

WB Pendahan 10

Con 12-1-1
Doc # 81962



November 17, 2014

Mr. Matt Phoenix, P.E.
IDNR – Land Quality Bureau
Wallace State Office Building
502 East 9th Street
Des Moines, Iowa 50319-0034

**RE: EVALUATION OF THE SRAMP
AREA A-MARSHALL COUNTY SLF
64-SDP-6-92C**

Dear Mr. Phoenix:

This SRAMP Evaluation of Area A (Closure Permit 64-SDP-6-92C) is included herein in accordance with Permit Amendment #3, dated February 28, 1996.

Concurrent review of analytical data for MW-205 (upgradient the SRAMP collection lines) and MW-214 (downgradient the SRAMP collection lines) indicate the following:

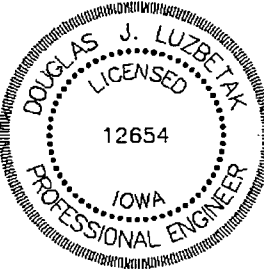
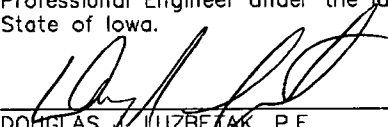
Benzene persists at MW-205 in concentrations that periodically exceed the MCL (5 ug/L). The reported benzene concentrations at MW-205 have ranged from a high of 26.2 ug/L (January, 1994) to a low of 2.0 ug/L (April, 2013). The most current reported concentration is 7.2 ug/L (October, 2014). Downgradient of the SRAMP collection line (at MW-214), concentrations of benzene are undetected and reported as below laboratory method detection limits of <1 ug/L (October, 1995 to October, 2014).

Trichloroethylene (TCE) persists at MW-205 in concentrations that are currently above the MCL (5 ug/L). Detected concentrations of TCE at MW-205 decreased significantly since 1992 (308 ug/l in October, 1992 to 19.3 ug/L in October, 2014). Downgradient the SRAMP collection line (at MW-214), concentrations of TCE are reported at or below the MCL (5 ug/L) since April, 2009. The most current reported concentration is 2.0 ug/L (October, 2014). A summary of detected assessment parameters is included in Attachment A.

Note that MW-205 and MW-214 are located in the interior of the landfill property. The area of interest is situated approximately 900' to 1800' north (upgradient) of Linn Creek. The interpretation is made that the SRAMP collection line is actively intercepting impacted groundwater. The concentrations of TCE remain near the MCL (currently below the MCL) at MW-214. We recommend continued monitoring and evaluation of the SRAMP system based on the observed decreases in TCE concentrations over time, the substantial distance (900' minimum) to Linn Creek and the nearest downgradient property boundary.

Recommendations

1. Perform the routine semi-annual monitoring of water levels and water quality as required by Permit. The SRAMP Evaluation should be performed again in November, 2015.

	I hereby certify that this engineering document was prepared by me or under my direct personal supervision and that I am a duly licensed Professional Engineer under the laws of the State of Iowa.	
		<u>11/17/14</u>
	DOUGLAS J. LUZBETAK, P.E. License number 12654	DATE
	My license renewal date is December 31, 2014.	
	Pages or sheets covered by this seal: <u>44</u>	

