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May 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: April 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 April 30, 2021, approximately 338,049 labor hours worked.

During April, 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 April 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 April.

### **OU1 General Civil Work**

- Supported site contractor operations and continued general site maintenance activities.
- Loaded out the Area 6 remix cells soil stockpile for offsite disposal.
- Continued final Site grading activities.
- Completed demobilizing construction equipment trailers from the Site.



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### **OU1 ISS**

- Remobilized necessary equipment for required cell remixing activities. A total of 11 cells of soil were remixed (900 cubic yards) in Area 6.

### **OU1 Bulkhead Installation**

- None – Bulkhead installation is complete.

### **OU1 Vibration and Air Monitoring**

- No further vibration monitoring is occurring at the site.
- Remobilized air monitoring equipment to operate during remix activities. Collected samples at 6 locations and perimeter locations during the soil remixing activities.

### **OU1 Offsite Waste Disposal**

- Non-Hazardous
  - Ten (10) 25 CY dump trucks of soil to Conestoga Landfill in Morgantown, PA.
- Hazardous
  - One (1) 55-gallon drum of NAPL to Cycle Chem in Lewisberry, PA.
  - One (1) 55-gallon drums of NAPL-stained PPE to Cycle Chem in Lewisberry, PA.

### **OU1 NAPL Recovery**

- Pumped approximately 41 gallons of NAPL from RW4-2
- Sentinel wells were measured on April 26.
- Baildown test at RW4-2 completed on April 28.

### **High Concentration Arsenic Area (HCAA)**

- No work activities associated with the HCAA were completed in April.

### **Site Security, Maintenance, and Inspections**

- Weekly boom and SWPP inspections were temporarily suspended in April as site activities were stabilized. Inspections will resume in May during remixing activities.

### **Two-Week Look-Ahead**

- Continue pumping RW4-2.
- Gauge sentry wells.
- Install permanent fencing along the southern and northeastern portion of the Site.
- Complete transportation and off-site disposal of HCAA and NAPL drums.



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## 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. As detailed within the report, and via communications with EPA, two samples failed associated with Batch 7. This included one sample failing for UCS and one sample for permeability. Corrective measures were to remix these cells which was performed during April. Subsequent samples from these remixed cells also failed and corrective measures as defined below are to be implemented.

### 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](http://www.quantaremediation.com)

### Other Deliverables and Submittals

- Received approval from EPA on April 28 for the ISS Completion Reports for ISS activities completed through May 2018.

### Corrective Actions

As detailed in the ISS Compliance Data Summary, two samples failed to meet the required Performance Criteria for UCS and permeability. In addition, a third sample was trending below the applicable requirements. Remixing activities of these cells was performed in April and subsequently results from the remixing did not pass criteria due to incorrect reagent percentages added to the soil mixes. The cells are to be remixed in May 2021 after appropriate planning activities.

### Activities Planned for Next 6 Weeks

- Continue with NAPL recovery operations.
- Continue weekly boom inspections and SWPPP inspections and associated maintenance.
- Complete the second remixing of cells.
- Discontinue perimeter and offsite air monitoring.



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- Complete demobilizing all materials and equipment from the Site.
- Restore Area 6 (southeastern portion of the Site).

### Schedule Update and Delays

Current demobilization (following completion of cell remixing) is planned to be fully completed by end of May 2021.

### Percent Complete

Work associated with the entire OU1 Remedial Action is approximately 96 percent complete.

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)

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

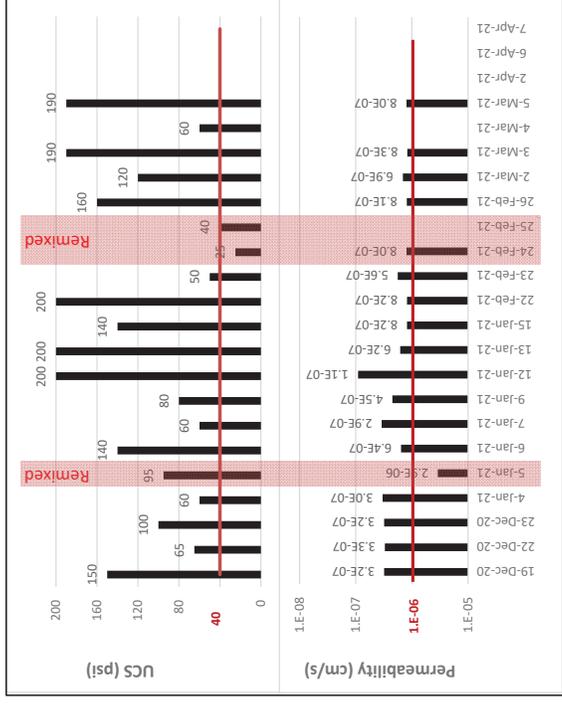
Quanta Resources Corporation Superfund Site, OU1  
Data through: 4/30/2021

