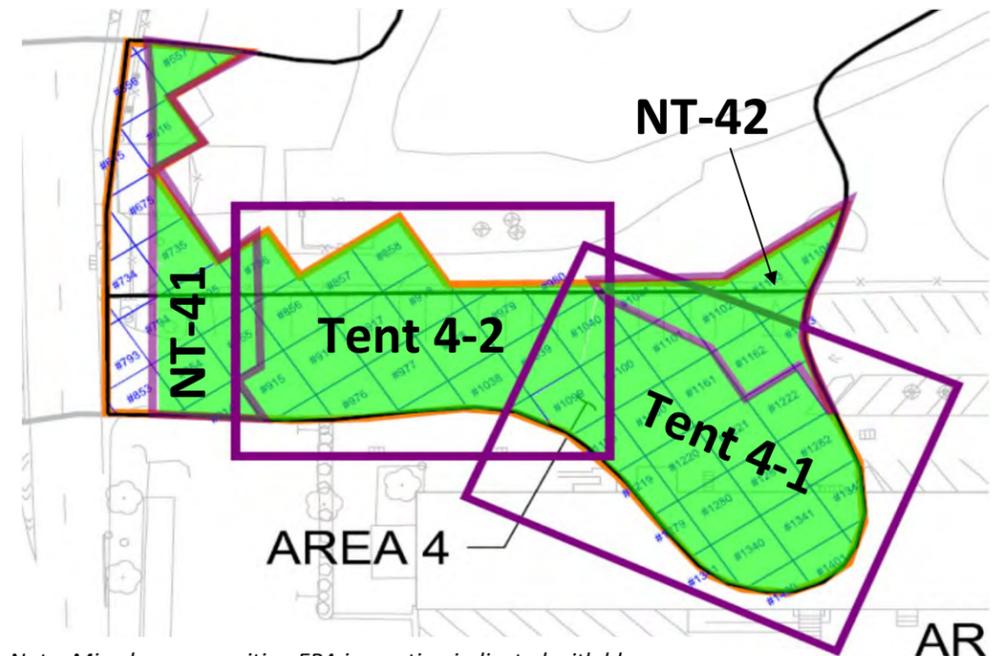
Total CY Mixed: 6575

Data Pending



Leaching Reduction by Constituent		Aug 14 2020 Sample. Dec 14 2020 Sample Held.	
Site Constituent		Site Constituent	
1 Arsenic	100%	12 Benzo(b)fluoranthene	NE; <1% tPAH
2 Benzene	97%	13 Benzo(g,h,i)perylene	NE; <1% tPAH
3 Toluene	95%	14 Benzo(k)fluoranthene	NE; <1% tPAH
4 Ethylbenzene	96%	15 Chrysene	NE; <1% tPAH
5 Total Xylenes	95%	16 Dibenz(a,h)anthracene	NE; <1% tPAH
6 Naphthalene	92%	17 Fluoranthene	NE; <1% tPAH
7 Acenaphthene	86%	18 Fluorene	88%
8 Acenaphthylene	NE; <1% tPAH	19 Indeno(1,2,3-cd)pyrene	NE; <1% tPAH
9 Anthracene	NE; <1% tPAH	20 Phenanthrene	91%
10 Benzo(a)anthracene	NE; <1% tPAH	21 Pyrene	NE; <1% tPAH
11 Benzo(a)pyrene	NE; <1% tPAH		

Constituents Passing: 7 of 9



Note: Mixed areas awaiting EPA inspection indicated with blue

In Situ Solidification/Stabilization Results Dashboard, Tent 5-2 and NT-53 (Leaching Batch 10)

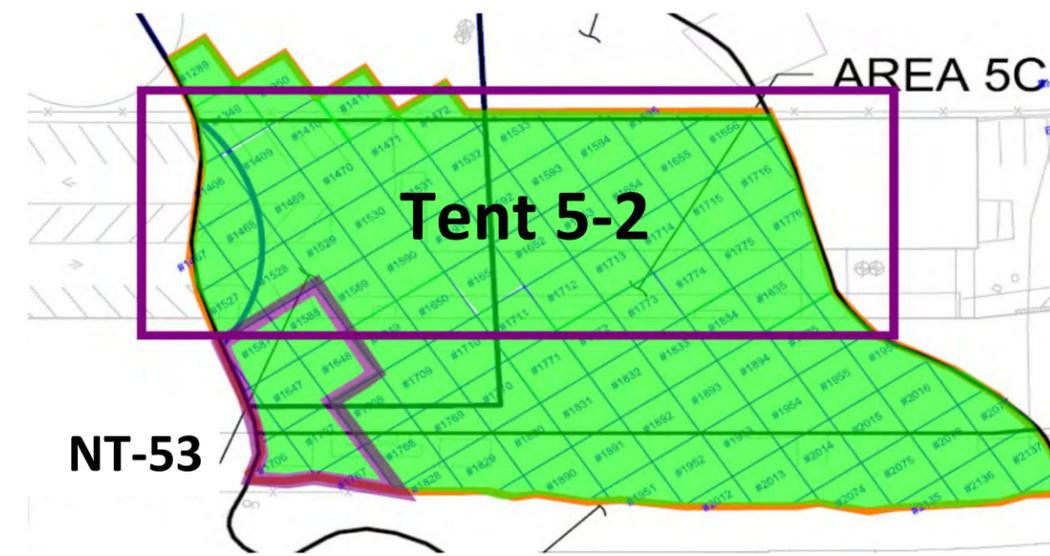
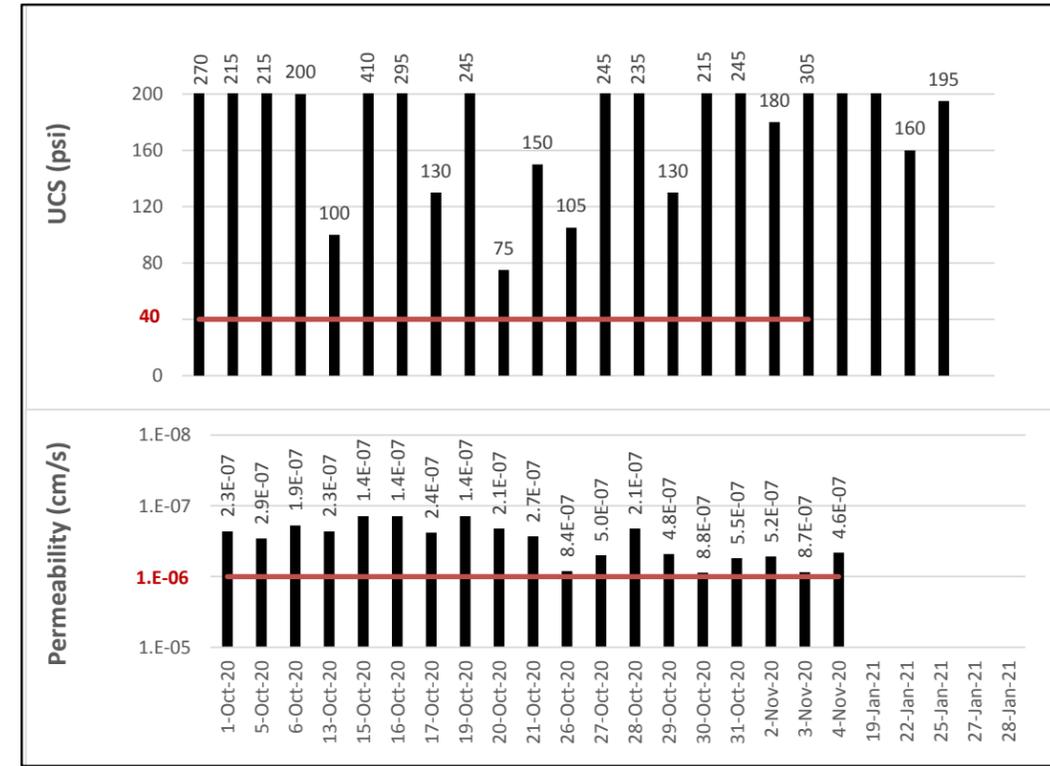
Quanta Resources Corporation Superfund Site, OU1

Data through: 3/3/2021

Area	Date	Volume (CY)	Mix Design		UCS (≥40 psi)	Permeability (≤1E-6 cm/s)
			Cement	Slag		
5-2	1-Oct-20	318	2%	6%	270	2.3E-07
5-2	5-Oct-20	363	2%	6%	215	2.9E-07
5-2	6-Oct-20	452	2%	6%	215	1.9E-07
5-2	13-Oct-20	314	2%	6%	200	2.3E-07
5-2	15-Oct-20	247	2%	6%	100	1.4E-07
5-2	16-Oct-20	314	2%	6%	410	1.4E-07
5-2	17-Oct-20	324	2%	6%	295	2.4E-07
5-2	19-Oct-20	321	2%	6%	130	1.4E-07
5-2	20-Oct-20	330	2%	6%	245	2.1E-07
5-2	21-Oct-20	319	2%	6%	75	2.7E-07
5-2	26-Oct-20	324	2%	6%	150	8.4E-07
5-2	27-Oct-20	325	2%	6%	105	5.0E-07
5-2	28-Oct-20	318	2%	6%	245	2.1E-07
5-2	29-Oct-20	308	2%	6%	235	4.8E-07
5-2	30-Oct-20	299	2%	6%	130	8.8E-07
5-2	31-Oct-20	201	2%	6%	215	5.5E-07
5-2	2-Nov-20	188	2%	6%	245	5.2E-07
5-2	3-Nov-20	240	2%	6%	180	8.7E-07
5-2	4-Nov-20	323	2%	6%	305	4.6E-07
NT-53	19-Jan-21	330	2%	6%	225	
NT-53	22-Jan-21	384	2%	6%	255	
NT-53	25-Jan-21	75	2%	6%	160	
NT-53	27-Jan-21	343	2%	6%	195	
NT-53	28-Jan-21	182	2%	6%		

Total CY Mixed: **7142**

Data Pending



Note: Mixed areas awaiting EPA inspection indicated with blue shading. Green cells are mixed and have been inspected.

Leaching Reduction by Constituent			
Site Constituent		Site Constituent	
1	Arsenic	12	Benzo(b)fluoranthene
2	Benzene	13	(g,h,i)perylene
3	Toluene		(k)fluoranthene
4	Ethylbenzene		
5	Total Xylenes		(h)anthracene
6	Naphthalene		ene
7	Acenaphthene		orene
8	Acenaphthylene	19	Indeno(1,2,3-cd)pyrene
9	Anthracene	20	Phenanthrene
10	Benzo(a)anthracene	21	Pyrene
11	Benzo(a)pyrene		

Held Samples, See Tent 5-1 Dashboard for Batch 7 Results

Constituents Passing

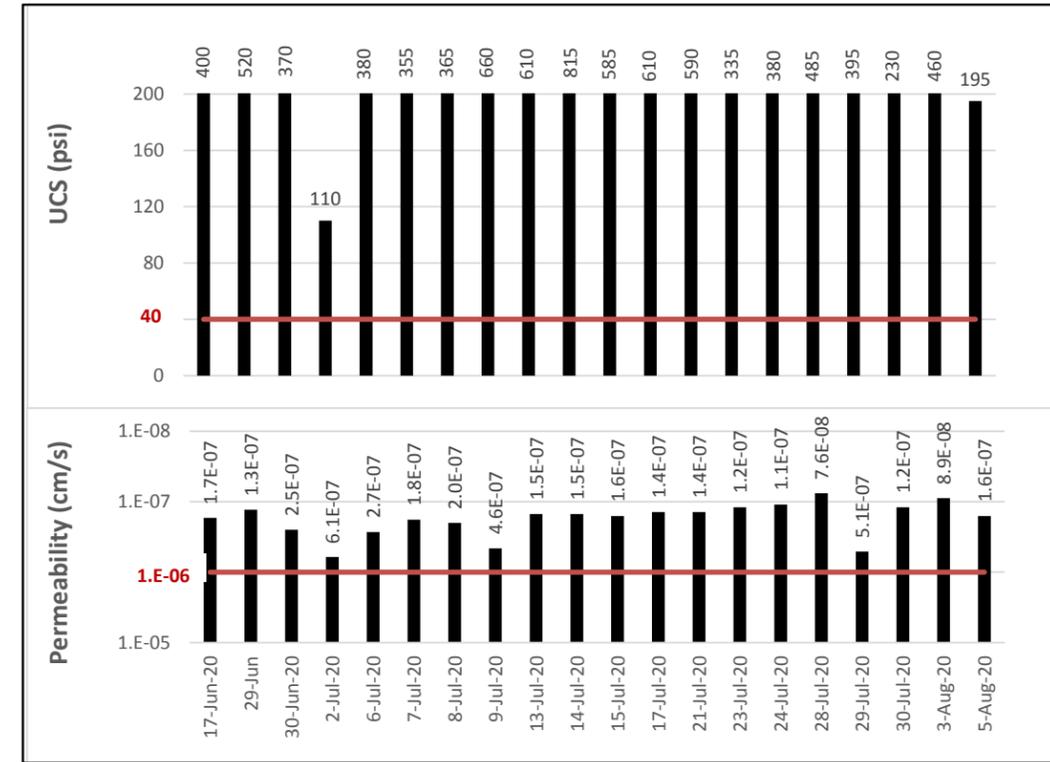
In Situ Solidification/Stabilization Results Dashboard, Tent 5-1 (Leaching Batch 10)

