



The Science You Build On.

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September 24, 2015

Project LC-07-04279A

Ms. Melissa Erdman, Town Clerk
Town of Onalaska
Town Hall
N5589 Commerce Road
Onalaska, WI 54650

Re: Third Quarter 2015 Onalaska Landfill Gas Monitoring
Onalaska Municipal Landfill Site
Onalaska, Wisconsin

Dear Ms. Erdman:

Braun Intertec Corporation (Braun Intertec) is presenting gas-monitoring data for the referenced site. The landfill gas monitoring is based on requirements of item number 18 of the Consent Decree with the United States Environmental Protection Agency (USEPA). Item number 18 states that the "settling Defendant shall take explosimeter and oxygen readings at all landfill gas monitoring wells on a quarterly basis according to procedures to be established by USEPA and Wisconsin Department of Natural Resources (WDNR), unless approval is obtained from the USEPA in consultation with WDNR to perform such readings on a less frequent basis." Mr. Larry Lester of the WDNR—South Central Region Headquarters, provided the Consent Decree information to Braun Intertec.

On September 10, 2015, Braun Intertec personnel collected oxygen and explosimeter (LEL) readings at seven landfill gas monitoring wells, identified on the landfill gas piping map, for the Onalaska municipal landfill site as LG-1 through LG-7. September oxygen level reading at gas monitoring point LG-5 was higher than the previous gas monitoring. Oxygen level readings at gas monitoring points LG-1, LG-2, LG-3, LG-4, LG-6 and LG-7 were lower than the previous gas monitoring. Figure 1 depicts the oxygen level readings versus time. The September LEL readings at gas monitoring points LG-1, LG-2, LG-3, LG-4, LG-6 and LG-7 remained the same as the previous gas monitoring. The LEL reading at gas monitoring point LG-5 was lower than the previous gas monitoring. Figure 2 depicts the LEL readings versus time. Tables 1A and 1B provide a historical summary of oxygen and LEL readings. The LEL and oxygen field readings, along with site observations, are provided on the Site Visit Sheet.

If you have any questions or comments regarding this project, please call David Bradshaw at 608.781.7277.

Sincerely,

BRAUN INTERTEC CORPORATION

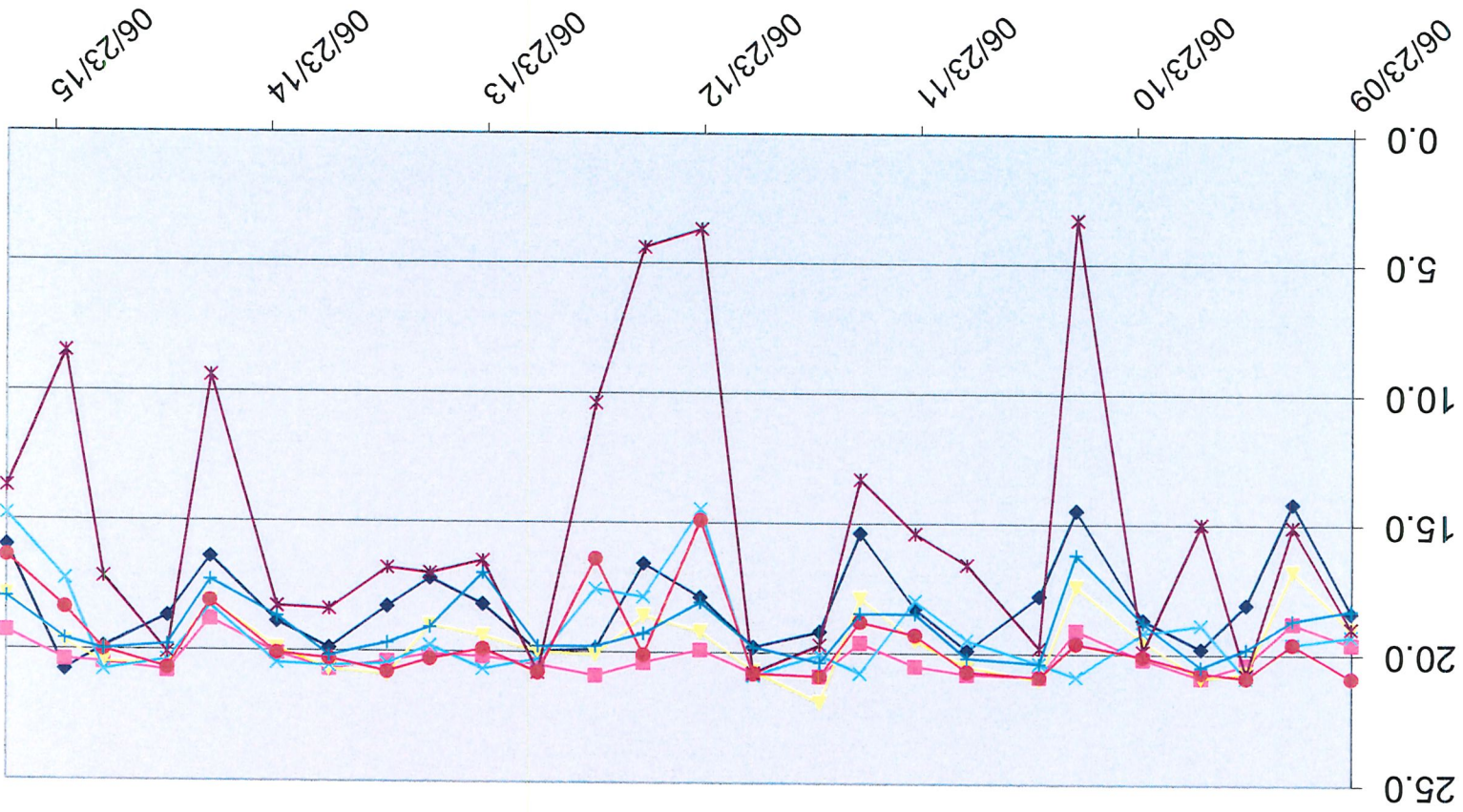
David M. Bradshaw
Environmental Field Technician

