



Memorandum

Huntington Power Plant

*8 miles west of Huntington, Utah on Hwy. 31
P.O. Box 680
Huntington, Utah 84528*

Date: January 14, 2016

To: Bradly Giles

From: Russ Willson, PacifiCorp
Mark Rutherford, PacifiCorp

Subject: Confirmation of CCR Removal Efforts for the Huntington Power Plant Historic Scrubber Pond

Description of Historic Scrubber Pond

The scrubber pond (pond) at the Huntington Plant was a 7 acre foot storage pond historically used to store scrubber wastes. The pond covered 28,000 square feet in area and was located north of the coal blend pile and southeast of the Unit One and Unit Two cooling towers. The pond was approximately 6 feet deep at its deepest location. The pond was constructed with an asphaltic bottom and sides with the addition of a poly liner. The thickness of the asphalt was 6" – 8". Located at the fringe of the poly liner were large, 3' to 5' boulders. There were two concrete control structures located in the pond. The inlet structure was a 4' x 4' x 3' high concrete box structure with a 6" HDPE pipe used to historically deliver scrubber waste to the pond. The pond also had a 3.5' x 5' x 2' high concrete structure with an 18" PVC pipe used as an outlet for overflow conditions.

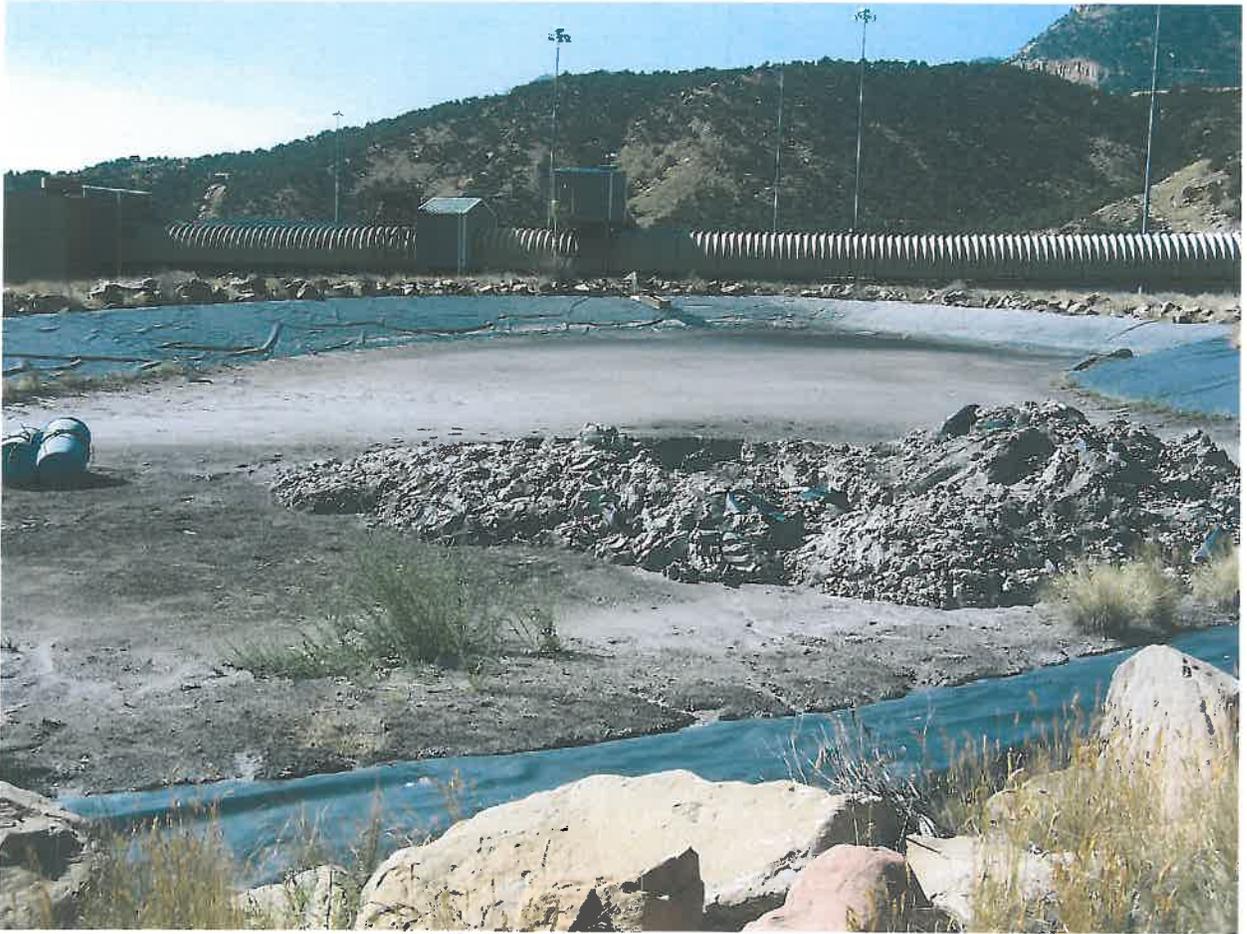
Prior to closure the pond had not been actively used to collect or store scrubber wastes for at least 6 years. At the time of closure, the pond contained approximately 2.5 acre feet of scrubber wastes consisting of FGD wastes, fly ash, bottom ash, coal dust and some soil from rainwater runoff events. The waste was moist from storm water capture and in the lower reaches of the pond was wet (see attached photo).

