

## Appendix D-2: Radionuclide Data

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Windward Environmental LLC  
 200 West Mercer Street  
 Seattle, WA 98119

**MASS SPEC SERVICES**  
 P.O. Box 163, Orangeburg, NY 10962  
**Report of Analysis**

Report Date: 01/20/05  
 MSS No.: Pb0070  
 Project: 04-08-06-23  
 LDW Group  
 Date Rec'd: 12/30/04  
 Task Supervisor: H. Jeter

Attn: Tad Dashler

**Sediments**

Core LDW-Sg1a collected 12/29/04

Radiometric Results in pCi / g dry

MSS No.	Identity	Comment	Collection Time	Pb-210	Cs-137	Beta Count	Gamma Count
Pb0070-1	LDW-Sg1a-0-1		8:26	0.98 ± 0.12	0.120 ± 0.063	01/08/05	01/05/05
Pb0070-2	LDW-Sg1a-0-1 MR	Matrix Replicate	8:26	0.90 ± 0.12	0.150 ± 0.079	01/08/05	01/06/05
Pb0070-3	LDW-Sg1a-5-7		8:35	0.60 ± 0.12	0.174 ± 0.056	01/08/05	01/04/05
Pb0070-4	LDW-Sg1a-5-7 FD	Field Duplicate	8:35	0.70 ± 0.12	0.161 ± 0.069	01/08/05	01/06/05
Pb0070-5	LDW-Sg1a-10-11		8:45	0.75 ± 0.14	0.272 ± 0.083	01/08/05	01/07/05
Pb0070-6	LDW-Sg1a-15-16		8:55	0.63 ± 0.13	0.201 ± 0.059	01/08/05	01/05/05
Pb0070-7	LDW-Sg1a-20-21		9:03	0.55 ± 0.14	0.191 ± 0.058	01/08/05	01/06/05
Pb0070-8	LDW-Sg1a-25-26		9:16	0.73 ± 0.13	0.300 ± 0.075	01/08/05	01/07/05
Pb0070-9	LDW-Sg1a-30-31		9:24	0.41 ± 0.10	0.262 ± 0.052	01/08/05	01/07/05
Pb0070-10	LDW-Sg1a-35-37		9:32	0.61 ± 0.12	0.209 ± 0.094	01/08/05	01/08/05
Pb0070-11	LDW-Sg1a-35-37 MS	Matrix Spike	9:32	6.55 ± 0.27	58.35 ± 0.67	01/08/05	01/05/05
Pb0070-12	LDW-Sg1a-35-37 MSD	Matrix Spike Duplicate	9:32	7.00 ± 0.26	53.48 ± 0.61	01/08/05	01/05/05
Pb0070-13	LDW-Sg1a-40-41		9:40	0.43 ± 0.10	0.431 ± 0.095	01/08/05	01/08/05
Pb0070-14	LDW-Sg1a-45-46		9:46	0.38 ± 0.09	0.265 ± 0.087	01/08/05	01/08/05
Pb0070-15	LDW-Sg1a-50-51		9:52	0.49 ± 0.11	0.093 ± 0.050	01/08/05	01/08/05
Pb0070-16	LDW-Sg1a-55-56		10:00	0.37 ± 0.12	0.098 ± 0.057	01/08/05	01/09/05
Pb0070-17	LDW-Sg1a-60-61		10:09	0.40 ± 0.08	0.098 ± 0.036	01/08/05	01/09/05
Pb0070-18	LDW-Sg1a-65-66		10:43	0.38 ± 0.09	< 0.078	01/08/05	01/09/05
Pb0070-19	LDW-Sg1a-70-71		10:50	0.27 ± 0.09	< 0.055	01/08/05	01/07/05
Pb0070-20	LDW-Sg1a-75-76		10:57	0.45 ± 0.11	< 0.093	01/08/05	01/09/05
Pb0070-21	LDW-Sg1a-80-81		11:04	0.39 ± 0.14	< 0.065	01/08/05	01/09/05
<b>Matrix Spike Expected Values:</b>		Pb-210	6.53 pCi/g spike + (0.61 ± 0.12) from matrix =		7.14 ± 0.12 pCi/g		
		Cs-137	49.9 pCi/g spike + (0.209 ± 0.094) from matrix =		50.1 ± 0.1 pCi/g		

Target Detection Limits:

Pb-210 0.2 pCi/g dry  
 Cs-137 0.2 pCi/g dry

Bismuth Beta Counting Method  
 Gamma Spectral Analysis

Tolerances are 2 sigma counting uncertainties.  
 Detection limits are at the 4.66 sigma level.

  
 Hewitt W. Jeter

Windward Environmental LLC  
 200 West Mercer Street  
 Seattle, WA 98119

**MASS SPEC SERVICES**  
 P.O. Box 163, Orangeburg, NY 10962  
**Report of Analysis**

**Report Date:** 01/20/05  
**MSS No.:** Pb0071  
**Project:** 04-08-06-23  
 LDW Group  
**Date Rec'd:** 12/30/04  
**Task Supervisor:** H. Jeter

**Attn:** Tad Dashler

**Sediments**

Core LDW-Sg2 collected 12/28/04

Radiometric Results in pCi / g dry

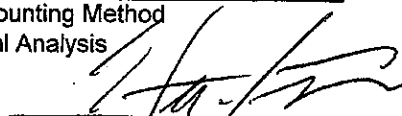
MSS No.	Identity	Comment	Collection				
			Time	Pb-210	Cs-137	Beta Count	Gamma Count
Pb0071-1	LDW-Sg2-0-1		14:05	0.59 ± 0.12	0.071 ± 0.028	01/15/05	01/10/05
Pb0071-2	LDW-Sg2-5-6		14:11	0.48 ± 0.12	0.088 ± 0.046	01/15/05	01/14/05
Pb0071-3	LDW-Sg2-10-11		14:17	0.45 ± 0.15	0.153 ± 0.046	01/15/05	01/10/05
Pb0071-4	LDW-Sg2-15-16		14:24	0.40 ± 0.10	0.165 ± 0.052	01/15/05	01/12/05
Pb0071-5	LDW-Sg2-20-21		14:40	0.14 ± 0.11	0.169 ± 0.066	01/15/05	01/13/05
Pb0071-6	LDW-Sg2-25-26		14:49	0.14 ± 0.06	0.124 ± 0.054	01/15/05	01/11/05
Pb0071-7	LDW-Sg2-30-31		14:58	0.16 ± 0.08	< 0.083	01/15/05	01/11/05
Pb0071-8	LDW-Sg2-30-31 MR	Matrix Replicate	14:58	0.19 ± 0.09	< 0.068	01/15/05	01/12/05
Pb0071-9	LDW-Sg2-35-36		15:07	0.20 ± 0.08	< 0.055	01/15/05	01/13/05
Pb0071-10	LDW-Sg2-40-41		15:14	0.20 ± 0.08	< 0.045	01/15/05	01/11/05
Pb0071-11	LDW-Sg2-45-46		15:25	0.27 ± 0.11	< 0.069	01/15/05	01/11/05
Pb0071-12	LDW-Sg2-50-52		15:37	0.29 ± 0.09	< 0.075	01/15/05	01/19/05
Pb0071-13	LDW-Sg2-50-52 FD	Field Duplicate	15:37	0.44 ± 0.09	< 0.072	01/15/05	01/17/05
Pb0071-14	LDW-Sg2-55-56		15:45	0.15 ± 0.10	< 0.054	01/15/05	01/12/05
Pb0071-15	LDW-Sg2-60-62		15:53	0.38 ± 0.13	< 0.054	01/15/05	01/12/05
Pb0071-16	LDW-Sg2-60-62 MS	Matrix Spike	15:53	7.52 ± 0.32	49.10 ± 0.62	01/15/05	01/10/05
Pb0071-17	LDW-Sg2-60-62 MSD	Matrix Spike Duplicate	15:53	7.60 ± 0.30	54.79 ± 0.70	01/15/05	01/10/05
Pb0071-18	LDW-Sg2-65-66		16:03	0.32 ± 0.12	< 0.033	01/17/05	01/14/05
Pb0071-19	LDW-Sg2-70-71		16:13	0.18 ± 0.12	< 0.032	01/17/05	01/14/05
Pb0071-20	LDW-Sg2-75-76		16:25	0.31 ± 0.09	< 0.054	01/17/05	01/15/05
Pb0071-21	LDW-Sg2-80-81		16:38	0.19 ± 0.10	< 0.040	01/17/05	01/13/05
<b>Matrix Spike Expected Values:</b>		Pb-210	7.45 pCi/g spike + (0.38 ± 0.13) from matrix =		7.83 ± 0.13	pCi/g	
		Cs-137	44.7 pCi/g spike + (no contribution from matrix) =		44.7	pCi/g	