Quanta Resources Corporation Superfund Site, OU1

Data through: 3/3/2021

Area	Date	Volume (CY)	Mix Design		UCS (≥40 psi)	Permeability (≤1E-6 cm/s)
			Cement	Slag		
5-1	17-Jun-20	273	2%	6%	400	1.7E-07
5-1	29-Jun-20	169	2%	6%	520	1.3E-07
5-1	30-Jun-20	314	2%	6%	370	2.5E-07
5-1	2-Jul-20	198	2%	6%	110	6.1E-07
5-1	6-Jul-20	267	2%	6%	380	2.7E-07
5-1	7-Jul-20	252	2%	6%	355	1.8E-07
5-1	8-Jul-20	427	2%	6%	365	2.0E-07
5-1	9-Jul-20	423	2%	6%	660	4.6E-07
5-1	13-Jul-20	122	2%	6%	610	1.5E-07
5-1	14-Jul-20	398	2%	6%	815	1.5E-07
5-1	15-Jul-20	155	2%	6%	585	1.6E-07
5-1	17-Jul-20	422	2%	6%	610	1.4E-07
5-1	21-Jul-20	314	2%	6%	590	1.4E-07
5-1	23-Jul-20	331	4%	6%	335	1.2E-07
5-1	24-Jul-20	142	2%	6%	380	1.1E-07
5-1	28-Jul-20	276	4%	6%	485	7.6E-08
5-1	29-Jul-20	260	4%	6%	395	5.1E-07
5-1	30-Jul-20	328	2%	6%	230	1.2E-07
5-1	3-Aug-20	231	2%	6%	460	8.9E-08
5-1	5-Aug-20	337	2%	6%	195	1.6E-07

Total CY Mixed: **5640**



Leaching Reduction by Constituent					
Site Constituent			Site Constituent		
1	Arsenic	98%	12	Benzo(b)fluoranthene	NE; <1% tPAH
2	Benzene	95%	13	Benzo(g,h,i)perylene	Not detected
3	Toluene	94%	14	Benzo(k)fluoranthene	Not detected
4	Ethylbenzene	99%	15	Chrysene	NE; <1% tPAH
5	Total Xylenes	98%	16	Dibenz(a,h)anthracene	Not detected
6	Naphthalene	99%	17	Fluoranthene	NE; <1% tPAH
7	Acenaphthene	98%	18	Fluorene	NE; <1% tPAH
8	Acenaphthylene	NE; <1% tPAH	19	Indeno(1,2,3-cd)pyrene	Not detected
9	Anthracene	NE; <1% tPAH	20	Phenanthrene	NE; <1% tPAH
10	Benzo(a)anthracene	NE; <1% tPAH	21	Pyrene	NE; <1% tPAH
11	Benzo(a)pyrene	NE; <1% tPAH			
Constituents Passing		7 of 7			



Note: Mixed areas awaiting EPA inspection indicated with blue shading. Green cells are mixed and have been inspected.

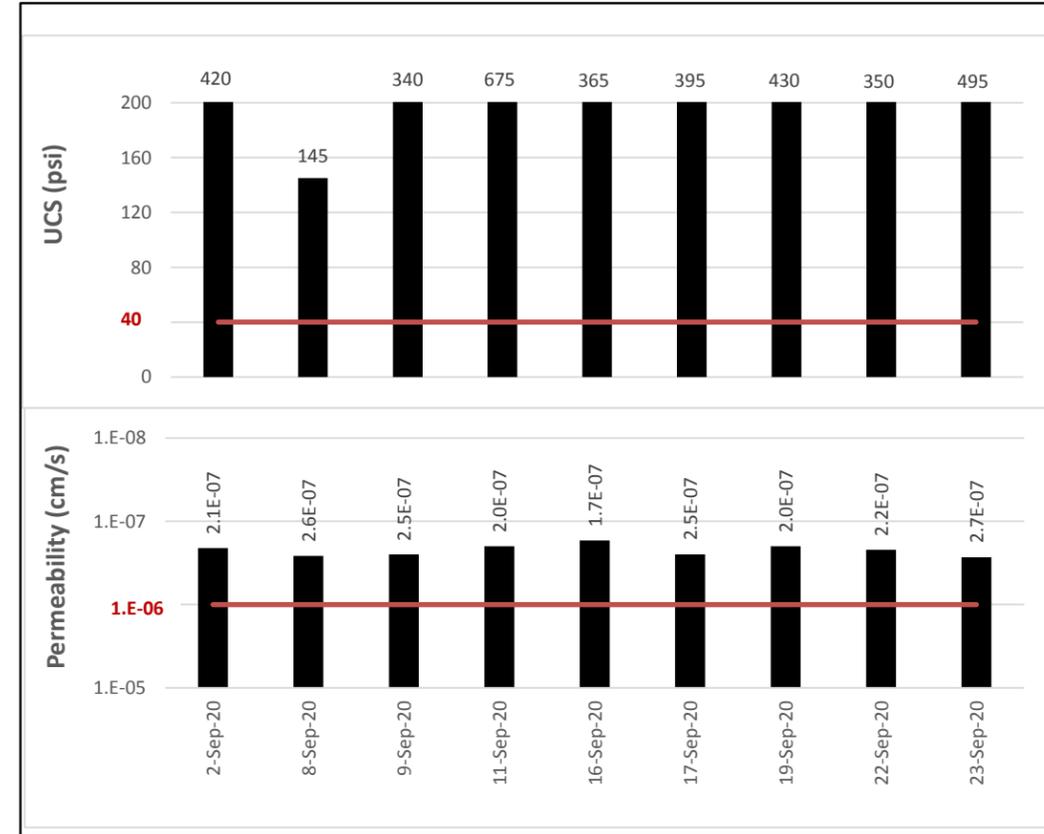
Leaching calculations for each constituent provided in the ISS Memo for this Parcel. Boxed sample dates on table above indicate collection of a leaching sample. Constituents with 90+% reduction are shaded green. NE - Not Evaluated; constituent not detected in baseline sample or <1% of tPAH.

In Situ Solidification/Stabilization Results Dashboard, Tent 7-4 (Leaching Batch 11)

Quanta Resources Corporation Superfund Site, OU1

Data through: 3/3/2021

Tent	Date	Volume (CY)	Mix Design		UCS (≥40 psi)	Permeability (≤1E-6 cm/s)
			Cement	Slag		
7-4	2-Sep-20	182	2%	6%	420	2.1E-07
7-4	8-Sep-20	183	2%	6%	145	2.6E-07
7-4	9-Sep-20	236	2%	6%	340	2.5E-07
7-4	11-Sep-20	180	2%	6%	675	2.0E-07
7-4	16-Sep-20	253	2%	6%	365	1.7E-07
7-4	17-Sep-20	225	2%	6%	395	2.5E-07
7-4	19-Sep-20	221	2%	6%	430	2.0E-07
7-4	22-Sep-20	341	2%	6%	350	2.2E-07
7-4	23-Sep-20	429	2%	6%	495	2.7E-07

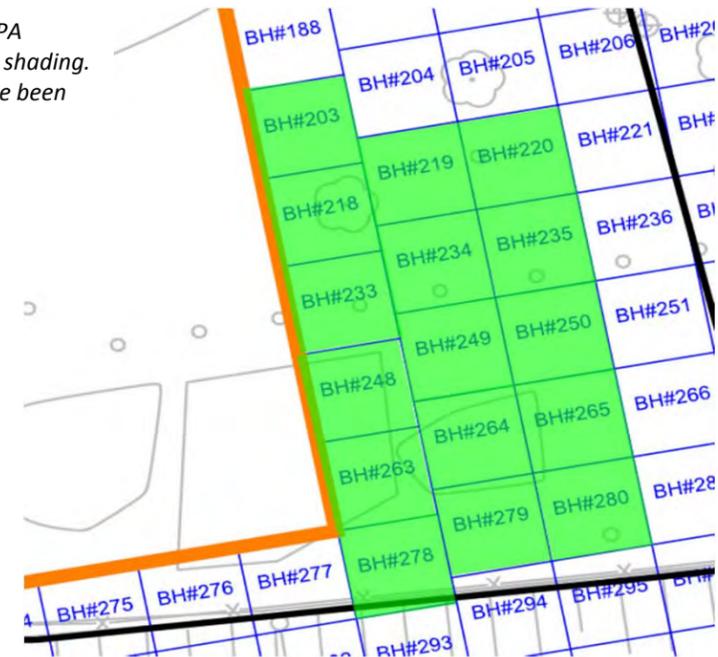


Total CY Mixed: **2250**

Leaching Reduction by Constituent		
1	Arsenic	95%
2	Benzene	100%
3	Toluene	100%
4	Ethylbenzene	100%
5	Total Xylenes	99%
6	Naphthalene	99%
7	Acenaphthene	98%
8	Acenaphthylene	NE <1% tPAH
9	Anthracene	NE <1% tPAH
10	Benzo(a)anthracene	NE <1% tPAH
11	Benzo(a)pyrene	NE <1% tPAH
12	Benzo(b)fluoranthene	NE <1% tPAH
13	Benzo(g,h,i)perylene	NE <1% tPAH
14	Benzo(k)fluoranthene	NE <1% tPAH
15	Chrysene	NE <1% tPAH
16	Dibenz(a,h)anthracene	NE Not detected
17	Fluoranthene	NE <1% tPAH
18	Fluorene	97%
19	Indeno(1,2,3-cd)pyrene	NE <1% tPAH
20	Phenanthrene	94%
21	Pyrene	NE <1% tPAH

Constituents Passing: **9 of 9**

Note: Mixed areas awaiting EPA inspection indicated with blue shading. Green cells are mixed and have been inspected.



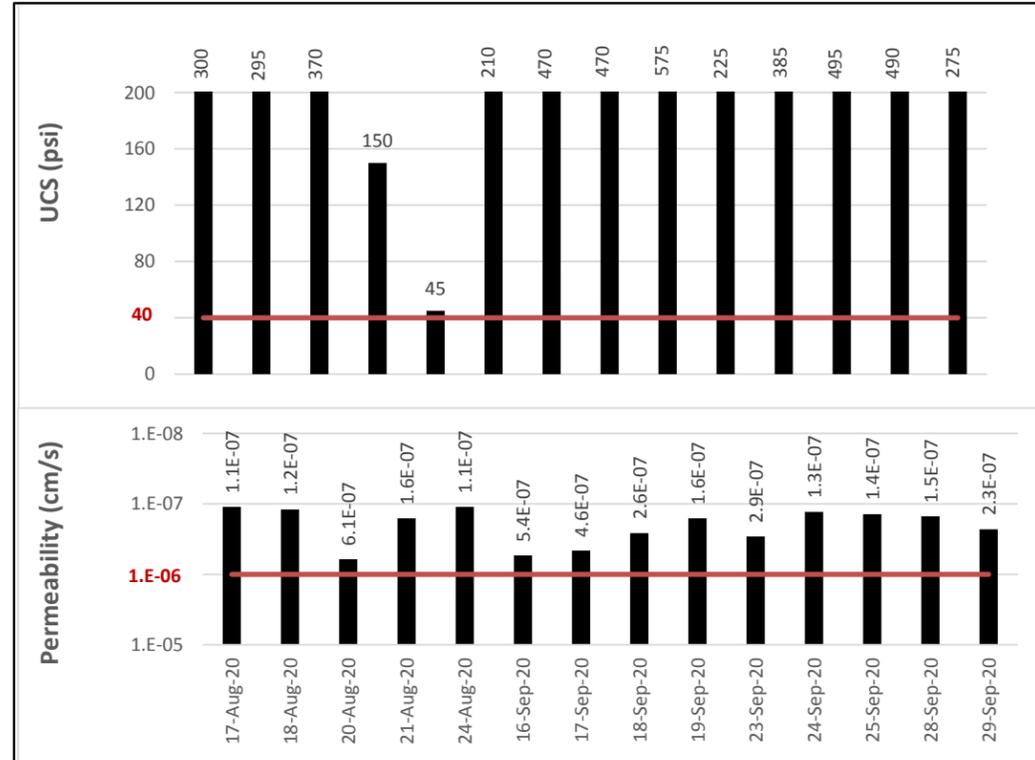
In Situ Solidification/Stabilization Results Dashboard, NT-51 and Tent 5-2 (Leaching Batch 10)