**Area A SRAMP Evaluation
November, 2013**

Date	MW-205				MW-214			
	Water Depth	986.54 Water Elevation	Benzene	TCE	Water Depth	956.4 Water Elevation	Benzene	TCE
10/23/1992	17.1	969.44	12.0	308.0				
01/21/1993	15.42	971.12	13.5	NT				
04/22/1993	9.2	977.34	14.6	322.0				
07/13/1993	10.26	976.28	15.7	143.0				
10/11/1993	13.7	972.84	NT	273.0				
01/25/1994	17.72	968.82	26.2	277.0				
04/14/1994	15.1	971.44	14.2	170.0				
07/08/1994	14.54	972	14.2	150.0				
10/20/1994	15.4	971.14	15.6	157.0				
01/04/1995	16.64	969.9	17.8	156.0				
04/21/1995	11.9	974.64	17.0	143.0				
07/07/1995	16.05	970.49	17.8	144.0				
10/12/1995	17.58	968.96	15.9	134.0	10.25	946.15	<1	4.1
01/10/1996	18.33	968.21	13.9	127.0	10.6	945.8	<1	4.9
04/15/1996	13.11	973.43	14.8	143.0	10.25	946.15	<1	14.5
07/17/1996	14.65	971.89	18.4	90.1	10.48	945.92	<1	12.2
10/08/1996	16.2	970.34	13.2	103.0	10.58	945.82	<1	12.2
01/21/1997	16.05	970.49	14.8	99.1	9.15	947.25	<1	15.8
04/11/1997	11.9	974.64	13.3	112.0	6.95	949.45	<1	30.5
07/17/1997	16.05	970.49	12.2	87.7	10.5	945.9	<1	12.7
10/15/1997	13.95	972.59	9.3	84.9	10.2	946.2	<1	12.1
01/27/1998	16.4	970.14	10.2	81.9	10.25	946.15	<1	16.0
04/21/1998	10.6	975.94	9.6	66.8	5.9	950.5	<1	23.9
07/21/1998	14.5	972.04	8.0	59.0	9.8	946.6	<1	11.7
10/09/1998	16.6	969.94	5.7	52	10.3	946.1	<1	10.5
01/26/1999	17.55	968.99	12.6	53.5	10.3	946.1	<1	14.2
04/19/1999	10.55	975.99	7.1	31.3	8.2	948.2	<1	16.1
07/26/1999	14.9	971.64	7.0	30.4	10	946.4	<1	10.7
10/04/1999	17.3	969.24	6.7	40.9	10.8	945.6	<1	12.4
01/06/2000	18.3	968.24	6.9	65.1	11.05	945.35	<1	11.1
04/13/2000	18.65	967.89	7.0	49.7	11	945.4	<1	7.6
07/05/2000	11.6	974.94	11.0	138	5.2	951.2	<1	17.2
10/04/2000	17.28	969.26	6.3	50.8	10.89	945.51	<1	7.9
04/27/2001	13.1	973.44	6	32.6	9.7	946.7	<1	7.2
10/18/2001	17.4	969.14	6.7	35.8	10.65	945.75	<1	7.8
04/27/2002	11.18	975.36	5.8	17.8	10.29	946.11	<1	6.4
10/08/2002	16.93	969.61	6.9	20.0	10.71	945.69	<1	7.0
04/22/2003	12.69	973.85	5.5	38.6	9.8	946.6	<1	6.4
10/08/2003	16.75	969.79	3.9	20.3	10.82	945.58	<1	6.4
04/27/2004	11.15	975.39	8.1	11.2	6.9	949.5	<1	6.8
10/05/2004	15.85	970.69	6.1	16.0	11	945.4	<1	7.6
04/11/2005	10.85	975.69	5.6	7.2	9.45	946.95	<1	6.0
10/05/2005	16.84	969.7	5.7	8.8	10.64	945.76	<1	6.3
04/05/2006	11.72	974.82	3.8	17.8	7.06	949.34	<1	5.3
10/05/2006	15.27	971.27	3.9	6.7	10.59	945.81	<1	6.5
04/02/2007	10.01	976.53	5.5	9.3	5.35	951.05	<1	7.1
10/09/2007	15.39	971.15	3.8	5.6	10.55	945.85	<1	4.9
04/01/2008	10.2	976.34	4.6	4.1	5.71	950.69	<1	5.2
10/13/2008	17.38	969.16	5.9	8.0	11	945.4	<1	5.9
04/01/2009	11.68	974.86	5.8	2.3	7.45	948.95	<1	4.1
10/16/2009	13.9	972.64	6.1	5.3	8.48	947.92	<1	4.7
04/07/2010	12.1	974.44	10.8	2.0	7	949.4	<1	3.7
10/01/2010	14.25	972.29	6.9	2.7	7	949.4	<1	4.8
04/04/2011	13.9	972.64	5.8	7.1	9.3	947.1	<1	<1
10/05/2011	18.05	968.49	5.5	5.0	12.6	943.8	<1	5.0
04/08/2012	14.25	972.29	5.7	1.4	9.35	947.05	<1	3.5
10/09/2012	18.5	968.04	4.3	5.2	13.7	942.7	<1	3.6
04/03/2013	13.6	972.94	2	6.5	15.4	941	<1	2.9
10/16/2013	18.4	968.14	5.6	5.6	11.1	945.3	<1	2.9
04/09/2014	15.4	971.14	3	6.1	15.6	940.8	<1	2.0
10/17/2014	13.1	973.44	7.2	19.3	5.75	950.65	<1	2.0