Target Detection Limits:

Pb-210 0.2 pCi/g dry  
 Cs-137 0.2 pCi/g dry

Bismuth Beta Counting Method  
 Gamma Spectral Analysis

Tolerances are 2 sigma counting uncertainties.  
 Detection limits are at the 4.66 sigma level.

  
 Hewitt W. Jeter

Windward Environmental LLC  
200 West Mercer Street  
Seattle, WA 98119

Attn: Tad Dashler

**MASS SPEC SERVICES**  
P.O. Box 163, Orangeburg, NY 10962  
**Report of Analysis**

**Sediments**

Core LDW-Sg3 collected 12/27/04

Report Date:	02/07/05
MSS No.:	Pb0072
Project:	04-08-06-23 LDW Group
Date Rec'd:	12/30/04
Task Supervisor:	H. Jeter

Radiometric Results in pCi / g dry

MSS No.	Identity	Comment	Collection Time	Pb-210	Cs-137	Beta Count	Gamma Count
Pb0072-1	LDW-Sg3-0-1	low weight 10.71 g dry	8:34	0.90 ± 0.24	0.170 ± 0.102	01/21/05	01/23/05
Pb0072-2	LDW-Sg3-5-6		8:49	1.00 ± 0.13	0.160 ± 0.060	01/21/05	01/29/05
Pb0072-3	LDW-Sg3-10-11		9:03	0.64 ± 0.12	0.198 ± 0.081	01/21/05	01/24/05
Pb0072-4	LDW-Sg3-15-17		9:12	0.69 ± 0.11	0.119 ± 0.053	01/21/05	01/22/05
Pb0072-5	LDW-Sg3-15-17 FD	Field Duplicate	9:12	0.85 ± 0.12	0.160 ± 0.042	01/21/05	01/23/05
Pb0072-6	LDW-Sg3-20-21		9:23	0.90 ± 0.15	0.147 ± 0.051	01/21/05	01/27/05
Pb0072-7	LDW-Sg3-25-27		9:31	0.78 ± 0.13	0.301 ± 0.105	01/22/05	01/22/05
Pb0072-8	LDW-Sg3-25-27 MS	Matrix Spike	9:31	8.19 ± 0.37	32.23 ± 0.40	01/22/05	01/21/05
Pb0072-9	LDW-Sg3-25-27 MSD	Matrix Spike Duplicate	9:31	8.15 ± 0.35	34.04 ± 0.41	01/22/05	01/21/05
Pb0072-10	LDW-Sg-30-31		9:44	0.80 ± 0.14	0.140 ± 0.069	01/22/05	01/23/05
Pb0072-11	LDW-Sg3-35-36		9:59	0.70 ± 0.13	0.149 ± 0.036	01/22/05	01/22/05
Pb0072-12	LDW-Sg3-40-41		10:11	0.50 ± 0.13	< 0.089	01/22/05	01/20/05
Pb0072-13	LDW-Sg3-45-46		10:26	0.69 ± 0.11	0.100 ± 0.059	01/22/05	01/29/05
Pb0072-14	LDW-Sg3-50-51		10:37	0.66 ± 0.14	< 0.094	01/22/05	01/22/05
Pb0072-15	LDW-Sg3-50-51 MR	Matrix Replicate	10:37	0.91 ± 0.17	0.212 ± 0.109	01/22/05	01/21/05
Pb0072-16	LDW-Sg3-55-56		10:48	0.80 ± 0.11	0.190 ± 0.057	01/22/05	01/23/05
Pb0072-17	LDW-Sg3-60-61		11:00	0.69 ± 0.14	0.167 ± 0.067	01/22/05	01/27/05
Pb0072-18	LDW-Sg3-65-66		11:18	0.77 ± 0.13	< 0.081	01/22/05	01/24/05
Pb0072-19	LDW-Sg3-70-71		11:34	0.75 ± 0.13	0.125 ± 0.042	01/22/05	01/23/05
Pb0072-20	LDW-Sg3-75-76		11:38	0.67 ± 0.14	0.331 ± 0.105	01/22/05	01/27/05
Pb0072-21	LDW-Sg3-80-81		11:45	0.67 ± 0.13	0.357 ± 0.108	01/22/05	01/23/05
<b>Matrix Spike Expected Values:</b>							
		Pb-210	7.89 pCi/g spike + (0.78 ± 0.13) from matrix =			8.67 ± 0.13	pCi/g
		Cs-137	31.43 pCi/g spike + (0.30 ± 0.11) from matrix =			31.73 ± 0.11	pCi/g

Target Detection Limits:

Tolerances are 2 sigma counting uncertainties.  
Detection limits are at the 4.66 sigma level.

Pb-210 0.2 pCi/g dry  
Cs-137 0.2 pCi/g dry

Bismuth Beta Counting Method  
Gamma Spectral Analysis

  
Hewitt W. Jeter

Windward Environmental LLC  
 200 West Mercer Street  
 Seattle, WA 98119

**MASS SPEC SERVICES**  
 P.O. Box 163, Orangeburg, NY 10962  
**Report of Analysis**

**Report Date:** 02/10/05  
**MSS No.:** Pb0073  
**Project:** 04-08-06-23  
 LDW Group  
**Date Rec'd:** 12/30/04  
**Task Supervisor:** H. Jeter

