

June 09, 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: May 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 May 28, 2021, approximately 338,910 labor hours worked.

During May, 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 May 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 May.

OU1 General Civil Work

- Supported site contractor operations and continued general site maintenance activities.
- Began construction of a permanent site fence replacing the existing temporary construction fence.
- Completed demobilizing construction equipment trailers from the Site.



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OU1 ISS

- Remobilized necessary equipment to complete remixing activities in areas that did not meet the performance criteria as detailed in the previous status report. During the week of May 24, a total of 11 cells of soil were remixed (1,000 cubic yards) in Area 6.

OU1 Bulkhead Installation

- None – Bulkhead installation is complete.

OU1 Vibration and Air Monitoring

- Vibration monitoring is complete.
- Air monitoring stations were remobilized to the site to support the remixing effort. A total of four real-time stations were deployed, along with 6 air sampling locations.

OU1 Offsite Waste Disposal

- No waste was shipped from the site in May.

OU1 NAPL Recovery

- Pumped approximately 33 gallons of NAPL from RW4-2
- Sentinel wells were measured on May 26.

High Concentration Arsenic Area (HCAA)

- Quarterly groundwater monitoring was completed at the HCAA in May.

Site Security, Maintenance, and Inspections

- Weekly boom inspections were completed May 4, May 14, May 17, and May 27.
- Weekly SWPP inspections were completed May 7, May 14, May 21, and May 28.

Two-Week Look-Ahead

- Remove overburden material associated with the remixing activities.
- Continue pumping RW4-2.
- Continue permanent fence installation.
- Start Area 6 restoration .
- Gauge sentry wells.

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



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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. One additional result was received for leaching for Batch 7 (final tent locations). As detailed on the dashboard, 9 out of 9 constituents have greater than 90% reduction in leaching surpassing performance criteria.

Air Monitoring

No new air monitoring data was received in May.

Other Deliverables and Submittals

- Submitted the HCAA Construction Completion Report to EPA on May 17. This report details the field activities completed (drilling and injection) in the summer 2021 as well as the first two quarterly rounds of groundwater sampling at the Quanta site.

Corrective Actions

As detailed previously, select cells had to be remixed in May due to failing Performance Criteria. These cells were successfully remixed, and no additional corrective actions were required.

Activities Planned for Next 6 Weeks

- Continue with NAPL recovery operations.
- Continue weekly boom inspections and SWPPP inspections and associated maintenance.
- Complete construction of the permanent fence and Area 6 restoration (southeastern portion of the Site).

Schedule Update and Delays

Remixing of cells and demobilization from the site have been completed.

Percent Complete

Work associated with the entire OU1 Remedial Action is approximately 98 percent complete.



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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 – In Situ Solidification/Stabilization Results Dashboard

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)

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

Quanta Resources Corporation Superfund Site, OU1

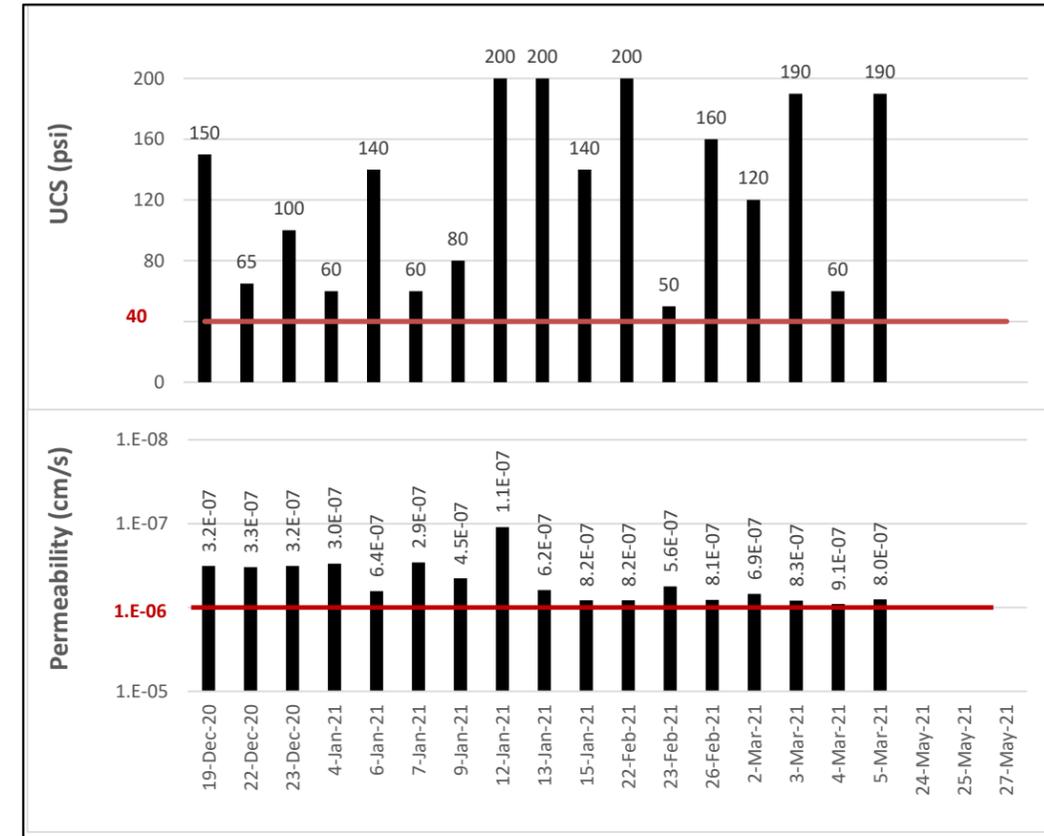
Data through: 6/3/2021

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	3.2E-07
6-2	22-Dec-20	329	2%	6%	65	3.3E-07
6-2	23-Dec-20	236	2%	6%	100	3.2E-07
6-2	4-Jan-21	150	4%	6%	60	3.0E-07
6-2	6-Jan-21	345	2%	6%	140	6.4E-07
6-2	7-Jan-21	244	2%	6%	60	2.9E-07
6-2	9-Jan-21	245	2%	6%	80	4.5E-07
6-2	12-Jan-21	331	4%	6%	200	1.1E-07
6-2	13-Jan-21	234	2%	6%	200	6.2E-07
6-2	15-Jan-21	30	2%	6%	140	8.2E-07
6-1	22-Feb-21	515	2%	6%	200	8.2E-07
6-1	23-Feb-21	299	2%	6%	50	5.6E-07
6-1	26-Feb-21	210	2%	6%	160	8.1E-07
6-1	2-Mar-21	312	4%	6%	120	6.9E-07
6-1	3-Mar-21	172	2%	6%	190	8.3E-07
6-1	4-Mar-21	221	2%	6%	60	9.1E-07
6-1	5-Mar-21	210	2%	6%	190	8.0E-07
NT	24-May-21	289	4%	6%		
NT	25-May-21	336	4%	6%		
NT	27-May-21	395	4%	6%		

Total CY Mixed: **5359**

Data Pending

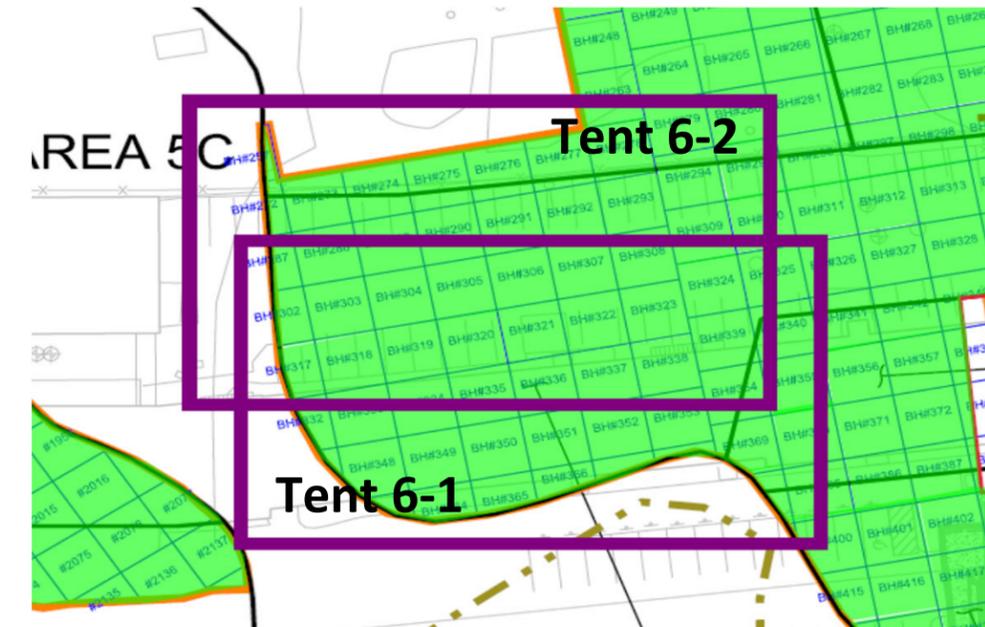
Cells mixed on May 24, 25, and 27 are remixes of prior cells. Only the final mix for these cells is shown.



Leaching Reduction by Constituent

Site Constituent	Reduction	Site Constituent	Reduction
1 Arsenic	90%	12 Benzo(b)fluoranthene	NE; <1% tPAH
2 Benzene	100%	13 Benzo(g,h,i)perylene	Not detected
3 Toluene	99%	14 Benzo(k)fluoranthene	Not detected
4 Ethylbenzene	99%	15 Chrysene	NE; <1% tPAH
5 Total Xylenes	99%	16 Dibenz(a,h)anthracene	Not detected
6 Naphthalene	99%	17 Fluoranthene	NE; <1% tPAH
7 Acenaphthene	98%	18 Fluorene	97%
8 Acenaphthylene	NE; <1% tPAH	19 Indeno(1,2,3-cd)pyrene	Not detected
9 Anthracene	NE; <1% tPAH	20 Phenanthrene	97%
10 Benzo(a)anthracene	NE; <1% tPAH	21 Pyrene	NE; <1% tPAH
11 Benzo(a)pyrene	Not detected		