Tent	Date	Volume (CY)	Mix Design		Slag	UCS (≥40 psi)	Permeability (≤1E-6 cm/s)
			Cement	Cement			
6-2	19-Dec-20	256	2%	2%	6%	150	3.2E-07
6-2	22-Dec-20	329	2%	2%	6%	65	3.3E-07
6-2	23-Dec-20	236	2%	2%	6%	100	3.2E-07
6-2	4-Jan-21	150	4%	4%	6%	60	3.0E-07
6-2	5-Jan-21	245	2%	2%	6%	95	2.9E-06
6-2	6-Jan-21	345	2%	2%	6%	140	2.9E-06
6-2	7-Jan-21	244	2%	2%	6%	60	2.9E-07
6-2	9-Jan-21	245	2%	2%	6%	80	4.5E-07
6-2	12-Jan-21	331	4%	4%	6%	200	1.1E-07
6-2	13-Jan-21	234	2%	2%	6%	200	6.2E-07
6-2	15-Jan-21	30	2%	2%	6%	140	8.2E-07
6-1	22-Feb-21	515	2%	2%	6%	200	8.2E-07
6-1	23-Feb-21	299	2%	2%	6%	50	5.6E-07
6-1	24-Feb-21	295	2%	2%	6%	25	8.0E-07
6-1	25-Feb-21	253	2%	2%	6%	40	8.0E-07
6-1	26-Feb-21	210	2%	2%	6%	160	8.1E-07
6-1	2-Mar-21	312	4%	4%	6%	120	6.9E-07
6-1	3-Mar-21	172	2%	2%	6%	190	8.3E-07
6-1	4-Mar-21	221	2%	2%	6%	60	8.3E-07
6-1	5-Mar-21	210	2%	2%	6%	190	8.0E-07
NT	2-Apr-21	remix	4%	4%	--		
NT	6-Apr-21	remix	4%	4%	--		
NT	7-Apr-21	remix	4%	4%	--		

Total CY Mixed: 5229

Data Pending

Cells shown in ~~pink~~ have been remixed; original UCS/permeability data is not representative. Volume not shown for remix cells; original cell volume applies.



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

Leaching Reduction by 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 Dibenzo(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	

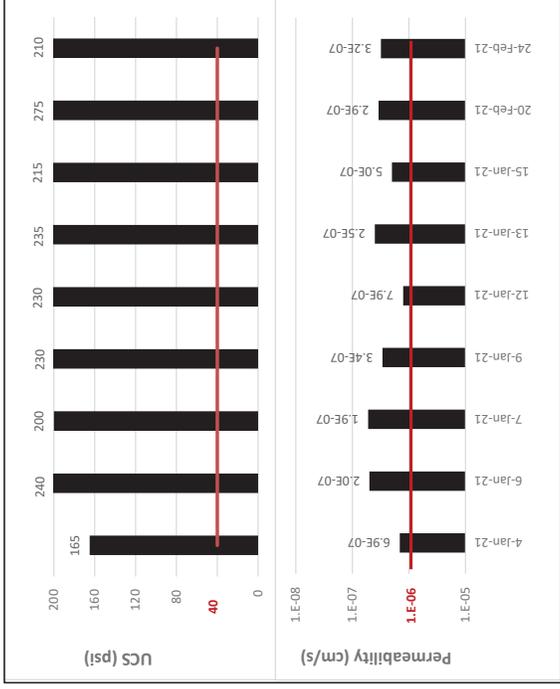
Constituents Passing: 9 of 9

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

Quanta Resources Corporation Superfund Site, OU1  
Data through: 4/30/2021

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	Site Constituent	Site Constituent
1 Arsenic	12 Benzo(b)fluoranthene	14 Benzo(a)anthracene	15 Benzo(a)pyrene
2 Benzene	13 Benzothienanthrene	16 Benzo(k)fluoranthene	17 Benzo(e)pyrene
3 Toluene	14 Benzothienanthrene	18 Benzo(a)anthracene	19 Benzo(a)anthracene
4 Ethylbenzene	15 Benzo(a)anthracene	19 Benzo(a)anthracene	20 Indeno(1,2,3-cd)pyrene
5 Total Xylenes	16 Benzo(k)fluoranthene	20 Indeno(1,2,3-cd)pyrene	21 Phenanthrene
6 Naphthalene	17 Benzo(e)pyrene	21 Phenanthrene	22 Pyrene
7 Acenaphthene	18 Benzo(a)anthracene	22 Pyrene	
8 Acenaphthylene	19 Benzo(a)anthracene		
9 Anthracene	20 Indeno(1,2,3-cd)pyrene		
10 Benzo(a)anthracene	21 Phenanthrene		
11 Benzo(a)pyrene	22 Pyrene		
Constituents Passing		Constituents Passing	

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

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

Quanta Resources Corporation Superfund Site, OU1  
4/30/2021

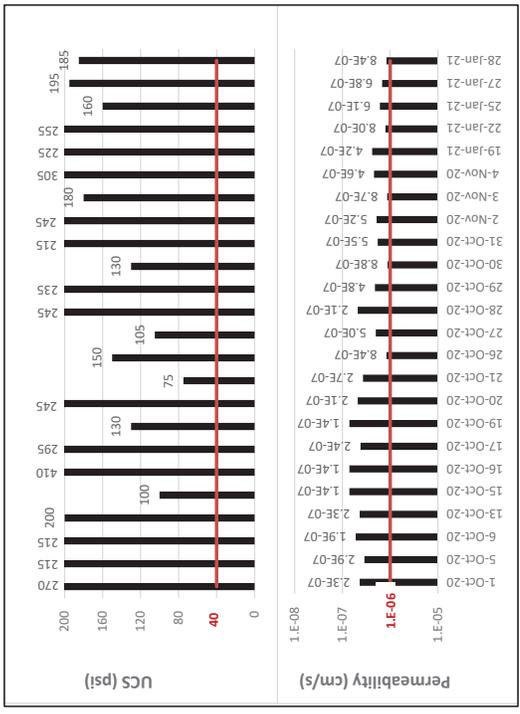
Area	Date	Volume (CY)	Mix Design		UCS (≥40 psi)	Permeability (≤1E-6 cm/s)
			Cement	Slag		
5-2	1-Oct-20	318	2%	6%	270	2.3E-07
5-2	5-Oct-20	363	2%	6%	215	2.9E-07
5-2	6-Oct-20	452	2%	6%	215	1.9E-07
5-2	13-Oct-20	314	2%	6%	200	2.3E-07
5-2	15-Oct-20	247	2%	6%	100	1.4E-07
5-2	16-Oct-20	314	2%	6%	410	1.4E-07
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 Benzol(b)fluoranthene
2 Benzene	13 (g,h,i)perylene
3 Toluene	14 (k)fluoranthene
4 Ethylbenzene	15 (m)anthracene
5 Total Xylenes	16 Fluorene
6 Naphthalene	17 Indeno(1,2,3-cd)pyrene
7 Acenaphthene	18 Phenanthrene
8 Acenaphthylene	19 Pyrene
9 Anthracene	20
10 Benzol(a)anthracene	21
11 Benzol(a)pyrene	22