2015 Cleaning, CCR Removal and Analysis

Clean closing activities on the scrubber pond were conducted during the first week of October, 2015. The activities included the removal of all of the CCR materials with the use of an excavator and dump trucks. The CCR materials were placed in the CCR landfill for

final disposal. Over-excavation to native and sandy soils was witnessed by Russ Willson during the CCR material removal portion of the project. Representative soil sampling was conducted on the native materials remaining in the bottom of the pond. The samples were tested for pH, TCLP metals and total petroleum hydro-carbons. The results of the analysis are attached to this document. The concrete structures were demolished and removed to the industrial waste landfill. The asphaltic and poly liners were also removed and disposed of in the industrial waste landfill. After the removal of the CCR materials, liners, structures and boulders was complete, the clean banks of the pond were pulled in and used to fill the void of the pond. Also, in December of 2015, the entire pond closure site was hydro-seeded with a reclamation seed mix to reduce the potential for erosion at the disturbed site (see attached photo)

In view of the historical use of the Scrubber Pond, the understanding that the pond was lined with a combination of asphalt and poly materials, visual and analytical evaluations of the native soil during decommissioning, filling in the pond void with clean materials and the final reclamation of the area, it is our belief that the Scrubber Pond has been properly clean closed.



Scrubber Pond Prior to Decommissioning



Photo Showing the Depth of CCR Materials to be Removed. Photo Also Reveals the Asphaltic Liner Below the Poly Liner.



Scrubber Pond Location after Closure and Reclamation

Attachment 1

Analytical Results from Soil Samples



INORGANIC ANALYTICAL REPORT

Client: PacifiCorp - Huntington Plant **Contact:** Russell Willson
Project: Historic Scrubber Pond Closure - CCR / 3000107488
Lab Sample ID: 1509566-001
Client Sample ID: Soil Sample #1
Collection Date: 9/24/2015 900h
Received Date: 9/29/2015 1025h

Analytical Results

3440 South 700 West
Salt Lake City, UT 84119

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
pH @ 25° C	pH Units		9/29/2015 1745h	SW9045D	1.00	8.53	H

H - Sample was received outside of the holding time.

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Kyle F. Gross
Laboratory Director

Jose Rocha
QA Officer



ORGANIC ANALYTICAL REPORT

Client: PacifiCorp - Huntington Plant **Contact:** Russell Willson
Project: Historic Scrubber Pond Closure - CCR / 3000107488
Lab Sample ID: 1509566-001A
Client Sample ID: Soil Sample #1
Collection Date: 9/24/2015 900h
Received Date: 9/29/2015 1025h

Test Code: 8015-S-TPH-3546

Analytical Results TPH-DRO (C10-C28) by Method 8015D Mod/3546

Analyzed: 9/30/2015 1323h **Extracted:** 9/29/2015 1355h
Units: mg/kg-dry **Dilution Factor:** 1 **Method:** SW8015D

Compound	CAS Number	Reporting Limit	Analytical Result	Qual		
Diesel Range Organics (DRO) (C10-C28)	68476-34-6	20.8	140			
Surrogate	CAS	Result	Amount Spiked	% REC	Limits	Qual
Surr: 4-Bromofluorobenzene	460-00-4	17.4	34.72	50.0	10-122	

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ORGANIC ANALYTICAL REPORT

Client: PacifiCorp - Huntington Plant **Contact:** Russell Willson
Project: Historic Scrubber Pond Closure - CCR / 3000107488
Lab Sample ID: 1509566-001A
Client Sample ID: Soil Sample #1
Collection Date: 9/24/2015 900h
Received Date: 9/29/2015 1025h

