

**PARSONS ENGINEERING SCIENCE, INC.**

30 Dan Road • Canton, Massachusetts 02021-2809 • (781) 401-3200 • Fax: (781) 401-2575

December 17, 1999

00772



Commander  
U.S. Army Corps of Engineers  
Engineering and Support Center, Huntsville  
Attn: Ms. Dorothy Richards, CEHNC-PM  
4820 University Square  
Huntsville, AL 35816-1822,

**SUBJECT: Response to USEPA Comments Dated November 2, 1999 on Background Sample Analyses for Plutonium-239/240 at SEAD-12, Seneca Army Depot Activity**

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Dear Ms. Richards:

Parsons Engineering Science is pleased to provide you with responses to USEPA comments dated November 2, 1999 on background sample analyses for Plutonium-239/240 (July 2, 1999). These responses were prepared under Delivery Order 5 under Contract No. DACA87-95-D-0031.

If you have any questions or concerns regarding these comments, please do not hesitate to call me at (781) 401-2535 or Michael Duchesneau at (781) 401-2492.

Sincerely,

**PARSONS ENGINEERING SCIENCE, INC.**

A handwritten signature in cursive script, appearing to read "Jacqueline Travers".

Jacqueline Travers, P.E.  
Task Order Manager

cc: Mr. Tom Enroth, CENAN-PP-HE  
Mr. Stephen Absolom, SEDA

Mr. Keith Hoddinott, USACHPPM (Prov.)  
Mr. John Buck, USAEC

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**PARSONS ENGINEERING SCIENCE, INC.**

30 Dan Road • Canton, Massachusetts 02021-2809 • (781) 401-3200 • Fax: (781) 401-2575

December 17, 1999

Mr. Julio Vazquez  
USEPA Region II  
Superfund Federal Facilities Section  
290 Broadway, 18<sup>th</sup> Floor  
New York, NY 10007-1866

Mr. James Quinn  
New York State Department of Environmental Conservation  
Bureau of Eastern Remedial Action  
Division of Hazardous Waste Remediation  
50 Wolf Road  
Albany, NY 12233-7010

**SUBJECT: Response to USEPA Comments Dated November 2, 1999 on Background Sample Analyses for Plutonium-239/240 at SEAD-12, Seneca Army Depot Activity**

Dear Mr. Vazquez/Mr. Quinn:

Please find enclosed responses to USEPA comments dated November 2, 1999 on background sample analyses for Plutonium-239/240 (July 2, 1999).

If you have any questions or concerns regarding these comments, please do not hesitate to call me at (781) 401-2535 or Michael Duchesneau at (781) 401-2492.

Sincerely,

**PARSONS ENGINEERING SCIENCE, INC.**



Jacqueline Travers, P.E.  
Task Order Manager

cc: Mr. Tom Enroth, CENAN-PP-HE  
Mr. Stephen Absolom, SEDA  
Ms. Dorothy Richards, CEHNC-PM-ND

Mr. Keith Hoddinott, USACHPPM (Prov.)  
Mr. John Buck, USAEC

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**Response to the Comments From  
United States Environmental Protection Agency,  
Region II**

**Subject: Re-Sampling of Background Samples in Connection with SEAD-12 Rad Site**

**[Background Sample Analyses for Plutonium 239/240 at SEAD-12, Seneca Army Depot,  
Romulus, New York, July 2, 1999]**

**Comments Dated: November 2, 1999**

**Date of Comment Response: December 15, 1999**

*The following are EPA comments on the above subject. It is recommended that re-sampling on all background locations of SEAD 12 be initiated in order to verify the presence or absence of Pu 239/240. The comments below are grouped in two parts. The first addresses our concerns with the first round of samples (i.e., data quality), and the second contains our recommendations on the second round (re-sampling) of all background locations of SEAD-12.*

Comment:

*First, the information provided in the 7/2/99 cover letter to this Report from Parsons ESI states that two sediment and eight solid background/off-site sample locations have detections of Pu-239/240. Table 1 (revised) of the Report lists the results for only eight of these samples, which required no data qualifiers by the lab nor by the Parsons validator. Two of these eight samples are contained in laboratory SDG 976185. QA/QC reports, as provided in Appendix A, are missing for this SDG. Thus, verification of the data summarized in Table 1 (revised) cannot be performed for these two sample locations, namely, MW12-3 (0-2ft) and (6-8ft).*

Response: Table 1 (revised) lists the Pu-239/240 results for background soil samples. As mentioned above, eight of the soil samples have detections of Pu-239/240. Table 2 provides the Pu-239/240 results for sediment. Two of these sediment samples have detections of Pu-239/240.

Laboratory SDG 976185, which contains soil data for MW12-3 (0-2 ft) and (6-8 ft), was inadvertently left out of Appendix A. It is provided with these responses to comments.

Comment:

*Information for samples SD12-60 and SD23-63, proposed in the Parsons cover letter for re-sampling, is missing from the Report. Thus, review and verification of results cannot be performed.*

Response: Sample SD23-63 is a typographical error. The sediment samples proposed for re-sampling are SD12-60 and SD12-63. The information for these two sediment samples is included in SDG 976235 as shown in Table 2. The data and QA/QC information for SDG 976235 is included in Appendix A. However, an additional copy has been provided assuming the reviewer's copy was missing. SD12-60 corresponds to sample ID 12454 and SD12-63 corresponds to sample ID 12448.

Comment:

*In addition, Parsons ESI proposes re-sampling of these ten locations due to the trend of Pu-239/240 concentrations reported correlating to similar concentrations of this contaminant detected in the associated Method Blank. Review of the QA/QC reports provided for the following SDGs and proposed re-sampling locations (six out of the ten proposed) indicate that the associated Method Blank concentrations of Pu-239/240 are non-detect:*

SDG 976178	Sample MW12-4	(4-5.4 ft. depth) MBAPU0205
	Sample MW12-4	(6-8 ft. depth)
SDG 976183	Sample MW12-4	(0-0.2ft depth) MBAPU0-205
	Sample MW12-1	(02-2ft depth)
	Sample MW12-1	(0-0.2ft depth)
	Sample MW12-1	(4-6 ft depth)

*Note: QA/QC report for SDG 976185 containing samples MW12-3 (0-0.2ft) and MW12-3 (6-8 ft) and associated method blank, is missing from Appendix A. See 1(a) above.*

*Information for SD 12-60 and SD 23-63 and the associated Method Blank is not provided on Table 1 (revised) nor in Appendix A. See 1(a) above.*

Response: It is understood that method blank data for the six samples listed above did not detect Pu-239/240. We did not propose the ten sample locations based on the associated method blank data. The ten locations were proposed because they were background locations where Pu-239/240 was detected in the sample itself.

The reference to method blank data in our cover letter dated 7/2/99 was to point out that when looking at the background data set, approximately the same frequency of samples from the site dataset had reported detections of Pu-239/240. Most detections were between 0.1 to 0.2 pCi/g. Similarly, about the same frequency of method blank results reported detections of Pu-239/240 in this same activity range. This trend may provide evidence that the reported detections at this level are actually due to analytical artifacts rather than the actual presence of Pu-239/240.

As stated above in response to an earlier comment, information for SD12-60 and SD23-63 (which should be SD12-63) and associated method blank are included in Table 2 and SDG 976235 of Appendix A. Although these were included in the 7/2/99 submittal, they have been copied and attached to these responses, in the event they were missing from the reviewer's copy.

Comment: *Please note that the QC Footer text located in Appendix A, as prepared by Core Labs states that the "Time Analyzed stated in each QC report may not reflect the actual time of each analysis". However, no further reasoning is provided and no true analysis times for each sample and associated QC are listed anywhere. The information currently provided in the QC reports regarding the Pu analysis times is misleading since the same date and time is listed for all samples and associated Method Blanks within an SDG. This software problem should be corrected prior to any further data submittals.*

Response: Analysis dates and times provided in the electronic deliverables are unique for each sample and analysis on the QC reports. I believe the reviewer is referring to the "Received Date" column of the data package. These dates and times are typically the same since samples within the SDG are shipped together. According to Core Laboratories, the QC Footer referenced above should not have been applied for this project. Parsons ES has spot checked QA/QC hard copy backup and has confirmed that the times specified in the hard copies for the analyses match those provided in the electronic copies submitted in the 7/2/99 submittal.