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

Constituents Passing

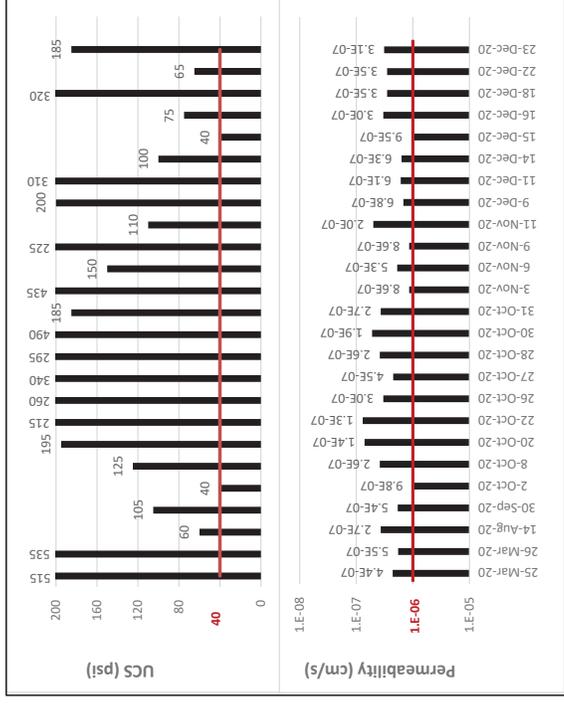


Note: Mixed areas awaiting EPA inspection indicated with blue shading. Green cells are mixed and have been inspected.

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

Quanta Resources Corporation Superfund Site, OUI  
Data through: 4/30/2021

Area	Date	Mix Design			UCS (≥40 psi)	Permeability (≤1E-6 cm/s)
		Volume (CY)	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				



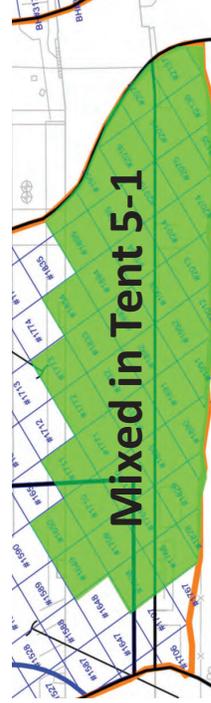
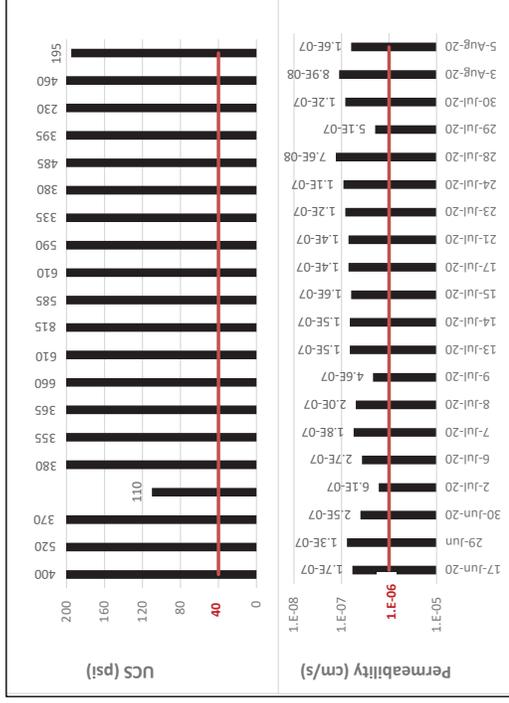
Leaching Reduction by Constituent		Aug 14 2020 Sample, Dec 14 2020 Sample Held	
Site Constituent	Site Constituent	Site Constituent	Site Constituent
1 Arsenic	100%	12 Benzo(b)fluoranthene	NE; <1% tPAH
2 Benzene	97%	13 Benzo(g,h,i)perylene	NE; <1% tPAH
3 Toluene	95%	14 Benzo(k)fluoranthene	NE; <1% tPAH
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	

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

Quanta Resources Corporation Superfund Site, OU1  
Data through: 4/30/2021

Area	Date	Volume (CY)	Mix Design		Slag	UCS (≥40 psi)	Permeability (≤1E-6 cm/s)
			Cement	Permeability			
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	
		<b>Total CY Mixed:</b>		<b>5640</b>			

Leaching Reduction by Constituent		Site Constituent	
1	Arsenic	98%	12 Benzo(b)fluoranthene
2	Benzene	95%	13 Benzo(g,h,i)perylene
3	Toluene	94%	14 Benzo(k)fluoranthene
4	Ethylbenzene	99%	15 Chrysene
5	Total Xylenes	98%	16 Dibenz(a,h)anthracene
6	Naphthalene	99%	17 Fluoranthene
7	Acenaphthylene	98%	18 Fluorene
8	Acenaphthylene	NE; <1% tPAH	19 Indeno(1,2,3-cd)pyrene
9	Anthracene	NE; <1% tPAH	20 Phenanthrene
10	Benzo(a)anthracene	NE; <1% tPAH	21 Pyrene
11	Benzo(a)pyrene	NE; <1% tPAH	
		<b>Constituents Passing</b>	
		<b>7 of 7</b>	



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.