Quanta Resources Corporation Superfund Site, OU1

Data through: 3/3/2021

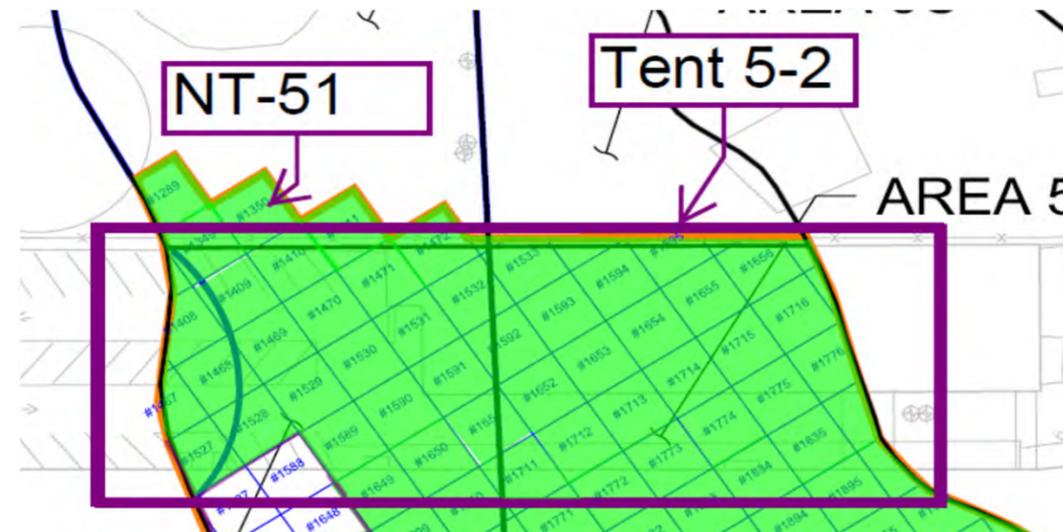
Area	Date	Volume (CY)	Mix Design		UCS (≥40 psi)	Permeability (≤1E-6 cm/s)
			Cement	Slag		
NT-51	17-Aug-20	273	4%	6%	300	1.1E-07
NT-51	18-Aug-20	169	4%	6%	295	1.2E-07
NT-51	20-Aug-20	314	4%	6%	370	6.1E-07
NT-51	21-Aug-20	198	4%	6%	150	1.6E-07
NT-51	24-Aug-20	267	4%	6%	45	1.1E-07
5-2	16-Sep-20	224	2%	6%	210	5.4E-07
5-2	17-Sep-20	170	2%	6%	470	4.6E-07
5-2	18-Sep-20	281	2%	6%	470	2.6E-07
5-2	19-Sep-20	171	2%	6%	575	1.6E-07
5-2	23-Sep-20	407	2%	6%	225	2.9E-07
5-2	24-Sep-20	327	2%	6%	385	1.3E-07
5-2	25-Sep-20	278	2%	6%	495	1.4E-07
5-2	28-Sep-20	300	2%	6%	490	1.5E-07
5-2	29-Sep-20	173	2%	6%	275	2.3E-07

Total CY Mixed: **3551**



Leaching Reduction by Constituent	
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
Constituents Passing	

Held Sample, See Tent 5-1 Dashboard for Batch 7 Results



Note: Mixed areas awaiting EPA inspection indicated with blue shading. Green cells are mixed and have been inspected.

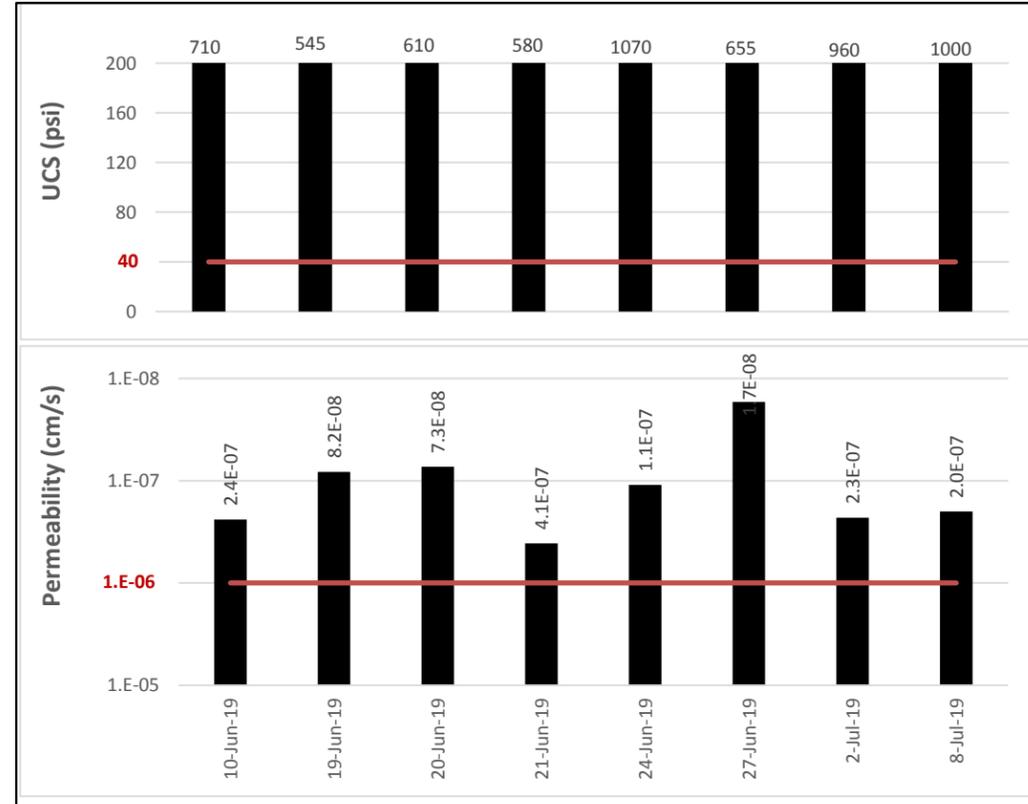
In Situ Solidification/Stabilization Results Dashboard, Tent 3-1 (Leaching Batch 5)

Quanta Resources Corporation Superfund Site, OU1

Data through: 3/3/2021

Tent	Date	Volume (CY)	Mix Design		UCS (≥40 psi)	Permeability (≤1E-6 cm/s)
			Cement	Slag		
3-1	10-Jun-19	288	2%	6%	710	2.40E-07
3-1	19-Jun-19	167	2%	6%	545	8.20E-08
3-1	20-Jun-19	166	2%	6%	610	7.30E-08
3-1	21-Jun-19	280	2%	6%	580	4.10E-07
3-1	24-Jun-19	147	2%	6%	1070	1.10E-07
3-1	27-Jun-19	343	2%	6%	655	1.70E-08
3-1	2-Jul-19	343	2%	6%	960	2.30E-07
3-1	8-Jul-19	341	2%	6%	1000	2.00E-07

Total CY Mixed: 2076



Leaching Reduction by Constituent		
Site Constituent	8-Jul-19	
1 Arsenic	97%	
2 Benzene	99%	
3 Toluene	99%	
4 Ethylbenzene	99%	
5 Total Xylenes	99%	
6 Naphthalene	96%	
7 Acenaphthene	88%	
8 Acenaphthylene	94%	
9 Anthracene	NE	<1% tPAH
10 Benzo(a)anthracene	NE	<1% tPAH
11 Benzo(a)pyrene	NE	<1% tPAH
12 Benzo(b)fluoranthene	NE	<1% tPAH
13 Benzo(g,h,i)perylene	NE	Not detected
14 Benzo(k)fluoranthene	NE	<1% tPAH
15 Chrysene	NE	<1% tPAH
16 Dibenz(a,h)anthracene	NE	Not detected
17 Fluoranthene	NE	<1% tPAH
18 Fluorene	83%	
19 Indeno(1,2,3-cd)pyrene	NE	Not detected
20 Phenanthrene	53%	
21 Pyrene	NE	<1% tPAH
Constituents Passing	7 of 10	

Leaching calculations for each constituent provided in the ISS Memo for this Parcel. Boxed sample dates on table above indicate collection of a leaching sample. Constituents with 90+% reduction are shaded green. NE - Not Evaluated; constituent not detected in baseline sample or <1% of tPAH.



Note: Mixed areas awaiting EPA inspection indicated with blue shading. Green cells are mixed and have been inspected.

In Situ Solidification/Stabilization Results Dashboard, Tent 3-2 (Leaching Batch 5)

Quanta Resources Corporation Superfund Site, OU1

Data through: 3/3/2021

Tent	Date	Volume (CY)	Mix Design		UCS (≥40 psi)	Permeability (≤1E-6 cm/s)
			Cement	Slag		
3-2	10-Sep-19	179	2%	6%	470	2.50E-07
3-2	11-Sep-19	339	2%	6%	65	2.30E-07
3-2	12-Sep-19	293	2%	6%	550	3.40E-07
3-2	13-Sep-19	182	2%	6%	490	5.70E-08
3-2	17-Sep-19	343	2%	6%	465	2.10E-07
3-2	23-Sep-19	342	2%	6%	330	2.00E-07
3-2	24-Sep-19	329	2%	6%	405	1.20E-07
3-2	25-Sep-19	328	2%	6%	690	2.30E-07
3-2	27-Sep-19	414	2%	6%	485	1.60E-07
3-2	30-Sep-19	304	2%	6%	830	2.90E-07
3-2	1-Oct-19	348	2%	6%	615	2.90E-07
3-2	2-Oct-19	355	2%	6%	775	2.40E-07
3-2	9-Oct-19	306	2%	6%	270	2.70E-07
3-2	11-Oct-19	320	2%	6%	80	2.60E-07
3-2	14-Oct-19	71	2%	6%	200	2.90E-07
3-2	17-Oct-19	301	2%	6%	145	9.00E-07
3-2	22-Oct-19	320	2%	6%	440	2.30E-07
3-2	29-Oct-19	273	2%	6%	130	2.90E-07
3-2	7-Nov-19	261	2%	6%	560	3.60E-07
3-2	12-Nov-19	327	2%	6%	510	2.10E-07
3-2	13-Nov-19	104	2%	6%	530	3.00E-07
3-2	15-Nov-19	203	2%	6%	205	3.90E-07
3-2	21-Nov-19	319	2%	6%	335	4.30E-07
3-2	22-Nov-19	90	2%	6%	615	6.30E-07
3-2	26-Nov-19	317	2%	6%	115	2.20E-07