Attachments:

- Figure 1 - Oxygen Level Trends
- Figure 2 - LEL Concentration Trends
- Table 1A - Landfill Oxygen Monitoring Results
- Table 1B - Landfill LEL Monitoring Results
- Site Visit Sheet

AA/EOE

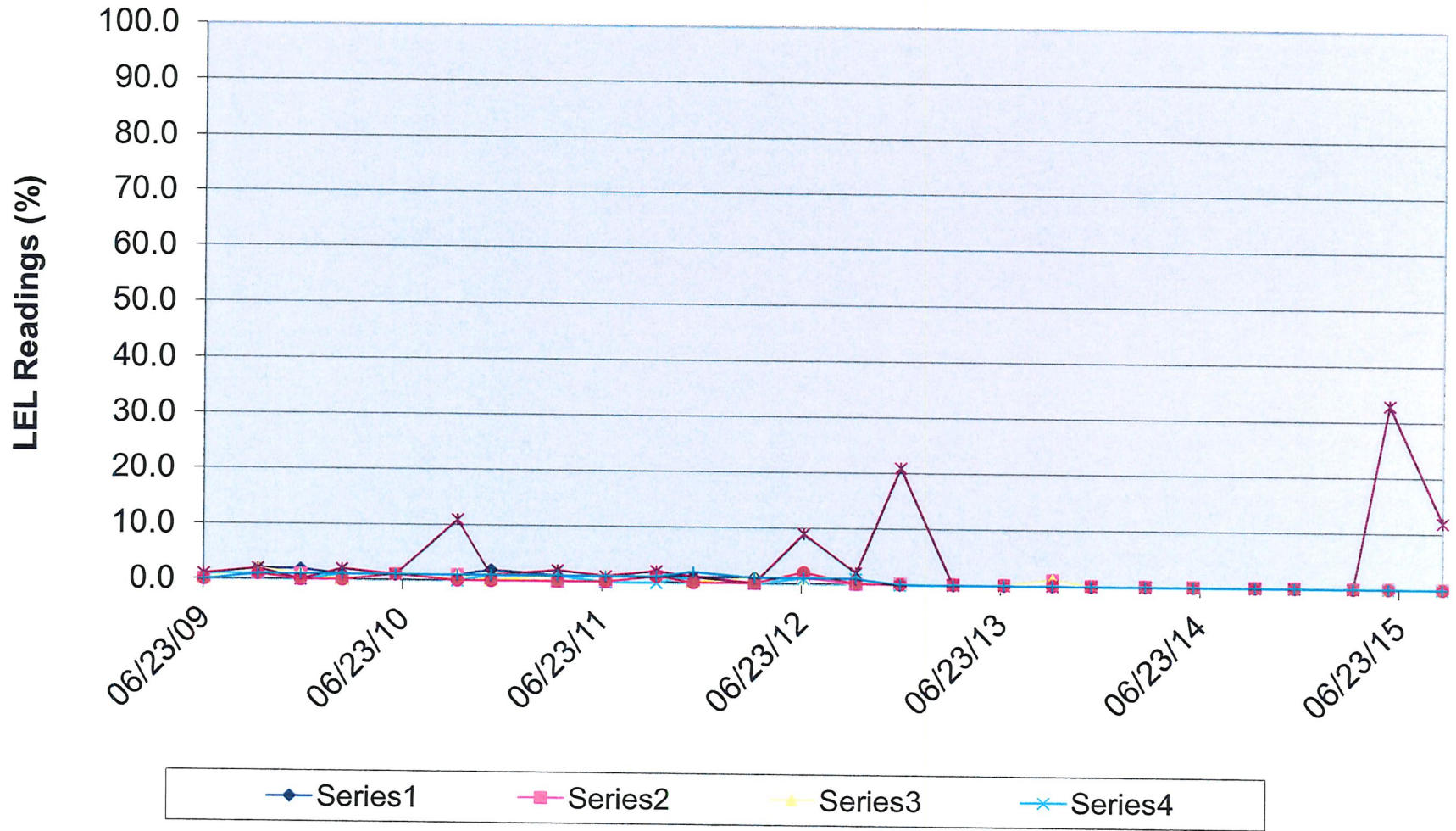
Series1 Series2 Series3 Series4 Series5 Series6 Series7