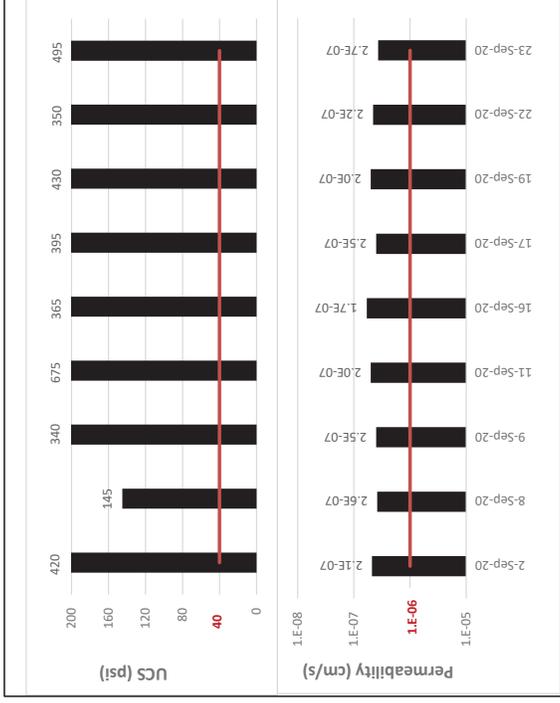
### In Situ Solidification/Stabilization Results Dashboard, Tent 7-4 (Leaching Batch 11)

Quanta Resources Corporation Superfund Site, OU1  
Data through: 4/30/2021

Tent	Date	Volume (CV)	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 CV 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	NE
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		<b>9 of 9</b>

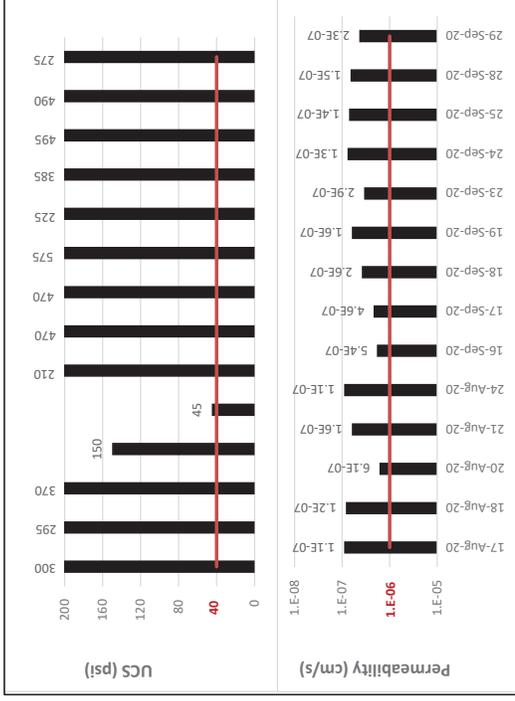


Note: Mixed areas awaiting EPA inspection indicated with blue shading. Green cells are mixed and have been inspected.

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

Quanta Resources Corporation Superfund Site, OU1  
Data through: 4/30/2021

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	
		<b>Total CY Mixed:</b>			<b>3551</b>		



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

Leaching Reduction by Constituent	Results
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(e,h,i)perylene	
14 Benzo(k)fluoranthene	
15 Chrysene	
16 Di(benz(a,h))anthracene	
17 Fluoranthene	
18 Fluorene	
19 indeno(1,2,3-cd)pyrene	
20 Phenanthrene	
21 Pyrene	
<b>Constituents Passing</b>	

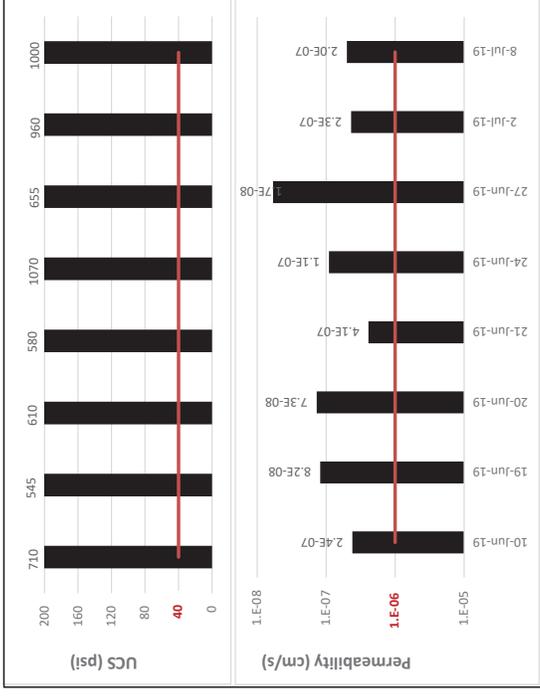
Held Sample, See Tent 5-1 Dashboard for Batch 7

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

Quanta Resources Corporation Superfund Site, OU1  
Data through: 4/30/2021

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



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

Leaching Reduction by Constituent	8-Jul-19
1 Arsenic	97%
2 Benzene	99%
3 Toluene	99%
4 Ethylbenzene	99%
5 Total Xylenes	99%
6 Naphthalene	88%
7 Acenaphthylene	94%
8 Acenaphthylene	94%
9 Anthracene	NE
10 Benz(a)anthracene	NE
11 Benz(a)pyrene	NE
12 Benz(b)fluoranthene	NE
13 Benz(g,h,i)perylene	NE
14 Benz(k)fluoranthene	NE
15 Chrysene	NE
16 Dibenz(a,h)anthracene	NE
17 Fluoranthene	NE
18 Fluorene	85%
19 Indeno(1,2,3-cd)pyrene	NE
20 Phenanthrene	53%
21 Pyrene	NE
<b>Constituents Passing</b>	<b>7 of 10</b>

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 PAH.