Constituents Passing: **9 of 9**



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

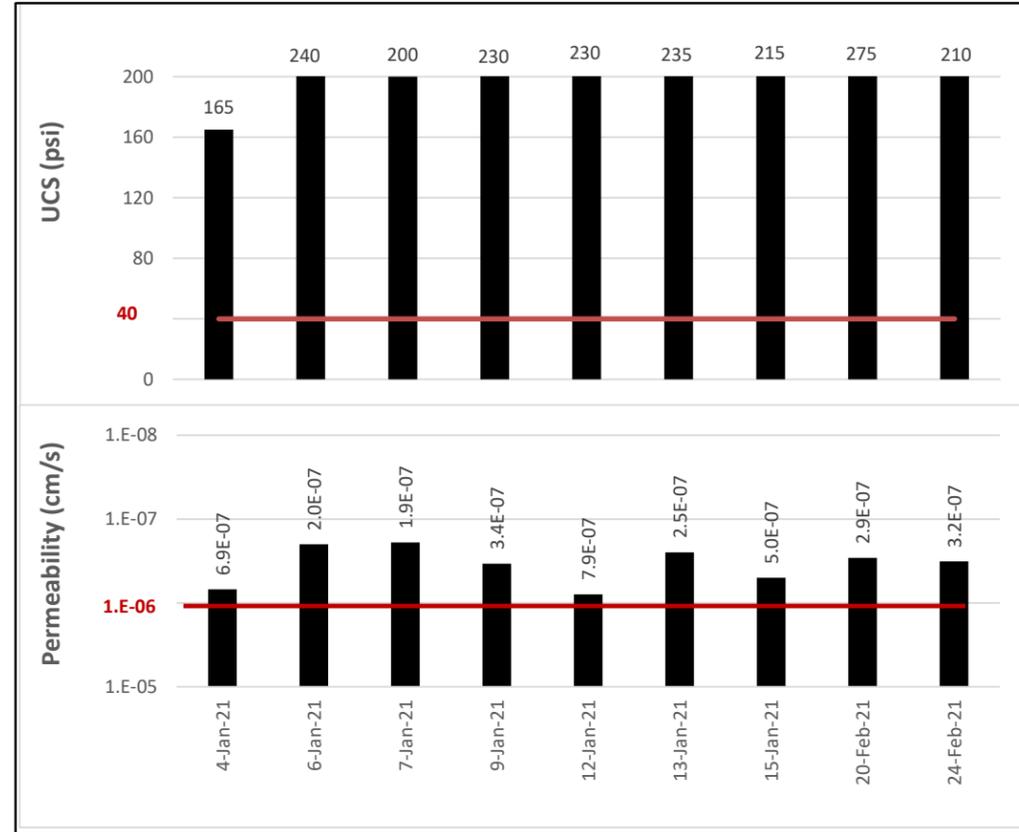
In Situ Solidification/Stabilization Results Dashboard, Area 4 (Leaching Batch 9, page 2)

Quanta Resources Corporation Superfund Site, OU1

Data through: 6/3/2021

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	6.9E-07
4-2	6-Jan-21	164	2%	6%	240	2.0E-07
4-2	7-Jan-21	167	2%	6%	200	1.9E-07
4-2	9-Jan-21	199	2%	6%	230	3.4E-07
4-2	12-Jan-21	163	2%	6%	230	7.9E-07
4-2	13-Jan-21	140	2%	6%	235	2.5E-07
4-2	15-Jan-21	163	2%	6%	215	5.0E-07
NT-41	20-Feb-21	439	2%	6%	275	2.9E-07
NT-41	24-Feb-21	260	2%	6%	210	3.2E-07

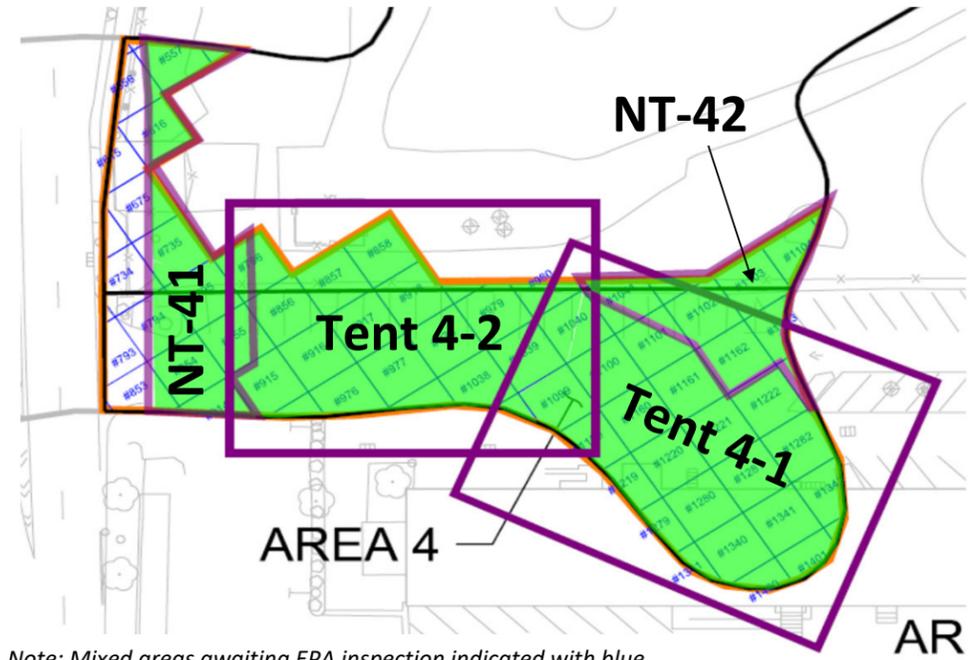
Total CY Mixed: **1884**



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(e)pyrene	
3 Toluene		14 Benzo(a)anthracene	
4 Ethylbenzene			
5 Total Xylenes			
6 Naphthalene			
7 Acenaphthene			
8 Acenaphthylene			
9 Anthracene		20 Indeno(1,2,3-cd)pyrene	
10 Benzo(a)anthracene		21 Phenanthrene	
11 Benzo(a)pyrene			

Constituents Passing

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



Note: Mixed areas awaiting EPA inspection indicated with blue

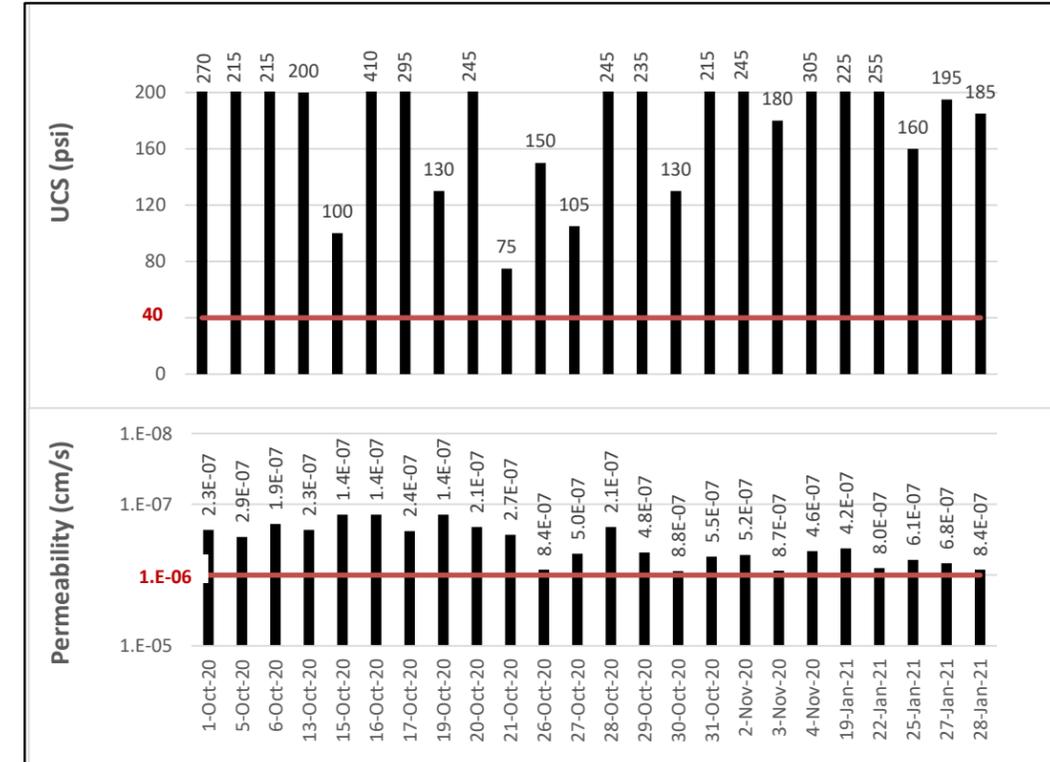
In Situ Solidification/Stabilization Results Dashboard, Tent 5-2 and NT-53 (Leaching Batch 10)

Quanta Resources Corporation Superfund Site, OU1

Data through: 6/3/2021

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	4.2E-07
NT-53	22-Jan-21	384	2%	6%	255	8.0E-07
NT-53	25-Jan-21	75	2%	6%	160	6.1E-07
NT-53	27-Jan-21	343	2%	6%	195	6.8E-07
NT-53	28-Jan-21	182	2%	6%	185	8.4E-07

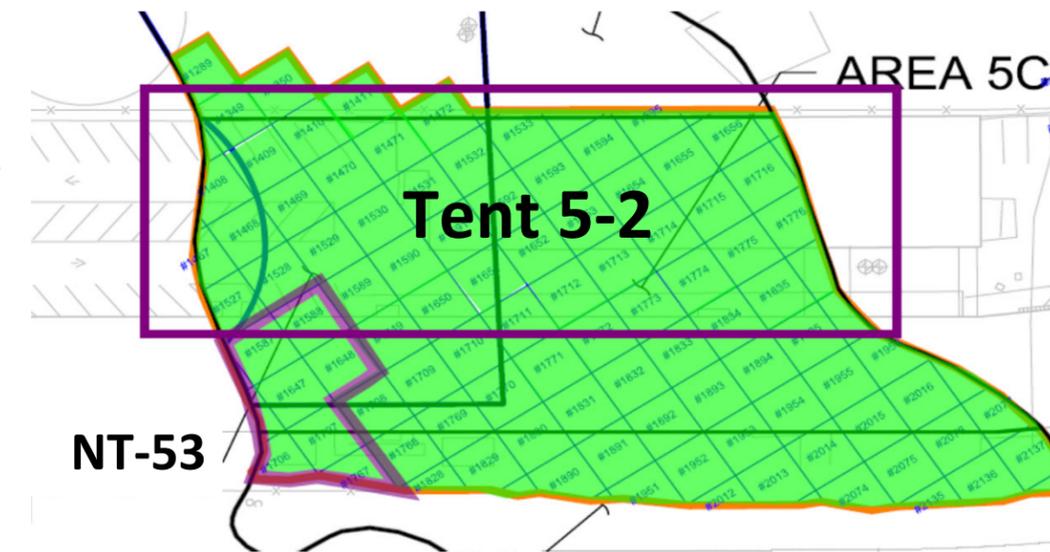
Total CY Mixed: **7142**



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	14 Fluorene
5 Total Xylenes	15 (a,h)anthracene
6 Naphthalene	16 Fluoranthene
7 Acenaphthene	17 Fluorene
8 Acenaphthylene	18 Fluorene
9 Anthracene	19 Indeno(1,2,3-cd)pyrene
10 Benzo(a)anthracene	20 Phenanthrene
11 Benzo(a)pyrene	21 Pyrene

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

Constituents Passing:



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

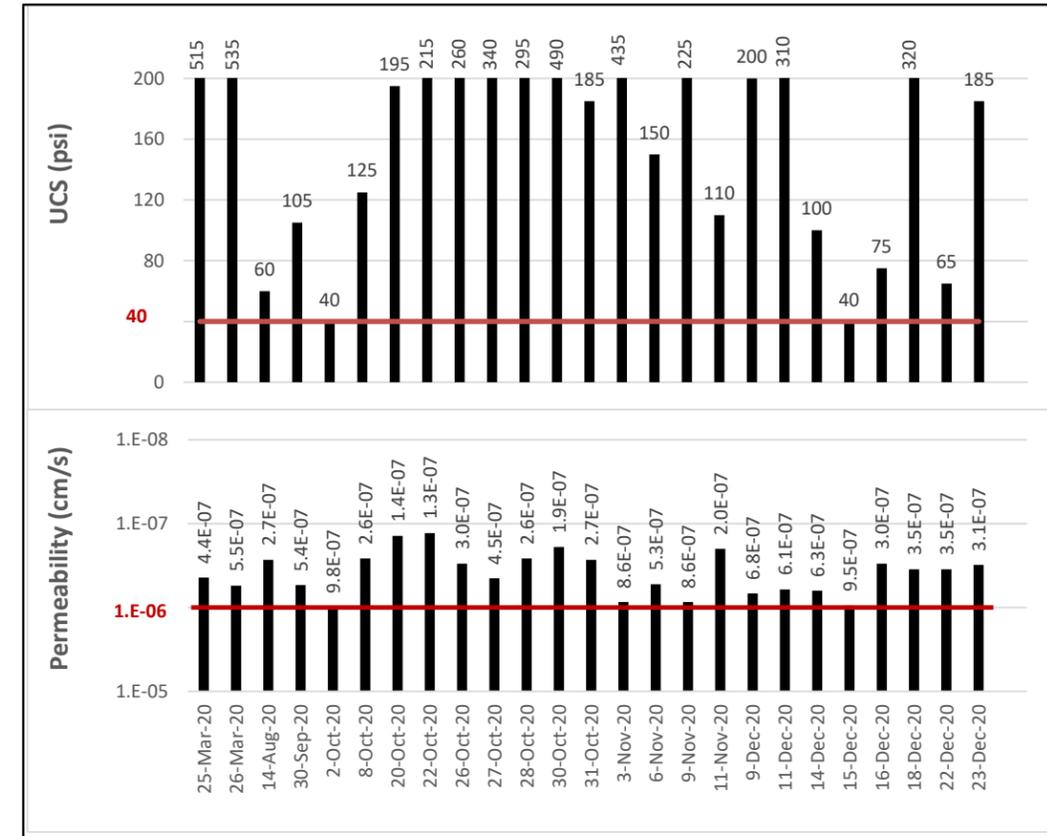
In Situ Solidification/Stabilization Results Dashboard, Area 4 (Leaching Batch 9, page 1)

Quanta Resources Corporation Superfund Site, OU1

Data through: 6/3/2021

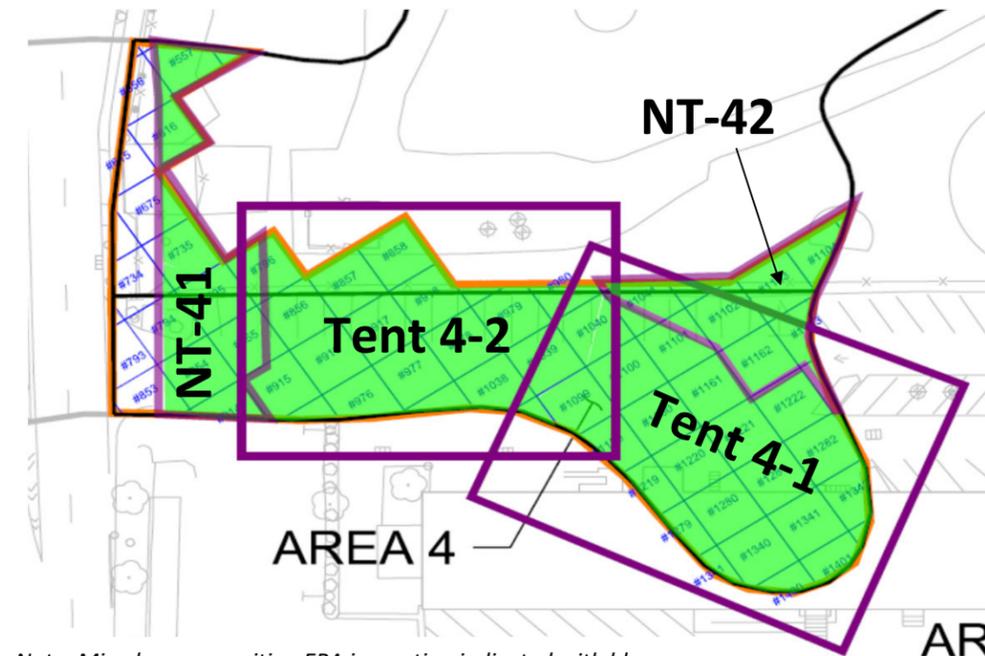
Area	Date	Volume (CY)	Mix Design		UCS (≥40 psi)	Permeability (≤1E-6 cm/s)
			Cement	Slag		
NT-41	25-Mar-20	249	2%	6%	515	4.4E-07
NT-41	26-Mar-20	317	2%	6%	535	5.5E-07
NT-42	14-Aug-20	372	4%	6%	60	2.7E-07
NT-42	30-Sep-20	300	4%	6%	105	5.4E-07
4-1	2-Oct-20	341	2%	6%	40	9.8E-07
4-1	8-Oct-20	142	2%	6%	125	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	6.8E-07
4-2	11-Dec-20	335	2%	6%	310	6.1E-07
4-2	14-Dec-20	283	4%	6%	100	6.3E-07
4-2	15-Dec-20	160	2%	6%	40	9.5E-07
4-2	16-Dec-20	159	2%	6%	75	3.0E-07
4-2	18-Dec-20	187	2%	6%	320	3.5E-07
4-2	22-Dec-20	176	2%	6%	65	3.5E-07
4-2	23-Dec-20	248	2%	6%	185	3.1E-07

Total CY Mixed: **6575**



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

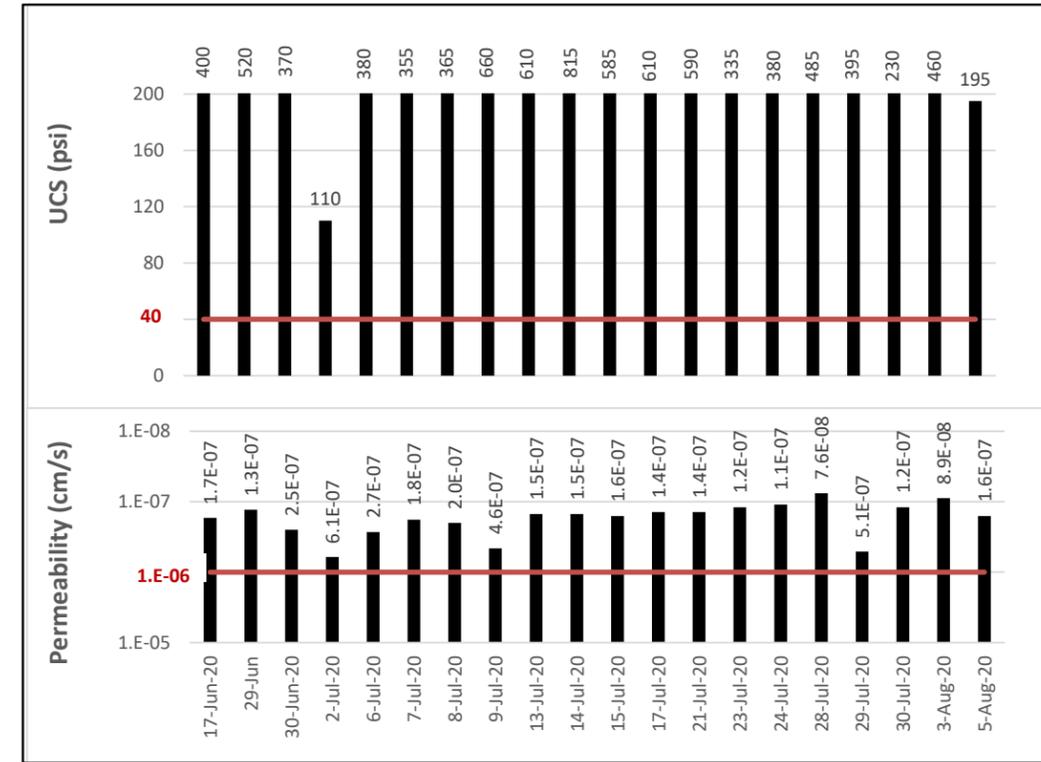
In Situ Solidification/Stabilization Results Dashboard, Tent 5-1 (Leaching Batch 10)

Quanta Resources Corporation Superfund Site, OU1

Data through: 6/3/2021

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.

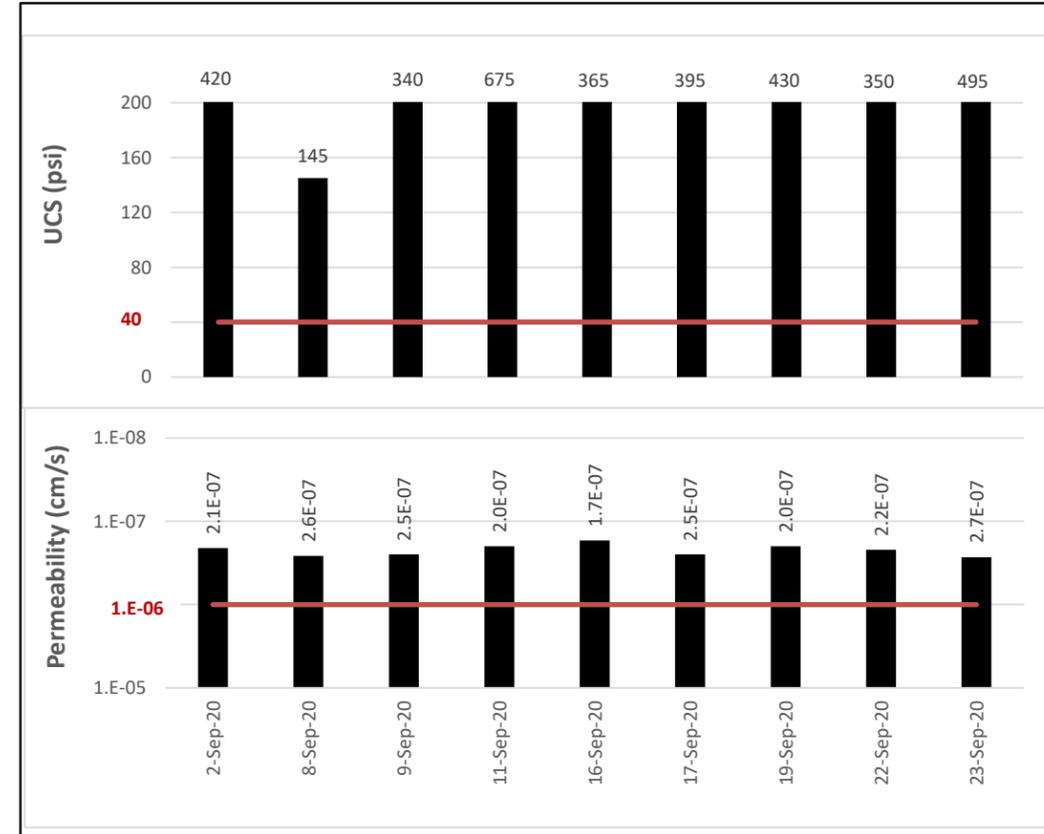
Leaching calculations for each constituent provided in the ISS Memo for this Parcel. Boxed sample dates on table above indicate collection of a leaching sample. Constituents with 90+% reduction are shaded green. NE - Not Evaluated; constituent not detected in baseline sample or <1% of tPAH.