Comment: *Second, as a result of SEDA's agreement to conduct re-sampling of the SEAD 12 locations for Pu239/240, compliance with current EPA Quality Assurance System requirements must be demonstrated. The following information must be submitted to EPA for review and approval, if any deviation from the previously approved SEAD 12 Scoping Plan occurs. This is to include the routine elements of a Quality Assurance Project Plan, specified in EPA QA/R-5 (draft final 10/98) as follows:*

- Project/Task Organization
- Problem Definition/Background
- Project/Task Description
- Quality Objectives and Criteria for Measurement Data
- Special Training Requirements/Certifications
- Documentation and Records
- Sampling process Design
- Sampling Methods Requirements
- Sample Handling and Custody Requirements
- Analytical Methods Requirements
- QC Requirements
- Instrument/Equipment Testing, Inspection and Maintenance Requirements
- Inspection/Acceptance Requirements for Supplies and Consumables
- Data Acquisition Requirements
- Data Quality Management
- Assessments and Response Actions
- Reports to Management
- Data Review, Validation, and Verification Requirements
- Validation and Verification Methods
- Reconciliation with User Requirements

*Only those elements listed above which differ from that specified in the previously approved Plan for SEAD 12 must be submitted to EPA for review and approval.*

Response: Most of the components above are already covered between the SEAD-12 Project Scoping Plan and Appendices A and C of the Generic Installation Workplan for RI/FS Investigations at Seneca Army Depot Activity. Modifications of the above components are provided as Attachment B to the November 22, 1999 Sampling and Analysis Plan for Re-Sampling of Pu-239/240 of Soil/Sediment at SEAD-12. Attachment B is currently being prepared and will be submitted under separate cover.

Comment: *Most important is that follow up analysis have a suitable low detection limit as reported values of the first round of samples of 0.1 to 0.2 pCi/g are an order of magnitude above background from fallout.*

Response: The detection limit requested by the New York State Department of Health for re-analysis of soil samples for Pu-239/240 is 0.01pCi/g. This is the detection limit that shall be met during the re-analysis of samples collected from SEAD-12.

*EPA would like to split samples on all the above ten background samples. Specific instructions, protocols, and laboratory information will be provided under a separate cover sheet.*





## ENVIRONMENTAL TESTING SERVICES

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### Sample Delivery Group Narrative

April 24, 1998

**Customer:** Parsons Engineering Science, Inc.

**Project:** SEAD-12

**Core Laboratories – Casper Job Number:** 976185

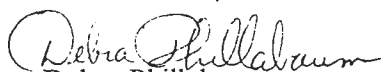
The following information is pertinent to the interpretation of the data.

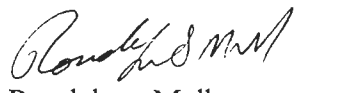
On November 8, 1997, Core Laboratories - Casper received ten soil samples in good condition.

The analytical batch for the isotopic thorium had low tracer recovery, which caused the batch to be reanalyzed. The reanalyzed thorium batch used a smaller sample volume and passed QC criteria. The lower volumes elevated the LLDs for Th-230. The MB for the Th-230 was elevated slightly at 0.8 pCi/g. The MB for U234 was slightly elevated at 0.3 pCi/g.

The positive results that are reported for the gamma emitters have calculated MDAs based on the most abundant line of the gamma emitter in question. The activity and the error is calculated by the software for the positive results. The Ra226 activity by gamma is not reported using the 186kev line since Ra226 has a low abundance at that line and the U235 has a greater abundance with an energy very close to 186 which would cause interference. Therefore, the Ra226 is calculated from the Bi214 line, a daughter of Ra226. The Ra228 is calculated from the Ac228 line, the daughter of Ra228, as Ra228 is a beta emitter.

If you have any questions concerning this data, please call Ronni Mull at (307) 235-5741.

  
Debra Phillabaum  
QA/QC Coordinator









  
Rondalynn Mull  
Radiochemistry Supervisor



COOLER #70


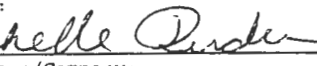
« « « CORE LABORATORIES - CHAIN OF CUSTODY RECORD » » »

CUSTOMER INFORMATION		PROJECT INFORMATION		# ABC-012068 Page <u>3</u> Of <u>4</u> File = 11079701.bar LAB JOB NUMBER <div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 5px auto;">976185</div>
Company...: Parsons		Project...: SEAD-12		
Report To: Mike Duchesneau		Bill To...: Mike Duchesneau		
101 Huntington Ave.		Address...: 101 Huntington Ave.		
Boston MA, 02199		Boston MA 02199		
Phone/Fax: 617-859-2492 617-859-2043		Phone/Fax: 617-859-2492 617-859-2043		

SMR	DATE	TIME	BARCODE	SAMPLE ID	PARAMETERS	COMMENTS	LAB NO.
BJP	11/07/97	1015	 10197	12046	LIQUID-2A	OVER-FOR-PARAM-KEY	
BJP	11/07/97	1015	 10193	12046	RN222	OVER-FOR-PARAM-KEY	
DRG	11/07/97	1100	 10191	12426	SOLIDS-1A	OVER-FOR-PARAM-KEY	
DRG	11/07/97	1030	 10199	12443	SOLIDS-1A	OVER-FOR-PARAM-KEY	
CSM	11/07/97	1000	 10192	12444	SOLIDS-1A	OVER-FOR-PARAM-KEY	
CSM	11/07/97	1130	 10189	12445	SOLIDS-1A	OVER-FOR-PARAM-KEY	
BJP	11/07/97	1120	 10190	12446	SOLIDS-1A	OVER-FOR-PARAM-KEY	
KKS	11/06/97	1020	 10274	12509	SOLIDS-1B	OVER-FOR-PARAM-KEY	

SHIPMENT METHOD: FedEx AIRBILL NO.: 1531151871

REQUIRED TURNAROUND:\*\* [ ] SAME DAY [ ] 24 HOURS [ ] 48 HOURS [ ] 72 HOURS [ ] 5 DAYS [ ] 10 DAYS [X] ROUTINE [ ] \_\_\_\_\_ \*\* RUSH WORK MAY REQUIRE SURCHARGE

RELINQUISHED BY:	Date	RELINQUISHED BY:	Date	RELINQUISHED BY:	Date
Signature: 	11/7/97	Signature:		Signature:	
Printed Name/Company: NICHOLAS A. SMITH / PARSONS	Time 1900	Printed Name/Company:	Time	Printed Name/Company:	Time
RECEIVED BY:	Date	RECEIVED BY:	Date	RECEIVED BY:	Date
Signature: 	11/8/97	Signature:		Signature:	
Printed Name/Company: Michelle Puder - CORE	Time 1200	Printed Name/Company:	Time	Printed Name/Company:	Time





- |   |  |   |  |
|---|--|---|--|
| <input type="checkbox"/> Anaheim, CA (714) 937-1094           | <input type="checkbox"/> Corpus Christi, TX (512) 289-2673 | <input type="checkbox"/> Houston, TX (Pet) (713) 943-9776 | <input type="checkbox"/> Long Beach, CA (310) 595-8401 |
| <input type="checkbox"/> Aurora, CO (303) 751-1780            | <input type="checkbox"/> Edison, NJ (908) 225-6700         | <input type="checkbox"/> Indianapolis, IN (317) 875-5894  | <input type="checkbox"/> Tampa, FL (813) 884-8268      |
| <input checked="" type="checkbox"/> Casper, WY (307) 235-5741 | <input type="checkbox"/> Houston, TX (Env) (713) 690-4444  | <input type="checkbox"/> Lake Charles, LA (318) 583-4926  | <input type="checkbox"/> Valparaiso, IN (219) 464-2389 |

COOLER # 70

« « « CORE LABORATORIES - CHAIN OF CUSTODY RECORD » » »

CUSTOMER INFORMATION		PROJECT INFORMATION	
Company...: Parsons		Project...: SEAD-12	
Port To: Mike Duchesneau		Bill To...: Mike Duchesneau	
101 Huntington Ave.		Address...: 101 Huntington Ave.	
Boston MA, 02199		Boston MA 02199	
Phone/Fax: 617-859-2492 617-859-2043		Phone/Fax: 617-859-2492 617-859-2043	

# ABC-012069  
 Page 4 Of 4  
 File = 11079701.bar  
**LAB JOB NUMBER**  
976185

SMR	DATE	TIME	BARCODE	SAMPLE ID	PARAMETERS	COMMENTS	LAB NO.
KKS	11/06/97	1030	 10273	12510	SOLIDS-1B	OVER-FOR-PARAM-KEY	
KKS	11/06/97	1100	 10272	12511	SOLIDS-1B	OVER-FOR-PARAM-KEY	
KKS	11/06/97	1500	 10271	12512	SOLIDS-1B	OVER-FOR-PARAM-KEY	
KKS	11/06/97	1510	 10270	12513	SOLIDS-1B	OVER-FOR-PARAM-KEY	
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SHIPMENT METHOD: FEDEX AIRBILL NO.: 1531151871