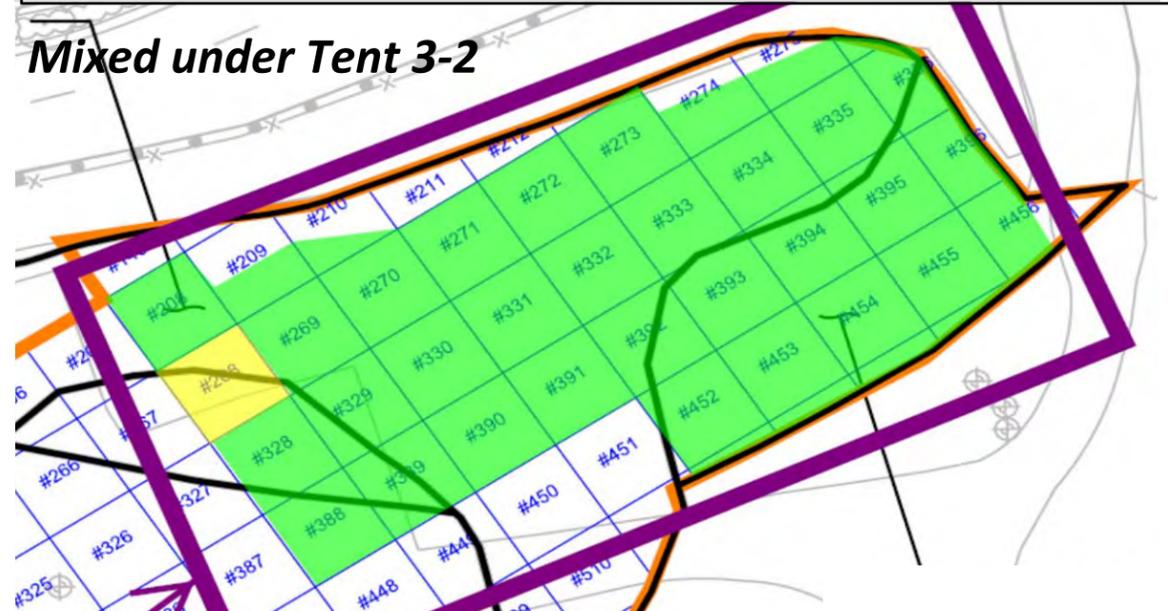
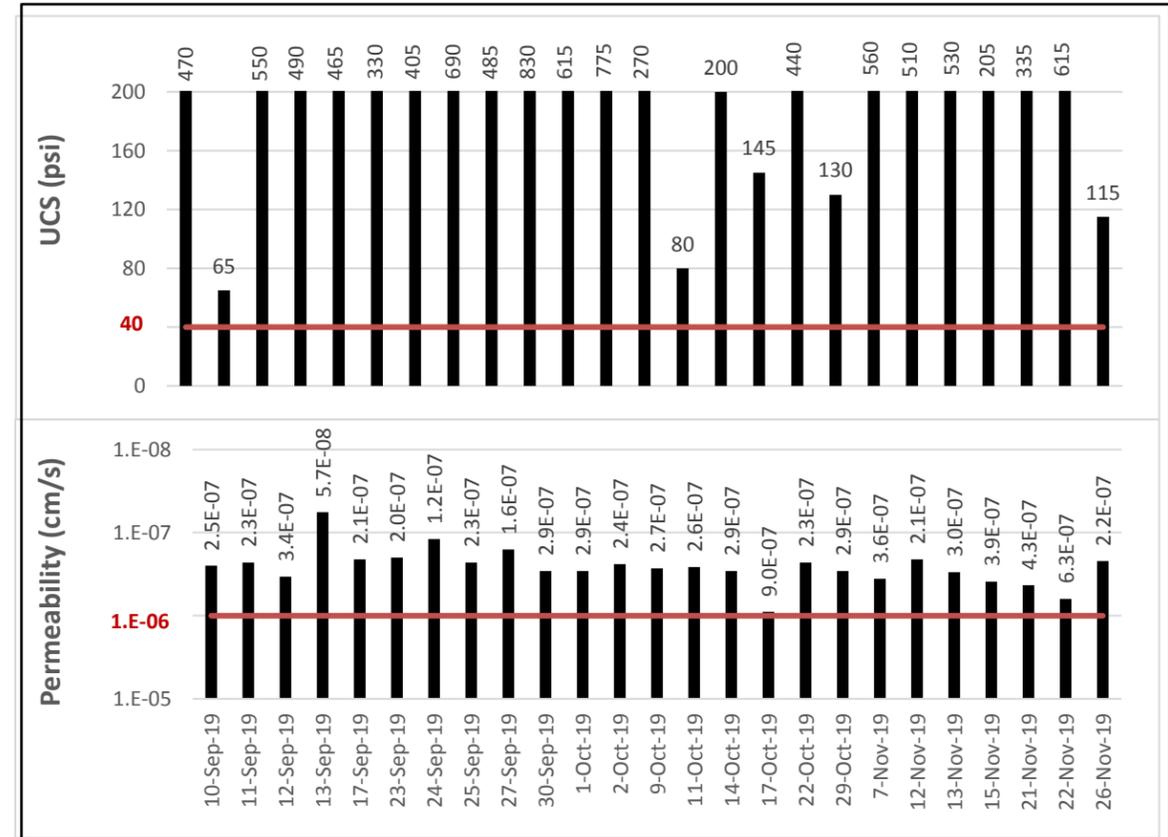
Total CY Mixed: 6968

Leaching Reduction by Constituent

Site Constituent	11-Oct-19	Site Constituent	11-Oct-19
1 Arsenic	98%	12 Benzo(b)fluoranthene	NE
2 Benzene	80%	13 Benzo(g,h,i)perylene	NE
3 Toluene	82%	14 Benzo(k)fluoranthene	NE
4 Ethylbenzene	80%	15 Benzo(a)fluoranthene	NE
5 Total Xylenes	78%	16 Benzo(a)anthracene	0%
6 Naphthalene		17 Indeno(1,2,3-cd)pyrene	1%
7 Acenaphthene		18 Phenanthrene	NE
8 Acenaphthylene		19 Anthracene	0%
9 Anthracene		20 Pyrene	0%
10 Benzo(a)anthracene	NE		
11 Benzo(a)pyrene	NE		

Constituents Passing: N/A Extra Sample

Extra Sample; See Tent 3-1 Dashboard for Batch 5 Leaching Results



Note: Mixed areas awaiting EPA inspection indicated with blue shading. Green cells are mixed and have been inspected. Yellow cells were previously mixed during the ISS Field Demonstration.

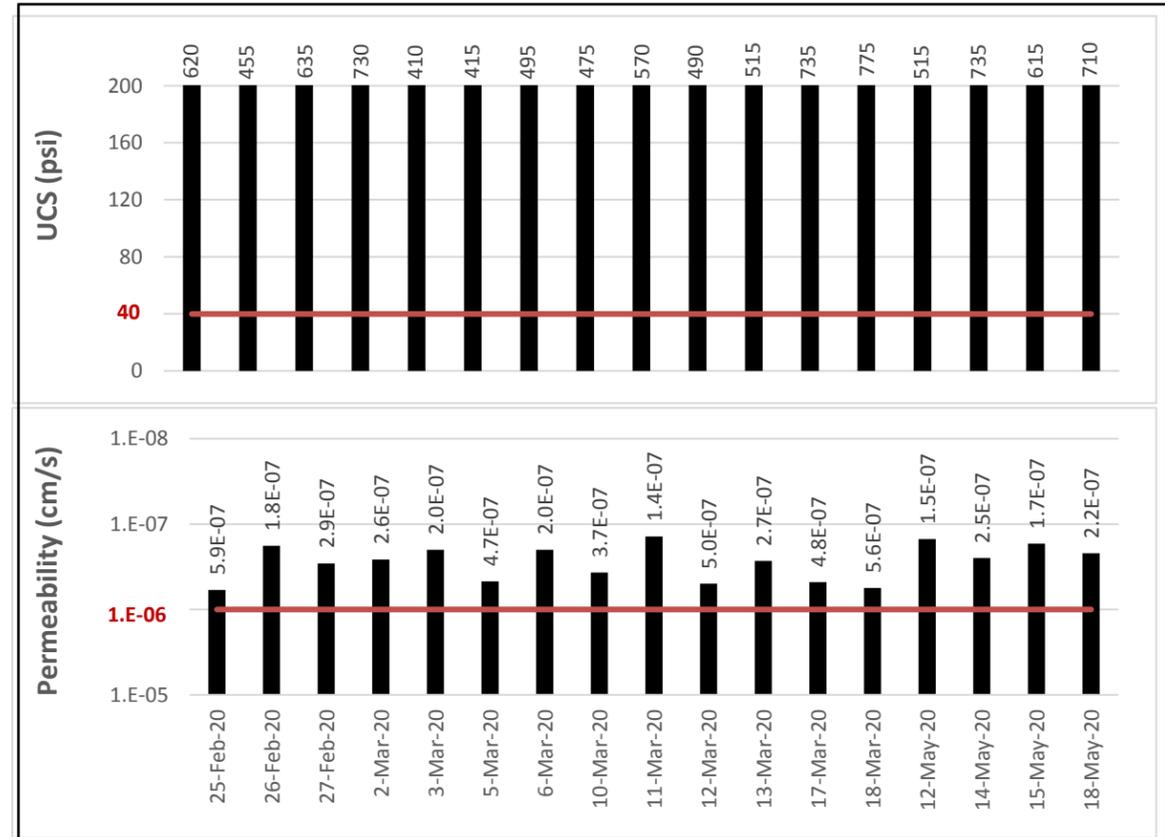
In Situ Solidification/Stabilization Results Dashboard, Tents 3-3 and 3-4 (Leaching Batch 5)

Quanta Resources Corporation Superfund Site, OU1

Data through: 3/3/2021

Tent	Date	Volume (CY)	Mix Design		UCS (≥40 psi)	Permeability (≤1E-6 cm/s)
			Cement	Slag		
3-3	25-Feb-20	313	2%	6%	620	5.90E-07
3-3	26-Feb-20	327	2%	6%	455	1.80E-07
3-3	27-Feb-20	173	2%	6%	635	2.90E-07
3-3	2-Mar-20	173	2%	6%	730	2.60E-07
3-3	3-Mar-20	210	2%	6%	410	2.00E-07
3-3	5-Mar-20	173	2%	6%	415	4.70E-07
3-3	6-Mar-20	36	2%	6%	495	2.00E-07
3-3	10-Mar-20	323	2%	6%	475	3.70E-07
3-3	11-Mar-20	173	2%	6%	570	1.40E-07
3-3	12-Mar-20	152	2%	6%	490	5.00E-07
3-3	13-Mar-20	173	2%	6%	515	2.70E-07
3-3	17-Mar-20	327	2%	6%	735	4.80E-07
3-3	18-Mar-20	125	2%	6%	775	5.60E-07
3-4	12-May-20	686	2%	6%	515	1.50E-07
3-4	14-May-20	610	2%	6%	735	2.50E-07
3-4	15-May-20	531	2%	6%	615	1.70E-07
3-4	18-May-20	347	2%	6%	710	2.20E-07

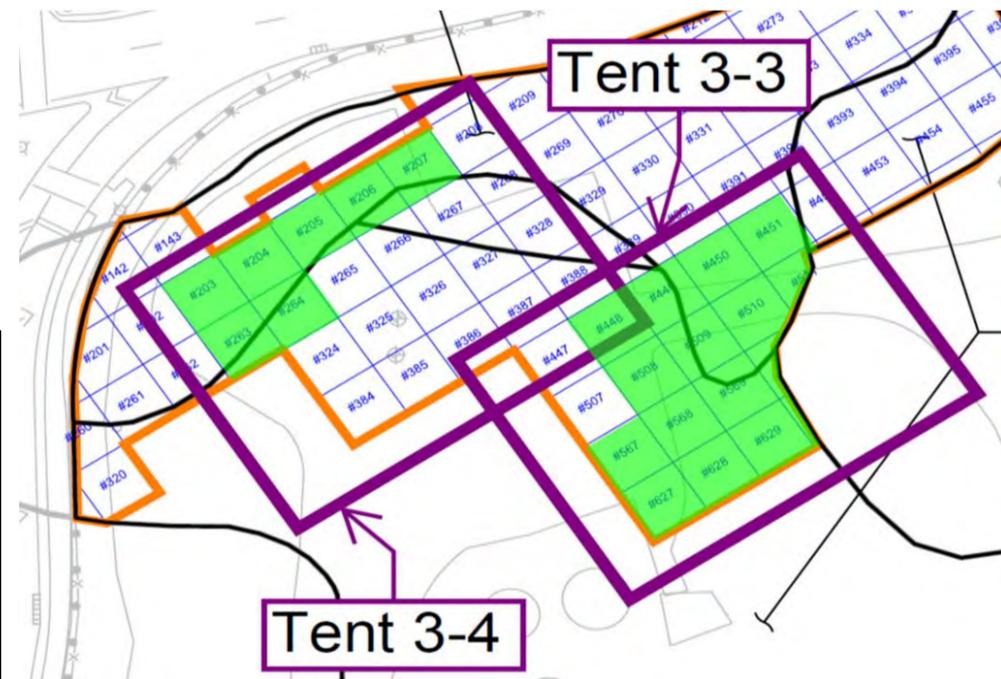
Total CY Mixed: 4855



Leaching Sample on February 27 Held; See Tent 3-1 Dashboard for Batch 5 Leaching

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

Constituents Passing



Note: Mixed areas awaiting EPA inspection indicated with blue shading. Green cells are mixed and have been inspected. Yellow cells were previously mixed during the ISS Field Demonstration.