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

Quanta Resources Corporation Superfund Site, OU1

Data through: 6/3/2021

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.



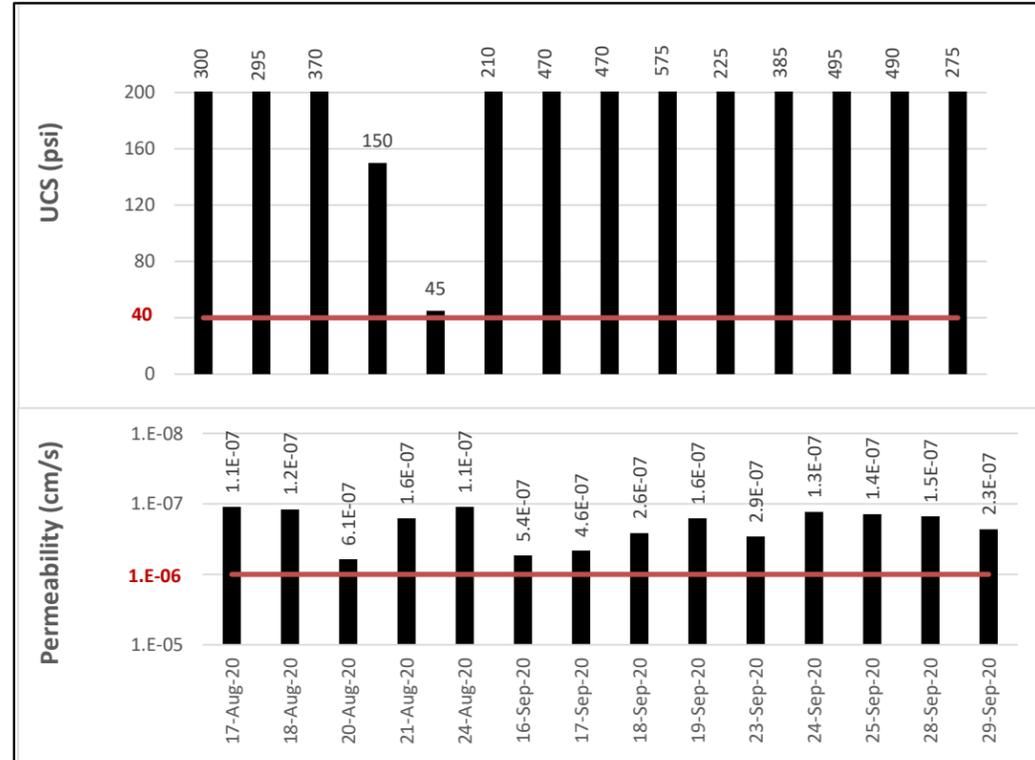
In Situ Solidification/Stabilization Results Dashboard, NT-51 and Tent 5-2 (Leaching Batch 10)

Quanta Resources Corporation Superfund Site, OU1

Data through: 6/3/2021

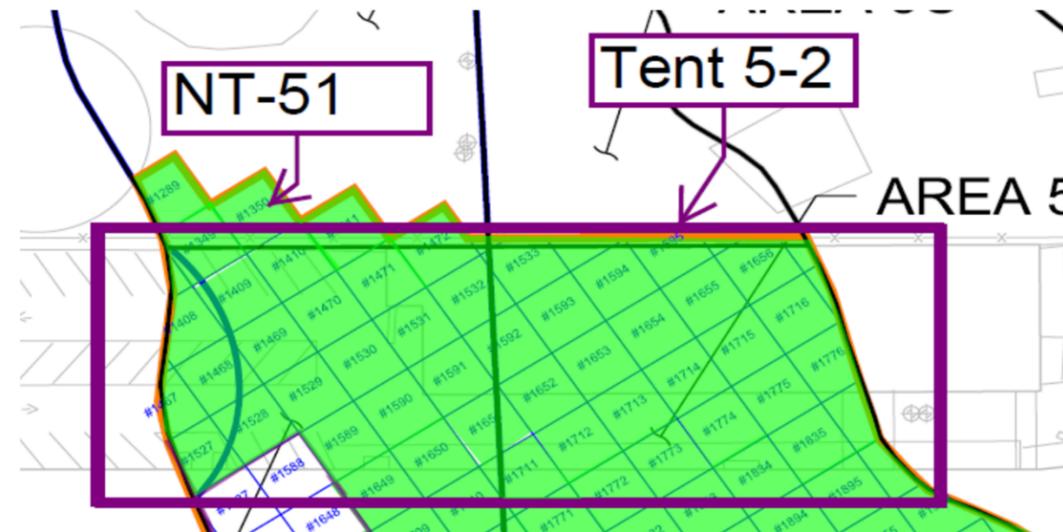
Area	Date	Volume (CY)	Mix Design		UCS (≥40 psi)	Permeability (≤1E-6 cm/s)
			Cement	Slag		
NT-51	17-Aug-20	273	4%	6%	300	1.1E-07
NT-51	18-Aug-20	169	4%	6%	295	1.2E-07
NT-51	20-Aug-20	314	4%	6%	370	6.1E-07
NT-51	21-Aug-20	198	4%	6%	150	1.6E-07
NT-51	24-Aug-20	267	4%	6%	45	1.1E-07
5-2	16-Sep-20	224	2%	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.

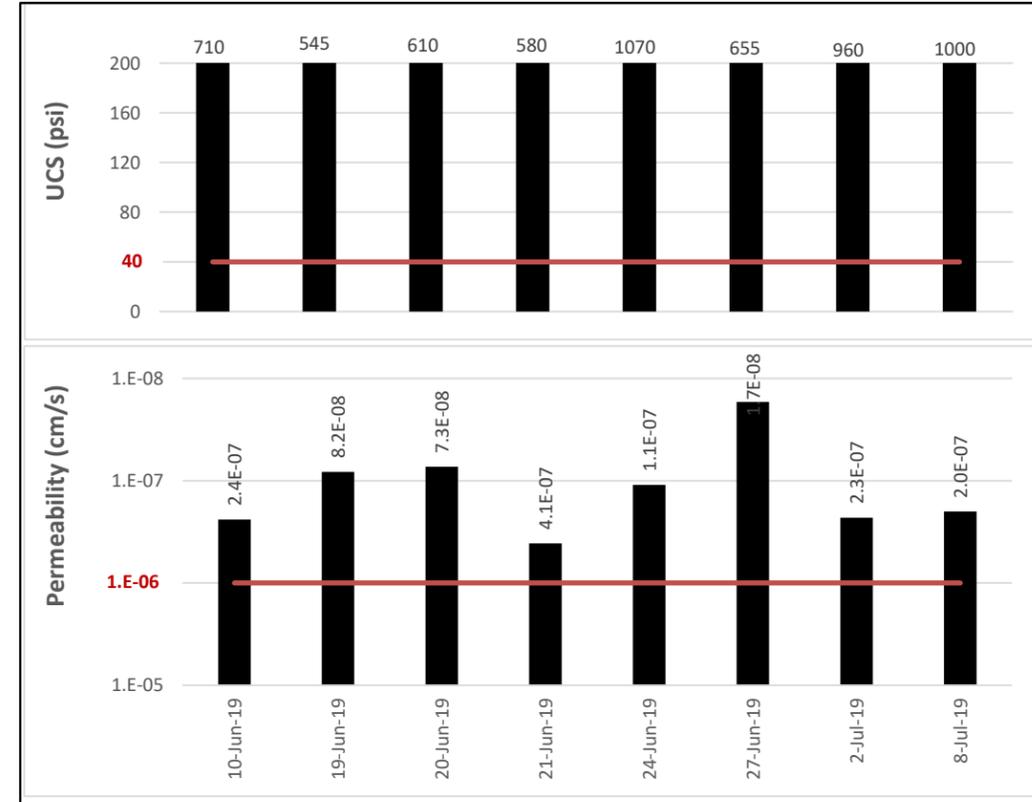
In Situ Solidification/Stabilization Results Dashboard, Tent 3-1 (Leaching Batch 5)

Quanta Resources Corporation Superfund Site, OU1

Data through: 6/3/2021

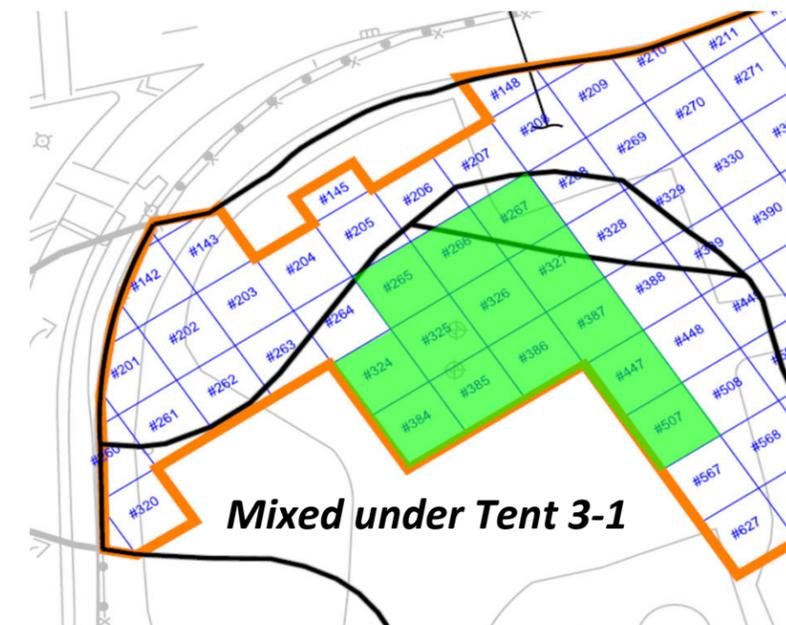
Tent	Date	Volume (CY)	Mix Design		UCS (≥40 psi)	Permeability (≤1E-6 cm/s)
			Cement	Slag		
3-1	10-Jun-19	288	2%	6%	710	2.40E-07
3-1	19-Jun-19	167	2%	6%	545	8.20E-08
3-1	20-Jun-19	166	2%	6%	610	7.30E-08
3-1	21-Jun-19	280	2%	6%	580	4.10E-07
3-1	24-Jun-19	147	2%	6%	1070	1.10E-07
3-1	27-Jun-19	343	2%	6%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