**Sediments**

**Attn:** Tad Dashler

**Core LDW-Sg4 collected 12/22/04**

Radiometric Results in pCi / g dry

MSS No.	Identity	Comment	Collection			Beta Count	Gamma Count
			Time	Pb-210	Cs-137		
Pb0073-1	LDW-Sg4-0-1		12:00	0.42 ± 0.13	0.085 ± 0.034	01/28/05	02/02/05
Pb0073-2	LDW-Sg4-5-6		12:04	0.75 ± 0.14	0.171 ± 0.083	01/28/05	01/31/05
Pb0073-3	LDW-Sg4-10-12		12:11	0.49 ± 0.11	0.135 ± 0.057	01/28/05	02/03/05
Pb0073-4	LDW-Sg4-10-12 FD	Field Duplicate	12:11	0.46 ± 0.10	0.071 ± 0.047	01/28/05	02/03/05
Pb0073-5	LDW-Sg4-15-16		12:16	0.58 ± 0.12	0.122 ± 0.040	01/28/05	02/03/05
Pb0073-6	LDW-Sg4-20-21		12:25	0.54 ± 0.11	0.165 ± 0.059	01/28/05	02/01/05
Pb0073-7	LDW-Sg4-25-26		12:33	0.49 ± 0.11	0.158 ± 0.056	01/28/05	02/03/05
Pb0073-8	LDW-Sg4-30-31		13:15	0.53 ± 0.10	0.185 ± 0.045	01/28/05	02/02/05
Pb0073-9	LDW-Sg4-35-37		13:23	0.60 ± 0.12	0.231 ± 0.099	01/28/05	01/28/05
Pb0073-10	LDW-Sg4-35-37 MS	Matrix Spike	13:23	14.97 ± 0.61	68.05 ± 0.82	01/28/05	01/20/05
Pb0073-11	LDW-Sg4-35-37 MSD	Matrix Spike Duplicate	13:23	15.54 ± 0.69	67.31 ± 0.79	01/29/05	01/20/05
Pb0073-12	LDW-Sg4-40-41		13:32	0.58 ± 0.10	0.254 ± 0.059	01/29/05	02/01/05
Pb0073-13	LDW-Sg4-45-46		13:39	0.44 ± 0.12	0.162 ± 0.075	01/29/05	02/03/05
Pb0073-14	LDW-Sg4-50-51		13:43	0.40 ± 0.13	0.338 ± 0.086	01/29/05	02/02/05
Pb0073-15	LDW-Sg4-55-56		13:50	0.42 ± 0.12	0.219 ± 0.061	01/29/05	01/31/05
Pb0073-16	LDW-Sg4-60-61		13:55	0.53 ± 0.14	0.250 ± 0.106	01/29/05	02/02/05
Pb0073-17	LDW-Sg4-65-66		14:01	0.52 ± 0.11	0.203 ± 0.040	01/29/05	02/02/05
Pb0073-18	LDW-Sg4-70-71		14:05	0.43 ± 0.10	0.145 ± 0.044	01/29/05	01/29/05
Pb0073-19	LDW-Sg4-75-76		14:11	0.32 ± 0.12	0.481 ± 0.161	01/29/05	01/28/05
Pb0073-20	LDW-Sg4-75-76 MR	Matrix Replicate	14:11	0.43 ± 0.11	0.429 ± 0.138	01/29/05	02/01/05
Pb0073-21	LDW-Sg4-80-81		14:17	0.26 ± 0.11	0.265 ± 0.068	01/29/05	01/31/05
<b>Matrix Spike Expected Values:</b>				Pb-210 15.36 pCi/g spike + (0.60 ± 0.12) from matrix =		15.96 ± 0.12	pCi/g
				Cs-137 59.09 pCi/g spike + (0.23 ± 0.10) from matrix =		59.32 ± 0.10	pCi/g

Target Detection Limits:

Pb-210 0.2 pCi/g dry  
 Cs-137 0.2 pCi/g dry

Bismuth Beta Counting Method  
 Gamma Spectral Analysis

Tolerances are 2 sigma counting uncertainties.  
 Detection limits are at the 4.66 sigma level.

Hewitt W. Jeter

Windward Environmental LLC  
200 West Mercer Street  
Seattle, WA 98119

**MASS SPEC SERVICES**  
P.O. Box 163, Orangeburg, NY 10962  
**Report of Analysis**

Report Date: 02/16/05  
MSS No.: Pb0074  
Project: 04-08-06-23  
LDW Group  
Date Rec'd: 12/30/04  
Task Supervisor: H. Jeter

Attn: Tad Dashler

**Sediments**

Core LDW-Sg5a collected 12/28/04

Radiometric Results in pCi / g dry

MSS No.	Identity	Comment	Collection Time	Pb-210	Cs-137	Beta Count	Gamma Count
Pb0074-1	LDW-Sg5a-0-1		8:45	1.04 ± 0.16	0.140 ± 0.078	02/04/05	02/10/05
Pb0074-2	LDW-Sg5a-0-1 MR	Matrix Replicate	8:45	0.96 ± 0.14	< 0.091	02/04/05	02/14/05
Pb0074-3	LDW-Sg5a-5-6		8:54	1.08 ± 0.16	0.125 ± 0.067	02/04/05	02/11/05
Pb0074-4	LDW-Sg5a-10-11		9:07	1.07 ± 0.18	0.132 ± 0.043	02/04/05	02/12/05
Pb0074-5	LDW-Sg5a-15-16		9:15	0.89 ± 0.14	0.203 ± 0.076	02/04/05	02/09/05
Pb0074-6	LDW-Sg5a-20-21		10:00	1.02 ± 0.15	0.160 ± 0.066	02/04/05	02/13/05
Pb0074-7	LDW-Sg5a-25-26		10:09	0.75 ± 0.13	0.140 ± 0.048	02/04/05	02/14/05
Pb0074-8	LDW-Sg5a-30-32		10:18	0.57 ± 0.13	0.108 ± 0.049	02/04/05	02/11/05
Pb0074-9	LDW-Sg5a-30-32 FD	Field Duplicate	10:18	0.80 ± 0.14	0.115 ± 0.047	02/05/05	02/10/05
Pb0074-10	LDW-Sg5a-35-36		10:32	0.96 ± 0.15	0.125 ± 0.058	02/05/05	02/11/05
Pb0074-11	LDW-Sg5a-40-42		10:37	0.75 ± 0.14	0.128 ± 0.064	02/05/05	02/09/05
Pb0074-12	LDW-Sg5a-40-42 MS	Matrix Spike	10:37	9.95 ± 0.39	32.05 ± 0.35	02/05/05	02/11/05
Pb0074-13	LDW-Sg5a-40-42 MSD	Matrix Spike Duplicate	10:37	9.20 ± 0.40	31.70 ± 0.34	02/05/05	02/13/05
Pb0074-14	LDW-Sg5a-45-46		10:46	0.62 ± 0.16	0.118 ± 0.049	02/05/05	02/13/05
Pb0074-15	LDW-Sg5a-50-51		10:57	0.56 ± 0.18	0.132 ± 0.048	02/05/05	02/10/05
Pb0074-16	LDW-Sg5a-55-56		11:06	0.38 ± 0.17	0.141 ± 0.054	02/05/05	02/13/05
Pb0074-17	LDW-Sg5a-60-61		11:13	0.87 ± 0.22	0.302 ± 0.099	02/05/05	02/10/05
Pb0074-18	LDW-Sg5a-65-66		11:23	0.58 ± 0.17	0.110 ± 0.046	02/05/05	02/12/05
Pb0074-19	LDW-Sg5a-70-71		11:31	0.58 ± 0.17	< 0.071	02/05/05	02/14/05
Pb0074-20	LDW-Sg5a-75-76		11:39	0.79 ± 0.17	0.115 ± 0.038	02/05/05	02/10/05
Pb0074-21	LDW-Sg5a-80-81		11:46	0.61 ± 0.16	0.158 ± 0.079	02/05/05	02/14/05
<b>Matrix Spike Expected Values:</b>		Pb-210	9.40 pCi/g spike + (0.75 ± 0.14) from matrix =		10.15 ± 0.14	pCi/g	
		Cs-137	29.55 pCi/g spike + (0.13 ± 0.06) from matrix =		29.68 ± 0.06	pCi/g	

Target Detection Limits:

Pb-210 0.2 pCi/g dry  
Cs-137 0.2 pCi/g dry

Bismuth Beta Counting Method  
Gamma Spectral Analysis

Tolerances are 2 sigma counting uncertainties.  
Detection limits are at the 4.66 sigma level.