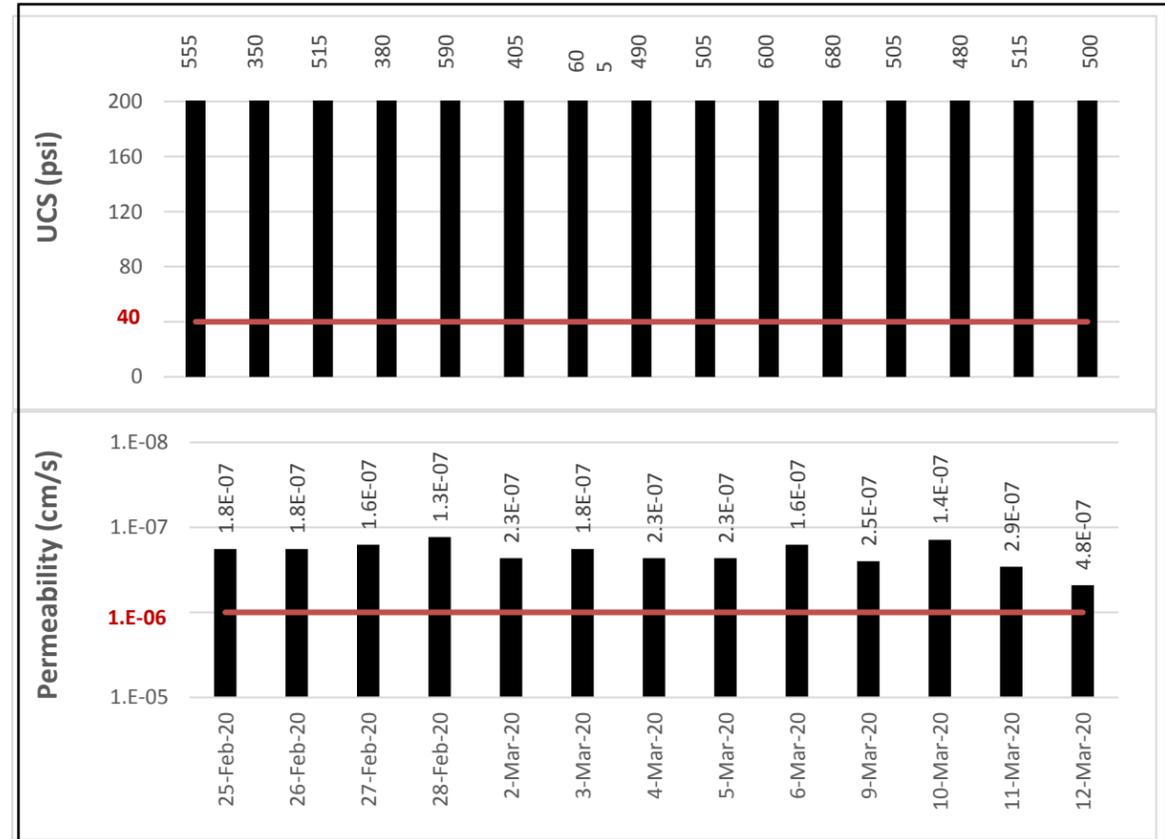
In Situ Solidification/Stabilization Results Dashboard, NT-31, 32, 33 (Leaching Batch 5)

Quanta Resources Corporation Superfund Site, OU1

Data through: 3/3/2021

Area	Date	Volume (CY)	Mix Design		UCS (≥40 psi)	Permeability (≤1E-6 cm/s)
			Cement	Slag		
NT-33	25-Feb-20	39	2%	6%	555	1.80E-07
NT-32	26-Feb-20	131	2%	6%	350	1.80E-07
NT-32	27-Feb-20	269	2%	6%	515	1.60E-07
NT-32	28-Feb-20	258	2%	6%	380	1.30E-07
NT-32	2-Mar-20	291	2%	6%	590	2.30E-07
NT-32	3-Mar-20	66	2%	6%	405	1.80E-07
NT-31	4-Mar-20	367	2%	6%	605	2.30E-07
NT-31	5-Mar-20	166	2%	6%	490	2.30E-07
NT-31	6-Mar-20	167	2%	6%	505	1.60E-07
NT-31	9-Mar-20	151	2%	6%	600	2.50E-07
NT-31	10-Mar-20	333	2%	6%	680	1.40E-07
NT-31	11-Mar-20	167	2%	6%	505	2.90E-07
NT-31	12-Mar-20	303	2%	6%	480	4.80E-07
NT-31	17-Mar-20	173	2%	6%	515	9.10E-07
NT-31	24-Mar-20	333	2%	6%	500	2.10E-07

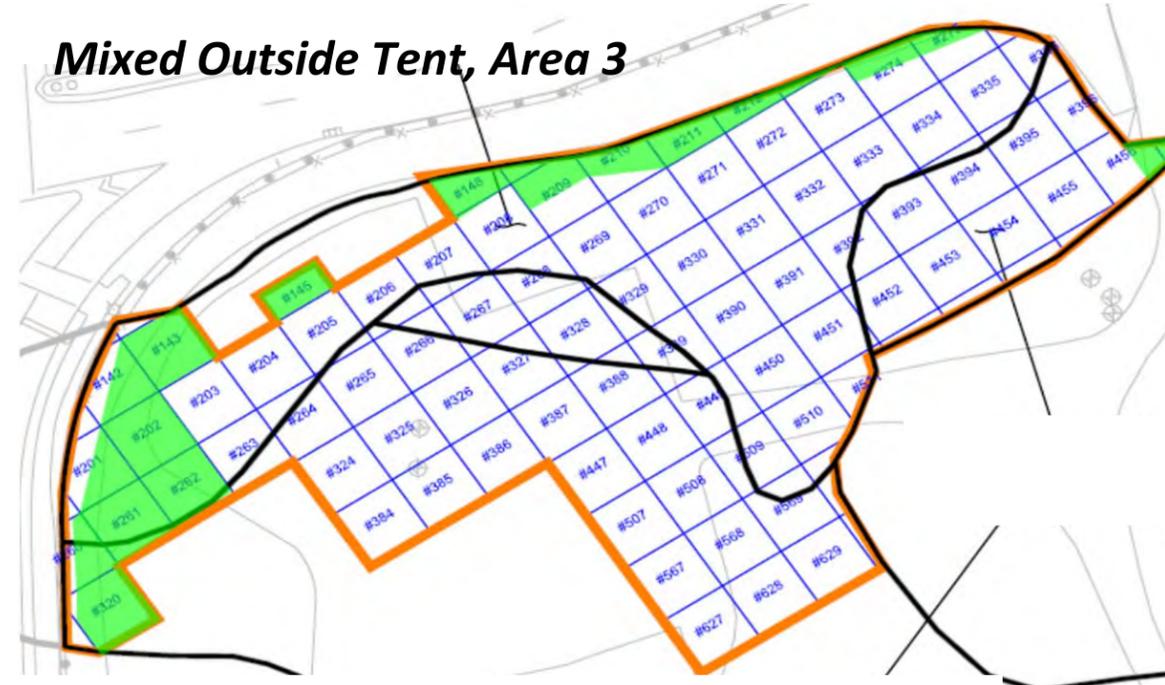
Total CY Mixed: **3215**



Leaching Reduction by Constituent	
Site Constituent	10-Mar-20
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
Constituents Passing	

Sample on March 10 Held; See Tent 3-1 Dashboard for Batch 5 Leaching Results

Mixed Outside Tent, Area 3



Note: Mixed areas awaiting EPA inspection indicated with blue shading. Green cells are mixed and have been inspected. Yellow cells were previously mixed during the ISS Field Demonstration.

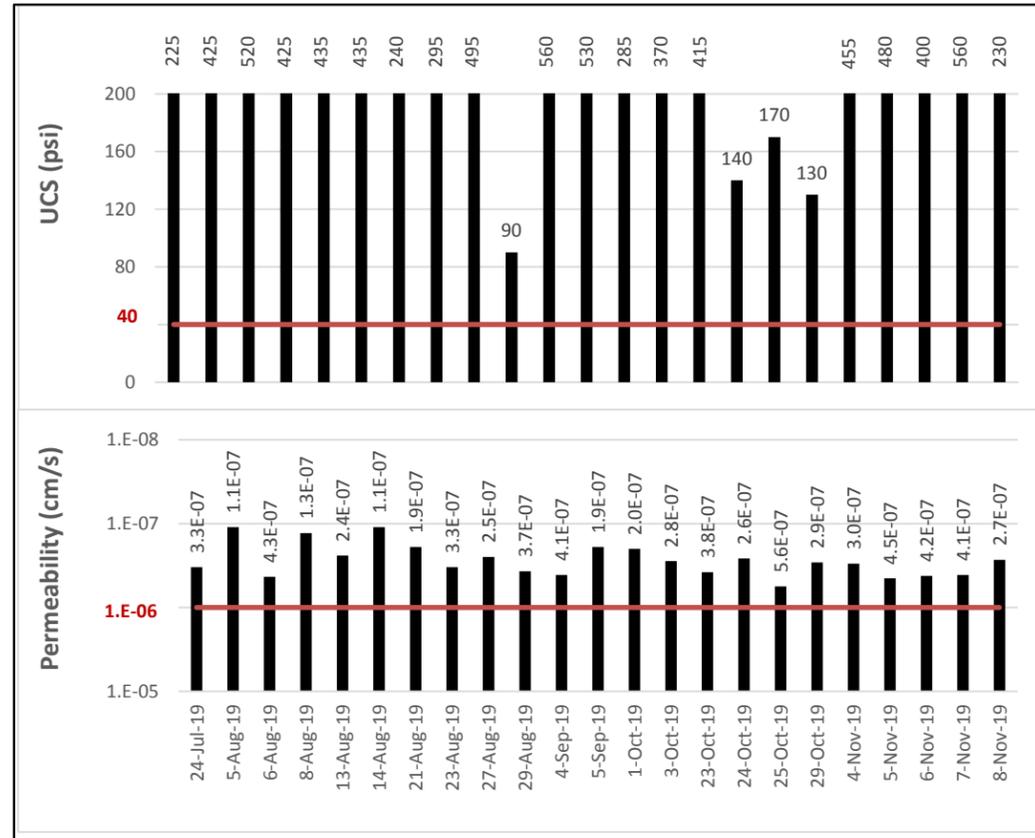
In Situ Solidification/Stabilization Results Dashboard, Tent 7-1 (Leaching Batch 6)

Quanta Resources Corporation Superfund Site, OU1

Data through: 3/3/2021

Tent	Date	Volume (CY)	Mix Design		UCS (≥40 psi)	Permeability (≤1E-6 cm/s)
			Cement	Slag		
7-1	24-Jul-19	536	2%	6%	225	3.3E-07
7-1	5-Aug-19	494	2%	6%	425	1.1E-07
7-1	6-Aug-19	488	2%	6%	520	4.3E-07
7-1	8-Aug-19	468	2%	6%	425	1.3E-07
7-1	13-Aug-19	502	2%	6%	435	2.4E-07
7-1	14-Aug-19	524	2%	6%	435	1.1E-07
7-1	21-Aug-19	354	2%	6%	240	1.9E-07
7-1	23-Aug-19	323	2%	6%	295	3.3E-07
7-1	27-Aug-19	291	2%	6%	495	2.5E-07
7-1	29-Aug-19	298	2%	6%	90	3.7E-07
7-1	4-Sep-19	335	2%	6%	560	4.1E-07
7-1	5-Sep-19	282	2%	6%	530	1.9E-07
7-1	1-Oct-19	457	2%	6%	285	2.0E-07
7-1	3-Oct-19	246	2%	6%	370	2.8E-07
7-1	23-Oct-19	596	2%	6%	415	3.8E-07
7-1	24-Oct-19	291	2%	6%	140	2.6E-07
7-1	25-Oct-19	308	2%	6%	170	5.6E-07
7-1	29-Oct-19	296	2%	6%	130	2.9E-07
7-1	4-Nov-19	260	2%	6%	455	3.0E-07
7-1	5-Nov-19	268	2%	6%	480	4.5E-07
7-1	6-Nov-19	159	2%	6%	400	4.2E-07
7-1	7-Nov-19	262	2%	6%	560	4.1E-07
7-1	8-Nov-19	276	2%	6%	230	2.7E-07

Total CY Mixed: **8311**



Leaching Reduction by Constituent		8-Aug-19	23-Oct-19
1	Arsenic	100%	HELD SAMPLE; See August 8 results for Batch 6
2	Benzene	100%	
3	Toluene	100%	
4	Ethylbenzene	98%	
5	Total Xylenes	97%	
6	Naphthalene	99%	
7	Acenaphthene	NE; <1% tPAH	
8	Acenaphthylene	NE; <1% tPAH	
9	Anthracene	NE; <1% tPAH	
10	Benzo(a)anthracene	NE; <1% tPAH	
11	Benzo(a)pyrene	NE; <1% tPAH	
12	Benzo(b)fluoranthene	NE; <1% tPAH	
13	Benzo(g,h,i)perylene	NE; not detected	
14	Benzo(k)fluoranthene	NE; not detected	
15	Chrysene	NE; <1% tPAH	
16	Dibenz(a,h)anthracene	NE; not detected	
17	Fluoranthene	NE; <1% tPAH	
18	Fluorene	NE; <1% tPAH	
19	Indeno(1,2,3-cd)pyrene	NE; not detected	
20	Phenanthrene	NE; <1% tPAH	
21	Pyrene	NE; <1% tPAH	
Constituents Passing		6 of 6	