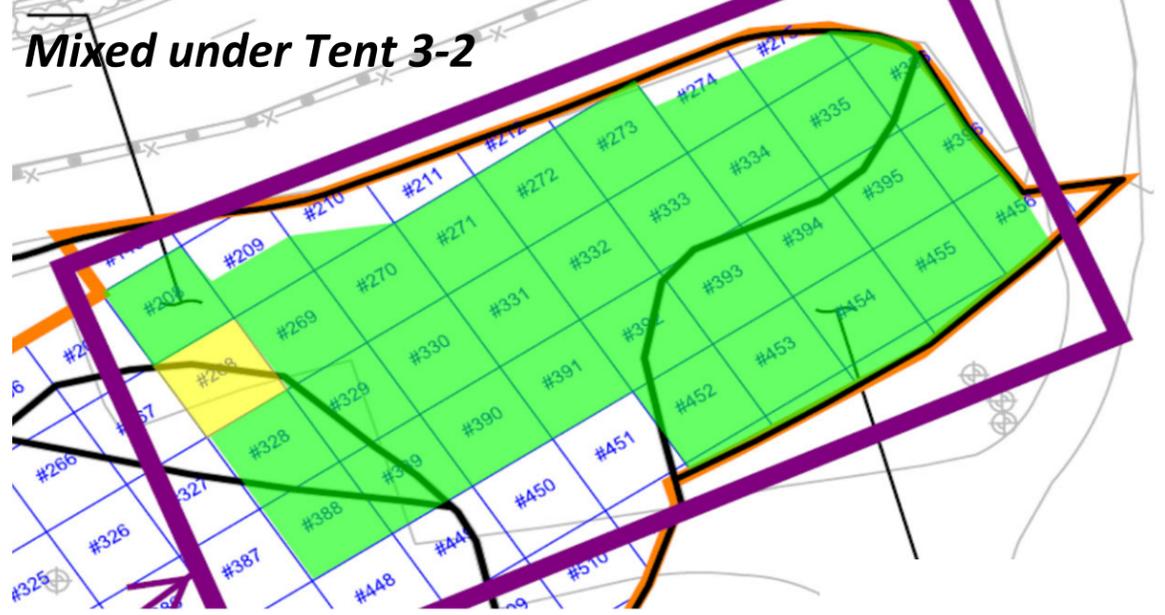
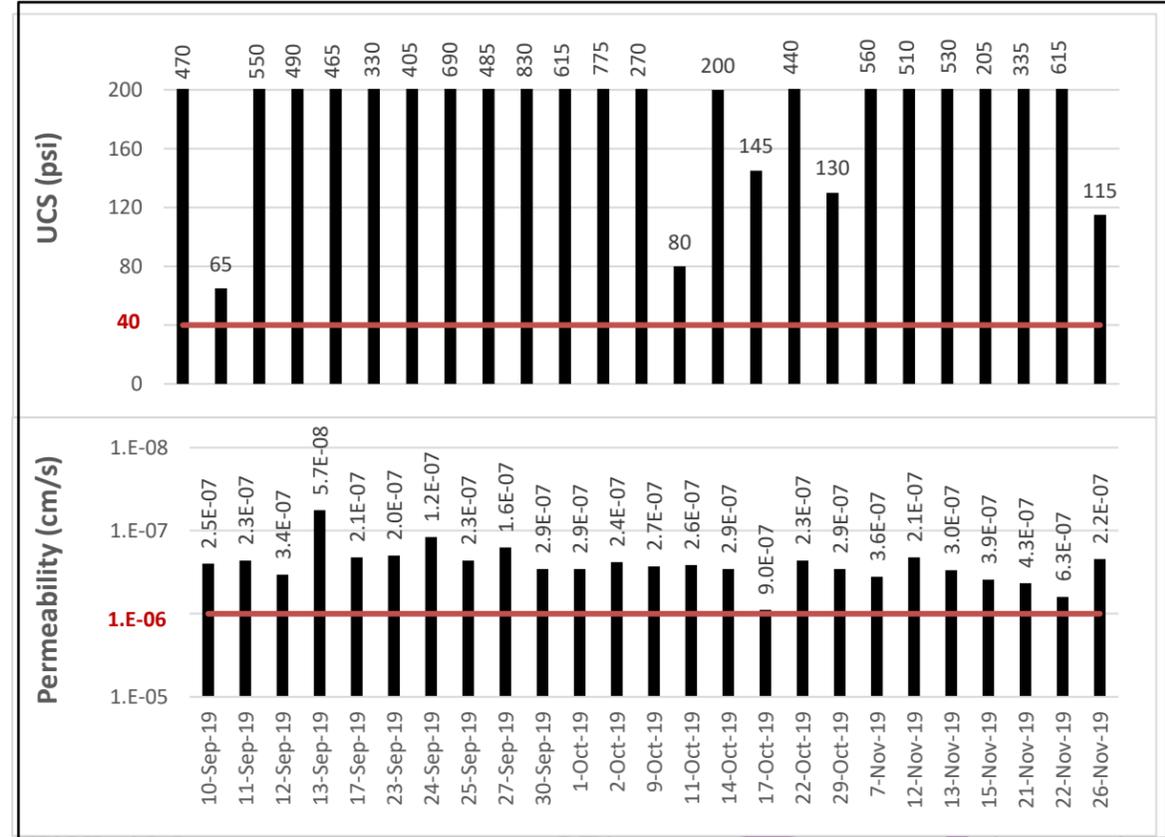
In Situ Solidification/Stabilization Results Dashboard, Tent 3-2 (Leaching Batch 5)

Quanta Resources Corporation Superfund Site, OU1

Data through: 6/3/2021

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%		NE	
6 Naphthalene			0%	
7 Acenaphthene			1%	
8 Acenaphthylene		19 Indeno(1,2,3-cd)pyrene	NE	
9 Anthracene		20 Phenanthrene	0%	
10 Benzo(a)anthracene	NE	21 Pyrene	0%	
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.

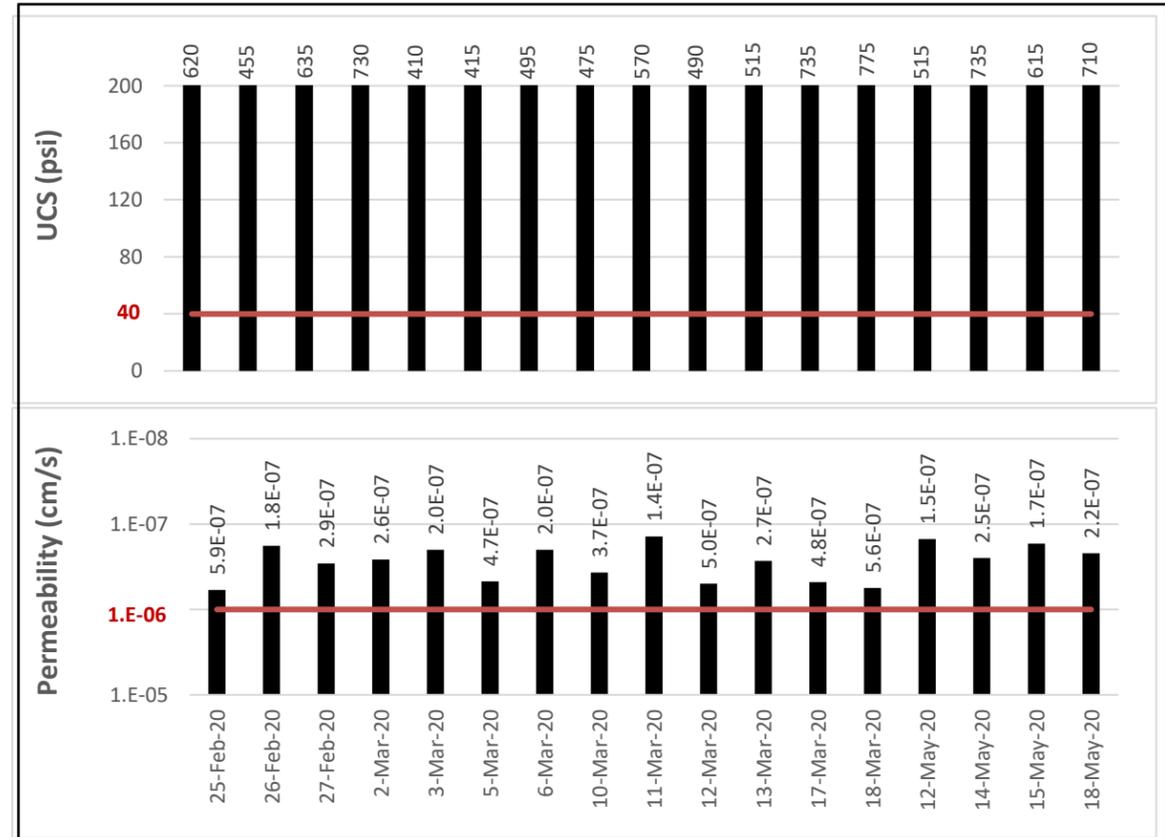
In Situ Solidification/Stabilization Results Dashboard, Tents 3-3 and 3-4 (Leaching Batch 5)

Quanta Resources Corporation Superfund Site, OU1

Data through: 6/3/2021

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

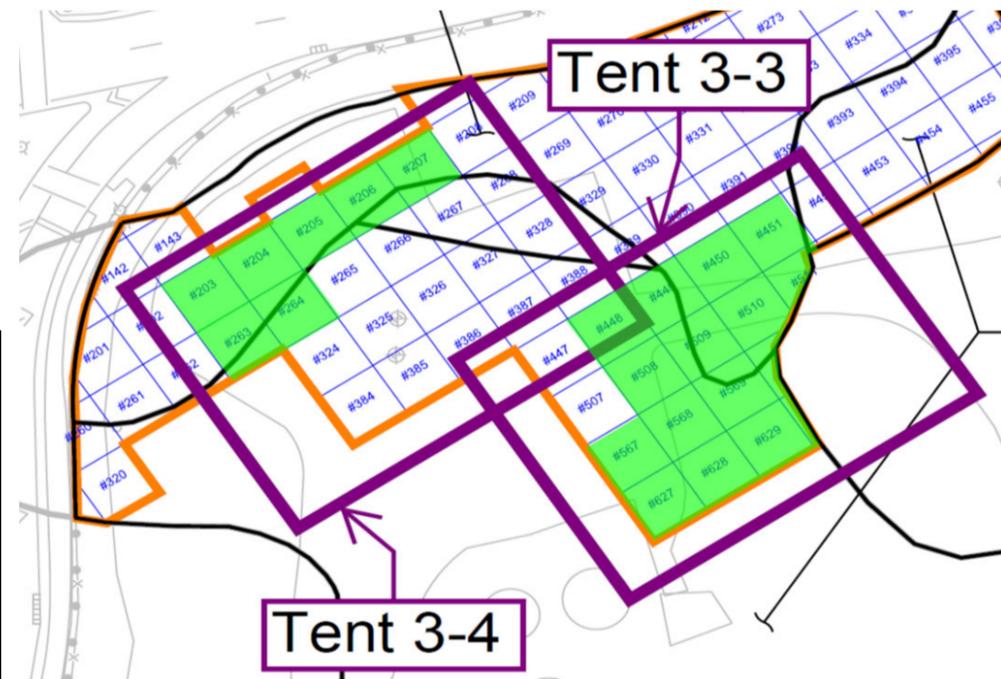
Total CY Mixed: 4855



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.