  
Hewitt W. Jeter

## Appendix D-2: Radionuclide Data

---

Windward Environmental LLC  
 200 West Mercer Street  
 Seattle, WA 98119

Attn: Tad Deshler

**MASS SPEC SERVICES**  
 P.O. Box 163, Orangeburg, NY 10962  
**Report of Analysis**

**Sediments**

Core LDW-Sg6 collected 12/22/04

Report Date: 02/24/05

MSS No.: Pb0075

Project: 04-08-06-23  
 LDW Group

Date Rec'd: 12/30/04

Task Supervisor: H. Jeter

Radiometric Results in pCi / g dry

MSS No.	Identity	Comment	Collection Time	Pb-210	Cs-137	Beta Count	Gamma Count
Pb0075-1	LDW-Sg6-0-1		8:40	1.02 ± 0.17	0.083 ± 0.041	02/12/05	02/17/05
Pb0075-2	LDW-Sg6-5-7		8:52	0.63 ± 0.16	0.069 ± 0.028	02/12/05	02/19/05
Pb0075-3	LDW-Sg6-5-7 FD	Field Duplicate	8:52	0.72 ± 0.17	0.098 ± 0.050	02/12/05	02/16/05
Pb0075-4	LDW-Sg6-10-11		8:59	0.79 ± 0.16	0.201 ± 0.060	02/12/05	02/19/05
Pb0075-5	LDW-Sg6-15-16		9:05	0.69 ± 0.20	0.072 ± 0.054	02/12/05	02/20/05
Pb0075-6	LDW-Sg6-20-21		9:12	0.33 ± 0.14	0.114 ± 0.059	02/12/05	02/17/05
Pb0075-7	LDW-Sg6-25-27		9:21	0.58 ± 0.23	0.196 ± 0.072	02/12/05	02/20/05
Pb0075-8	LDW-Sg6-25-27 MS	Matrix Spike	9:21	11.10 ± 0.51	28.17 ± 0.40	02/12/05	02/21/05
Pb0075-9	LDW-Sg6-25-27 MSD	Matrix Spike Duplicate	9:21	11.03 ± 0.49	28.90 ± 0.34	02/16/05	02/17/05
Pb0075-10	LDW-Sg6-30-31		9:28	0.78 ± 0.19	0.224 ± 0.080	02/16/05	02/21/05
Pb0075-11	LDW-Sg6-35-36		9:34	0.50 ± 0.19	0.133 ± 0.070	02/16/05	02/16/05
Pb0075-12	LDW-Sg6-40-41		9:40	0.66 ± 0.15	0.188 ± 0.071	02/12/05	02/18/05
Pb0075-13	LDW-Sg6-45-46		9:47	0.85 ± 0.13	0.160 ± 0.056	02/12/05	02/16/05
Pb0075-14	LDW-Sg6-50-51		10:01	0.62 ± 0.15	0.159 ± 0.056	02/12/05	02/15/05
Pb0075-15	LDW-Sg6-55-56		10:07	0.36 ± 0.15	0.160 ± 0.078	02/12/05	02/16/05
Pb0075-16	LDW-Sg6-60-61		10:11	0.22 ± 0.17	0.113 ± 0.053	02/16/05	02/19/05
Pb0075-17	LDW-Sg6-65-66		10:18	0.48 ± 0.17	0.119 ± 0.052	02/16/05	02/21/05
Pb0075-18	LDW-Sg6-70-71		10:25	0.30 ± 0.15	0.083 ± 0.046	02/16/05	02/15/05
Pb0075-19	LDW-Sg6-75-76		10:34	0.50 ± 0.14	0.174 ± 0.064	02/12/05	02/19/05
Pb0075-20	LDW-Sg6-80-81		10:45	0.48 ± 0.16	0.133 ± 0.074	02/12/05	02/15/05
Pb0075-21	LDW-Sg6-80-81 MR	Matrix Replicate	10:45	0.37 ± 0.14	0.156 ± 0.081	02/12/05	02/17/05
<b>Matrix Spike Expected Values:</b>							
		Pb-210	10.95 pCi/g spike + (0.58 ± 0.23)	from matrix =		11.52 ± 0.23	pCi/g
		Cs-137	27.46 pCi/g spike + (0.20 ± 0.07)	from matrix =		27.66 ± 0.07	pCi/g

Target Detection Limits:

Pb-210 0.2 pCi/g dry  
 Cs-137 0.2 pCi/g dry

Bismuth Beta Counting Method  
 Gamma Spectral Analysis

Tolerances are 2 sigma counting uncertainties.  
 Detection limits are at the 4.66 sigma level.

  
 Hewitt W. Jeter



Windward Environmental LLC  
200 West Mercer Street  
Seattle, WA 98119

**MASS SPEC SERVICES**  
P.O. Box 163, Orangeburg, NY 10962  
**Report of Analysis**

Report Date: 03/10/05  
MSS No.: Pb0076  
Project: 04-08-06-23  
LDW Group  
Date Rec'd: 12/30/04  
Task Supervisor: H. Jeter