Leaching calculations for each constituent provided in Attachment 5 of the ISS Memo for this Parcel. Boxed sample dates on table above indicate collection of a leaching sample. Constituents with 90+% reduction are shaded green. NE - Not Evaluated; constituent not detected in baseline sample or comprises less than 1% of total PAHs



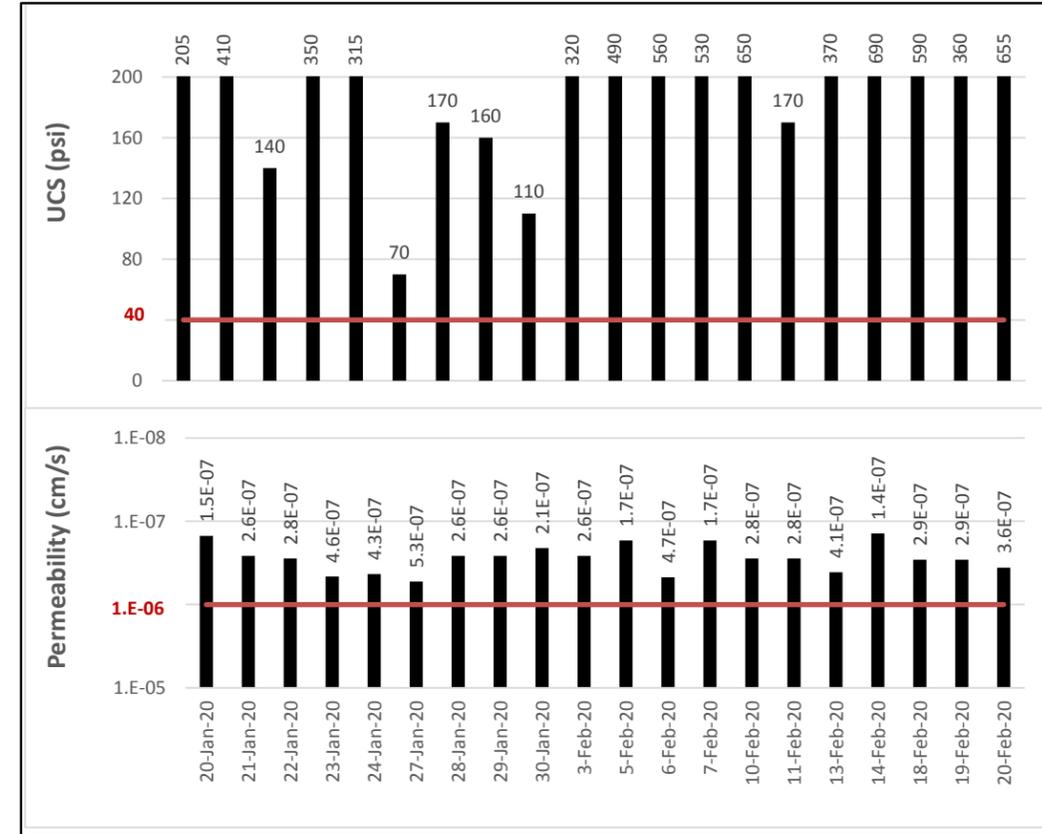
In Situ Solidification/Stabilization Results Dashboard, Tent 7-2 (Leaching Batch 6)

Quanta Resources Corporation Superfund Site, OU1

Data through: 3/3/2021

Tent	Date	Volume (CY)	Mix Design		UCS (≥40 psi)	Permeability (≤1E-6 cm/s)
			Cement	Slag		
7-2	20-Jan-20	312	4%	6%	205	1.5E-07
7-2	21-Jan-20	472	4%	6%	410	2.6E-07
7-2	22-Jan-20	564	4%	6%	140	2.8E-07
7-2	23-Jan-20	394	4%	6%	350	4.6E-07
7-2	24-Jan-20	538	4%	6%	315	4.3E-07
7-2	27-Jan-20	256	4%	6%	70	5.3E-07
7-2	28-Jan-20	295	4%	6%	170	2.6E-07
7-2	29-Jan-20	242	4%	6%	160	2.6E-07
7-2	30-Jan-20	329	4%	6%	110	2.1E-07
7-2	3-Feb-20	252	4%	6%	320	2.6E-07
7-2	5-Feb-20	198	4%	6%	490	1.7E-07
7-2	6-Feb-20	247	4%	6%	560	4.7E-07
7-2	7-Feb-20	249	4%	6%	530	1.7E-07
7-2	10-Feb-20	258	4%	6%	650	2.8E-07
7-2	11-Feb-20	239	4%	6%	170	2.8E-07
7-2	13-Feb-20	198	4%	6%	370	4.1E-07
7-2	14-Feb-20	214	4%	6%	690	1.4E-07
7-2	18-Feb-20	204	4%	6%	590	2.9E-07
7-2	19-Feb-20	237	4%	6%	360	2.9E-07
7-2	20-Feb-20	185	4%	6%	655	3.6E-07

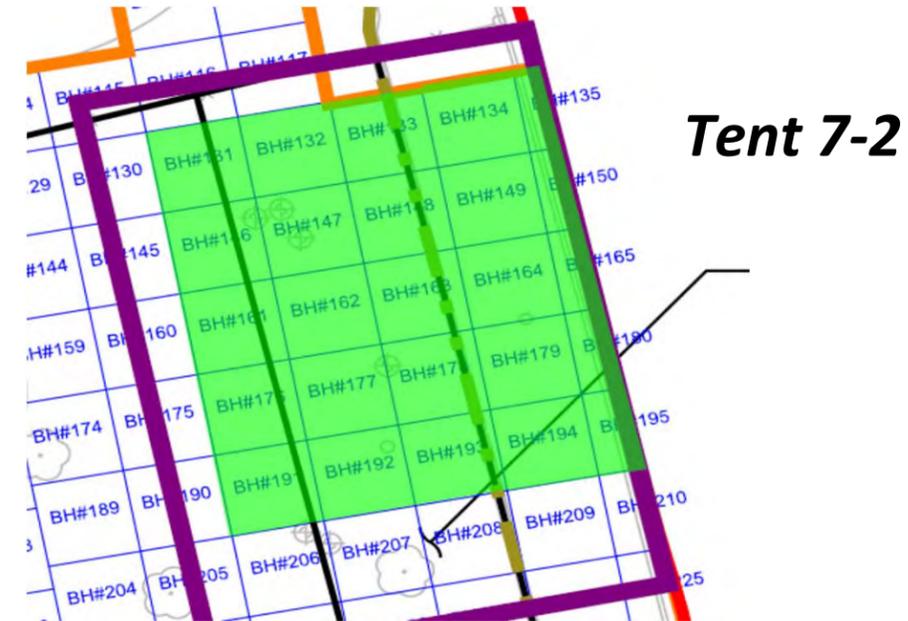
Total CY Mixed: **5882**



Leaching Reduction by Constituent	30-Jan-20
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	

Held Sample, See Tent 7-1 Dashboard for Batch 6 Results

Constituents Passing



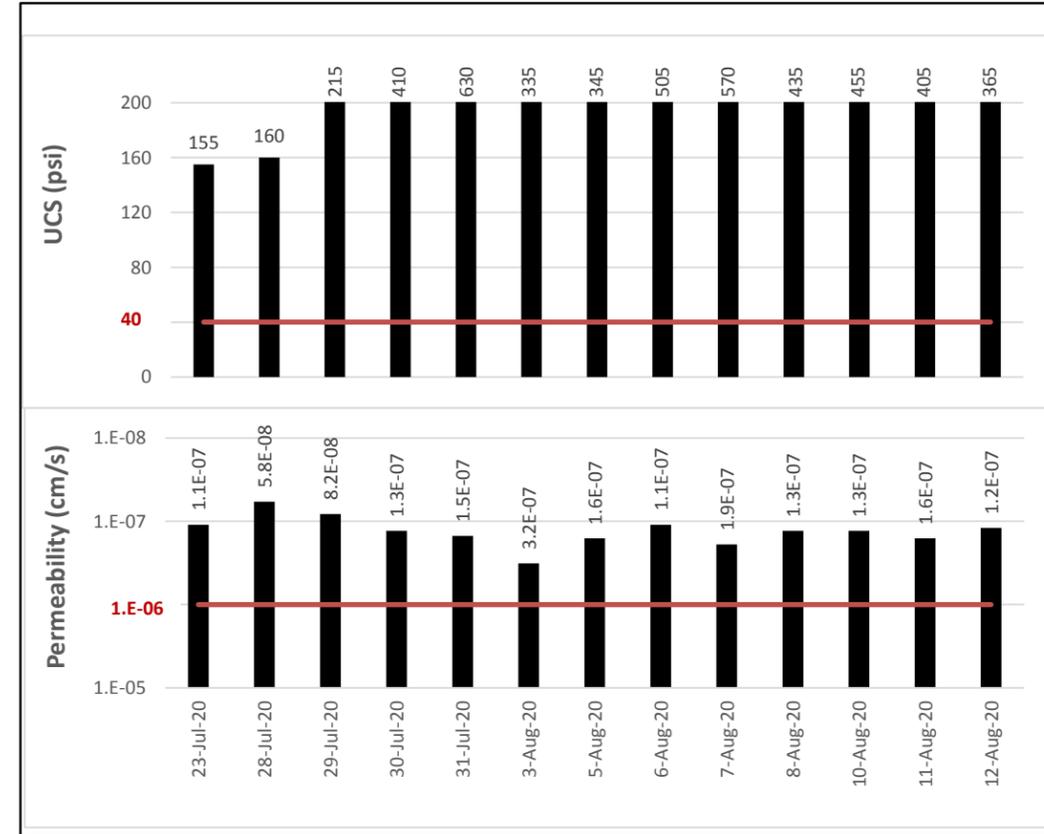
Note: Mixed areas awaiting EPA inspection indicated with blue shading. Green cells are mixed and have been inspected.

In Situ Solidification/Stabilization Results Dashboard, Tent 7-3 (Leaching Batch 6)

Quanta Resources Corporation Superfund Site, OU1

Data through: 3/3/2021

Tent	Date	Volume (CY)	Mix Design		UCS (≥40 psi)	Permeability (≤1E-6 cm/s)
			Cement	Slag		
7-3	23-Jul-20	182	2%	6%	155	1.1E-07
7-3	28-Jul-20	183	2%	6%	160	5.8E-08
7-3	29-Jul-20	236	2%	6%	215	8.2E-08
7-3	30-Jul-20	180	2%	6%	410	1.3E-07
7-3	31-Jul-20	253	2%	6%	630	1.5E-07
7-3	3-Aug-20	225	2%	6%	335	3.2E-07
7-3	5-Aug-20	221	2%	6%	345	1.6E-07
7-3	6-Aug-20	341	2%	6%	505	1.1E-07
7-3	7-Aug-20	429	2%	6%	570	1.9E-07
7-3	8-Aug-20	204	2%	6%	435	1.3E-07
7-3	10-Aug-20	417	2%	6%	455	1.3E-07
7-3	11-Aug-20	534	2%	6%	405	1.6E-07
7-3	12-Aug-20	171	2%	6%	365	1.2E-07

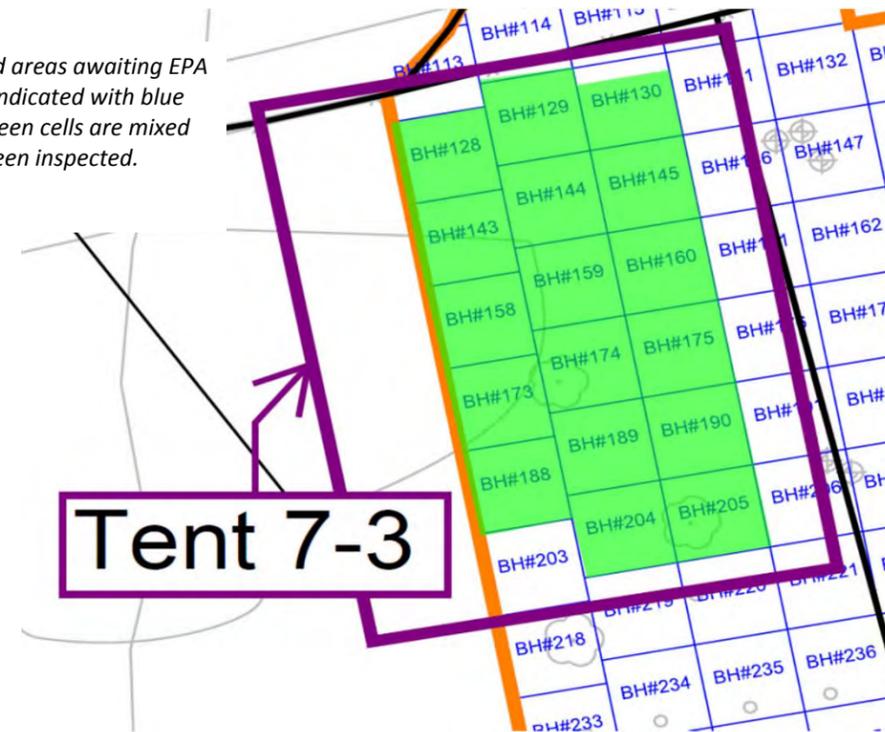


Total CY Mixed: **3575**

Leaching Reduction by Constituent	
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
Constituents Passing	

Held Sample, See Tent 7-1 Dashboard for Batch 6 Results

Note: Mixed areas awaiting EPA inspection indicated with blue shading. Green cells are mixed and have been inspected.