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

Quanta Resources Corporation Superfund Site, OU1  
Data through: 4/30/2021

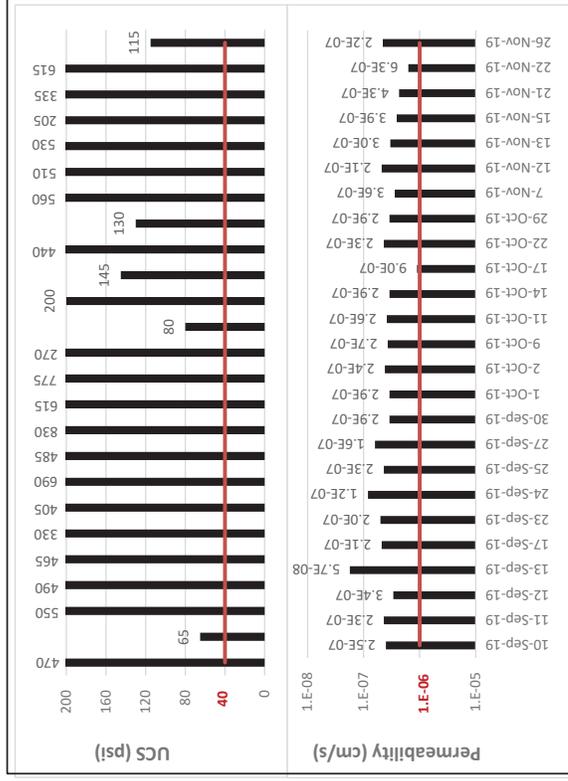
Tent	Date	Volume (CY)	Mix Design		UCS (≥40 psi)	Permeability (≤1E-6 cm/s)
			Cement	Slag		
3-2	10-Sep-19	179	2%	6%	470	2.50E-07
3-2	11-Sep-19	339	2%	6%	65	2.30E-07
3-2	12-Sep-19	293	2%	6%	550	3.40E-07
3-2	13-Sep-19	182	2%	6%	490	5.70E-08
3-2	17-Sep-19	343	2%	6%	465	2.10E-07
3-2	23-Sep-19	342	2%	6%	330	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 Constituent	11-Oct-19 Site Constituent		11-Oct-19
	Reduction	Constituent	
1 Arsenic	98%	12	NE
2 Benzene	80%	13	NE
3 Toluene	82%	14	NE
4 Ethylbenzene	80%	15	NE
5 Total Xylenes	78%	15	NE
6 Naphthalene			0%
7 Acenaphthene			1%
8 Acenaphthylene			NE
9 Anthracene	NE	20	0%
10 Benzo(a)anthracene	NE	21	0%
11 Benzo(a)pyrene	NE		0%

Constituents Passing: N/A Extra Sample

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



Mixed under Tent 3-2



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: 4/30/2021

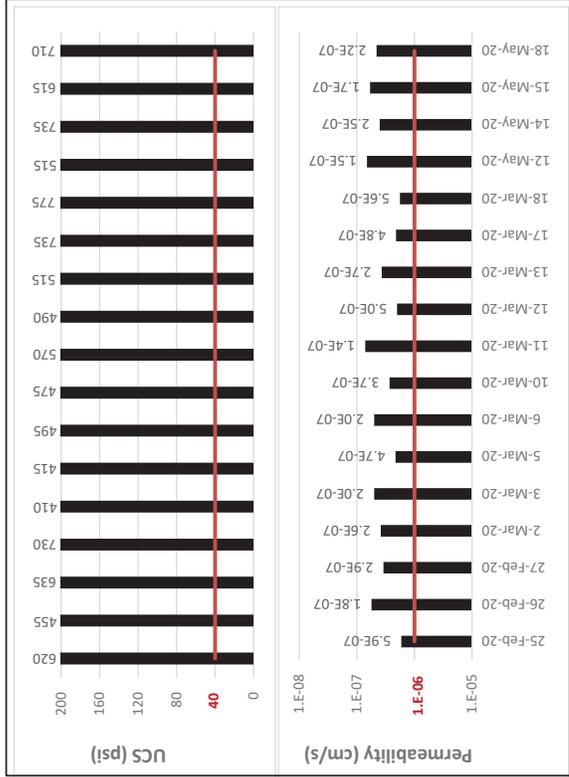
Tent	Date	Volume (CY)	Mix Design			UCS (≥40 psi)	Permeability (≤1E-6 cm/s)
			Cement	Slag			
3-3	25-Feb-20	313	2%	6%	620	5.90E-07	
3-3	26-Feb-20	327	2%	6%	455	1.80E-07	
3-3	27-Feb-20	173	2%	6%	635	2.90E-07	
3-3	2-Mar-20	173	2%	6%	730	2.60E-07	
3-3	3-Mar-20	210	2%	6%	410	2.00E-07	
3-3	5-Mar-20	173	2%	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.