Attn: Tad Deshler

**Sediments**

Core LDW-Sg7 collected 12/16/04

Radiometric Results in pCi / g dry

MSS No.	Identity	Comment	Collection			Beta Count	Gamma Count
			Time	Pb-210	Cs-137		
Pb0076-1	LDW-Sg7-0-1		13:00	0.80 ± 0.13	0.115 ± 0.049	02/18/05	03/05/05
Pb0076-2	LDW-Sg7-5-6		13:18	0.53 ± 0.12	0.134 ± 0.058	02/18/05	03/03/05
Pb0076-3	LDW-Sg7-10-11		13:35	0.56 ± 0.11	0.119 ± 0.041	02/18/05	03/05/05
Pb0076-4	LDW-Sg7-15-16		13:57	0.60 ± 0.11	0.198 ± 0.085	02/18/05	03/05/05
Pb0076-5	LDW-Sg7-20-21		14:25	0.45 ± 0.10	0.096 ± 0.038	02/18/05	03/05/05
Pb0076-6	LDW-Sg7-25-26		14:41	0.42 ± 0.09	0.085 ± 0.041	02/18/05	03/06/05
Pb0076-7	LDW-Sg7-30-31		14:55	0.39 ± 0.11	0.125 ± 0.041	02/18/05	02/27/05
Pb0076-8	LDW-Sg7-35-37		15:12	0.41 ± 0.09	0.118 ± 0.030	02/18/05	03/06/05
Pb0076-9	LDW-Sg7-35-37 FD	Field Duplicate	15:12	0.37 ± 0.08	0.120 ± 0.031	02/18/05	03/06/05
Pb0076-10	LDW-Sg7-40-41		15:32	0.40 ± 0.11	0.155 ± 0.042	02/19/05	03/08/05
Pb0076-11	LDW-Sg7-45-46		16:00	0.32 ± 0.09	0.110 ± 0.041	02/19/05	02/27/05
Pb0076-12	LDW-Sg7-50-51		16:12	0.26 ± 0.08	0.099 ± 0.041	02/19/05	03/07/05
Pb0076-13	LDW-Sg7-55-57		16:24	0.25 ± 0.11	0.080 ± 0.044	02/19/05	03/06/05
Pb0076-14	LDW-Sg7-55-57 MS	Matrix Spike	16:24	12.16 ± 0.48	25.72 ± 0.31	02/19/05	03/04/05
Pb0076-15	LDW-Sg7-55-57 MSD	Matrix Spike Duplicate	16:24	12.97 ± 0.57	23.26 ± 0.33	02/19/05	03/02/05
Pb0076-16	LDW-Sg7-60-61		16:43	0.28 ± 0.10	0.105 ± 0.032	02/19/05	03/07/05
Pb0076-17	LDW-Sg7-65-66		17:00	0.36 ± 0.13	0.218 ± 0.054	02/19/05	02/28/05
Pb0076-18	LDW-Sg7-65-66 MR	Matrix Replicate	17:00	0.41 ± 0.14	0.303 ± 0.073	02/19/05	03/06/05
Pb0076-19	LDW-Sg7-70-71		17:13	0.29 ± 0.13	0.326 ± 0.040	02/19/05	03/08/05
Pb0076-20	LDW-Sg7-75-76		17:25	0.24 ± 0.10	0.307 ± 0.055	02/19/05	03/07/05
Pb0076-21	LDW-Sg7-80-81		17:37	0.33 ± 0.11	0.382 ± 0.053	02/19/05	03/06/05
<b>Matrix Spike Expected Values:</b>			Pb-210	12.35 pCi/g spike + (0.25 ± 0.11) from matrix =		12.60 ± 0.11	pCi/g
			Cs-137	23.67 pCi/g spike + (0.08 ± 0.04) from matrix =		23.75 ± 0.04	pCi/g

Target Detection Limits:

Pb-210 0.2 pCi/g dry  
Cs-137 0.2 pCi/g dry

Bismuth Beta Counting Method  
Gamma Spectral Analysis

Tolerances are 2 sigma counting uncertainties.  
Detection limits are at the 4.66 sigma level.

  
Hewitt W. Jeter

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 200 West Mercer Street  
 Seattle, WA 98119

**MASS SPEC SERVICES**  
 P.O. Box 163, Orangeburg, NY 10962  
**Report of Analysis**

Report Date: 03/15/05  
 MSS No.: Pb0077  
 Project: 04-08-06-23  
 LDW Group  
 Date Rec'd: 12/30/04  
 Supervisor: H. Jeter

Attn: Tad Deshler

**Sediments**

Core LDW-Sg8 collected 12/21

MSS No.	Identity	Comment	Collection Time			Beta Count	Gamma Count
Pb0077-1	LDW-Sg8-0-1		10:53			02/26/05	03/09/05
Pb0077-2	LDW-Sg8-5-6		11:00			02/26/05	03/10/05
Pb0077-3	LDW-Sg8-10-11		11:05			02/26/05	03/11/05
Pb0077-4	LDW-Sg8-15-17		11:13	0.22 ± 0.09	< 0.058	02/26/05	03/11/05
Pb0077-5	LDW-Sg8-15-17 FD	Field Duplicate	11:13	0.29 ± 0.09	< 0.044	02/26/05	03/07/05
Pb0077-6	LDW-Sg8-20-21		11:19	0.30 ± 0.11	< 0.041	02/26/05	03/10/05
Pb0077-7	LDW-Sg8-25-26		11:27	0.31 ± 0.10	< 0.047	02/26/05	03/10/05
Pb0077-8	LDW-Sg8-30-31		11:34	0.23 ± 0.09	< 0.036	02/26/05	03/10/05
Pb0077-9	LDW-Sg8-35-36		11:40	0.50 ± 0.12	< 0.048	02/26/05	03/04/05
Pb0077-10	LDW-Sg8-40-42		11:46	0.35 ± 0.14	< 0.065	02/26/05	03/06/05
Pb0077-11	LDW-Sg8-40-42 MS	Matrix Spike	11:46	12.08 ± 0.50	24.03 ± 0.29	02/26/05	02/24/05
Pb0077-12	LDW-Sg8-40-42 MSD	Matrix Spike Duplicate	11:46	10.80 ± 0.45	23.40 ± 0.35	02/26/05	03/02/05
Pb0077-13	LDW-Sg8-45-46		11:53	0.32 ± 0.11	< 0.043	02/26/05	03/03/05
Pb0077-14	LDW-Sg8-50-51		12:50	0.25 ± 0.08	< 0.038	02/26/05	03/09/05
Pb0077-15	LDW-Sg8-55-56		12:56	0.36 ± 0.13	< 0.049	02/26/05	03/09/05
Pb0077-16	LDW-Sg8-60-61		13:02	< 0.26	< 0.045	02/26/05	02/24/05
Pb0077-17	LDW-Sg8-60-61 MR	Matrix Replicate	13:02	0.29 ± 0.14	< 0.064	02/26/05	03/09/05
Pb0077-18	LDW-Sg8-65-66		13:08	0.40 ± 0.14	< 0.042	02/26/05	03/11/05
Pb0077-19	LDW-Sg8-70-71		13:14	0.23 ± 0.11	< 0.044	02/26/05	03/08/05
Pb0077-20	LDW-Sg8-75-76		13:20	0.50 ± 0.14	< 0.028	02/26/05	03/12/05
Pb0077-21	LDW-Sg8-80-81		13:26	0.28 ± 0.11	< 0.036	02/26/05	03/03/05
<b>Matrix Spike Expected Values:</b>							
		Pb-210	11.20 pCi/g spike + (0.35 ± 0.14) from matrix =			11.55 ± 0.14	pCi/g
		Cs-137	23.00 pCi/g spike + (no contribution from matrix) =			23.00	pCi/g

Target Detection Limits:

Pb-210 0.2 pCi/g dry  
 Cs-137 0.2 pCi/g dry

Bismuth Beta Counting Method  
 Gamma Spectral Analysis

Tolerances are 2 sigma counting uncertainties.  
 Detection limits are at the 4.66 sigma level.

