

AP - 43

**STAGE 1 & 2
REPORTS**

DATE:

8-10-10



Infrastructure, environment, buildings

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Mr. Ed Hansen
New Mexico Energy, Minerals, & Natural Resources Dept.
Oil Conservation Division, Environmental Bureau
1220 S. St. Francis Drive
Santa Fe, New Mexico 87505

ARCADIS U.S.
1004 North Big Spring Street
Suite 300
Midland
Texas 79701
Tel 432 687 5400
Fax 432 687 5401
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Environmental

Subject:

**REMEDIATION TERMINATION REQUEST
Jct. A-20, EME SWD SYSTEM
UNIT 'A', SEC. 20, T20S, R37E
NMOCD CASE # AP-43 (formerly 1R0427-89)**

Date:
August 10, 2010

Contact:
Sharon E. Hall

Phone:
432 687-5400

Email:
sharon.hall@arcadis-us.com

Mr. Hansen:

On behalf of Rice Operating Company (ROC), ARCADIS U.S., Inc. (ARCADIS) respectfully submits this Termination Request for the above-referenced site.

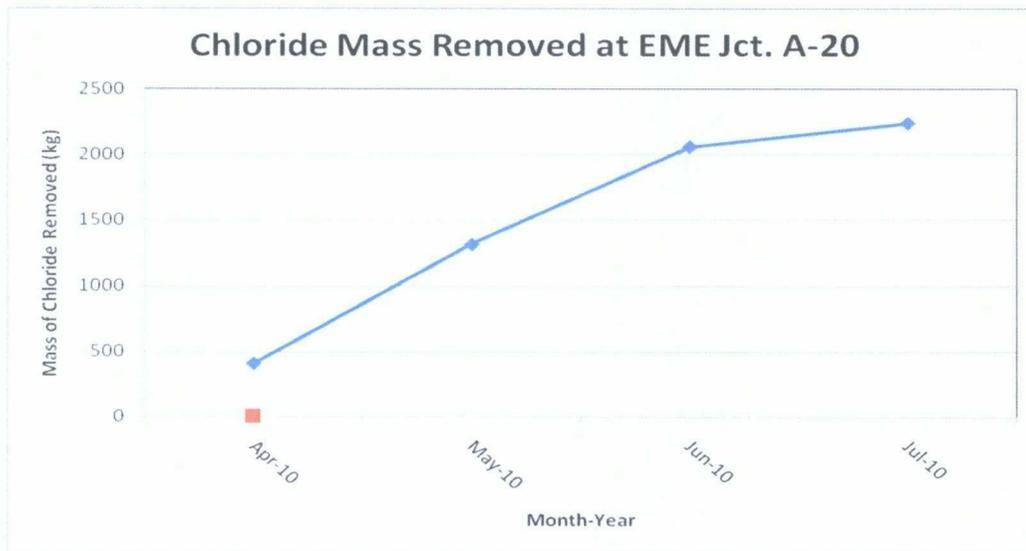
NMOCD approved ROC's Stage 2 Abatement Plan on May 12, 2009. The plan called for excavation of soils, placement of a clay liner and revegetation of the site. An excavation (and liner placement) summary report was included in the 2009 Monitor Well Report/Sampling Summary and Excavation Summary, submitted to NMOCD on April 12, 2010. The site has been revegetated, and site photos are attached.

Our ref:
MT000857.0001

The Stage 2 Abatement Plan included an estimation of the chloride mass that has contaminated the groundwater at the former junction box location and a plan for the removal of that chloride mass. The approved chloride mass estimation and plan for removal is as follows:

ROC proposed, and NMOCD approved, the installation of a groundwater recovery system at the former A-20 junction box location to recover an estimated 2,021.82 kilograms (kg) of chloride mass. A solar-driven pump was placed in well RW-1, a 4-inch recovery well. The pump generally operated 8-10 hours per day and the groundwater recovered from the well was pumped into a tank.