Oxygen Levels

Oxygen Readings (%)

LEL Levels



**Onalaska Municipal Landfill
LC-07-04279**

**TABLE 1A
Landfill Gas Monitoring**

Site Visit Date	Oxygen Readings (%) Gas Monitoring Points						
	LG-1	LG-2	LG-3	LG-4	LG-5	LG-6	LG-7
05/09/97	18.8	20.2	20.1	20.9	20.8	20.8	20.7
06/18/97	19.9	20.9	20.7	20.7	19.9	20.9	20.9
07/16/97	15.8	19.3	19.0	18.9	11.7	20.8	11.4
08/14/97	12.7	18.6	17.7	0.6	0.0	7.0	2.1
09/18/97	10.0	17.1	15.6	11.7	0.0	11.2	8.1
10/28/97	14.3	18.9	19.3	20.5	19.4	20.9	20.9
11/24/97	17.4			20.9	20.9	20.9	20.9
12/16/97	18.1	19.8	20.1	17.2	20.8	20.9	20.9
01/19/98	19.6			20.8	20.7	20.9	20.9
02/27/98	19.0	20.6	20.3	17.9	18.3	20.5	20.8
03/23/98	19.4	20.5	20.2	20.6	20.7	20.7	20.8
04/14/98	19.2	20.3	20.5	20.9	20.9	20.9	20.6
05/15/98	18.6	19.8	19.9	19.9	18.6	20.7	20.4
06/23/98	20.2	20.3	20.4	19.9	19.2	19.9	17.8
07/14/98	13.7	18.4	13.7	20.5	20.5	19.8	20.5
08/12/98	11.4	18.0	16.6	18.4	16.0	17.8	1.0
09/17/98	10.6	17.4	16.1	19.6	17.5	19.9	14.4
10/14/98	13.6	18.7	17.7	18.3	4.5	17.4	19.1
11/17/98	14.8	19.4	18.7	20.9	20.8	20.4	17.8
12/23/98				20.8	20.1	20.9	20.8
01/15/99	18.6			0.0	0.1	8.7	18.1
02/12/99	19.8	20.9		18.8	18.3	20.1	20.9
03/12/99	19.6	20.5		17.2	13.9	19.5	20.4
04/09/99	19.2	20.5	20.8	20.7	20.7	20.4	20.8
05/07/99	19.0	20.4	20.5	20.8	20.7	20.8	20.8
06/10/99	15.8	19.8	20.1	20.2	19.6	20.4	15.8
07/06/99	16.1	19.1	19.0	20.9	20.9	20.6	20.9
08/16/99	13.3	17.6	17.1	20.5	19.2	17.3	20.2
09/13/99	12.8	18.3	17.3	20.7	18.4	19.9	18.7
10/20/99	15.6	19.6	19.0	18.8	7.8	17.8	19.9
11/30/99	18.2	20.7	20.1	9.3	16.9	19.3	19.3
12/23/99	19.0	20.9		19.0	14.4	20.4	19.2
01/18/00	20.0			19.2	15.0	20.8	20.9
02/18/00	19.9			18.3	19.3	20.9	20.8
03/24/00	20.2	20.7	20.7	20.0	19.8	20.7	20.9
04/24/00	20.9	20.7	20.5	5.2	19.2	19.6	17.7
05/23/00	19.1	20.7	20.3	20.4	20.4	20.1	
06/15/00	17.8	19.5	19.4	20.9	20.8	19.8	20.8
07/21/00	15.1	20.9	17.8	20.8	20.6	20.7	20.2
08/15/00	13.2	18.8	17.6	20.7	20.8	20.7	20.9
09/19/00	16.3	18.9	18.2	20.9	20.9	20.9	20.7
10/26/00	15.0	19.9	19.0	6.4	18.6	7.1	19.5
12/28/00	19.7	19.7	18.9	19.5	19.7	19.7	19.2
03/20/01	20.8	20.8	20.7	20.9	20.6	20.7	20.8
06/20/01	20.7	20.7	20.9	20.8	20.7	20.8	20.8
07/30/01	20.8	20.9	20.9	20.8	20.8	20.9	20.8
08/28/01	20.9	20.2	20.5	18.6	20.1	19.1	20.9
09/26/01	20.8	20.9	20.8	20.8	20.9	20.9	20.9
10/29/01	20.9	20.7	20.7	20.2	20.7	20.6	20.8
12/04/01	20.8	20.8	20.9	20.8	20.9	20.7	20.9
03/29/02	20.9	20.9	20.8	20.9	20.8	20.8	20.8