In Situ Solidification/Stabilization Results Dashboard, NT-61 (Leaching Batch 7)

Quanta Resources Corporation Superfund Site, OU1

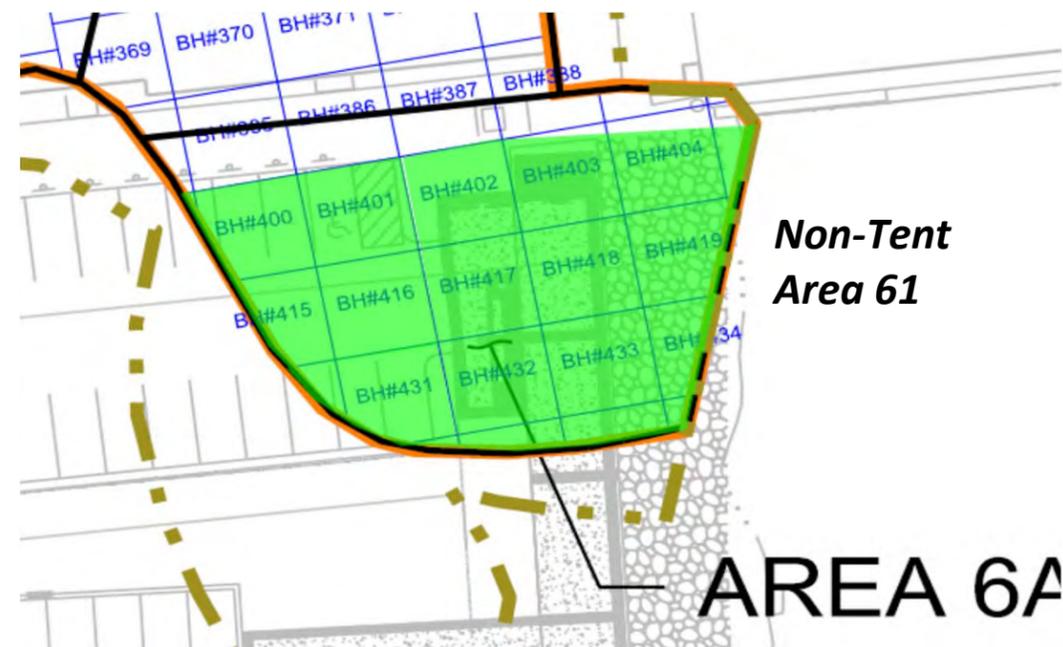
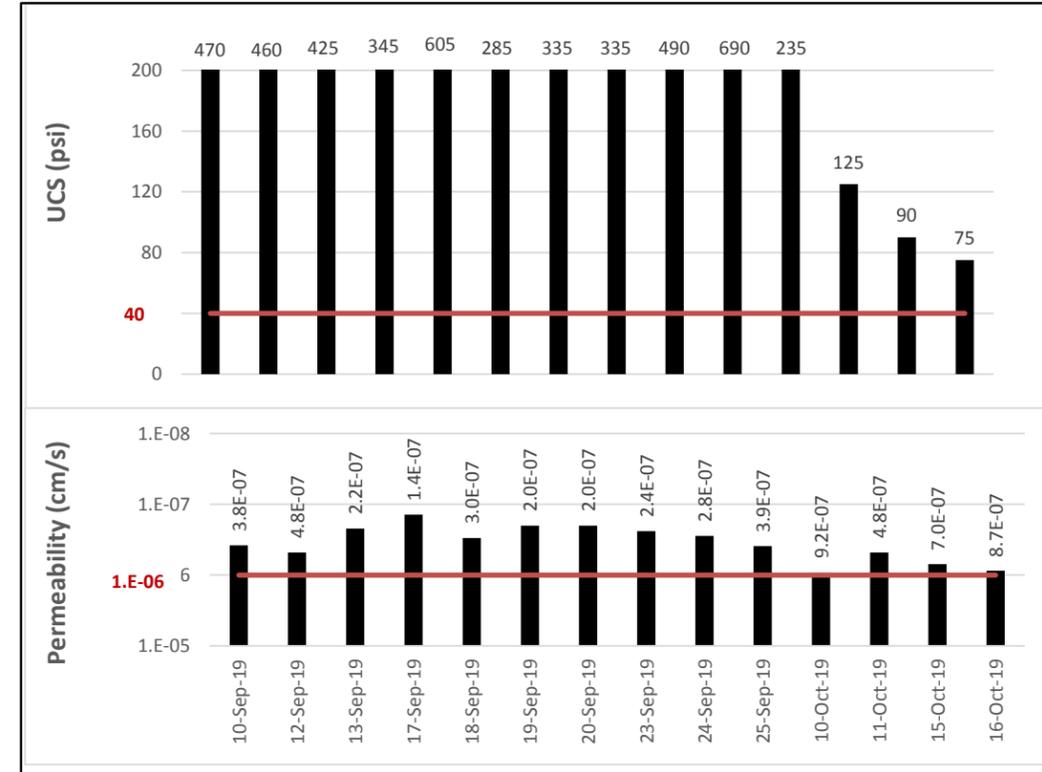
Data through: 3/3/2021

Area	Date	Volume (CY)	Mix Design		UCS (≥40 psi)	Permeability (≤1E-6 cm/s)
			Cement	Slag		
NT-61	10-Sep-19	237	4%	6%	470	3.8E-07
NT-61	12-Sep-19	247	4%	6%	460	4.8E-07
NT-61	13-Sep-19	220	4%	6%	425	2.2E-07
NT-61	17-Sep-19	292	4%	6%	345	1.4E-07
NT-61	18-Sep-19	266	4%	6%	605	3.0E-07
NT-61	19-Sep-19	354	4%	6%	285	2.0E-07
NT-61	20-Sep-19	239	4%	6%	335	2.0E-07
NT-61	23-Sep-19	244	4%	6%	335	2.4E-07
NT-61	24-Sep-19	221	4%	6%	490	2.8E-07
NT-61	25-Sep-19	226	4%	6%	690	3.9E-07
NT-61	10-Oct-19	225	4%	6%	235	9.2E-07
NT-61	11-Oct-19	210	4%	6%	125	4.8E-07
NT-61	15-Oct-19	172	4%	6%	90	7.0E-07
NT-61	16-Oct-19	118	4%	6%	75	8.7E-07

Total CY Mixed: **3271**

Leaching Reduction by Constituent		
Site Constituent	13-Sep-19	
1 Arsenic	100%	
2 Benzene	NE; not detected	
3 Toluene	NE; not detected	
4 Ethylbenzene	NE; not detected	
5 Total Xylenes	NE; not detected	
6 Naphthalene	NE; not detected	
7 Acenaphthene	NE; not detected	
8 Acenaphthylene	NE; not detected	
9 Anthracene	NE; not detected	
10 Benzo(a)anthracene	NE; not detected	
11 Benzo(a)pyrene	NE; not detected	
12 Benzo(b)fluoranthene	NE; not detected	
13 Benzo(g,h,i)perylene	NE; not detected	
14 Benzo(k)fluoranthene	NE; not detected	
15 Chrysene	NE; not detected	
16 Dibenz(a,h)anthracene	NE; not detected	
17 Fluoranthene	NE; not detected	
18 Fluorene	0%	Low baseline; no reduction
19 Indeno(1,2,3-cd)pyrene	NE; not detected	
20 Phenanthrene	0%	Low baseline; no reduction
21 Pyrene	0%	Low baseline; no reduction
Constituents Passing	1 of 4	

Leaching calculations for each constituent provided in the ISS Memo for this Parcel. Boxed sample dates on table above indicate collection of a leaching sample. Constituents with 90+% reduction are shaded green. NE - Not Evaluated; constituent not detected in baseline sample or <1% of tPAH.



Note: Mixed areas awaiting EPA inspection indicated with blue shading. Green cells are mixed and have been inspected.

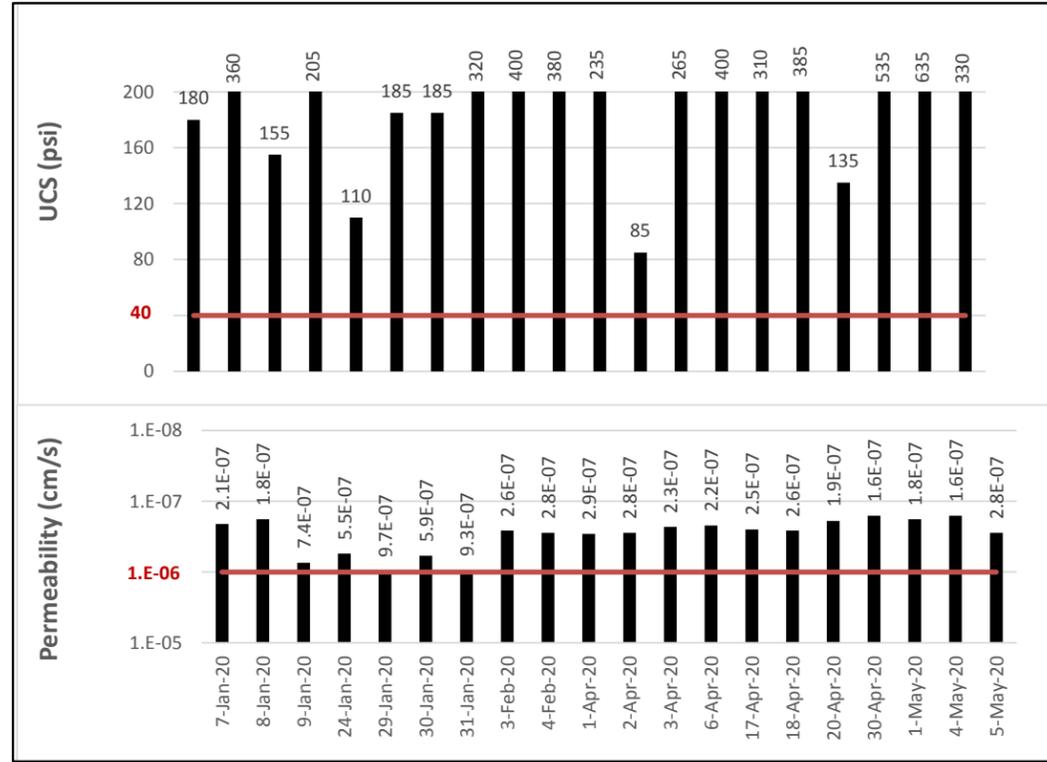
In Situ Solidification/Stabilization Results Dashboard, NT-62/63 (Leaching Batch 7)