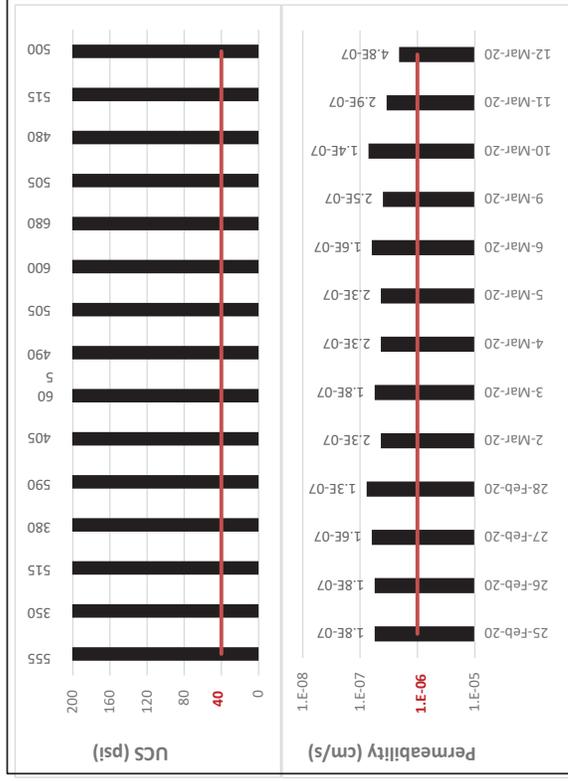
### In Situ Solidification/Stabilization Results Dashboard, NT-31, 32, 33 (Leaching Batch 5)

Quanta Resources Corporation Superfund Site, OU1  
Data through: 4/30/2021

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	
<b>Total CY Mixed: 3215</b>							

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	
<b>Constituents Passing</b>	

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



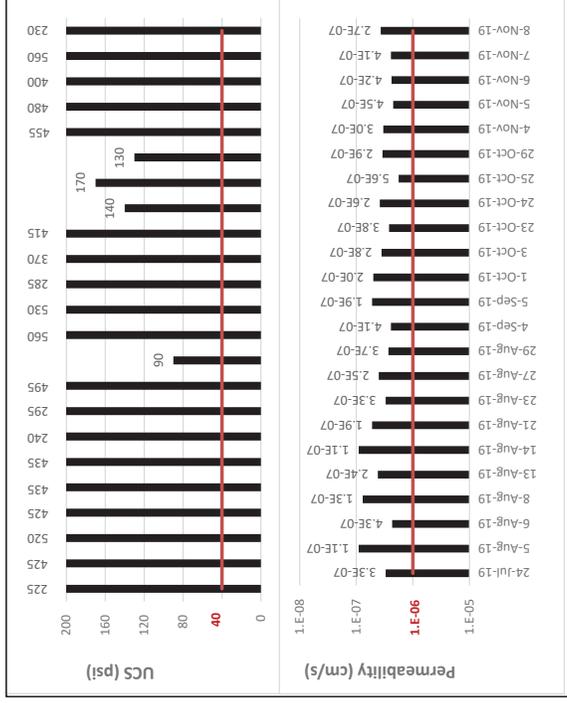
Note: Mixed areas awaiting EPA inspection indicated with blue shading. Green cells are mixed and have been inspected. Yellow cells were previously mixed during the ISS Field Demonstration.

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

Quanta Resources Corporation Superfund Site, OU1

Data through: 4/30/2021

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	6-Nov-19	268	2%	6%	480	4.5E-07
7-1	5-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
		<b>Total CY Mixed:</b>			<b>8311</b>	



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

Leaching Reduction by Constituent	8-Aug-19	23-Oct-19
1 Arsenic	100%	
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(k)fluoranthene	NE; not detected	
14 Benzo(e)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	
<b>Constituents Passing</b>		<b>6 of 6</b>

HELD SAMPLE;  
See August 8  
results for  
Batch 6

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

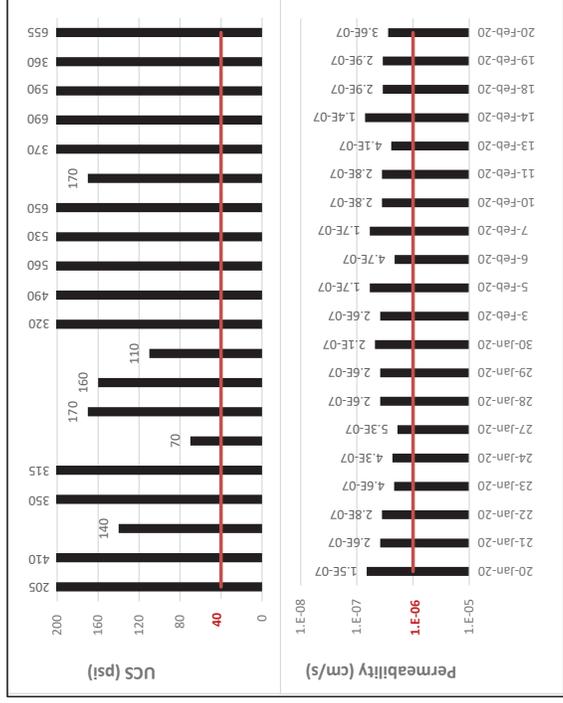
Quanta Resources Corporation Superfund Site, OU1  
4/30/2021

Tent	Date	Volume (CV)	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 CV 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(e,b,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)