**Onalaska Municipal Landfill
LC-07-04279**

**TABLE 1A
Landfill Gas Monitoring**

Site Visit Date	Oxygen Readings (%) Gas Monitoring Points						
	LG-1	LG-2	LG-3	LG-4	LG-5	LG-6	LG-7
06/07/02	20.9	20.3	20.9	14.2	14.3	19.6	19.0
07/18/02	20.9	20.9	20.9	18.6	18.2	20.8	20.9
08/15/02	14.5	20.9	18.6	18.2	11.4	18.3	16.8
10/10/02	14.5	21.7	19.9	9.4	3.8	12.5	17.1
12/11/02	19.9	20.7	19.7	18.3	18.9	20.7	20.9
03/31/03	20.4	20.9	21.0	7.3	18.0	17.6	17.5
06/30/03	20.9	20.8	20.8	20.7	19.9	20.9	20.9
07/30/03	20.8	20.7	20.3	18.6	19.2	20.8	20.8
08/21/03	18.7	19.2	16.4	17.3	18.6	19.7	19.9
09/30/03	18.2	19.6	14.4	20.9	20.0	20.9	20.6
10/30/03	18.9	19.4	15.3	21.3	20.1	20.6	20.4
12/18/03	20.9	20.9	18.7	19.5	20.9	20.7	20.9
03/25/04	20.8	19.8	15.8	18.9	20.2	20.9	20.6
06/18/04	20.8	20.7	17.6	19.4	19.7	20.9	20.0
07/20/04	20.9	20.9	18.2	20.1	18.6	19.8	20.4
08/19/04	20.9	20.8	20.1	17.6	20.1	20.6	20.9
09/23/04	20.9	20.9	20.8	20.7	20.8	20.9	20.9
10/15/04	20.9	20.9	20.9	20.8	20.9	20.9	20.9
12/10/04	20.8	20.7	20.6	19.9	20.2	20.7	20.8
01/31/05	20.9	20.8		20.1		20.8	20.9
03/08/05	20.9	20.9	20.8	15.6	18.9	19.7	20.8
06/27/05	20.9	20.9	20.4	18.9	20.2	20.8	20.9
07/19/05	18.8	20.7	20.9	20.7	14.1	20.2	20.9
08/23/05	17.2	20.2	18.1	18.7	20.1	17.4	16.7
09/26/05	12.1	18.1	16.2	16.3	5.3	20.2	16.9
10/13/05	13.2	18.4	16.8	19.9	19.2	12.9	12.9
03/06/06	20.1	20.9	20.9	20.9	20.9	20.9	20.5
06/30/06	17.9	20.5	19.4	20.9	20.9	20.7	20.3
09/21/06	15.4	18.9	17.2	19.6	16.6	19.5	19.3
12/29/06	18.2	20.6	20.1	20.3	19.2	20.9	20.2
03/31/07	19.3	20.4	20.5	20.6	20.2	20.2	19.3
06/21/07	17.7	19.2	20.1	20.8	19.9	20.4	17.5
09/28/07	13.8	18.4	17.2	20.4	19.5	20.9	16.8
12/31/07	20.9	20.9	21.0	20.8	20.6	20.9	21.0
03/26/08	20.0	20.9	20.8	20.9	20.9	20.9	20.9
06/26/08	18.3	19.8	20.0	20.1	19.7	20.9	18.5
09/12/08	15.9	19.9	18.6	19.6	16.1	19.7	18.6
12/18/08	19.9	20.9	20.8	20.6	18.7	20.9	20.5
03/31/09	20.2	20.9	20.9	19.6	19.3	20.9	20.5
06/23/09	18.4	19.6	19.0	19.3	19.0	20.9	18.3
09/30/09	14.2	18.8	16.8	19.6	15.1	19.6	18.7
12/17/09	18.1	20.4	20.7	20.9	20.8	20.9	19.8
03/03/10	19.8	20.9	20.9	18.9	15	20.7	20.5
06/09/10	18.7	20.2	19.5	19.2	19.9	20.1	18.8
09/30/10	14.5	19.1	17.4	20.9	3.3	19.6	16.2
12/01/10	17.8	20.9	21.0	20.4	19.8	20.9	20.4
04/02/11	19.9	20.8	20.5	19.5	16.6	20.7	20.2