REQUIRED TURNAROUND: \*\*  SAME DAY  24 HOURS  48 HOURS  72 HOURS  5 DAYS  10 DAYS  ROUTINE  \_\_\_\_\_ \*\* RUSH WORK MAY REQUIRE SURCHARGE

RELINQUISHED BY:	Date	RELINQUISHED BY:	Date	RELINQUISHED BY:	Date
Signature: <i>Nicholas A. Smith</i>	11/7/97	Signature:		Signature:	
Printed Name/Company: NICHOLAS A. SMITH / PARSONS	Time: 1900	Printed Name/Company:		Printed Name/Company:	
RECEIVED BY:	Date	RECEIVED BY:	Date	RECEIVED BY:	Date
Signature: <i>Michelle Pudev</i>	11/8/97	Signature:		Signature:	
Printed Name/Company: Michelle Pudev	Time: 1000	Printed Name/Company:		Printed Name/Company:	

- |   |  |   |  |
|---|--|---|--|
| <input type="checkbox"/> Anaheim, CA (714) 937-1094           | <input type="checkbox"/> Corpus Christi, TX (512) 289-2673 | <input type="checkbox"/> Houston, TX (Pet) (713) 943-9776 | <input type="checkbox"/> Long Beach, CA (310) 595-8401 |
| <input type="checkbox"/> Aurora, CO (303) 751-1780            | <input type="checkbox"/> Edison, NJ (908) 225-6700         | <input type="checkbox"/> Indianapolis, IN (317) 875-5894  | <input type="checkbox"/> Tampa, FL (813) 884-8268      |
| <input checked="" type="checkbox"/> Casper, WY (307) 235-5741 | <input type="checkbox"/> Houston, TX (Env) (713) 690-4444  | <input type="checkbox"/> Lake Charles, LA (318) 583-4926  | <input type="checkbox"/> Valparaiso, IN (219) 464-2389 |

PARSONS ES SAMPLE		ANALYSIS			ANALYZED							
SAMP ID	TYPE	SDG	METHOD	PARAMETER	RESULT	UNIT	ERROR	LLD	MATRIX	RCVD DATE	EXTRACT DATE	DATE
12407	MS	976118	mod. HASL 300	Promethium 147		97 % REC	15.3		12.3 Soil		4/4/1998 10:06	4/4/1998 10:06
12426	SA1	976185	mod. HASL 300	Plutonium-239/240	ND	pCi/g	0.1		0.2 Soil	11/8/1997 10:00	2/10/1998 15:49	2/10/1998 15:49
12426	SA1	976185	mod. HASL 300	Thorium-232, Activity		1 pCi/g	0.6		0.4 Soil	11/8/1997 10:00	2/19/1998 13:48	2/19/1998 13:48
12426	SA1	976185	mod. HASL 300	Thorium-230, Activity		1.6 pCi/g	0.8		0.5 Soil	11/8/1997 10:00	2/19/1998 13:48	2/19/1998 13:48
12426	SA1	976185	mod. HASL 300	Thorium-227	ND	pCi/g	0.1		0.4 Soil	11/8/1997 10:00	2/19/1998 13:48	2/19/1998 13:48
12426	SA1	976185	mod. HASL 300	Uranium-238, Activity		0.7 pCi/g	0.3		0.1 Soil	11/8/1997 10:00	2/10/1998 15:45	2/10/1998 15:45
12426	SA1	976185	mod. HASL 300	Uranium-235, Activity		0.1 pCi/g	0.1		0.1 Soil	11/8/1997 10:00	2/10/1998 15:45	2/10/1998 15:45
12426	SA1	976185	mod. HASL 300	Uranium-233/234, Activity		0.9 pCi/g	0.3		0.1 Soil	11/8/1997 10:00	2/10/1998 15:45	2/10/1998 15:45
12426	SA1	976185	CA-GLR-R160	Moisture (@ 104 deg. C)		34.4 % by Wt			Soil	11/8/1997 10:00	11/19/1997 12:00	11/19/1997 12:00
12426	SA1	976185	CA-GLR-17.0	Tritium, Activity		0.1 pCi/g	0.1		0.1 Soil	11/8/1997 10:00	2/12/1998 12:39	2/12/1998 12:39
12426	SA1	976185	EPA 901.1	Radium-228, Activity		2.3 pCi/g	0.5		0.2 Soil	11/8/1997 10:00	2/10/1998 18:44	2/10/1998 18:44
12426	SA1	976185	EPA 901.1	Radium-223, Activity	ND	pCi/g			0.4 Soil	11/8/1997 10:00	2/10/1998 18:44	2/10/1998 18:44
12426	SA1	976185	EPA 901.1	Bismuth-214, Activity		1.2 pCi/g	0.3		0.6 Soil	11/8/1997 10:00	2/10/1998 18:44	2/10/1998 18:44
12426	SA1	976185	EPA 901.1	Radium-226, Activity		1.2 pCi/g	0.3		0.6 Soil	11/8/1997 10:00	2/10/1998 18:44	2/10/1998 18:44
12426	SA1	976185	EPA 901.1	Cobalt-57, Activity	ND	pCi/g			0.1 Soil	11/8/1997 10:00	2/10/1998 18:44	2/10/1998 18:44
12426	SA1	976185	EPA 901.1	Cobalt-60, Activity	ND	pCi/g			0.3 Soil	11/8/1997 10:00	2/10/1998 18:44	2/10/1998 18:44
12426	SA1	976185	EPA 901.1	Cesium-137, Activity		0.8 pCi/g	0.2		0.1 Soil	11/8/1997 10:00	2/10/1998 18:44	2/10/1998 18:44
12426	SA1	976185	EPA 901.1	Lead-210, Activity	ND	pCi/g			22.8 Soil	11/8/1997 10:00	2/10/1998 18:44	2/10/1998 18:44
12426	SA1	976185	EPA 901.1	Lead-211, Activity	ND	pCi/g			9.3 Soil	11/8/1997 10:00	2/10/1998 18:44	2/10/1998 18:44
12426	SA1	976185	EPA 901.1	Lead-214, Activity		1.6 pCi/g	0.4		0.1 Soil	11/8/1997 10:00	2/10/1998 18:44	2/10/1998 18:44
12426	MD	976185	mod. HASL 300	Plutonium-239/240		0.1 RPD	0.1		0.2 Soil		2/10/1998 15:49	2/10/1998 15:49
12443	SA1	976185	mod. HASL 300	Plutonium-239/240		0.2 pCi/g	0.2		0.1 Soil	11/8/1997 10:00	2/10/1998 15:49	2/10/1998 15:49
12443	SA1	976185	mod. HASL 300	Thorium-232, Activity		0.8 pCi/g	0.5		0.3 Soil	11/8/1997 10:00	2/19/1998 13:48	2/19/1998 13:48
12443	SA1	976185	mod. HASL 300	Thorium-230, Activity		1.3 pCi/g	0.7		0.6 Soil	11/8/1997 10:00	2/19/1998 13:48	2/19/1998 13:48
12443	SA1	976185	mod. HASL 300	Thorium-227		0.1 pCi/g	0.1		0.3 Soil	11/8/1997 10:00	2/19/1998 13:48	2/19/1998 13:48
12443	SA1	976185	mod. HASL 300	Uranium-238, Activity		0.7 pCi/g	0.2		0.1 Soil	11/8/1997 10:00	2/10/1998 15:45	2/10/1998 15:45
12443	SA1	976185	mod. HASL 300	Uranium-235, Activity		0.1 pCi/g	0.1		0.1 Soil	11/8/1997 10:00	2/10/1998 15:45	2/10/1998 15:45
12443	SA1	976185	mod. HASL 300	Uranium-233/234, Activity		0.6 pCi/g	0.3		0.2 Soil	11/8/1997 10:00	2/10/1998 15:45	2/10/1998 15:45
12443	SA1	976185	CA-GLR-R160	Moisture (@ 104 deg. C)		31.8 % by Wt			Soil	11/8/1997 10:00	11/19/1997 12:00	11/19/1997 12:00
12443	SA1	976185	CA-GLR-17.0	Tritium, Activity		0.1 pCi/g	0.1		0.1 Soil	11/8/1997 10:00	2/12/1998 12:39	2/12/1998 12:39
12443	SA1	976185	EPA 901.1	Radium-228, Activity		1.7 pCi/g	0.6		0.2 Soil	11/8/1997 10:00	2/10/1998 19:43	2/10/1998 19:43
12443	SA1	976185	EPA 901.1	Lead-210, Activity	ND	pCi/g			1.8 Soil	11/8/1997 10:00	2/10/1998 19:43	2/10/1998 19:43
12443	SA1	976185	EPA 901.1	Bismuth-214, Activity	ND	pCi/g			1.4 Soil	11/8/1997 10:00	2/10/1998 19:43	2/10/1998 19:43
12443	SA1	976185	EPA 901.1	Cesium-137, Activity	ND	pCi/g			0.4 Soil	11/8/1997 10:00	2/10/1998 19:43	2/10/1998 19:43
12443	SA1	976185	EPA 901.1	Cobalt-60, Activity	ND	pCi/g			0.4 Soil	11/8/1997 10:00	2/10/1998 19:43	2/10/1998 19:43
12443	SA1	976185	EPA 901.1	Cobalt-57, Activity	ND	pCi/g			0.1 Soil	11/8/1997 10:00	2/10/1998 19:43	2/10/1998 19:43
12443	SA1	976185	EPA 901.1	Radium-226, Activity	ND	pCi/g			1.4 Soil	11/8/1997 10:00	2/10/1998 19:43	2/10/1998 19:43
12443	SA1	976185	EPA 901.1	Radium-223, Activity	ND	pCi/g			0.4 Soil	11/8/1997 10:00	2/10/1998 19:43	2/10/1998 19:43
12443	SA1	976185	EPA 901.1	Lead-214, Activity		1.4 pCi/g	0.4		0.2 Soil	11/8/1997 10:00	2/10/1998 19:43	2/10/1998 19:43
12443	SA1	976185	EPA 901.1	Lead-211, Activity		8.9 pCi/g	4.1		2.1 Soil	11/8/1997 10:00	2/10/1998 19:43	2/10/1998 19:43
12443	MS	976185	mod. HASL 300	Plutonium-239/240		102.1 % REC	0.8		0.2 Soil		2/10/1998 15:49	2/10/1998 15:49
12444	SA1	976185	EPA 901.1	Lead-210, Activity	ND	pCi/g			19.6 Soil	11/8/1997 10:00	2/10/1998 20:41	2/10/1998 20:41
12444	SA1	976185	EPA 901.1	Cesium-137, Activity		0.7 pCi/g	0.2		0.1 Soil	11/8/1997 10:00	2/10/1998 20:41	2/10/1998 20:41
12444	SA1	976185	EPA 901.1	Lead-211, Activity	ND	pCi/g			0.7 Soil	11/8/1997 10:00	2/10/1998 20:41	2/10/1998 20:41
12444	SA1	976185	EPA 901.1	Radium-223, Activity	ND	pCi/g			0.4 Soil	11/8/1997 10:00	2/10/1998 20:41	2/10/1998 20:41
12444	SA1	976185	EPA 901.1	Lead-214, Activity		1.2 pCi/g	0.3		0.2 Soil	11/8/1997 10:00	2/10/1998 20:41	2/10/1998 20:41