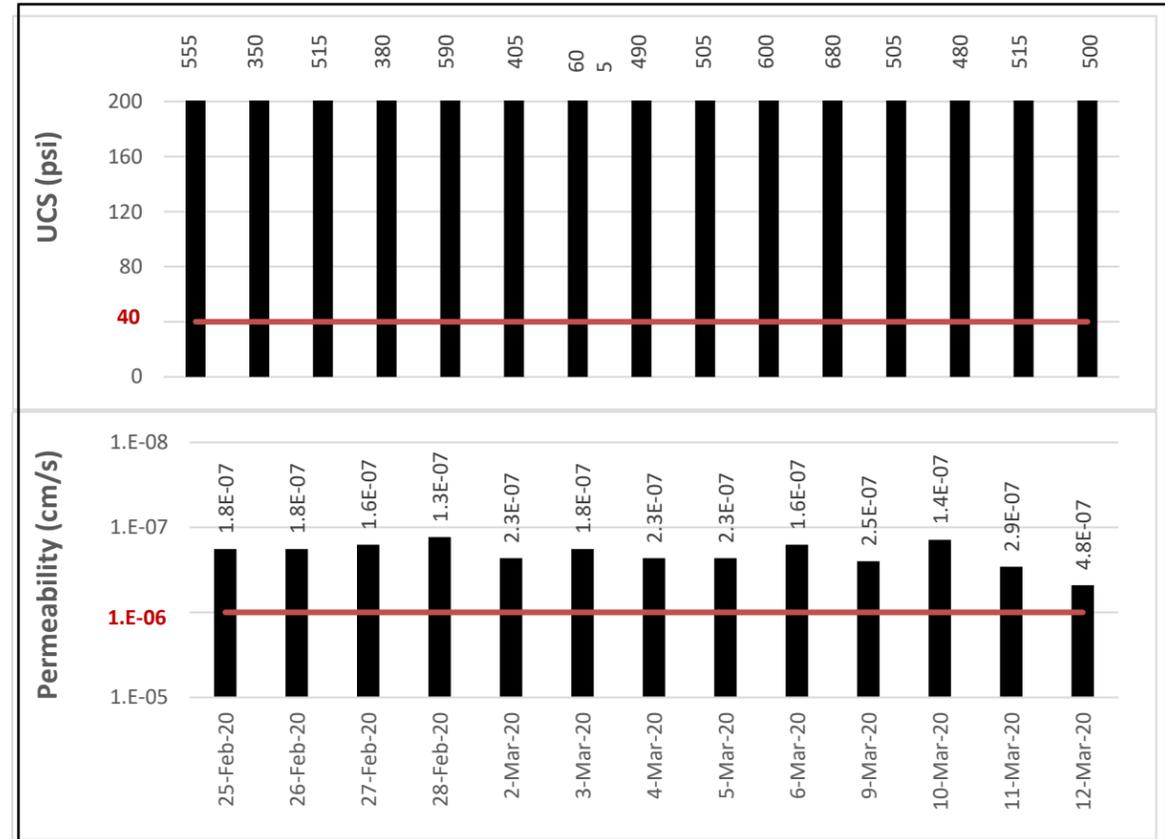
In Situ Solidification/Stabilization Results Dashboard, NT-31, 32, 33 (Leaching Batch 5)

Quanta Resources Corporation Superfund Site, OU1

Data through: 6/3/2021

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

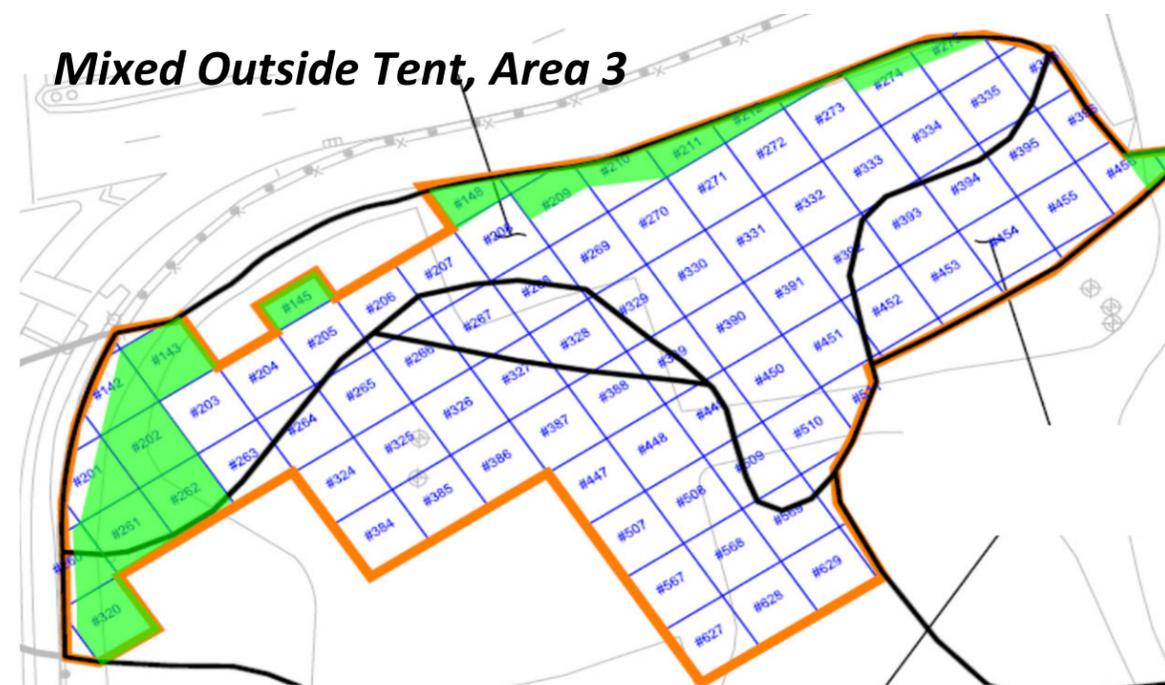
Total CY Mixed: **3215**



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.

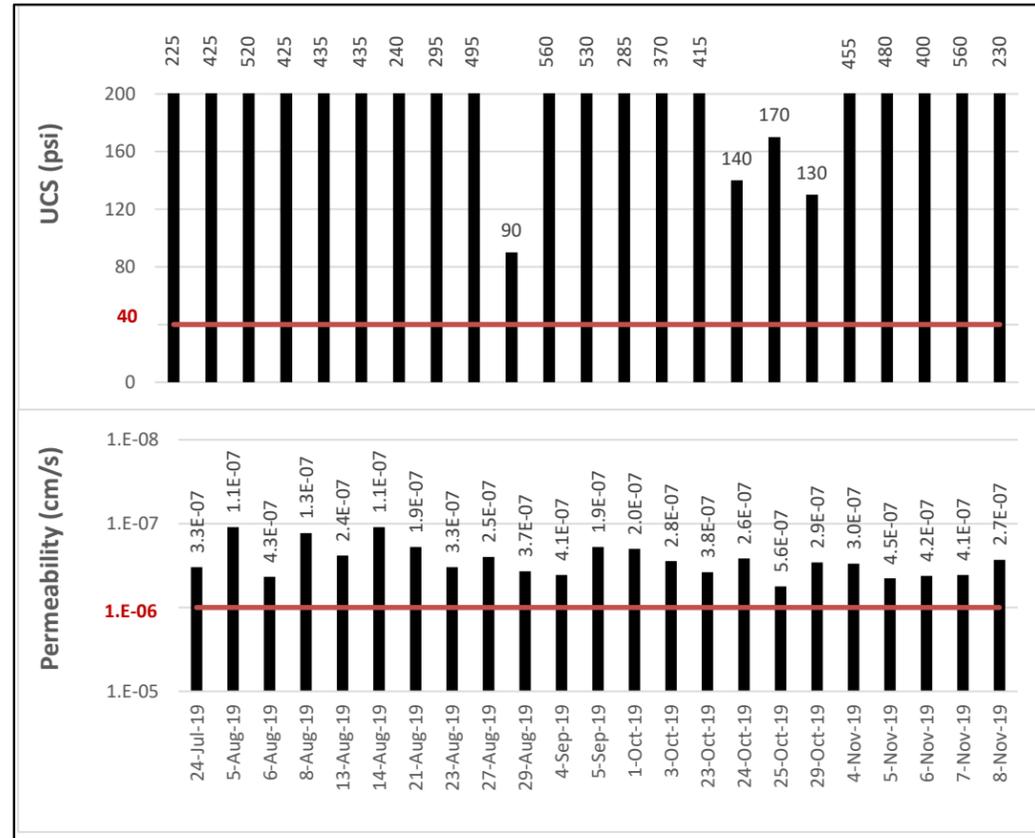
In Situ Solidification/Stabilization Results Dashboard, Tent 7-1 (Leaching Batch 6)

Quanta Resources Corporation Superfund Site, OU1

Data through: 6/3/2021

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



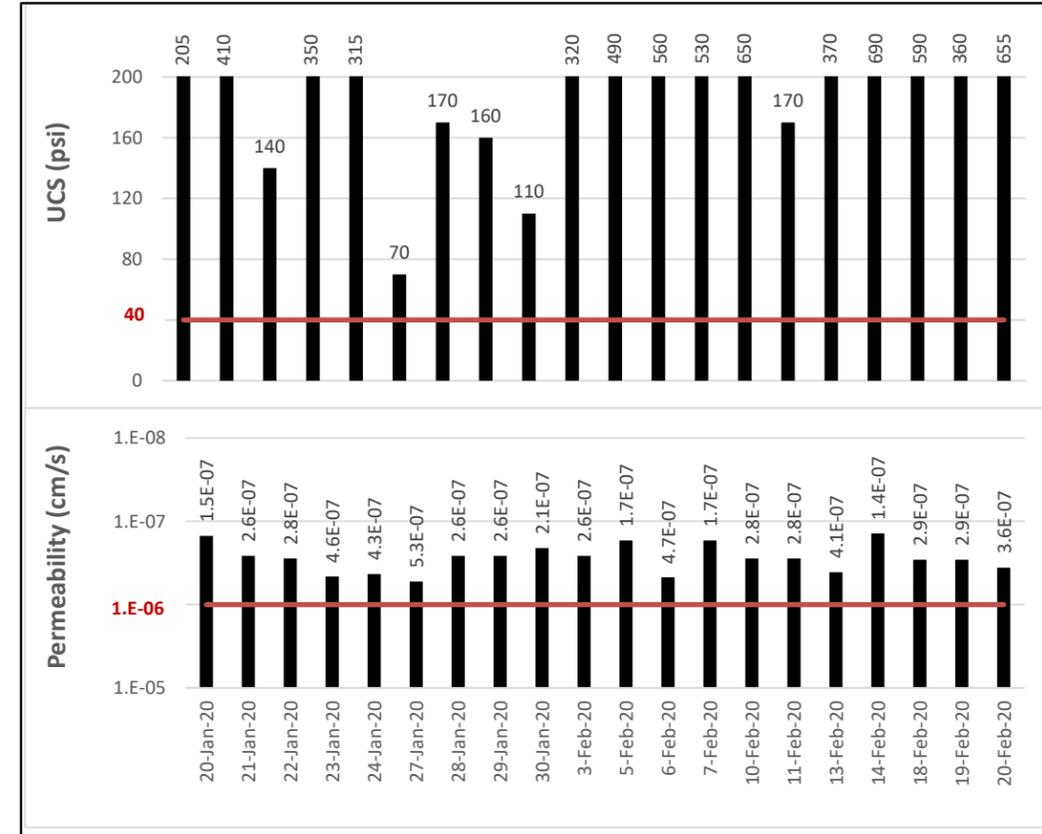
In Situ Solidification/Stabilization Results Dashboard, Tent 7-2 (Leaching Batch 6)