Hewitt W. Jeter

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Seattle, WA 98119

**MASS SPEC SERVICES**  
P.O. Box 163, Orangeburg, NY 10962  
**Report of Analysis**

**Report Date:** 03/25/05  
**MSS No.:** Pb0078  
**Project:** 04-08-06-23  
LDW Group  
**Date Rec'd:** 12/30/04  
**Task Supervisor:** H. Jeter

**Attn:** Tad Deshler

**Sediments**

Core LDW-Sg9 collected 12/21/04

Radiometric Results in pCi / g dry

MSS No.	Identity	Comment	Collection		Pb-210	Cs-137	Beta Count	Gamma Count
			Time					
Pb0078-1	LDW-Sg9-0-1		8:15		0.65 ± 0.20	< 0.048	03/11/05	03/12/05
Pb0078-2	LDW-Sg9-5-6		8:29		0.29 ± 0.14	< 0.046	03/11/05	03/16/05
Pb0078-3	LDW-Sg9-10-11		8:42		0.39 ± 0.17	0.201 ± 0.046	03/11/05	03/13/05
Pb0078-4	LDW-Sg9-15-16		8:49		0.33 ± 0.17	0.355 ± 0.070	03/11/05	03/13/05
Pb0078-5	LDW-Sg9-20-22		8:55		0.34 ± 0.21	0.174 ± 0.094	03/11/05	03/14/05
Pb0078-6	LDW-Sg9-20-22 FD	Field Duplicate	8:55		0.24 ± 0.13	0.145 ± 0.057	03/11/05	03/18/05
Pb0078-7	LDW-Sg9-25-26		9:05		0.31 ± 0.11	0.091 ± 0.049	03/11/05	03/12/05
Pb0078-8	LDW-Sg9-30-31		9:11		0.37 ± 0.13	0.083 ± 0.051	03/11/05	03/15/05
Pb0078-9	LDW-Sg9-35-36		9:15		< 0.24	0.089 ± 0.043	03/11/05	03/17/05
Pb0078-10	LDW-Sg9-40-41		9:20		< 0.21	0.141 ± 0.046	03/11/05	03/15/05
Pb0078-11	LDW-Sg9-45-46		9:26		0.20 ± 0.10	< 0.048	03/11/05	03/16/05
Pb0078-12	LDW-Sg9-50-51		9:32		0.32 ± 0.10	< 0.064	03/11/05	03/15/05
Pb0078-13	LDW-Sg9-55-56		9:38		0.29 ± 0.13	< 0.111	03/11/05	03/13/05
Pb0078-14	LDW-Sg9-60-62		9:44		0.26 ± 0.09	< 0.066	03/11/05	03/11/05
Pb0078-15	LDW-Sg9-60-62 MS	Matrix Spike	9:44		10.83 ± 0.46	25.95 ± 0.31	03/11/05	03/13/05
Pb0078-16	LDW-Sg9-60-62 MSD	Matrix Spike Duplicate	9:44		11.57 ± 0.50	23.87 ± 0.31	03/11/05	03/15/05
Pb0078-17	LDW-Sg9-65-66		9:52		0.32 ± 0.14	< 0.061	03/11/05	03/10/05
Pb0078-18	LDW-Sg9-70-71		10:00		0.35 ± 0.13	< 0.041	03/11/05	03/14/05
Pb0078-19	LDW-Sg9-75-76		10:05		0.29 ± 0.12	< 0.040	03/11/05	03/13/05
Pb0078-20	LDW-Sg9-80-81		10:11		0.21 ± 0.10	< 0.036	03/11/05	03/16/05
<b>Matrix Spike Expected Values:</b>								
		Pb-210	11.39 pCi/g spike + (0.26 ± 0.09) from matrix =			11.65 ± 0.09	pCi/g	
		Cs-137	23.28 pCi/g spike + (no contribution from matrix) =			23.28	pCi/g	

Target Detection Limits:

Pb-210 0.2 pCi/g dry  
Cs-137 0.2 pCi/g dry

Bismuth Beta Counting Method  
Gamma Spectral Analysis

Tolerances are 2 sigma counting uncertainties.  
Detection limits are at the 4.66 sigma level.

  
Hewitt W. Jeter

Windward Environmental LLC  
200 West Mercer Street  
Seattle, WA 98119

**MASS SPEC SERVICES**  
P.O. Box 163, Orangeburg, NY 10962  
**Report of Analysis**

Report Date: 03/30/05  
MSS No.: Pb0079  
Project: 04-08-06-23  
LDW Group  
Date Rec'd: 12/30/04  
Task Supervisor: H. Jeter

Attn: Tad Deshler

**Sediments**

Core LDW-Sg10 collected 12/20/04

Radiometric Results in pCi / g dry

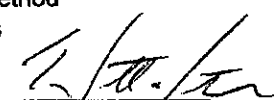
MSS No.	Identity	Comment	Collection Time	Radiometric Results in pCi / g dry			
				Pb-210	Cs-137	Beta Count	Gamma Count
Pb0079-1	LDW-Sg10-0-1		12:55	1.04 ± 0.16	0.107 ± 0.048	03/19/05	03/23/05
Pb0079-2	LDW-Sg10-5-6		13:02	0.93 ± 0.20	0.125 ± 0.045	03/19/05	03/24/05
Pb0079-3	LDW-Sg10-10-12		13:08	0.71 ± 0.17	0.107 ± 0.043	03/19/05	03/19/05
Pb0079-4	LDW-Sg10-10-12 FD	Field Duplicate	13:08	0.64 ± 0.16	0.096 ± 0.057	03/19/05	03/23/05
Pb0079-5	LDW-Sg10-15-16		13:17	0.54 ± 0.13	0.116 ± 0.047	03/19/05	03/22/05
Pb0079-6	LDW-Sg10-20-21		13:23	0.38 ± 0.17	0.154 ± 0.034	03/19/05	03/20/05
Pb0079-7	LDW-Sg10-25-26		13:31	0.55 ± 0.11	0.168 ± 0.047	03/19/05	03/23/05
Pb0079-8	LDW-Sg10-30-31		13:38	0.47 ± 0.14	0.212 ± 0.099	03/19/05	03/23/05
Pb0079-9	LDW-Sg10-35-36		13:47	0.59 ± 0.15	0.194 ± 0.065	03/19/05	03/22/05
Pb0079-10	LDW-Sg10-40-41		13:54	0.35 ± 0.10	0.203 ± 0.039	03/19/05	03/21/05
Pb0079-11	LDW-Sg10-45-46		14:00	0.57 ± 0.14	0.223 ± 0.059	03/19/05	03/24/05
Pb0079-12	LDW-Sg10-50-51		14:10	0.21 ± 0.12	0.184 ± 0.054	03/19/05	03/19/05
Pb0079-13	LDW-Sg10-55-56		14:17	0.47 ± 0.16	0.145 ± 0.072	03/19/05	03/19/05
Pb0079-14	LDW-Sg10-60-61		14:27	0.51 ± 0.12	0.156 ± 0.068	03/19/05	03/20/05
Pb0079-15	LDW-Sg10-60-61 MR	Matrix replicate	14:27	0.46 ± 0.14	0.196 ± 0.106	03/19/05	03/18/05
Pb0079-16	LDW-Sg10-65-66		14:35	0.39 ± 0.13	0.167 ± 0.031	03/19/05	03/24/05
Pb0079-17	LDW-Sg10-70-71		14:43	0.61 ± 0.15	0.290 ± 0.123	03/19/05	03/24/05
Pb0079-18	LDW-Sg10-75-77		14:50	0.51 ± 0.16	0.213 ± 0.039	03/19/05	03/21/05
Pb0079-19	LDW-Sg10-75-77 MS	Matrix Spike	14:50	10.37 ± 0.46	26.43 ± 0.33	03/19/05	03/14/05
Pb0079-20	LDW-Sg10-75-77 MSD	Matrix Spike Duplicate	14:50	11.40 ± 0.51	26.53 ± 0.36	03/19/05	03/14/05
Pb0079-21	LDW-Sg10-80-81		14:58	0.51 ± 0.14	0.206 ± 0.040	03/19/05	03/20/05
<b>Matrix Spike Expected Values:</b>				Pb-210 10.56 pCi/g spike + (0.51 ± 0.16) from matrix =		11.07 ± 0.16	pCi/g
				Cs-137 24.96 pCi/g spike + (0.21 ± 0.04) from matrix =		25.17 ± 0.04	pCi/g

Target Detection Limits:

Pb-210 0.2 pCi/g dry  
Cs-137 0.2 pCi/g dry

Bismuth Beta Counting Method  
Gamma Spectral Analysis

Tolerances are 2 sigma counting uncertainties.  
Detection limits are at the 4.66 sigma level.