PARSONS ES SAMPLE		ANALYSIS									ANALYZED	
SAMP ID	TYPE	SDG	METHOD	PARAMETER	RESULT	UNIT	ERROR	LLD	MATRIX	RCVD DATE	EXTRACT DATE	DATE
12444	SA1	976185	EPA 901.1	Radium-226, Activity	ND	pCi/g			1.2 Soil	11/8/1997 10:00	2/10/1998 20:41	2/10/1998 20:41
12444	SA1	976185	CA-GLR-17.0	Tritium, Activity	0.1	pCi/g	0.1		0.1 Soil	11/8/1997 10:00	2/12/1998 12:39	2/12/1998 12:39
12444	SA1	976185	mod. HASL 300	Plutonium-239/240	0.1	pCi/g	0.1		0.1 Soil	11/8/1997 10:00	2/10/1998 15:49	2/10/1998 15:49
12444	SA1	976185	mod. HASL 300	Thorium-232, Activity	0.6	pCi/g	0.4		0.2 Soil	11/8/1997 10:00	2/19/1998 13:48	2/19/1998 13:48
12444	SA1	976185	mod. HASL 300	Thorium-230, Activity	1	pCi/g	0.6		0.5 Soil	11/8/1997 10:00	2/19/1998 13:48	2/19/1998 13:48
12444	SA1	976185	EPA 901.1	Cobalt-57, Activity	ND	pCi/g			0.1 Soil	11/8/1997 10:00	2/10/1998 20:41	2/10/1998 20:41
12444	SA1	976185	mod. HASL 300	Thorium-227	ND	pCi/g	0.1		0.3 Soil	11/8/1997 10:00	2/19/1998 13:48	2/19/1998 13:48
12444	SA1	976185	EPA 901.1	Cobalt-60, Activity	ND	pCi/g			0.1 Soil	11/8/1997 10:00	2/10/1998 20:41	2/10/1998 20:41
12444	SA1	976185	mod. HASL 300	Uranium-238, Activity	0.5	pCi/g	0.2		0.1 Soil	11/8/1997 10:00	2/10/1998 15:45	2/10/1998 15:45
12444	SA1	976185	mod. HASL 300	Uranium-235, Activity	0.1	pCi/g	0.1		0.1 Soil	11/8/1997 10:00	2/10/1998 15:45	2/10/1998 15:45
12444	SA1	976185	mod. HASL 300	Uranium-233/234, Activity	0.6	pCi/g	0.3		0.2 Soil	11/8/1997 10:00	2/10/1998 15:45	2/10/1998 15:45
12444	SA1	976185	CA-GLR-R160	Moisture (@ 104 deg. C)	33.9	% by Wt			Soil	11/8/1997 10:00	11/19/1997 12:00	11/19/1997 12:00
12444	SA1	976185	EPA 901.1	Radium-228, Activity	2	pCi/g	0.4		0.1 Soil	11/8/1997 10:00	2/10/1998 20:41	2/10/1998 20:41
12444	SA1	976185	EPA 901.1	Bismuth-214, Activity	ND	pCi/g			1.2 Soil	11/8/1997 10:00	2/10/1998 20:41	2/10/1998 20:41
12445	SA1	976185	mod. HASL 300	Plutonium-239/240	0.1	pCi/g	0.1		0.1 Soil	11/8/1997 10:00	2/10/1998 15:49	2/10/1998 15:49
12445	SA1	976185	mod. HASL 300	Thorium-232, Activity	0.8	pCi/g	0.5		0.4 Soil	11/8/1997 10:00	2/19/1998 13:48	2/19/1998 13:48
12445	SA1	976185	mod. HASL 300	Thorium-230, Activity	1.3	pCi/g	0.7		0.5 Soil	11/8/1997 10:00	2/19/1998 13:48	2/19/1998 13:48
12445	SA1	976185	CA-GLR-17.0	Tritium, Activity	0.1	pCi/g	0.1		0.1 Soil	11/8/1997 10:00	2/12/1998 12:39	2/12/1998 12:39
12445	SA1	976185	mod. HASL 300	Thorium-227	ND	pCi/g	0.1		0.2 Soil	11/8/1997 10:00	2/19/1998 13:48	2/19/1998 13:48
12445	SA1	976185	EPA 901.1	Cobalt-57, Activity	ND	pCi/g			0.1 Soil	11/8/1997 10:00	2/10/1998 21:40	2/10/1998 21:40
12445	SA1	976185	mod. HASL 300	Uranium-238, Activity	0.7	pCi/g	0.2		0.1 Soil	11/8/1997 10:00	2/10/1998 15:45	2/10/1998 15:45
12445	SA1	976185	mod. HASL 300	Uranium-235, Activity	ND	pCi/g	0.1		0.1 Soil	11/8/1997 10:00	2/10/1998 15:45	2/10/1998 15:45
12445	SA1	976185	mod. HASL 300	Uranium-233/234, Activity	0.7	pCi/g	0.3		0.2 Soil	11/8/1997 10:00	2/10/1998 15:45	2/10/1998 15:45
12445	SA1	976185	CA-GLR-R160	Moisture (@ 104 deg. C)	39.8	% by Wt			Soil	11/8/1997 10:00	11/19/1997 12:00	11/19/1997 12:00
12445	SA1	976185	EPA 901.1	Radium-228, Activity	2	pCi/g	0.5		0.1 Soil	11/8/1997 10:00	2/10/1998 21:40	2/10/1998 21:40
12445	SA1	976185	EPA 901.1	Bismuth-214, Activity	ND	pCi/g			1.4 Soil	11/8/1997 10:00	2/10/1998 21:40	2/10/1998 21:40
12445	SA1	976185	EPA 901.1	Radium-226, Activity	ND	pCi/g			1.4 Soil	11/8/1997 10:00	2/10/1998 21:40	2/10/1998 21:40
12445	SA1	976185	EPA 901.1	Cobalt-60, Activity	ND	pCi/g			0.1 Soil	11/8/1997 10:00	2/10/1998 21:40	2/10/1998 21:40
12445	SA1	976185	EPA 901.1	Radium-223, Activity	ND	pCi/g			0.5 Soil	11/8/1997 10:00	2/10/1998 21:40	2/10/1998 21:40
12445	SA1	976185	EPA 901.1	Cesium-137, Activity	0.5	pCi/g	0.2		0.1 Soil	11/8/1997 10:00	2/10/1998 21:40	2/10/1998 21:40
12445	SA1	976185	EPA 901.1	Lead-210, Activity	ND	pCi/g			4.9 Soil	11/8/1997 10:00	2/10/1998 21:40	2/10/1998 21:40
12445	SA1	976185	EPA 901.1	Lead-211, Activity	ND	pCi/g			1.9 Soil	11/8/1997 10:00	2/10/1998 21:40	2/10/1998 21:40
12445	SA1	976185	EPA 901.1	Lead-214, Activity	1.6	pCi/g	0.4		0.1 Soil	11/8/1997 10:00	2/10/1998 21:40	2/10/1998 21:40
12446	SA1	976185	mod. HASL 300	Thorium-230, Activity	3.6	pCi/g	1.4		0.6 Soil	11/8/1997 10:00	2/19/1998 13:48	2/19/1998 13:48
12446	SA1	976185	CA-GLR-17.0	Tritium, Activity	0.1	pCi/g	0.1		0.1 Soil	11/8/1997 10:00	2/12/1998 12:39	2/12/1998 12:39
12446	SA1	976185	mod. HASL 300	Plutonium-239/240	0.1	pCi/g	0.2		0.3 Soil	11/8/1997 10:00	2/10/1998 15:49	2/10/1998 15:49
12446	SA1	976185	mod. HASL 300	Thorium-227	0.1	pCi/g	0.1		0.3 Soil	11/8/1997 10:00	2/19/1998 13:48	2/19/1998 13:48
12446	SA1	976185	mod. HASL 300	Uranium-235, Activity	0.1	pCi/g	0.1		0.2 Soil	11/8/1997 10:00	2/10/1998 15:45	2/10/1998 15:45
12446	SA1	976185	mod. HASL 300	Uranium-238, Activity	0.7	pCi/g	0.3		0.1 Soil	11/8/1997 10:00	2/10/1998 15:45	2/10/1998 15:45
12446	SA1	976185	mod. HASL 300	Thorium-232, Activity	1.3	pCi/g	0.7		0.4 Soil	11/8/1997 10:00	2/19/1998 13:48	2/19/1998 13:48
12446	SA1	976185	CA-GLR-R160	Moisture (@ 104 deg. C)	38.2	% by Wt			Soil	11/8/1997 10:00	11/19/1997 12:00	11/19/1997 12:00
12446	SA1	976185	EPA 901.1	Radium-228, Activity	2.2	pCi/g	0.6		0.1 Soil	11/8/1997 10:00	2/10/1998 22:38	2/10/1998 22:38
12446	SA1	976185	EPA 901.1	Bismuth-214, Activity	1.5	pCi/g	0.3		0.1 Soil	11/8/1997 10:00	2/10/1998 22:38	2/10/1998 22:38
12446	SA1	976185	EPA 901.1	Radium-226, Activity	1.5	pCi/g	0.3		0.1 Soil	11/8/1997 10:00	2/10/1998 22:38	2/10/1998 22:38
12446	SA1	976185	EPA 901.1	Cobalt-57, Activity	ND	pCi/g			0.1 Soil	11/8/1997 10:00	2/10/1998 22:38	2/10/1998 22:38
12446	SA1	976185	EPA 901.1	Cobalt-60, Activity	ND	pCi/g			0.2 Soil	11/8/1997 10:00	2/10/1998 22:38	2/10/1998 22:38