**Onalaska Municipal Landfill
LC-07-04279**

**TABLE 1B
Landfill Gas Monitoring**

Site Visit Date	LEL Readings (%) Gas Monitoring Points						
	LG-1	LG-2	LG-3	LG-4	LG-5	LG-6	LG-7
05/09/97	0.0	0.0	0.0	0.0	0.0	0.0	0.0
06/18/97	0.0	0.0	0.0	0.0	0.0	0.0	0.0
07/16/97	0.0	0.0	0.0	0.0	0.0	0.0	0.0
08/14/97	0.0	0.0	0.0	3.0	5.0	0.0	0.0
09/18/97	0.0	0.0	0.0	1.0	3.0	0.0	9.0
10/28/97	0.0	0.0	0.0	0.0	0.0	0.0	0.0
11/24/97	0.0			0.0	0.0	0.0	0.0
12/16/97	0.0	0.0	0.0	0.0	0.0	0.0	0.0
01/19/98	0.0			0.0	0.0	0.0	0.0
02/27/98	0.0	0.0	0.0	15.0	18.0	0.0	0.0
03/23/98	0.0	0.0	0.0	0.0	0.0	0.0	0.0
04/14/98	0.0	0.0	0.0	0.0	0.0	0.0	0.0
05/15/98	0.0	0.0	0.0	0.0	0.0	0.0	0.0
06/23/98	0.0	0.0	0.0	0.0	0.0	0.0	0.0
07/14/98	0.0	0.0	0.0	0.0	0.0	0.0	0.0
08/12/98	0.0	0.0	0.0	3.0	20.0	0.0	7.0
09/17/98	0.0	0.0	0.0	0.0	3.0	0.0	0.0
10/14/98	0.0	0.0	0.0	0.0	50.0	0.0	0.0
11/17/98	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12/23/98				0.0	0.0	0.0	0.0
01/15/99	0.0			4.0	11.0	12.0	2.0
02/12/99	0.0	0.0		0.0	0.0	0.0	0.0
03/12/99	0.0	0.0		0.0	0.0	0.0	0.0
04/09/99	0.0	0.0	0.0	0.0	0.0	0.0	0.0
05/07/99	0.0	0.0	0.0	0.0	0.0	0.0	0.0
06/10/99	0.0	0.0	0.0	0.0	0.0	0.0	0.0
07/06/99	0.0	0.0	0.0	0.0	0.0	0.0	0.0
08/16/99	0.0	0.0	0.0	0.0	0.0	0.0	0.0
09/13/99	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10/20/99	0.0	0.0	0.0	0.0	30.0	0.0	0.0
11/30/99	0.0	0.0	0.0	57.0	3.0	0.0	0.0
12/23/99	0.0	0.0		0.0	8.0	0.0	0.0
01/18/00	0.0			0.0	0.0	0.0	0.0
02/18/00	0.0			0.0	0.0	0.0	0.0
03/24/00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
04/24/00	0.0	0.0	0.0	58.0	0.0	0.0	0.0
05/23/00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
06/15/00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
07/21/00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
08/15/00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
09/19/00	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10/26/00	0.0	0.0	0.0	49	1.0	0.0	0.0
12/28/00	0.0	0.0	0.0	0.0	1.0	0.0	0.0
03/20/01	0.0	0.0	0.0	0.0	0.0	0.0	0.0
06/20/01	0.0	0.0	0.0	0.0	0.0	0.0	0.0
07/30/01	0.0	0.0	0.0	0.0	0.0	0.0	0.0
08/28/01	0.0	0.0	0.0	14.0	1.0	1.0	0.0