  
Hewitt W. Jeter

Windward Environmental LLC  
200 West Mercer Street  
Seattle, WA 98119

Attn: Tad Deshler

**MASS SPEC SERVICES**  
P.O. Box 163, Orangeburg, NY 10962  
**Report of Analysis**

**Sediments**

Core LDW-Sg11b and c collected 12/27/04

Report Date:	04/04/05
MSS No.:	Pb0080
Project:	04-08-06-23 LDW Group
Date Rec'd:	12/30/04
Task Supervisor:	H. Jeter

Radiometric Results in pCi / g dry

MSS No.	Identity	Comment	Collection		Cs-137	Beta Count	Gamma Count
			Time	Pb-210			
Pb0080-1	LDW-Sg11b-0-2		14:15	0.23 ± 0.08	< 0.043	03/25/05	03/29/05
Pb0080-2	LDW-Sg11b-0-2 FD	Field Duplicate	14:15	0.23 ± 0.09	< 0.032	03/25/05	03/31/05
Pb0080-3	LDW-Sg11b-5-6		14:22	0.26 ± 0.10	0.138 ± 0.057	03/25/05	03/30/05
Pb0080-4	LDW-Sg11b-10-11		14:28	0.29 ± 0.11	0.152 ± 0.037	03/25/05	03/29/05
Pb0080-5	LDW-Sg11b-15-16		14:35	0.28 ± 0.10	0.137 ± 0.061	03/25/05	03/31/05
Pb0080-6	LDW-Sg11b-20-21		14:42	0.43 ± 0.13	0.128 ± 0.037	03/25/05	03/31/05
Pb0080-7	LDW-Sg11b-25-27		14:50	0.26 ± 0.09	0.161 ± 0.045	03/25/05	03/26/05
Pb0080-8	LDW-Sg11b-25-27 MS	Matrix Spike	14:50	12.16 ± 0.47	33.56 ± 0.44	03/25/05	03/26/05
Pb0080-9	LDW-Sg11b-25-27 MSD	Matrix Spike Duplicate	14:50	13.89 ± 0.52	31.88 ± 0.44	03/25/05	03/27/05
Pb0080-10	LDW-Sg11b-30-31		14:58	0.36 ± 0.09	0.096 ± 0.038	03/25/05	04/01/05
Pb0080-11	LDW-Sg11b-35-36		15:06	0.37 ± 0.11	< 0.054	03/25/05	03/26/05
Pb0080-12	LDW-Sg11b-40-41		15:19	0.18 ± 0.08	< 0.057	03/25/05	04/02/05
Pb0080-13	LDW-Sg11c-0-1		15:45	0.32 ± 0.09	< 0.034	03/25/05	03/26/05
Pb0080-14	LDW-Sg11c-5-6		15:54	0.19 ± 0.08	< 0.050	03/25/05	03/29/05
Pb0080-15	LDW-Sg11c-10-12		16:00	0.22 ± 0.09	0.099 ± 0.020	03/25/05	03/26/05
Pb0080-16	LDW-Sg11c-10-12 FD	Field Duplicate	16:00	0.31 ± 0.11	0.113 ± 0.041	03/25/05	03/29/05
Pb0080-17	LDW-Sg11c-15-16		16:08	0.31 ± 0.09	0.206 ± 0.038	03/25/05	03/26/05
Pb0080-18	LDW-Sg11c-20-21		16:14	0.36 ± 0.10	0.188 ± 0.035	03/25/05	03/28/05
Pb0080-19	LDW-Sg11c-25-26		16:19	0.24 ± 0.07	0.097 ± 0.051	03/25/05	03/31/05
Pb0080-20	LDW-Sg11c-30-32		16:27	0.33 ± 0.11	0.241 ± 0.092	03/25/05	03/31/05
Pb0080-21	LDW-Sg11c-30-32 MS	Matrix Spike	16:27	12.75 ± 0.47	27.52 ± 0.24	03/25/05	03/26/05
Pb0080-22	LDW-Sg11c-30-32 MSD	Matrix Spike Duplicate	16:27	13.07 ± 0.48	27.02 ± 0.29	03/25/05	03/25/05
<b>Matrix Spike Expected Values</b>							
	25-27 cm	Pb-210	12.68 pCi/g spike + (0.26 ± 0.09) from matrix =			12.94 ± 0.09	pCi/g
		Cs-137	30.23 pCi/g spike + (0.16 ± 0.05) from matrix =			30.39 ± 0.05	pCi/g
	30-32 cm	Pb-210	12.53 pCi/g spike + (0.33 ± 0.11) from matrix =			12.86 ± 0.11	pCi/g
		Cs-137	25.23 pCi/g spike + (0.24 ± 0.09) from matrix =			25.47 ± 0.09	pCi/g

Target Detection Limits:

Tolerances are 2 sigma counting uncertainties.  
Detection limits are at the 4.66 sigma level.