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SAMP ID	TYPE	SDG	METHOD									DATE
12446	SA1	976185	EPA 901.1	Cesium-137, Activity	1.4	pCi/g	0.2	0.1	Soil	11/8/1997 10:00	2/10/1998 22:38	2/10/1998 22:38
12446	SA1	976185	EPA 901.1	Lead-210, Activity	ND	pCi/g		17.6	Soil	11/8/1997 10:00	2/10/1998 22:38	2/10/1998 22:38
12446	SA1	976185	mod. HASL 300	Uranium-233/234, Activity	1.3	pCi/g	0.4	0.2	Soil	11/8/1997 10:00	2/10/1998 15:45	2/10/1998 15:45
12446	SA1	976185	EPA 901.1	Lead-211, Activity	7.7	pCi/g	2.5	0.5	Soil	11/8/1997 10:00	2/10/1998 22:38	2/10/1998 22:38
12446	SA1	976185	EPA 901.1	Radium-223, Activity	ND	pCi/g		0.4	Soil	11/8/1997 10:00	2/10/1998 22:38	2/10/1998 22:38
12446	SA1	976185	EPA 901.1	Lead-214, Activity	1.6	pCi/g	0.3	0.1	Soil	11/8/1997 10:00	2/10/1998 22:38	2/10/1998 22:38
12503	MD	976178	EPA 901.1	Radium-226, Activity	1.1	RPD		1.3	Soil		2/10/1998 11:55	2/10/1998 11:55
12503	MD	976178	EPA 901.1	Cobalt-57, Activity	0	RPD		0.1	Soil		2/10/1998 11:55	2/10/1998 11:55
12503	MD	976178	EPA 901.1	Cobalt-60, Activity	0	RPD		0.1	Soil		2/10/1998 11:55	2/10/1998 11:55
12503	MD	976178	EPA 901.1	Bismuth-214, Activity	1.1	RPD		1.3	Soil		2/10/1998 11:55	2/10/1998 11:55
12503	MD	976178	EPA 901.1	Cesium-137, Activity	0	RPD		0.3	Soil		2/10/1998 11:55	2/10/1998 11:55
12503	MD	976178	EPA 901.1	Radium-223, Activity	0	RPD		0.3	Soil		2/10/1998 11:55	2/10/1998 11:55
12503	MD	976178	EPA 901.1	Lead-210, Activity	0	RPD		9.8	Soil		2/10/1998 11:55	2/10/1998 11:55
12503	MD	976178	EPA 901.1	Lead-211, Activity	0	RPD		7.5	Soil		2/10/1998 11:55	2/10/1998 11:55
12503	MD	976178	EPA 901.1	Lead-214, Activity	0	RPD	0.2	0.1	Soil		2/10/1998 11:55	2/10/1998 11:55
12503	MD	976178	EPA 901.1	Radium-228, Activity	30.8	RPD	0.4	0.1	Soil		2/10/1998 11:55	2/10/1998 11:55
12506	MD	976183	mod. HASL 300	Promethium 147	5.8	RPD	5.1	8.2	Soil		4/4/1998 10:06	4/4/1998 10:06
12506	MD	976183	mod. HASL 300	Thorium-232, Activity	20	RPD	0.5	0.3	Soil		2/19/1998 13:48	2/19/1998 13:48
12506	MD	976183	mod. HASL 300	Thorium-227	0.1	RPD	0.2	0.3	Soil		2/19/1998 13:48	2/19/1998 13:48
12506	MD	976183	mod. HASL 300	Thorium-230, Activity	16.2	RPD	0.8	0.5	Soil		2/19/1998 13:48	2/19/1998 13:48
12507	MS	976183	mod. HASL 300	Thorium-232, Activity	111.4	% REC	2.6	0.3	Soil		2/19/1998 13:48	2/19/1998 13:48
12509	SA1	976185	mod. HASL 300	Promethium 147	8.3	pCi/g	5	8.2	Soil	11/8/1997 10:00	4/4/1998 10:06	4/4/1998 10:06
12509	SA1	976185	mod. HASL 300	Plutonium-239/240	0.2	pCi/g	0.2	0.2	Soil	11/8/1997 10:00	2/10/1998 15:49	2/10/1998 15:49
12509	SA1	976185	mod. HASL 300	Thorium-232, Activity	1.1	pCi/g	0.6	0.2	Soil	11/8/1997 10:00	2/19/1998 13:48	2/19/1998 13:48
12509	SA1	976185	CA-GLR-17.0	Tritium, Activity	0.4	pCi/g	0.1	0.1	Soil	11/8/1997 10:00	2/12/1998 12:39	2/12/1998 12:39
12509	SA1	976185	mod. HASL 300	Thorium-230, Activity	1.5	pCi/g	0.7	0.4	Soil	11/8/1997 10:00	2/19/1998 13:48	2/19/1998 13:48
12509	SA1	976185	mod. HASL 300	Thorium-227	0.1	pCi/g	0.1	0.2	Soil	11/8/1997 10:00	2/19/1998 13:48	2/19/1998 13:48
12509	SA1	976185	mod. HASL 300	Uranium-235, Activity	0.1	pCi/g	0.1	0.1	Soil	11/8/1997 10:00	2/10/1998 15:45	2/10/1998 15:45
12509	SA1	976185	mod. HASL 300	Uranium-233/234, Activity	0.7	pCi/g	0.3	0.1	Soil	11/8/1997 10:00	2/10/1998 15:45	2/10/1998 15:45
12509	SA1	976185	CA-GLR-R160	Moisture (@ 104 deg. C)	22.2	% by Wt			Soil	11/8/1997 10:00	11/19/1997 12:00	11/19/1997 12:00
12509	SA1	976185	EPA 901.1	Radium-228, Activity	1.4	pCi/g	0.5	0.2	Soil	11/8/1997 10:00	2/10/1998 23:37	2/10/1998 23:37
12509	SA1	976185	EPA 901.1	Bismuth-214, Activity	1.4	pCi/g	0.4	0.3	Soil	11/8/1997 10:00	2/10/1998 23:37	2/10/1998 23:37
12509	SA1	976185	EPA 901.1	Radium-226, Activity	1.4	pCi/g	0.4	0.3	Soil	11/8/1997 10:00	2/10/1998 23:37	2/10/1998 23:37
12509	SA1	976185	EPA 901.1	Cobalt-57, Activity	ND	pCi/g		0.1	Soil	11/8/1997 10:00	2/10/1998 23:37	2/10/1998 23:37
12509	SA1	976185	EPA 901.1	Cobalt-60, Activity	ND	pCi/g		0.1	Soil	11/8/1997 10:00	2/10/1998 23:37	2/10/1998 23:37
12509	SA1	976185	mod. HASL 300	Uranium-238, Activity	0.6	pCi/g	0.2	0.1	Soil	11/8/1997 10:00	2/10/1998 15:45	2/10/1998 15:45
12509	SA1	976185	EPA 901.1	Cesium-137, Activity	ND	pCi/g		0.9	Soil	11/8/1997 10:00	2/10/1998 23:37	2/10/1998 23:37
12509	SA1	976185	EPA 901.1	Radium-223, Activity	ND	pCi/g		0.5	Soil	11/8/1997 10:00	2/10/1998 23:37	2/10/1998 23:37
12509	SA1	976185	EPA 901.1	Lead-210, Activity	ND	pCi/g		2.3	Soil	11/8/1997 10:00	2/10/1998 23:37	2/10/1998 23:37
12509	SA1	976185	EPA 901.1	Lead-211, Activity	ND	pCi/g		6.3	Soil	11/8/1997 10:00	2/10/1998 23:37	2/10/1998 23:37
12509	SA1	976185	EPA 901.1	Lead-214, Activity	1.3	pCi/g	0.3	0.1	Soil	11/8/1997 10:00	2/10/1998 23:37	2/10/1998 23:37
12509	MD	976185	CA-GLR-17.0	Tritium, Activity	0.6	RPD	198	254	Soil		2/12/1998 12:39	2/12/1998 12:39
12510	SA1	976185	mod. HASL 300	Plutonium-239/240	ND	pCi/g		0.1	Soil	11/8/1997 10:00	2/10/1998 15:49	2/10/1998 15:49
12510	SA1	976185	mod. HASL 300	Thorium-232, Activity	1.2	pCi/g	0.6	0.3	Soil	11/8/1997 10:00	2/19/1998 13:48	2/19/1998 13:48
12510	SA1	976185	mod. HASL 300	Thorium-230, Activity	2.9	pCi/g	1.1	0.5	Soil	11/8/1997 10:00	2/19/1998 13:48	2/19/1998 13:48
12510	SA1	976185	mod. HASL 300	Thorium-227	ND	pCi/g		0.1	Soil	11/8/1997 10:00	2/19/1998 13:48	2/19/1998 13:48