Quanta Resources Corporation Superfund Site, OU1

Data through: 3/3/2021

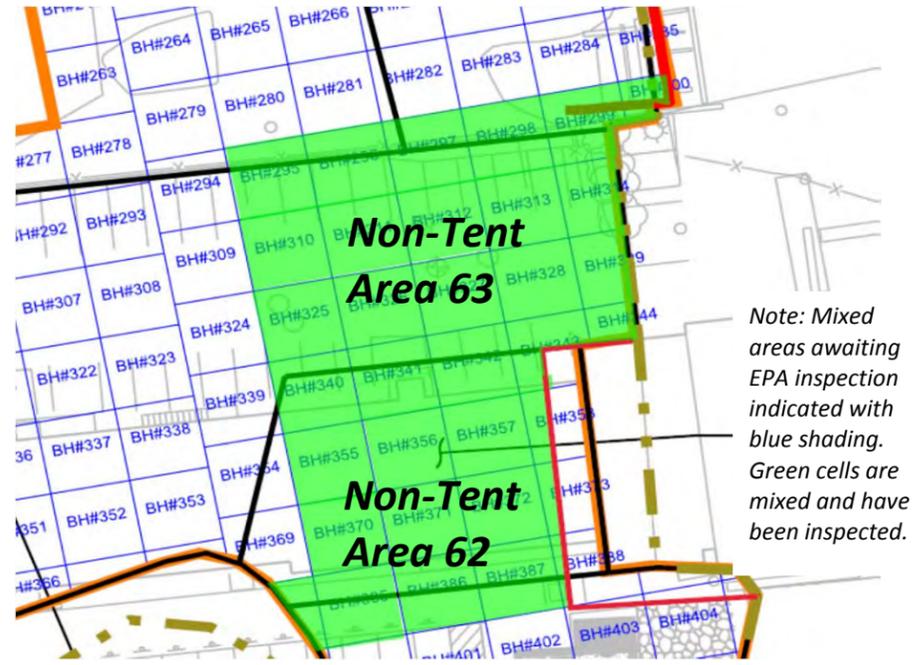
Area	Date	Volume (CY)	Mix Design		UCS (≥40 psi)	Permeability (≤1E-6 cm/s)
			Cement	Slag		
NT-62	7-Jan-20	236	4%	6%	180	2.1E-07
NT-62	8-Jan-20	188	4%	6%	360	1.8E-07
NT-62	9-Jan-20	141	4%	6%	155	7.4E-07
NT-62	24-Jan-20	271	4%	6%	205	5.5E-07
NT-62	29-Jan-20	206	4%	6%	110	9.7E-07
NT-62	30-Jan-20	195	4%	6%	185	5.9E-07
NT-62	31-Jan-20	180	4%	6%	185	9.3E-07
NT-62	3-Feb-20	235	4%	6%	320	2.6E-07
NT-62	4-Feb-20	170	4%	6%	400	2.8E-07
NT-63	1-Apr-20	225	4%	6%	380	2.9E-07
NT-63	2-Apr-20	187	4%	6%	235	2.8E-07
NT-63	3-Apr-20	253	4%	6%	85	2.3E-07
NT-63	6-Apr-20	333	4%	6%	265	2.2E-07
NT-63	17-Apr-20	319	4%	6%	400	2.5E-07
NT-63	18-Apr-20	230	4%	6%	310	2.6E-07
NT-63	20-Apr-20	222	4%	6%	385	1.9E-07
NT-63	30-Apr-20	90	4%	6%	135	1.6E-07
NT-63	1-May-20	296	4%	6%	535	1.8E-07
NT-63	4-May-20	189	4%	6%	635	1.6E-07
NT-63	5-May-20	374	4%	6%	330	2.8E-07

Total CY Mixed: **4541**



Leaching Reduction by Constituent					
Site Constituent			Site Constituent		
1	Arsenic	99%	12	Benzo(b)fluoranthene	NE; <1% tPAH
2	Benzene	99%	13	Benzo(g,h,i)perylene	NE; <1% tPAH
3	Toluene	97%	14	Benzo(k)fluoranthene	NE; <1% tPAH
4	Ethylbenzene	99%	15	Chrysene	NE; <1% tPAH
5	Total Xylenes	99%	16	Dibenz(a,h)anthracene	NE; not detected
6	Naphthalene	97%	17	Fluoranthene	87%
7	Acenaphthene	94%	18	Fluorene	93%
8	Acenaphthylene	NE; <1% tPAH	19	Indeno(1,2,3-cd)pyrene	NE; <1% tPAH
9	Anthracene	NE; <1% tPAH	20	Phenanthrene	88%
10	Benzo(a)anthracene	NE; <1% tPAH	21	Pyrene	NE; <1% tPAH
11	Benzo(a)pyrene	NE; <1% tPAH			

Constituents Passing **8 of 10**



In Situ Solidification/Stabilization Results Dashboard, Area 8 (Leaching Batch 8)

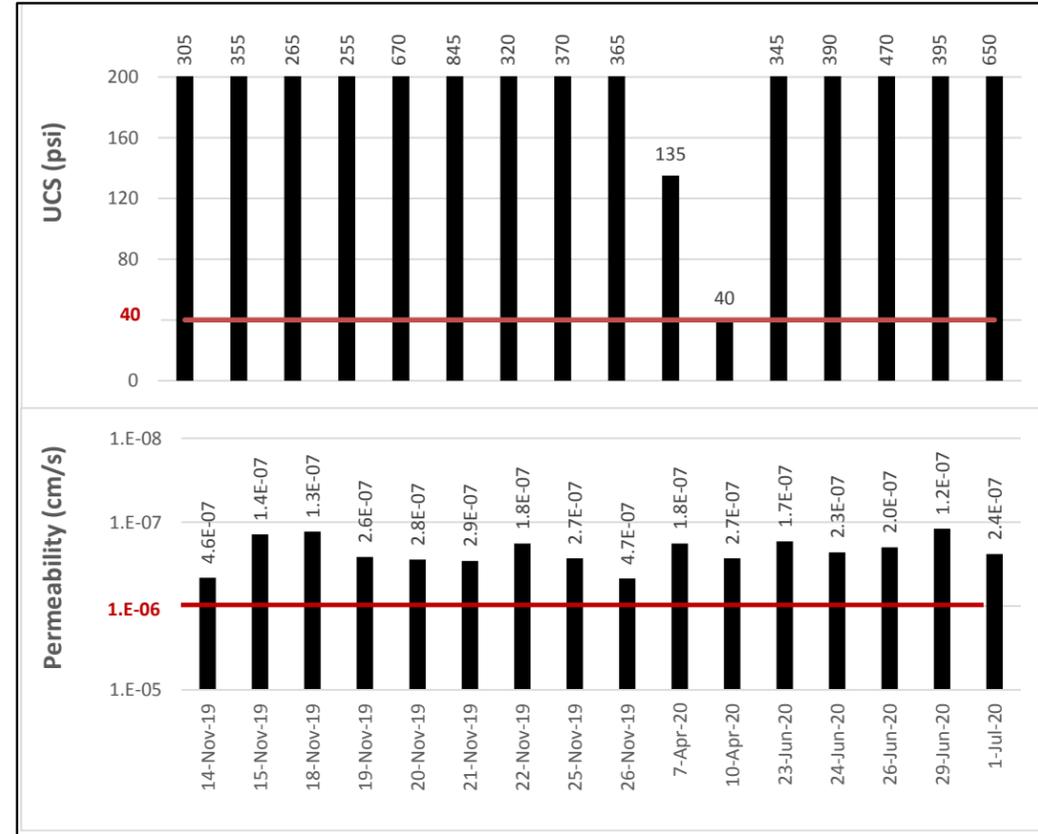
Quanta Resources Corporation Superfund Site, OU1

Data through: 3/3/2021

Area	Date	Volume (CY)	Mix Design		UCS (≥40 psi)	Permeability (≤1E-6 cm/s)
			Cement	Slag		
8	14-Nov-19	234	2%	6%	305	4.6E-07
8	15-Nov-19	115	2%	6%	355	1.4E-07
8	18-Nov-19	171	2%	6%	265	1.3E-07
8	19-Nov-19	304	2%	6%	255	2.6E-07
8	20-Nov-19	116	2%	6%	670	2.8E-07
8	21-Nov-19	173	2%	6%	845	2.9E-07
8	22-Nov-19	104	2%	6%	320	1.8E-07
8	25-Nov-19	123	2%	6%	370	2.7E-07
8	26-Nov-19	88	2%	6%	365	4.7E-07
8	7-Apr-20	310	4%	6%	135	1.8E-07
8	10-Apr-20	568	2%	6%	40	2.7E-07
8	23-Jun-20	231	2%	6%	345	1.7E-07
8	24-Jun-20	211	2%	6%	390	2.3E-07
8	26-Jun-20	226	2%	6%	470	2.0E-07
8	29-Jun-20	129	2%	6%	395	1.2E-07
8	1-Jul-20	221	2%	6%	650	2.4E-07

Total CY Mixed: **3324**

Leaching Reduction by Constituent		
Site Constituent	25-Nov-19	
1 Arsenic	97.19%	
2 Benzene	98.63%	
3 Toluene	97.23%	
4 Ethylbenzene	95.71%	
5 Total Xylenes	95.57%	
6 Naphthalene	95.94%	
7 Acenaphthene	93.38%	
8 Acenaphthylene	NE	<1% tPAH
9 Anthracene	NE	<1% tPAH
10 Benzo(a)anthracene	NE	<1% tPAH
11 Benzo(a)pyrene	NE	Not detected
12 Benzo(b)fluoranthene	NE	Not detected
13 Benzo(g,h,i)perylene	NE	Not detected
14 Benzo(k)fluoranthene	NE	Not detected
15 Chrysene	NE	<1% tPAH
16 Dibenz(a,h)anthracene	NE	Not detected
17 Fluoranthene	NE	<1% tPAH
18 Fluorene	NE	<1% tPAH
19 Indeno(1,2,3-cd)pyrene	NE	Not detected
20 Phenanthrene	NE	<1% tPAH
21 Pyrene	NE	<1% tPAH
Constituents Passing	7 of 7	



Note: Mixed areas awaiting EPA inspection indicated with blue shading. Green cells are mixed and have been





LAND DISPOSAL RESTRICTION NOTIFICATION AND CERTIFICATION FORM

GENERATOR NAME QUANTA RESOURCES RECOVERY
EPA ID NUMBER SUPERFUND SITE
NJD981139371

MANIFEST TRACKING NUMBER D73635
MANIFEST DOCUMENT NO. 022176111JK
WORK ORDER: 75991

The EPA hazardous wastes identified below must be treated to applicable treatment standards set forth in 40 CFR 268.40.

LINE	APPROVAL NO.	EPA WASTE NO.(S)	WW	SUB CATEGORY	UHC'S
1	112589	D018	NO		
2	112591	D018	NO		

I certify and warrant that the information that appears on this form, and appended documents, is true and correct. I have correctly indicated how my waste is to be managed in accordance with 40 CFR 268. My certification is based on personal examination of the information submitted, or based on my inquiries of those individuals responsible for obtaining the information.

Authorized Signature *Chris Fowler/Santa as agent/an* Title *Geologist* Date *2/5/21*
behalf of Honeywell Intl. Inc

Please print or type.

Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST		1. Generator ID Number NJD981139371	2. Page 1 of 1	3. Emergency Response Phone 908-354-0210	4. Manifest Tracking Number 022176111 JJK				
5. Generator's Name and Mailing Address HONEYWELL INTERNATIONAL 6100 PHILADELPHIA PIKE CLAYMONT, DE 19703 302-791-6738				Generator's Site Address (if different than mailing address) QUANTA RESOURCES RECOVERY SUPERFUND SITE 163 RIVER ROAD EDGEWATER, NJ 07020					
6. Transporter 1 Company Name ACV ENVIRONMENTAL SERVICES, INC				U.S. EPA ID Number NJD003812047					
7. Transporter 2 Company Name				U.S. EPA ID Number					
8. Designated Facility Name and Site Address CYCLE CHEM, INC 550 INDUSTRIAL DRIVE LEWISBERRY, PA 17339 717-938-4700				U.S. EPA ID Number PAD067098822					
GENERATOR	9a. HM	9b. U.S. DOT Description (including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))		10. Containers		11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes	
	X	1. RQ, NA3077, Hazardous waste, solid, n.o.s. (benzene), 9, III		01	DM	65	P	D018	
	X	2. RQ, NA3082, Hazardous waste, liquid, n.o.s. (benzene), 9, III		02	DM	600	P	D018	
		3.							
		4.							
14. Special Handling Instructions and Additional Information D73635 SO 75991 LDR on File SFSO# 1) Profile#112589 NAPL CONTAMINATED DEBRIS 2) Profile#112591 NAPL									
15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent. I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.									
Generator's/Offorer's Printed/Typed Name Austin Harderode/Sacobs as agent/abchalf of Honeywell				Signature <i>[Signature]</i>		Month 02	Day 05	Year 21	
INT'L	16. International Shipments <input type="checkbox"/> Import to U.S. <input type="checkbox"/> Export from U.S.		Port of entry/exit: _____ Date leaving U.S.: _____						
	17. Transporter Acknowledgment of Receipt of Materials								
TRANSPORTER	Transporter 1 Printed/Typed Name Manny Bal				Signature <i>[Signature]</i>		Month 02	Day 05	Year 21
	Transporter 2 Printed/Typed Name				Signature		Month	Day	Year
DESIGNATED FACILITY	18. Discrepancy								
	18a. Discrepancy Indication Space <input type="checkbox"/> Quantity <input type="checkbox"/> Type <input type="checkbox"/> Residue <input type="checkbox"/> Partial Rejection <input type="checkbox"/> Full Rejection								
	18b. Alternate Facility (or Generator)						U.S. EPA ID Number		
	Facility's Phone:								
18c. Signature of Alternate Facility (or Generator)						Month	Day	Year	
19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)									
1. H141		2. H141		3.		4.			
20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a									
Printed/Typed Name				Signature		Month	Day	Year	