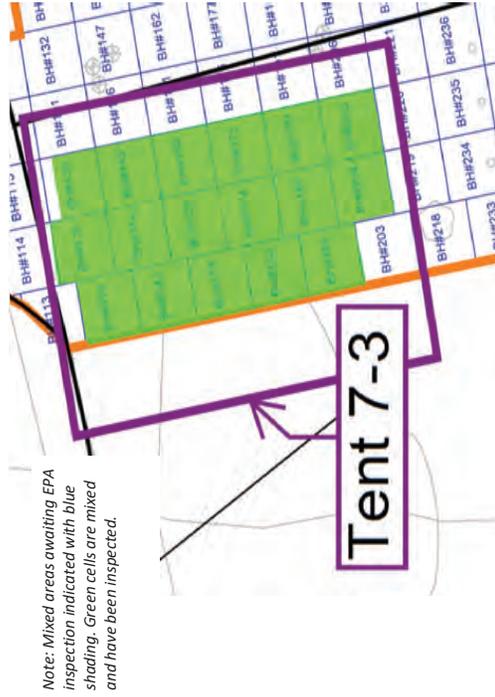
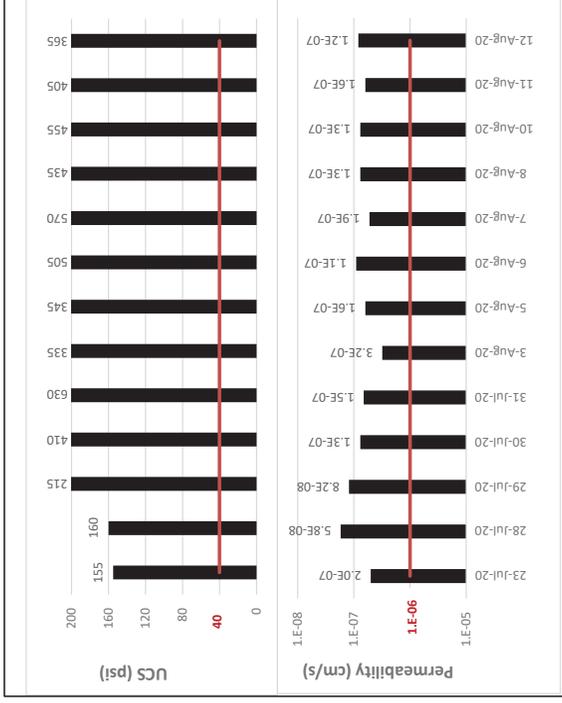
Quanta Resources Corporation Superfund Site, OU1  
Data through: 4/30/2021

Tent	Date	Volume (CV)	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 CV Mixed: **3575**

Leaching Reduction by Constituent	Constituents Passing
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

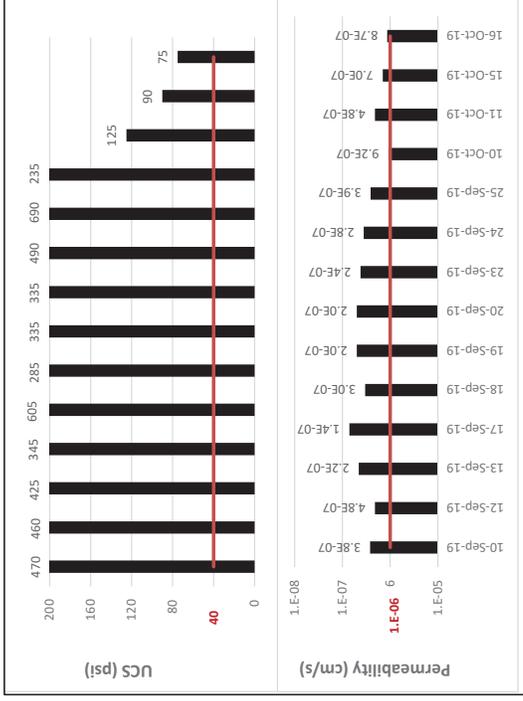


### In Situ Solidification/Stabilization Results Dashboard, NT-61 (Leaching Batch 7)

Quanta Resources Corporation Superfund Site, OU1  
4/30/2021

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**



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(b)pyrene	NE; not detected
12 Benzo(k)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%
19 Indeno(1,2,3-cd)pyrene	NE; not detected
20 Phenanthrene	0%
21 Pyrene	0%
<b>Constituents Passing 1 of 4</b>	

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 <3% of tPAH.



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

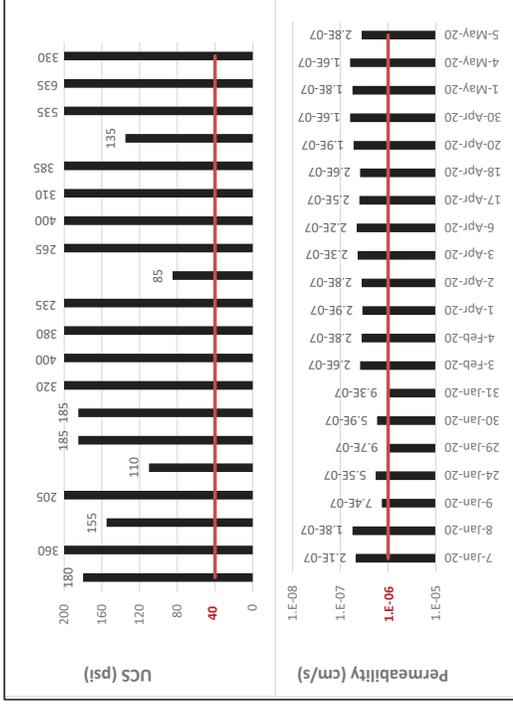
**AREA 6A**

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

Quanta Resources Corporation Superfund Site, OUI  
4/30/2021

Data through:

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	
		<b>Total CY Mixed:</b>			<b>4541</b>		