09/26/01	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10/29/01	0.0	0.0	0.0	2.0	0.0	1.0	0.0
12/04/01	0.0	0.0	0.0	0.0	0.0	1.0	0.0
03/29/02	0.0	0.0	0.0	0.0	0.0	0.0	0.0

**Onalaska Municipal Landfill
LC-07-04279**

**TABLE 1B
Landfill Gas Monitoring**

Site Visit Date	LEL Readings (%) Gas Monitoring Points						
	LG-1	LG-2	LG-3	LG-4	LG-5	LG-6	LG-7
06/07/02	0.0	0.0	0.0	21.0	15.0	1.0	1.0
07/18/02	0.0	0.0	0.0	12.0	8.0	0.0	0.0
08/15/02	2.0	0.0	1.0	11.0	15.0	1.0	2.0
10/10/02	2.0	0.0	2.0	100.0	100.0	45.0	2.0
12/11/02	1.0	0.0	2.0	1.0	2.0	0.0	3.0
03/31/03	1.0	0.0	0.0	57.0	27.0	3.0	14.0
06/30/03	0.0	0.0	0.0	0.0	0.1	0.0	0.0
07/30/03	0.0	0.0	0.0	12.0	7.0	0.0	0.0
08/21/03	0.0	0.0	3.0	5.0	1.0	0.0	0.0
09/30/03	3.0	2.0	3.0	0.0	2.0	0.0	2.0
10/30/03	0.0	1.0	0.0	3.0	1.0	0.0	0.0
12/18/03	0.0	0.0	1.0	1.0	0.0	0.0	0.0
03/25/04	0.0	0.0	3.0	1.0	1.0	0.0	0.0
06/18/04	0.0	1.0	2.0	0.0	0.0	0.0	0.0
07/20/04	0.0	0.0	1.0	1.0	1.0	0.0	0.0
08/19/04	0.0	0.0	1.0	0.0	1.0	0.0	0.0
09/23/04	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10/15/04	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12/10/04	0.0	0.0	0.0	0.0	0.0	0.0	0.0
01/31/05	0.0	0.0		0.0		0.0	0.0
03/08/05	0.0	1.0	1.0	7.0	12.0	1.0	0.0
06/27/05	0.0	0.0	0.0	4.0	2.0	0.0	0.0
07/19/05	2.0	0.0	0.0	0.0	2.0	1.0	0.0
08/23/05	2.0	0.0	1.0	1.0	0.0	2.0	2.0
09/26/05	3.0	1.0	2.0	17.0	100.0	0.0	2.0
10/13/05	2.0	1.0	2.0	1.0	17.0	2.0	2.0
03/06/06	2.0	1.0	0.0	0.0	0.0	0.0	2.0
06/30/06	2.0	1.0	2.0	1.0	1.0	0.0	1.0
09/21/06	2.0	1.0	2.0	1.0	5.0	1.0	1.0
12/29/06	1.0	1.0	1.0	0.0	1.0	0.0	1.0
03/31/07	0.0	0.0	0.0	0.0	0.0	0.0	0.0
06/21/07	1.0	0.0	0.0	0.0	1.0	0.0	1.0
09/28/07	1.0	1.0	1.0	1.0	1.0	0.0	2.0
12/31/07	0.0	0.0	0.0	0.0	0.0	0.0	1.0
03/26/08	1.0	0.0	1.0	1.0	0.0	1.0	1.0
06/26/08	1.0	0.0	1.0	0.0	1.0	0.0	1.0
09/12/08	1.0	0.0	0.0	0.0	2.0	0.0	1.0
12/18/08	0.0	0.0	0.0	0.0	2.0	0.0	1.0
03/31/09	0.0	0.0	0.0	1.0	1.0	0.0	0.0
06/23/09	0.0	0.0	0.0	1.0	1.0	0.0	0.0
09/30/09	2.0	1.0	2.0	1.0	2.0	1.0	1.0
12/17/09	2.0	1.0	1.0	0.0	0.0	0.0	1.0
03/03/10	1.0	0.0	0.0	1.0	2.0	0.0	1.0
06/09/10	1.0	1.0	1.0	1.0	1.0	1.0	1.0
09/30/10	1.0	1.0	1.0	0.0	11.0	0.0	1.0
12/01/10	2.0	0.0	0.0	1.0	1.0	0.0	1.0
4/2/2011	1.0	0.0	1.0	1.0	2.0	0.0	1.0