Quanta Resources Corporation Superfund Site, OU1

Data through: 6/3/2021

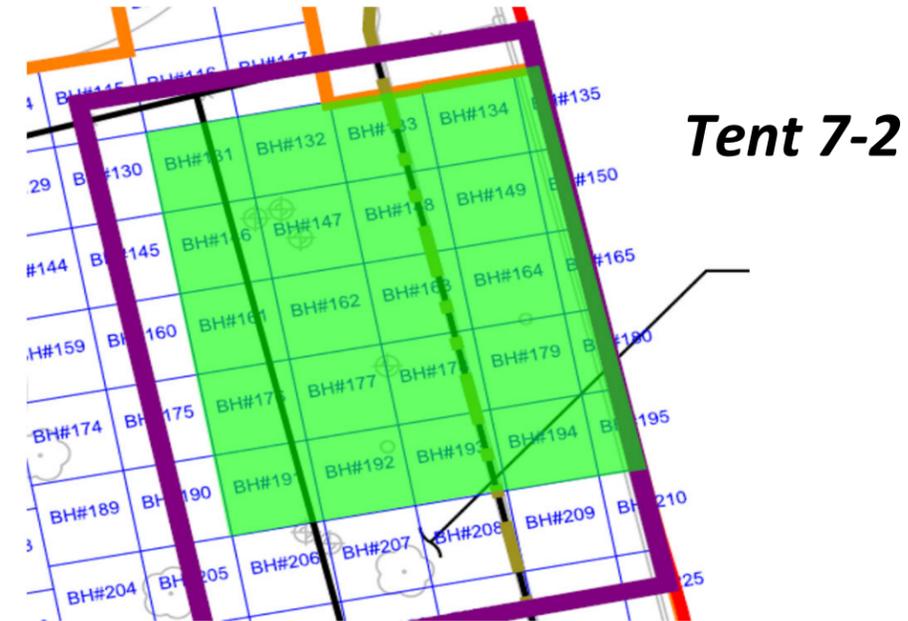
Tent	Date	Volume (CY)	Mix Design		UCS (≥40 psi)	Permeability (≤1E-6 cm/s)
			Cement	Slag		
7-2	20-Jan-20	312	4%	6%	205	1.5E-07
7-2	21-Jan-20	472	4%	6%	410	2.6E-07
7-2	22-Jan-20	564	4%	6%	140	2.8E-07
7-2	23-Jan-20	394	4%	6%	350	4.6E-07
7-2	24-Jan-20	538	4%	6%	315	4.3E-07
7-2	27-Jan-20	256	4%	6%	70	5.3E-07
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	
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.

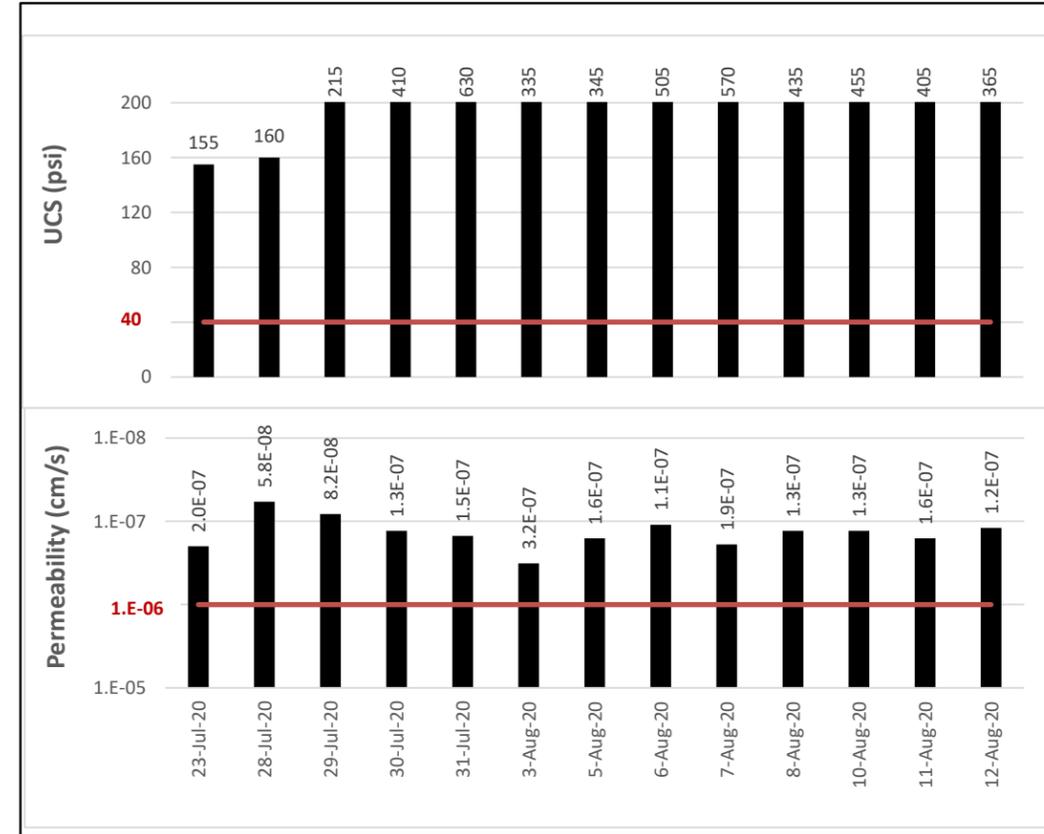
In Situ Solidification/Stabilization Results Dashboard, Tent 7-3 (Leaching Batch 6)

Quanta Resources Corporation Superfund Site, OU1

Data through: 6/3/2021

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	2.0E-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