Test Code: 8260-S-PPM

Analytical Results

VOAs MBTEXN/GRO by GC/MS Method 8260C

Analyzed: 9/30/2015 1152h

Units: mg/kg-dry

Dilution Factor: 2.48

Method: SW8260C

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Compound	CAS Number	Reporting Limit	Analytical Result	Qual
TPH C6-C10 (GRO)		0.0524	0.469	

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Surrogate	CAS	Result	Amount Spiked	% REC	Limits	Qual
Surr: 1,2-Dichloroethane-d4	17060-07-0	0.139	0.1309	106	51-170	
Surr: 4-Bromofluorobenzene	460-00-4	0.124	0.1309	95.1	60-144	
Surr: Dibromofluoromethane	1868-53-7	0.135	0.1309	103	60-145	
Surr: Toluene-d8	2037-26-5	0.131	0.1309	99.7	50-138	

Sampling and analytical preparation performed by method 5030C modified for analysis of soil samples collected in 2 or 4 oz jars.

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INORGANIC ANALYTICAL REPORT

Client: PacifiCorp - Huntington Plant **Contact:** Russell Willson
Project: Historic Scrubber Pond Closure - CCR / 3000107488
Lab Sample ID: 1509566-002
Client Sample ID: Soil Sample #2
Collection Date: 9/24/2015 905h
Received Date: 9/29/2015 1025h

Analytical Results

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Salt Lake City, UT 84119

<u>Compound</u>	<u>Units</u>	<u>Date Prepared</u>	<u>Date Analyzed</u>	<u>Method Used</u>	<u>Reporting Limit</u>	<u>Analytical Result</u>	<u>Qual</u>
pH @ 25° C	pH Units		9/29/2015 1745h	SW9045D	1.00	8.70	H

H - Sample was received outside of the holding time.

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ORGANIC ANALYTICAL REPORT

Client: PacifiCorp - Huntington Plant **Contact:** Russell Willson
Project: Historic Scrubber Pond Closure - CCR / 3000107488
Lab Sample ID: 1509566-002A
Client Sample ID: Soil Sample #2
Collection Date: 9/24/2015 905h
Received Date: 9/29/2015 1025h

Test Code: 8015-S-TPH-3546

Analytical Results

TPH-DRO (C10-C28) by Method 8015D Mod/3546

Analyzed: 9/30/2015 1303h **Extracted:** 9/29/2015 1355h
Units: mg/kg-dry **Dilution Factor:** 1 **Method:** SW8015D

Compound	CAS Number	Reporting Limit	Analytical Result	Qual		
Diesel Range Organics (DRO) (C10-C28)	68476-34-6	20.7	38.8			
Surrogate	CAS	Result	Amount Spiked	% REC	Limits	Qual
Surr: 4-Bromofluorobenzene	460-00-4	17.1	34.43	49.6	10-122	

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Project: Historic Scrubber Pond Closure - CCR / 3000107488
Lab Sample ID: 1509566-002A
Client Sample ID: Soil Sample #2
Collection Date: 9/24/2015 905h
Received Date: 9/29/2015 1025h

Test Code: 8260-S-PPM

Analytical Results

VOAs MBTEXN/GRO by GC/MS Method 8260C

Analyzed: 9/30/2015 1253h

Units: mg/kg-dry

Dilution Factor: 2.49

Method: SW8260C

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Compound	CAS Number	Reporting Limit	Analytical Result	Qual
TPH C6-C10 (GRO)		0.0519	0.0527	

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Surrogate	CAS	Result	Amount Spiked	% REC	Limits	Qual
Surr: 1,2-Dichloroethane-d4	17060-07-0	0.139	0.1298	107	51-170	
Surr: 4-Bromofluorobenzene	460-00-4	0.128	0.1298	98.6	60-144	
Surr: Dibromofluoromethane	1868-53-7	0.132	0.1298	102	60-145	
Surr: Toluene-d8	2037-26-5	0.129	0.1298	99.5	50-138	

Sampling and analytical preparation performed by method 5030C modified for analysis of soil samples collected in 2 or 4 oz jars.