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SAMP ID	TYPE	SDG	METHOD	PARAMETER	RESULT	UNIT	ERROR	LLD	MATRIX	RCVD DATE	EXTRACT DATE	DATE
12510	SA1	976185	mod. HASL 300	Uranium-238, Activity		0.6 pCi/g		0.2	0.1 Soil	11/8/1997 10:00	2/10/1998 15:45	2/10/1998 15:45
12510	SA1	976185	mod. HASL 300	Uranium-235, Activity	ND	pCi/g		0.1	0.1 Soil	11/8/1997 10:00	2/10/1998 15:45	2/10/1998 15:45
12510	SA1	976185	mod. HASL 300	Uranium-233/234, Activity		0.5 pCi/g		0.2	0.2 Soil	11/8/1997 10:00	2/10/1998 15:45	2/10/1998 15:45
12510	SA1	976185	CA-GLR-17.0	Tritium, Activity		0.1 pCi/g		0.1	0.1 Soil	11/8/1997 10:00	2/12/1998 12:39	2/12/1998 12:39
12510	SA1	976185	CA-GLR-R160	Moisture (@ 104 deg. C)		16.9 % by Wt			Soil	11/8/1997 10:00	11/19/1997 12:00	11/19/1997 12:00
12510	SA1	976185	EPA 901.1	Lead-214, Activity		1.5 pCi/g		0.3	0.1 Soil	11/8/1997 10:00	2/11/1998 0:35	2/11/1998 0:35
12510	SA1	976185	EPA 901.1	Radium-228, Activity		2.1 pCi/g		0.5	0.1 Soil	11/8/1997 10:00	2/11/1998 0:35	2/11/1998 0:35
12510	SA1	976185	EPA 901.1	Bismuth-214, Activity		1.5 pCi/g		0.4	0.2 Soil	11/8/1997 10:00	2/11/1998 0:35	2/11/1998 0:35
12510	SA1	976185	EPA 901.1	Radium-226, Activity		1.5 pCi/g		0.4	0.2 Soil	11/8/1997 10:00	2/11/1998 0:35	2/11/1998 0:35
12510	SA1	976185	EPA 901.1	Cobalt-57, Activity	ND	pCi/g			0.1 Soil	11/8/1997 10:00	2/11/1998 0:35	2/11/1998 0:35
12510	SA1	976185	EPA 901.1	Cobalt-60, Activity	ND	pCi/g			0.3 Soil	11/8/1997 10:00	2/11/1998 0:35	2/11/1998 0:35
12510	SA1	976185	EPA 901.1	Cesium-137, Activity	ND	pCi/g			0.1 Soil	11/8/1997 10:00	2/11/1998 0:35	2/11/1998 0:35
12510	SA1	976185	EPA 901.1	Lead-210, Activity	ND	pCi/g			14.7 Soil	11/8/1997 10:00	2/11/1998 0:35	2/11/1998 0:35
12510	SA1	976185	EPA 901.1	Lead-211, Activity	ND	pCi/g			4.1 Soil	11/8/1997 10:00	2/11/1998 0:35	2/11/1998 0:35
12510	SA1	976185	mod. HASL 300	Promethium 147		5.6 pCi/g		5	8.2 Soil	11/8/1997 10:00	4/4/1998 10:06	4/4/1998 10:06
12510	SA1	976185	EPA 901.1	Radium-223, Activity	ND	pCi/g			0.4 Soil	11/8/1997 10:00	2/11/1998 0:35	2/11/1998 0:35
12511	SA1	976185	mod. HASL 300	Thorium-232, Activity		0.8 pCi/g		0.5	0.3 Soil	11/8/1997 10:00	2/19/1998 13:48	2/19/1998 13:48
12511	SA1	976185	mod. HASL 300	Thorium-230, Activity		1.1 pCi/g		0.6	0.5 Soil	11/8/1997 10:00	2/19/1998 13:48	2/19/1998 13:48
12511	SA1	976185	mod. HASL 300	Thorium-227		0.2 pCi/g		0.2	0.4 Soil	11/8/1997 10:00	2/19/1998 13:48	2/19/1998 13:48
12511	SA1	976185	mod. HASL 300	Uranium-238, Activity		0.7 pCi/g		0.3	0.1 Soil	11/8/1997 10:00	2/10/1998 15:45	2/10/1998 15:45
12511	SA1	976185	mod. HASL 300	Uranium-235, Activity	ND	pCi/g		0.1	0.1 Soil	11/8/1997 10:00	2/10/1998 15:45	2/10/1998 15:45
12511	SA1	976185	CA-GLR-17.0	Tritium, Activity	ND	pCi/g		0.1	0.1 Soil	11/8/1997 10:00	2/12/1998 12:39	2/12/1998 12:39
12511	SA1	976185	mod. HASL 300	Uranium-233/234, Activity		1 pCi/g		0.3	0.2 Soil	11/8/1997 10:00	2/10/1998 15:45	2/10/1998 15:45
12511	SA1	976185	mod. HASL 300	Plutonium-239/240		0.2 pCi/g		0.2	0.2 Soil	11/8/1997 10:00	2/10/1998 15:49	2/10/1998 15:49
12511	SA1	976185	CA-GLR-R160	Moisture (@ 104 deg. C)		9.4 % by Wt			Soil	11/8/1997 10:00	11/19/1997 12:00	11/19/1997 12:00
12511	SA1	976185	EPA 901.1	Radium-228, Activity		1.7 pCi/g		0.4	0.1 Soil	11/8/1997 10:00	2/11/1998 1:34	2/11/1998 1:34
12511	SA1	976185	EPA 901.1	Bismuth-214, Activity		1.5 pCi/g		0.4	0.2 Soil	11/8/1997 10:00	2/11/1998 1:34	2/11/1998 1:34
12511	SA1	976185	EPA 901.1	Radium-226, Activity		1.5 pCi/g		0.4	0.2 Soil	11/8/1997 10:00	2/11/1998 1:34	2/11/1998 1:34
12511	SA1	976185	EPA 901.1	Cobalt-57, Activity	ND	pCi/g			0.1 Soil	11/8/1997 10:00	2/11/1998 1:34	2/11/1998 1:34
12511	SA1	976185	EPA 901.1	Cobalt-60, Activity	ND	pCi/g			0.5 Soil	11/8/1997 10:00	2/11/1998 1:34	2/11/1998 1:34
12511	SA1	976185	EPA 901.1	Cesium-137, Activity	ND	pCi/g			0.1 Soil	11/8/1997 10:00	2/11/1998 1:34	2/11/1998 1:34
12511	SA1	976185	EPA 901.1	Lead-210, Activity	ND	pCi/g			4.1 Soil	11/8/1997 10:00	2/11/1998 1:34	2/11/1998 1:34
12511	SA1	976185	EPA 901.1	Lead-211, Activity	ND	pCi/g			5.3 Soil	11/8/1997 10:00	2/11/1998 1:34	2/11/1998 1:34
12511	SA1	976185	mod. HASL 300	Promethium 147		6.5 pCi/g		5	8.2 Soil	11/8/1997 10:00	4/4/1998 10:06	4/4/1998 10:06
12511	SA1	976185	EPA 901.1	Lead-214, Activity		1.1 pCi/g		0.3	0.2 Soil	11/8/1997 10:00	2/11/1998 1:34	2/11/1998 1:34
12511	SA1	976185	EPA 901.1	Radium-223, Activity	ND	pCi/g			0.4 Soil	11/8/1997 10:00	2/11/1998 1:34	2/11/1998 1:34
12512	SA1	976185	mod. HASL 300	Plutonium-239/240	ND	pCi/g		0.1	0.3 Soil	11/8/1997 10:00	2/10/1998 15:49	2/10/1998 15:49
12512	SA1	976185	CA-GLR-17.0	Tritium, Activity	ND	pCi/g		0.1	0.1 Soil	11/8/1997 10:00	2/12/1998 12:39	2/12/1998 12:39
12512	SA1	976185	mod. HASL 300	Thorium-232, Activity		1.2 pCi/g		0.7	0.3 Soil	11/8/1997 10:00	2/19/1998 13:48	2/19/1998 13:48
12512	SA1	976185	mod. HASL 300	Uranium-238, Activity		0.8 pCi/g		0.3	0.1 Soil	11/8/1997 10:00	2/10/1998 15:45	2/10/1998 15:45
12512	SA1	976185	mod. HASL 300	Thorium-230, Activity		2.1 pCi/g		1	0.6 Soil	11/8/1997 10:00	2/19/1998 13:48	2/19/1998 13:48
12512	SA1	976185	mod. HASL 300	Thorium-227		0.1 pCi/g		0.2	0.4 Soil	11/8/1997 10:00	2/19/1998 13:48	2/19/1998 13:48
12512	SA1	976185	mod. HASL 300	Uranium-233/234, Activity		1.6 pCi/g		0.4	0.2 Soil	11/8/1997 10:00	2/10/1998 15:45	2/10/1998 15:45
12512	SA1	976185	CA-GLR-R160	Moisture (@ 104 deg. C)		29.3 % by Wt			Soil	11/8/1997 10:00	11/19/1997 12:00	11/19/1997 12:00
12512	SA1	976185	mod. HASL 300	Promethium 147		10.3 pCi/g		5	8.2 Soil	11/8/1997 10:00	4/4/1998 10:06	4/4/1998 10:06
12512	SA1	976185	EPA 901.1	Radium-228, Activity		1.7 pCi/g		0.4	0.2 Soil	11/8/1997 10:00	2/11/1998 2:32	2/11/1998 2:32