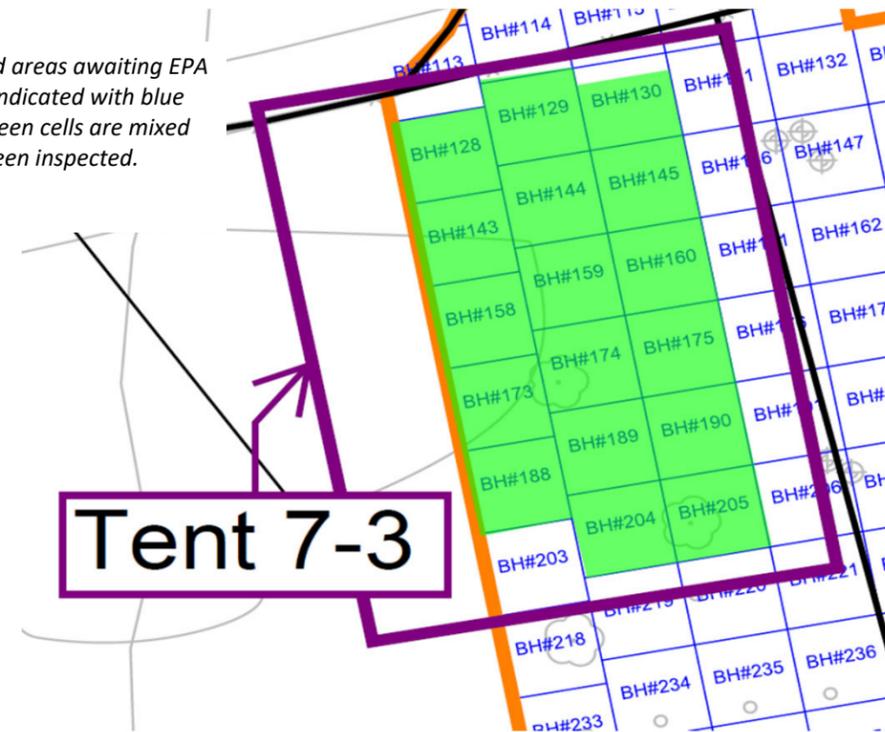
Total CY Mixed: **3575**



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

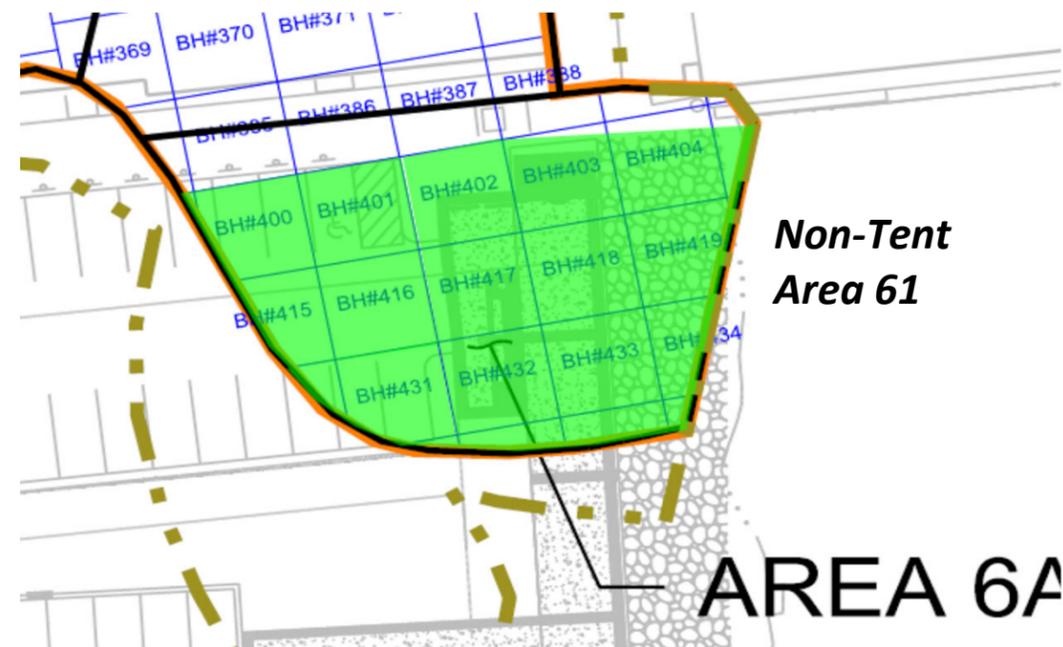
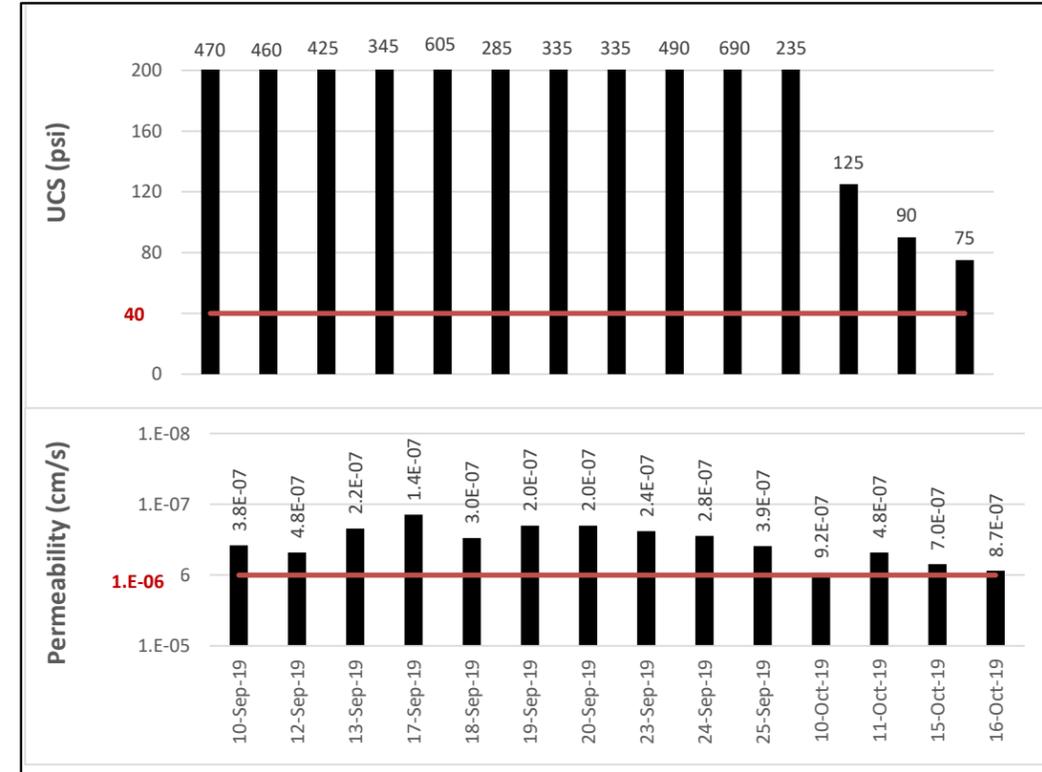
Data through: 6/3/2021

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.

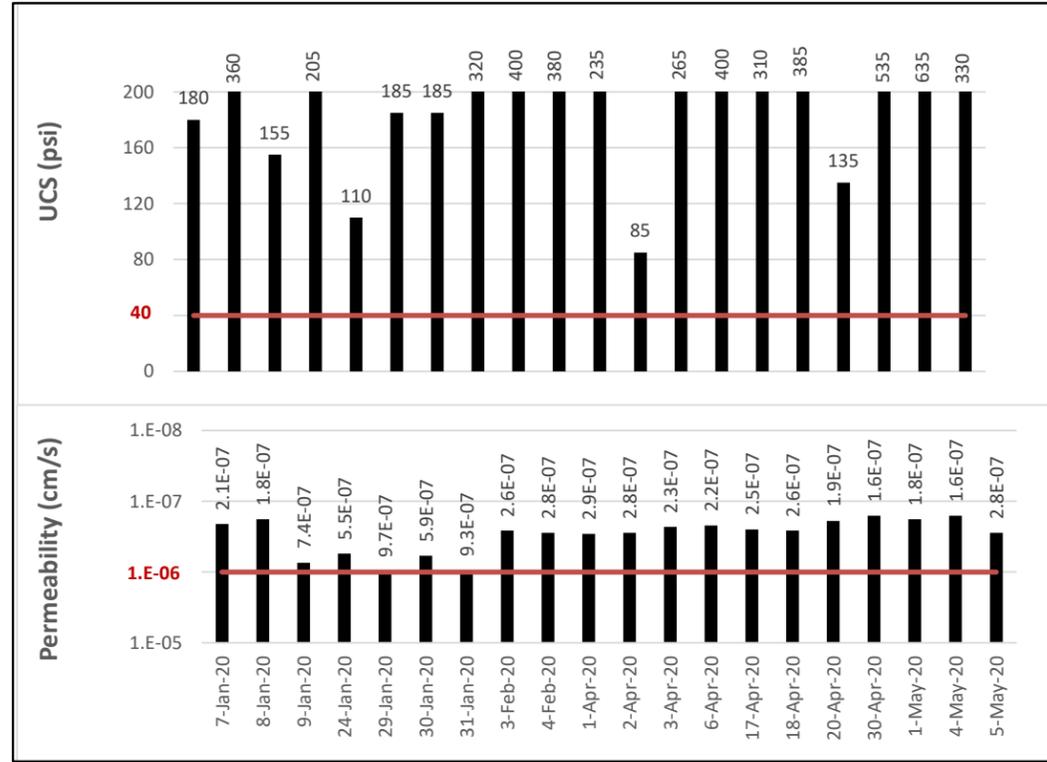
In Situ Solidification/Stabilization Results Dashboard, NT-62/63 (Leaching Batch 7)

Quanta Resources Corporation Superfund Site, OU1

Data through: 6/3/2021

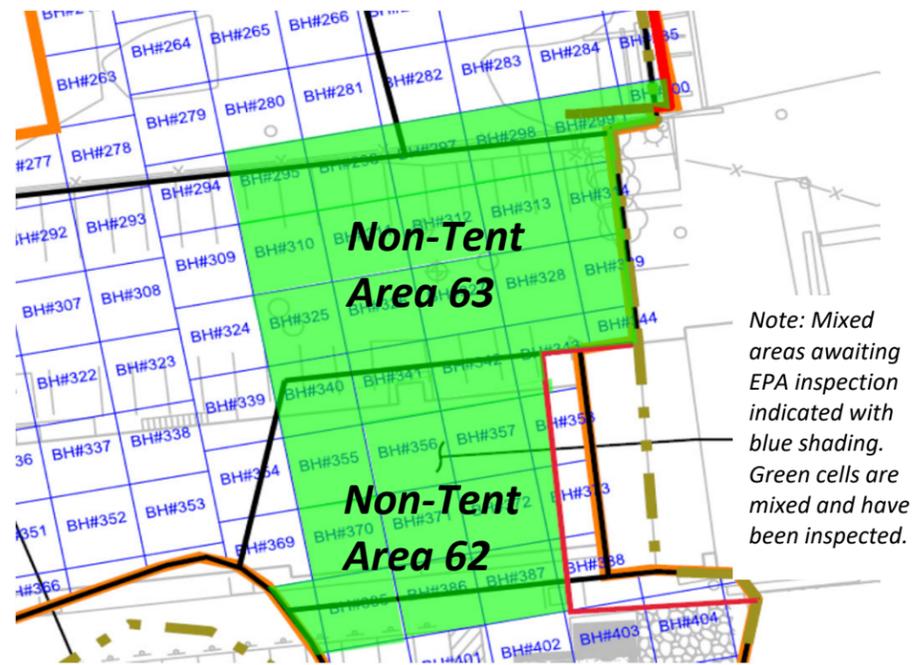
Area	Date	Volume (CY)	Mix Design		UCS (≥40 psi)	Permeability (≤1E-6 cm/s)
			Cement	Slag		
NT-62	7-Jan-20	236	4%	6%	180	2.1E-07
NT-62	8-Jan-20	188	4%	6%	360	1.8E-07
NT-62	9-Jan-20	141	4%	6%	155	7.4E-07
NT-62	24-Jan-20	271	4%	6%	205	5.5E-07
NT-62	29-Jan-20	206	4%	6%	110	9.7E-07
NT-62	30-Jan-20	195	4%	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**



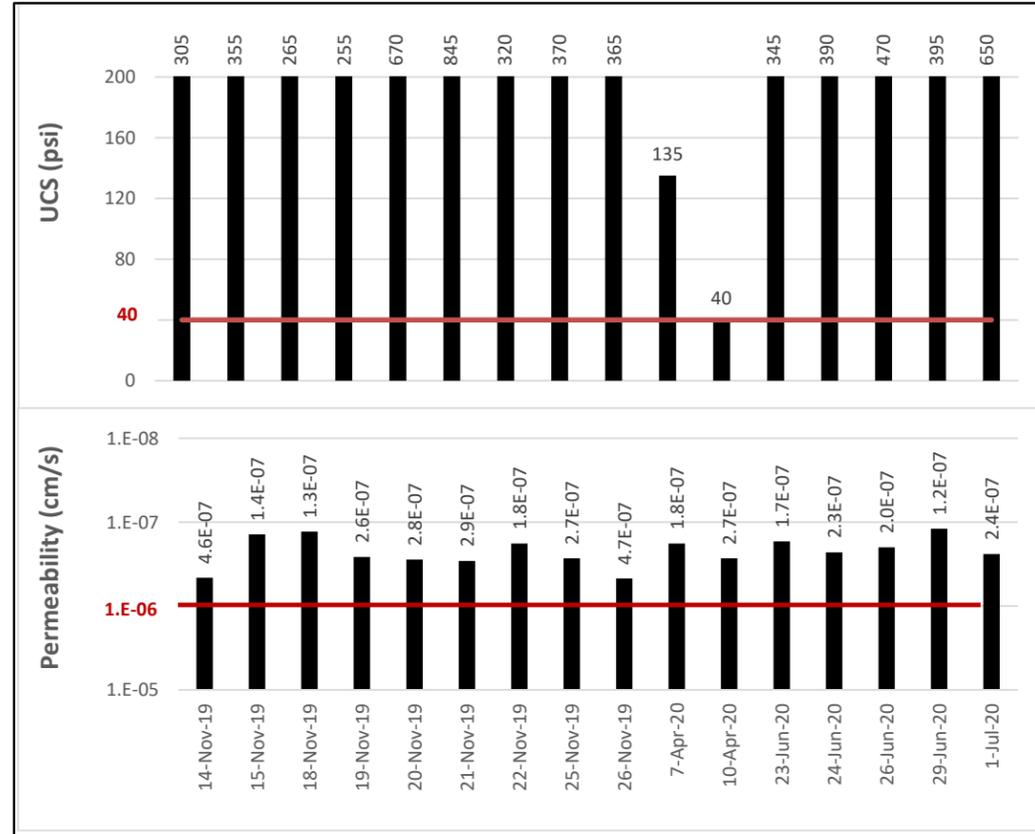
In Situ Solidification/Stabilization Results Dashboard, Area 8 (Leaching Batch 8)

Quanta Resources Corporation Superfund Site, OU1

Data through: 6/3/2021

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