**Onalaska Municipal Landfill
LC-07-04279**

**TABLE 1B
Landfill Gas Monitoring**

Site Visit Date	LEL Readings (%) Gas Monitoring Points						
	LG-1	LG-2	LG-3	LG-4	LG-5	LG-6	LG-7
06/29/11	0.0	0.0	1.0	0.0	1.0	0.0	1.0
09/30/11	1.0	1.0	1.0	0.0	2.0	1.0	1.0
12/07/11	1.0	0.0	0.0	1.0	1.0	0.0	2.0
03/28/12	1.0	0.0	1.0	0.0	0.0	0.0	1.0
06/26/12	1.0	1.0	1.0	1.0	9.0	2.0	1.0
09/30/12	1.0	0.0	1.0	1.0	2.0	0.0	1.0
12/20/12	0.0	0.0	0.0	0.0	21.0	0.0	0.0
03/27/13	0.0	0.0	0.0	0.0	0.0	0.0	0.0
06/28/13	0.0	0.0	0.0	0.0	0.0	0.0	0.0
09/25/13	1.0	1.0	1.0	0.0	0.0	0.0	0.0
12/05/13	0.0	0.0	0.0	0.0	0.0	0.0	0.0
03/14/14	0.0	0.0	0.0	0.0	0.0	0.0	0.0
06/10/14	0.0	0.0	0.0	0.0	0.0	0.0	0.0
10/01/14	0.0	0.0	0.0	0.0	0.0	0.0	0.0
12/12/14	0.0	0.0	0.0	0.0	0.0	0.0	0.0
03/30/15	0.0	0.0	0.0	0.0	0.0	0.0	0.0
06/03/15	0.0	0.0	0.0	0.0	33.0	0.0	0.0
09/10/15	0.0	0.0	0.0	0.0	12.0	0.0	0.0

Landfill Gas Monitoring
LC-07-04279A
Town of Onalaska

Date: 9-10-15
Technician: David Bradshaw
Weather: overcast, breezy, cool (70°)

Well Number	Time Monitored	Oxygen Readings	LEL Readings	Comments
LG-1	09:50	16.0	0.0	
LG-2	10:00	19.3	0.0	
LG-3	10:07	17.9	0.0	
LG-4	10:20	14.8	0.0	
LG-5	10:29	13.7	12.0	
LG-6	10:40	16.4	0.0	
LG-7	10:55	18.0	0.0	hornets nest in pro top

Additional Notes