PARSONS ES SAMPLE		ANALYSIS									ANALYZED	
SAMP ID	TYPE	SDG	METHOD	PARAMETER	RESULT	UNIT	ERROR	LLD	MATRIX	RCVD DATE	EXTRACT DATE	DATE
12512	SA1	976185	EPA 901.1	Bismuth-214, Activity	1.1	pCi/g	0.4		0.2 Soil	11/8/1997 10:00	2/11/1998 2:32	2/11/1998 2:32
12512	SA1	976185	EPA 901.1	Radium-226, Activity	1.1	pCi/g	0.4		0.2 Soil	11/8/1997 10:00	2/11/1998 2:32	2/11/1998 2:32
12512	SA1	976185	EPA 901.1	Cobalt-57, Activity	ND	pCi/g			0.1 Soil	11/8/1997 10:00	2/11/1998 2:32	2/11/1998 2:32
12512	SA1	976185	EPA 901.1	Cobalt-60, Activity	ND	pCi/g			0.4 Soil	11/8/1997 10:00	2/11/1998 2:32	2/11/1998 2:32
12512	SA1	976185	mod. HASL 300	Uranium-235, Activity	0.1	pCi/g	0.1		0.1 Soil	11/8/1997 10:00	2/10/1998 15:45	2/10/1998 15:45
12512	SA1	976185	EPA 901.1	Cesium-137, Activity	0.7	pCi/g	0.2		0.1 Soil	11/8/1997 10:00	2/11/1998 2:32	2/11/1998 2:32
12512	SA1	976185	EPA 901.1	Radium-223, Activity	ND	pCi/g			0.4 Soil	11/8/1997 10:00	2/11/1998 2:32	2/11/1998 2:32
12512	SA1	976185	EPA 901.1	Lead-210, Activity	ND	pCi/g			25.9 Soil	11/8/1997 10:00	2/11/1998 2:32	2/11/1998 2:32
12512	SA1	976185	EPA 901.1	Lead-211, Activity	ND	pCi/g			11.6 Soil	11/8/1997 10:00	2/11/1998 2:32	2/11/1998 2:32
12512	SA1	976185	EPA 901.1	Lead-214, Activity	1.3	pCi/g	0.2		0.1 Soil	11/8/1997 10:00	2/11/1998 2:32	2/11/1998 2:32
12512	MD	976185	mod. HASL 300	Uranium-238, Activity	22.2	RPD	0.3		0.1 Soil		2/10/1998 15:45	2/10/1998 15:45
12512	MD	976185	mod. HASL 300	Uranium-235, Activity	0	RPD	0.1		0.1 Soil		2/10/1998 15:45	2/10/1998 15:45
12512	MD	976185	mod. HASL 300	Uranium-233/234, Activity	37	RPD	0.3		0.2 Soil		2/10/1998 15:45	2/10/1998 15:45
12513	SA1	976185	mod. HASL 300	Plutonium-239/240	ND	pCi/g	0.1		0.3 Soil	11/8/1997 10:00	2/10/1998 15:49	2/10/1998 15:49
12513	SA1	976185	CA-GLR-17.0	Tritium, Activity	ND	pCi/g	0.1		0.1 Soil	11/8/1997 10:00	2/12/1998 12:39	2/12/1998 12:39
12513	SA1	976185	mod. HASL 300	Thorium-232, Activity	0.9	pCi/g	0.5		0.2 Soil	11/8/1997 10:00	2/19/1998 13:48	2/19/1998 13:48
12513	SA1	976185	mod. HASL 300	Thorium-227	0.1	pCi/g	0.2		0.2 Soil	11/8/1997 10:00	2/19/1998 13:48	2/19/1998 13:48
12513	SA1	976185	mod. HASL 300	Thorium-230, Activity	1	pCi/g	0.6		0.5 Soil	11/8/1997 10:00	2/19/1998 13:48	2/19/1998 13:48
12513	SA1	976185	mod. HASL 300	Uranium-235, Activity	ND	pCi/g	0.1		0.1 Soil	11/8/1997 10:00	2/10/1998 15:45	2/10/1998 15:45
12513	SA1	976185	mod. HASL 300	Uranium-233/234, Activity	0.7	pCi/g	0.3		0.1 Soil	11/8/1997 10:00	2/10/1998 15:45	2/10/1998 15:45
12513	SA1	976185	CA-GLR-R160	Moisture (@ 104 deg. C)	13.1	% by Wt			Soil	11/8/1997 10:00	11/19/1997 12:00	11/19/1997 12:00
12513	SA1	976185	mod. HASL 300	Promethium 147	5.1	pCi/g	5		8.2 Soil	11/8/1997 10:00	4/4/1998 10:06	4/4/1998 10:06
12513	SA1	976185	EPA 901.1	Radium-228, Activity	3.5	pCi/g	0.6		0.1 Soil	11/8/1997 10:00	2/11/1998 3:31	2/11/1998 3:31
12513	SA1	976185	EPA 901.1	Bismuth-214, Activity	ND	pCi/g			1.6 Soil	11/8/1997 10:00	2/11/1998 3:31	2/11/1998 3:31
12513	SA1	976185	EPA 901.1	Radium-226, Activity	ND	pCi/g			1.6 Soil	11/8/1997 10:00	2/11/1998 3:31	2/11/1998 3:31
12513	SA1	976185	EPA 901.1	Cobalt-57, Activity	ND	pCi/g			0.1 Soil	11/8/1997 10:00	2/11/1998 3:31	2/11/1998 3:31
12513	SA1	976185	mod. HASL 300	Uranium-238, Activity	0.7	pCi/g	0.2		0.1 Soil	11/8/1997 10:00	2/10/1998 15:45	2/10/1998 15:45
12513	SA1	976185	EPA 901.1	Cobalt-60, Activity	ND	pCi/g			0.4 Soil	11/8/1997 10:00	2/11/1998 3:31	2/11/1998 3:31
12513	SA1	976185	EPA 901.1	Radium-223, Activity	ND	pCi/g			0.4 Soil	11/8/1997 10:00	2/11/1998 3:31	2/11/1998 3:31
12513	SA1	976185	EPA 901.1	Cesium-137, Activity	ND	pCi/g			0.2 Soil	11/8/1997 10:00	2/11/1998 3:31	2/11/1998 3:31
12513	SA1	976185	EPA 901.1	Lead-210, Activity	ND	pCi/g			3.1 Soil	11/8/1997 10:00	2/11/1998 3:31	2/11/1998 3:31
12513	SA1	976185	EPA 901.1	Lead-211, Activity	ND	pCi/g			1.4 Soil	11/8/1997 10:00	2/11/1998 3:31	2/11/1998 3:31
12513	SA1	976185	EPA 901.1	Lead-214, Activity	1.8	pCi/g	0.4		0.2 Soil	11/8/1997 10:00	2/11/1998 3:31	2/11/1998 3:31
12513	MS	976185	CA-GLR-17.0	Tritium, Activity	78.3	% REC	188		238 Soil		2/12/1998 12:39	2/12/1998 12:39
12513	MS	976185	mod. HASL 300	Uranium-238, Activity	96	% REC	1		0.1 Soil		2/10/1998 15:45	2/10/1998 15:45
12513	MS	976185	mod. HASL 300	Uranium-233/234, Activity	96.3	% REC	1		0.1 Soil		2/10/1998 15:45	2/10/1998 15:45
GEM021098S	LCS	976185	EPA 901.1	Cesium-137, Activity	106.8	% REC	1270		339 Water		2/11/1998 5:28	2/11/1998 5:28
GEM021098S	LCS	976185	EPA 901.1	Cobalt-60, Activity	104.8	% REC	1540		327 Water		2/11/1998 5:28	2/11/1998 5:28
GEM021198	LCS	976185	EPA 901.1	Cesium-137, Activity	112.6	% REC	2010		335 Water		2/11/1998 7:25	2/11/1998 7:25
GEM021198	LCS	976185	EPA 901.1	Cobalt-60, Activity	106	% REC	1680		298 Water		2/11/1998 7:25	2/11/1998 7:25
GMX021098	LCS	976185	EPA 901.1	Cobalt-60, Activity	102.8	% REC	1190		298 Water		2/11/1998 4:29	2/11/1998 4:29
GMX021098	LCS	976185	EPA 901.1	Cesium-137, Activity	104	% REC	822		238 Water		2/11/1998 4:29	2/11/1998 4:29
GMX021198	LCS	976185	EPA 901.1	Cobalt-60, Activity	102.1	% REC	1230		265 Water		2/11/1998 6:26	2/11/1998 6:26
GMX021198	LCS	976185	EPA 901.1	Cesium-137, Activity	102.9	% REC	1080		306 Water		2/11/1998 6:26	2/11/1998 6:26
LC1H30206	LCS	976185	CA-GLR-17.0	Tritium, Activity	76.3	% REC	1.8		2.3 Water		2/12/1998 12:39	2/12/1998 12:39
LCSAPM0305	LCS	976185	mod. HASL 300	Promethium 147	97.6	% REC	4.9		4.1 Water		4/4/1998 10:06	4/4/1998 10:06