Leaching Reduction by Constituent		Site Constituent	
1	Arsenic	99%	12 Benzo(b)fluoranthene
2	Benzene	99%	13 Benzo(g,h,i)perylene
3	Toluene	97%	14 Benzo(k)fluoranthene
4	Ethylbenzene	99%	15 Chrysene
5	Total Xylenes	99%	16 Dibenz(a,h)anthracene
6	Naphthalene	97%	17 Fluoranthene
7	Acenaphthene	94%	18 Fluorene
8	Acenaphthylene	NE; <1% tPAH	19 Indeno(1,2,3-cd)pyrene
9	Anthracene	NE; <1% tPAH	20 Phenanthrene
10	Benzo(a)anthracene	NE; <1% tPAH	21 Pyrene
11	Benzo(a)pyrene	NE; <1% tPAH	
		<b>Constituents Passing</b>	<b>8 of 10</b>

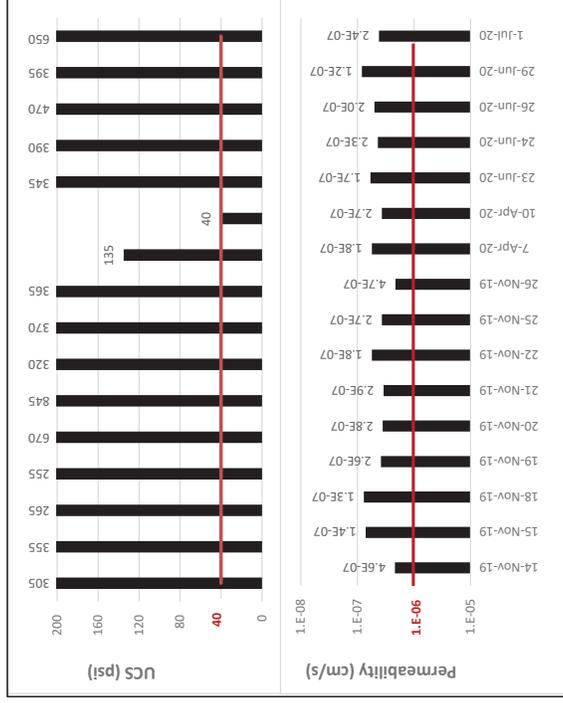
### In Situ Solidification/Stabilization Results Dashboard, Area 8 (Leaching Batch 8)

Quanta Resources Corporation Superfund Site, OU1  
Data through: 4/30/2021

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	1.7E-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		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
9	Anthracene	NE
10	Benzo(a)anthracene	NE
11	Benzo(b)pyrene	NE
12	Benzo(k)fluoranthene	NE
13	Benzo(e,h,i)perylene	NE
14	Benzo(k)fluoranthene	NE
15	Chrysene	NE
16	Dibenz(a,h)anthracene	NE
17	Fluoranthene	NE
18	Fluorene	NE
19	Indeno(1,2,3-cd)pyrene	NE
20	Phenanthrene	NE
21	Pyrene	NE
Constituents Passing		7 of 7



**Area 8**  
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** D80382  
**MANIFEST DOCUMENT NO.** 022176546JJK  
**WORK ORDER:** 83108

The EPA hazardous wastes identified below must be treated to applicable treatment standards set forth in 40 CFR 261

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 *James Burke* Title *Geologist* Date *9/28/01*

Please print or type.

<b>UNIFORM HAZARDOUS WASTE MANIFEST</b>		1. Generator ID Number <b>NJD081139371</b>	2. Page 1 of 1	3. Emergency Response Phone <b>908-354-0210</b>	4. Manifest Tracking Number <b>022176546 JJK</b>			
5. Generator's Name and Mailing Address <b>HONEYWELL INTERNATIONAL 8100 PHILADELPHIA PIKE CLAYMONT, DE 19703</b> Generator's Phone: <b>302-791-8738</b>				Generator's Site Address (if different than mailing address) <b>QUANTA RESOURCES RECOVERY SUPERFUND SITE 163 RIVER ROAD EDGEWATER, NJ 07020</b>				
6. Transporter 1 Company Name <b>ACV ENVIRONMENTAL SERVICES, INC</b>				U.S. EPA ID Number <b>NJD003812047</b>				
7. Transporter 2 Company Name				U.S. EPA ID Number				
8. Designated Facility Name and Site Address <b>CYCLE CHEM, INC 550 INDUSTRIAL DRIVE LEWISBERRY, PA 17339</b> Facility's Phone: <b>717-938-4700</b>				U.S. EPA ID Number <b>PAD067098822</b>				
<b>GENERATOR</b>	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	XXI	DM	75	P	D018	
	X	2. RQ, NA3082, Hazardous waste, liquid, n.o.s. (benzene), 9, III	XXI	DM	400	P	D018	
		3.						
		4.						
14. Special Handling Instructions and Additional Information <b>D80382 SO 83108 LDR on File SFSO#</b> <b>1) Profile#112589 NAPL CONTAMINATED DEBRIS 2) Profile#112591 NAPL</b>								
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/Offeror's Printed/Typed Name <i>Austin Harekewicz/ChM as agent/on behalf of Honeywell</i>				Signature <i>[Signature]</i>		Month Day Year <b>10/25/21</b>		
<b>INT'L</b>	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.:			
	Transporter signature (for exports only):							
<b>TRANSPORTER</b>	17. Transporter Acknowledgment of Receipt of Materials		Signature		Month Day Year			
	Transporter 1 Printed/Typed Name <i>Tina Poan</i>		<i>[Signature]</i>		<b>10/25/21</b>			
	Transporter 2 Printed/Typed Name		Signature		Month Day Year			
<b>DESIGNATED FACILITY</b>	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:				Month Day Year			
	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. <b>H141</b>		2. <b>H141</b>		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		

GENERATOR'S INITIAL COPY