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INORGANIC ANALYTICAL REPORT

Client: PacifiCorp - Huntington Plant **Contact:** Russell Willson
Project: Historic Scrubber Pond Closure - CCR / 3000107488
Lab Sample ID: 1509566-003
Client Sample ID: Soil Sample #3
Collection Date: 9/25/2015 1530h
Received Date: 9/29/2015 1025h

Analytical Results

3440 South 700 West
Salt Lake City, UT 84119

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
pH @ 25° C	pH Units		9/29/2015 1745h	SW9045D	1.00	8.51	H

H - Sample was received outside of the holding time.

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ORGANIC ANALYTICAL REPORT

Client: PacifiCorp - Huntington Plant **Contact:** Russell Willson
Project: Historic Scrubber Pond Closure - CCR / 3000107488
Lab Sample ID: 1509566-003A
Client Sample ID: Soil Sample #3
Collection Date: 9/25/2015 1530h
Received Date: 9/29/2015 1025h

Test Code: 8015-S-TPH-3546

Analytical Results TPH-DRO (C10-C28) by Method 8015D Mod/3546

Analyzed: 9/30/2015 1323h **Extracted:** 9/29/2015 1355h
Units: mg/kg-dry **Dilution Factor:** 1 **Method:** SW8015D

Compound	CAS Number	Reporting Limit	Analytical Result	Qual		
Diesel Range Organics (DRO) (C10-C28)	68476-34-6	21.1	59.8			
Surrogate	CAS	Result	Amount Spiked	% REC	Limits	Qual
Surr: 4-Bromofluorobenzene	460-00-4	19.9	35.20	56.6	10-122	

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INORGANIC ANALYTICAL REPORT

Client: PacifiCorp - Huntington Plant **Contact:** Russell Willson
Project: Historic Scrubber Pond Closure - CCR / 3000107488
Lab Sample ID: 1509566-004
Client Sample ID: Soil Sample #4
Collection Date: 9/25/2015 1540h
Received Date: 9/29/2015 1025h

Analytical Results

3440 South 700 West
Salt Lake City, UT 84119

Compound	Units	Date Prepared	Date Analyzed	Method Used	Reporting Limit	Analytical Result	Qual
pH @ 25° C	pH Units		9/29/2015 1745h	SW9045D	1.00	8.07	H

H - Sample was received outside of the holding time.

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ORGANIC ANALYTICAL REPORT

Client: PacifiCorp - Huntington Plant **Contact:** Russell Willson
Project: Historic Scrubber Pond Closure - CCR / 3000107488
Lab Sample ID: 1509566-004A
Client Sample ID: Soil Sample #4
Collection Date: 9/25/2015 1540h
Received Date: 9/29/2015 1025h

Test Code: 8015-S-TPH-3546

Analytical Results

TPH-DRO (C10-C28) by Method 8015D Mod/3546

Analyzed: 9/30/2015 1343h **Extracted:** 9/29/2015 1355h
Units: mg/kg-dry **Dilution Factor:** 1 **Method:** SW8015D

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Compound	CAS Number	Reporting Limit	Analytical Result	Qual
Diesel Range Organics (DRO) (C10-C28)	68476-34-6	21.2	34.9	

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Surrogate	CAS	Result	Amount Spiked	% REC	Limits	Qual
Surr: 4-Bromofluorobenzene	460-00-4	19.6	35.28	55.5	10-122	

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Client: PacifiCorp - Huntington Plant **Contact:** Russell Willson
Project: Historic Scrubber Pond Closure - CCR / 3000107488
Lab Sample ID: 1509566-004A
Client Sample ID: Soil Sample #4
Collection Date: 9/25/2015 1540h
Received Date: 9/29/2015 1025h

Test Code: 8260-S-PPM

Analytical Results

VOAs MBTEXN/GRO by GC/MS Method 8260C

Analyzed: 9/30/2015 1334h

Units: mg/kg-dry

Dilution Factor: 2.51

Method: SW8260C

3440 South 700 West
Salt Lake City, UT 84119

Compound	CAS Number	Reporting Limit	Analytical Result	Qual		
TPH C6-C10 (GRO)		0.0540	0.0586			
Surrogate	CAS	Result	Amount Spiked	% REC	Limits	Qual
Surr: 1,2-Dichloroethane-d4	17060-07-0	0.144	0.1351	107	51-170	
Surr: 4-Bromofluorobenzene	460-00-4	0.131	0.1351	96.8	60-144	
Surr: Dibromofluoromethane	1868-53-7	0.137	0.1351	101	60-145	
Surr: Toluene-d8	2037-26-5	0.133	0.1351	98.3	50-138	

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