Pb-210 0.2 pCi/g dry  
Cs-137 0.2 pCi/g dry

Bismuth Beta Counting Method  
Gamma Spectral Analysis

  
Hewitt W. Jeter

Windward Environmental LLC  
200 West Mercer Street  
Seattle, WA 98119

Attn: Tad Deshler

**MASS SPEC SERVICES**  
P.O. Box 163, Orangeburg, NY 10962  
**Report of Analysis**

**Sediments**

Core LDW-Sg12 collected 12/20/04

Report Date: 04/12/05

MSS No.: Pb0081

Project: 04-08-06-23  
LDW Group

Date Rec'd: 12/30/04

Task Supervisor: H. Jeter

Radiometric Results in pCi / g dry


MSS No.	Identity	Comment	Collection Time	Pb-210	Cs-137	Beta Count	Gamma Count
Pb0081-1	LDW-Sg12-0-1		7:47	1.07 ± 0.15	0.131 ± 0.039	04/01/05	04/06/05
Pb0081-2	LDW-Sg12-5-6		7:58	0.50 ± 0.11	0.074 ± 0.041	04/01/05	04/05/05
Pb0081-3	LDW-Sg12-10-11		8:09	0.77 ± 0.13	< 0.091	04/01/05	04/06/05
Pb0081-4	LDW-Sg12-15-16		8:20	0.76 ± 0.13	0.079 ± 0.044	04/01/05	04/05/05
Pb0081-5	LDW-Sg12-20-21		8:28	0.98 ± 0.14	< 0.072	04/01/05	04/05/05
Pb0081-6	LDW-Sg12-25-26		8:39	1.11 ± 0.12	< 0.094	04/01/05	04/05/05
Pb0081-7	LDW-Sg12-30-32		8:47	0.96 ± 0.13	0.135 ± 0.064	04/01/05	04/06/05
Pb0081-8	LDW-Sg12-30-32 FD	Field Duplicate	8:47	0.81 ± 0.12	0.246 ± 0.076	04/01/05	04/05/05
Pb0081-9	LDW-Sg12-35-36		8:55	0.43 ± 0.10	< 0.052	04/01/05	04/05/05
Pb0081-10	LDW-Sg12-40-41		9:07	0.87 ± 0.13	0.121 ± 0.071	04/01/05	04/05/05
Pb0081-11	LDW-Sg12-45-46		9:16	1.04 ± 0.14	< 0.106	04/01/05	04/07/05
Pb0081-12	LDW-Sg12-50-51		9:26	1.03 ± 0.14	< 0.102	04/01/05	04/09/05
Pb0081-13	LDW-Sg12-55-56		9:39	1.40 ± 0.16	< 0.096	04/01/05	04/10/05
Pb0081-14	LDW-Sg12-60-62		9:46	1.22 ± 0.15	0.120 ± 0.051	04/01/05	04/09/05
Pb0081-15	LDW-Sg12-60-62 MS	Matrix Spike	9:46	11.46 ± 0.47	48.09 ± 0.47	04/01/05	04/09/05
Pb0081-16	LDW-Sg12-60-62 MSD	Matrix Spike Duplicate	9:46	12.77 ± 0.49	49.68 ± 0.50	04/01/05	04/09/05
Pb0081-17	LDW-Sg12-65-66		10:04	1.13 ± 0.15	0.145 ± 0.067	04/01/05	04/09/05
Pb0081-18	LDW-Sg12-70-71		10:12	0.85 ± 0.14	0.113 ± 0.055	04/01/05	04/07/05
Pb0081-19	LDW-Sg12-75-76		10:19	0.96 ± 0.14	0.105 ± 0.062	04/01/05	04/10/05
Pb0081-20	LDW-Sg12-80-81		10:30	1.00 ± 0.13	0.156 ± 0.073	04/01/05	04/09/05
<b>Matrix Spike Expected Values:</b>				Pb-210 10.66 pCi/g spike + (1.22 ± 0.15) from matrix =		11.88 ± 0.15	pCi/g
				Cs-137 44.35 pCi/g spike + (0.12 ± 0.05) from matrix =		44.47 ± 0.05	pCi/g

Target Detection Limits:

Pb-210 0.2 pCi/g dry  
Cs-137 0.2 pCi/g dry

Bismuth Beta Counting Method  
Gamma Spectral Analysis

Tolerances are 2 sigma counting uncertainties.  
Detection limits are at the 4.66 sigma level.

  
Hewitt W. Jeter

Windward Environmental LLC  
 200 West Mercer Street  
 Seattle, WA 98119

**MASS SPEC SERVICES**  
 P.O. Box 163, Orangeburg, NY 10962  
**Report of Analysis**

**Report Date:** 04/16/05  
**MSS No.:** Pb0082  
**Project:** 04-08-06-23  
 LDW Group  
**Date Rec'd:** 12/30/04  
**Task Supervisor:** H. Jeter

**Attn:** Tad Deshler

**Sediments**

Core LDW-Sg13 collected 12/17/04

Radiometric Results in pCi / g dry

MSS No.	Identity	Comment	Collection		Pb-210	Cs-137	Beta Count	Gamma Count
			Time					
Pb0082-1	LDW-Sg13-0-1		9:51		0.87 ± 0.14	0.111 ± 0.044	04/08/05	04/09/05
Pb0082-2	LDW-Sg13-5-6		10:05		0.94 ± 0.14	< 0.083	04/08/05	04/11/05
Pb0082-3	LDW-Sg13-10-11		10:22		0.69 ± 0.13	0.098 ± 0.056	04/08/05	04/11/05
Pb0082-4	LDW-Sg13-15-17		10:34		1.05 ± 0.14	< 0.083	04/08/05	04/10/05
Pb0082-5	LDW-Sg13-15-17 FD	Field Duplicate	10:34		1.03 ± 0.15	< 0.067	04/08/05	04/10/05
Pb0082-6	LDW-Sg13-20-21		10:46		0.82 ± 0.14	< 0.068	04/08/05	04/07/05
Pb0082-7	LDW-Sg13-25-26		11:00		0.55 ± 0.10	< 0.053	04/08/05	04/14/05
Pb0082-8	LDW-Sg13-30-31		11:14		0.64 ± 0.14	< 0.122	04/08/05	04/12/05
Pb0082-9	LDW-Sg13-35-36		11:26		0.78 ± 0.13	0.129 ± 0.068	04/08/05	04/13/05
Pb0082-10	LDW-Sg13-40-41		11:40		0.72 ± 0.12	0.093 ± 0.048	04/08/05	04/13/05
Pb0082-11	LDW-Sg13-45-46		11:51		0.46 ± 0.11	0.113 ± 0.053	04/08/05	04/12/05
Pb0082-12	LDW-Sg13-50-52		13:20		0.51 ± 0.10	0.082 ± 0.035	04/08/05	04/12/05
Pb0082-13	LDW-Sg13-50-52 MS	Matrix Spike	13:20		8.70 ± 0.30	25.55 ± 0.32	04/08/05	04/10/05
Pb0082-14	LDW-Sg13-50-52 MSD	Matrix Spike Duplicate	13:20		8.89 ± 0.34	19.94 ± 0.25	04/08/05	04/12/05
Pb0082-15	LDW-Sg13-55-56		13:28		0.37 ± 0.11	< 0.049	04/08/05	04/11/05
Pb0082-16	LDW-Sg13-60-61		13:43		0.54 ± 0.11	< 0.071	04/08/05	04/14/05
Pb0082-17	LDW-Sg13-60-61 MR	Matrix Replicate	13:43		0.50 ± 0.11	< 0.100	04/08/05	04/11/05
Pb0082-18	LDW-Sg13-65-66		13:51		0.54 ± 0.12	0.116 ± 0.037	04/08/05	04/13/05
Pb0082-19	LDW-Sg13-70-71		14:11		0.57 ± 0.12	0.070 ± 0.040	04/08/05	04/11/05
Pb0082-20	LDW-Sg13-75-76		14:19		0.56 ± 0.10	0.107 ± 0.059	04/08/05	04/14/05
Pb0082-21	LDW-Sg13-80-81		14:25		0.46 ± 0.09	0.119 ± 0.061	04/08/05	04/12/05
<b>Matrix Spike Expected Values:</b>					Pb-210 8.22 pCi/g spike + (0.51 ± 0.10) from matrix =		8.73 ± 0.10	pCi/g
					Cs-137 19.59 pCi/g spike + (0.08 ± 0.04) from matrix =		19.67 ± 0.04	pCi/g

Target Detection Limits:

Pb-210 0.2 pCi/g dry  
 Cs-137 0.2 pCi/g dry

Bismuth Beta Counting Method  
 Gamma Spectral Analysis

Tolerances are 2 sigma counting uncertainties.  
 Detection limits are at the 4.66 sigma level.

  
 Hewitt W. Jeter