As of July 9, 2010, a total of 171,402 gallons of groundwater has been recovered from the recovery well, RW-1. This equates to a total recovered chloride mass of 2,238.45 kilograms. The following graph depicts the cumulative chloride mass removed at the site since recovery began in April 2010. The chloride mass removal estimate is based on a chloride concentration of 3,450 milligrams per liter (see attached laboratory report.)



Monitoring and Recovery Wells

Upon discontinuation of the groundwater recovery system, the system will be dismantled and monitoring wells MW-1, MW-2, MW-3, MW-4 and recovery well RW-1 will be plugged using a cement grout with 1 to 3% bentonite. Up-gradient MW-5 will continue to be periodically sampled to monitor regional groundwater impacts.

The Stage 2 Abatement Plan proposed continued monitoring of MW-1 until BTEX concentrations were below New Mexico Water Quality Commission (WQCC) standards for four quarters. Although benzene concentrations are above the WQCC standard of 0.01 milligrams per liter (mg/L), concentrations remain low. Since November of 2005, benzene concentrations have ranged from <0.001 to 0.068 mg/L. Benzene is not detected in any of the other monitor wells at the site. Groundwater analytical results for MW-1 are summarized in the attached table. Based on the fact that groundwater in the area has been reported since as early as 1952 as regionally impacted with chlorides and unusable, and that no water wells were identified in Section 20, Township 20S, Section 37E, we request approval to plug MW-1.

Ed Hansen
August 10, 2010

ROC has met all remediation requirements in accordance with 19.15.30 NMAC, and respectfully requests termination of the regulatory file for this site.

ROC is the service provider (agent) for the EME Salt Water Disposal System and has no ownership of any portion of pipeline, well or facility. The EME SWD System is owned by a consortium of oil producers, System Parties, who provide all operating capital on a percentage ownership/usage basis.

Thank you for your consideration concerning this request for termination at this site. If you have any questions please contact Hack Conder at (575) 393-9174.

Sincerely,

ARCADIS



Sharon E. Hall
Associate Vice President

Copies:
Hack Conder, ROC

Attachments:
Site Photographs
Laboratory Report
MW-1 Analytical Results Table

EME Jct. A-20 (AP-43)
Unit A, Section 20, T20S, R37E



vegetation, facing south toward the groundwater recovery system, MW-3, and RW-1



vegetation, facing west toward MW-1

MW	Depth to Water (feet)	Total Depth (feet)	Well Volume (gallons)	Volume Purged (gallons)	Sample Date	Cl (mg/L)	TDS (mg/L)	Benzene (mg/L)	Toluene (mg/L)	Ethyl Benzene (mg/L)	Total Xylenes (mg/L)	Sulfate (mg/L)
1	24.70	38.40	2.2	6.7	3/5/2002	2279	5044	<0.002	0.003	0.006	0.014	1087
1	25.62	38.22	2	6	5/13/2002	2100	4840	XXX	XXX	XXX	XXX	793
1	26.00	38.25	1.96	6	8/22/2002	2130	4890	XXX	XXX	XXX	XXX	822
1	24.97	38.25	2.125	6.5	11/12/2002	2130	5070	XXX	XXX	XXX	XXX	780
1	26.20	38.00	0.28	0.8	3/14/2003	1120	5020	XXX	XXX	XXX	XXX	673
1	23.20	26.00	0.448	1.3	6/5/2003	2130	4500	XXX	XXX	XXX	XXX	875
1	23.42	26.00	0.4	1.2	9/3/2003	2130	5240	XXX	XXX	XXX	XXX	679
1	23.20	26.00	0.448	1.3	12/10/2003	2390	4870	XXX	XXX	XXX	XXX	731
1	25.64	26.50	0.86	2.5	2/26/2004	2300	4900	XXX	XXX	XXX	XXX	588
1	23.02	26.00	0.448	1.3	5/27/2004	1910	4480	XXX	XXX	XXX	XXX	588
1	XXX	XXX	XXX	XXX	9/16/2004	2360	5340	XXX	XXX	XXX	XXX	273
1	24.53	38.36	2.21	6.6	11/24/2004	1930	5110	XXX	XXX	XXX	XXX	422
1	22.39	XXX	XXX	XXX	3/22/2005	2330	4290	XXX	XXX	XXX	XXX	125
1	23.40	32.00	XXX	4.32	6/28/2005	2430	5060	XXX	XXX	XXX	XXX	481
1	23.45	32.00	XXX	4.18	9/6/2005	2460	5100	XXX	XXX	XXX	XXX	486
1	23.43	38.36	2.4	8	11/2/2005	2330	5310	0.00643	0.0125	0.0635	0.1558	484
1	23.22	38.36	2.4	8	2/1/2006	2750	5100	0.0139	0.0435	0.145	0.3009	434
1	23.20	38.36	2.4	8	4/26/2006	2700	5430	0.00433	0.00849	0.0694	0.1248	482
1	23.84	38.36	2.3	8	7/24/2006	2180	4010	0.0341	<0.0200	0.0823	0.0866	96.8
1	23.60	38.36	2.4	8	10/17/2006	1830	4050	0.0409	0.0187	0.124	0.1489	44.7
1	23.82	38.26	2.3	8	1/30/2007	2960	4870	<0.001	<0.001	<0.001	<0.001	504
1	23.67	38.26	2.3	8	4/12/2007	2870	6360	0.0288	0.0472	0.177	0.194	493
1	24.06	38.26	2.3	8	7/16/2007	2090	4220	<0.001	<0.001	<0.001	<0.002	70.4
1	24.48	38.26	2.2	8	9/4/2007	1999	4612	<0.002	0.031	0.24	0.246	115
1	24.14	38.26	2.3	8	10/11/2007	2100	4416	0.068	0.012	0.17	0.138	111
1	24.00	38.26	2.3	8	1/16/2008	2320	5501	0.028	<0.02	0.139	0.132	305
1	23.88	38.26	2.3	8	4/11/2008	2440	5560	0.027	0.006	0.102	0.068	457
1	24.41	38.26	2.2	8	7/22/2008	3200	6560	<0.002	<0.002	<0.002	<0.006	670
1	24.22	38.26	2.2	8	10/17/2008	3100	6990	0.001	<0.001	0.002	<0.003	744
1	23.90	38.28	2.3	8	2/4/2009	6570	3200	0.003	<0.001	0.003	<0.003	691
1	23.83	38.28	2.3	8	5/8/2009	2400	5120	0.03	0.004	0.05	0.024	201
1	24.76	38.28	2.2	8	8/28/2009	3300	6910	<0.001	<0.001	<0.001	<0.003	631
1	24.77	38.28	2.2	8	10/30/2009	3150	7540	0.056	0.073	0.32	1.69	610
1	24.46	38.28	2.2	8	2/16/2010	2500	5230	0.042	0.006	0.055	0.055	248
1	24.20	38.28	2.3	8	5/18/2010	2100	4890	0.012	0.002	0.016	0.014	53.8

mg/L=milligrams per liter
 XXX- not analyzed



**ARDINAL
LABORATORIES**

PHONE (575) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

July 13, 2010

Hack Conder
Rice Operating Company
112 West Taylor
Hobbs, NM 88240

Re: EME A-20

Enclosed are the results of analyses for sample number H20279, received by the laboratory on 07/07/10 at 8:15 am.

Cardinal Laboratories is accredited through Texas NELAP for:

Method SW-846 8021	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method SW-846 8260	Benzene, Toluene, Ethyl Benzene, and Total Xylenes
Method TX 1005	Total Petroleum Hydrocarbons

Certificate number T104704398-08-TX. Accreditation applies to solid and chemical materials and non-potable water matrices.

Cardinal Laboratories is accredited through the State of Colorado Department of Public Health and Environment for:

Method EPA 552.2	Haloacetic Acids (HAA-5)
Method EPA 524.2	Total Trihalomethanes (TTHM)
Method EPA 524.2	Regulated VOCs (V2, V3)

Accreditation applies to public drinking water matrices.

Total Number of Pages of Report: 3 (includes Chain of Custody)

Sincerely,


Celey D. Keene
Laboratory Director

This report conforms with NELAP requirements.