PARSONS ES SAMPLE		ANALYSIS		PARAMETER	RESULT	UNIT	ERROR	LLD	MATRIX	RCVD DATE	ANALYZED	
SAMP ID	TYPE	SDG	METHOD								EXTRACT DATE	DATE
LCSAPU0205	LCS	976185	mod. HASL 300	Plutonium-239/240	95.8	% REC	0.6		0.1 Water		2/10/1998 15:49	2/10/1998 15:49
LCSAT0212	LCS	976185	mod. HASL 300	Thorium-232, Activity	108.6	% REC	1		0.1 Water		2/19/1998 13:48	2/19/1998 13:48
LCSAU0205	LCS	976185	mod. HASL 300	Uranium-233/234, Activity	92.6	% REC	1		0.2 Water		2/10/1998 15:45	2/10/1998 15:45
LCSAU0205	LCS	976185	mod. HASL 300	Uranium-238, Activity	98	% REC	0.9		0.1 Water		2/10/1998 15:45	2/10/1998 15:45
MB2H30206	MB	976185	CA-GLR-17.0	Tritium, Activity	1.5	pCi/L	1.4		2.2 Water		2/12/1998 12:39	2/12/1998 12:39
MBAPU0205	MB	976185	mod. HASL 300	Plutonium-239/240	ND	pCi/L	0.1		0.2 Water		2/10/1998 15:49	2/10/1998 15:49
MBAT0212	MB	976185	mod. HASL 300	Thorium-227	ND	pCi/L	0.1		0.2 Water		2/19/1998 13:48	2/19/1998 13:48
MBAT0212	MB	976185	mod. HASL 300	Thorium-232, Activity	0.1	pCi/L	0.1		0.2 Water		2/19/1998 13:48	2/19/1998 13:48
MBAT0212	MB	976185	mod. HASL 300	Thorium-230, Activity	0.8	pCi/L	0.4		0.2 Water		2/19/1998 13:48	2/19/1998 13:48
MBAU0205	MB	976185	mod. HASL 300	Uranium-235, Activity	0.1	pCi/L	0.1		0.1 Water		2/10/1998 15:45	2/10/1998 15:45
MBAU0205	MB	976185	mod. HASL 300	Uranium-238, Activity	0.1	pCi/L	0.1		0.1 Water		2/10/1998 15:45	2/10/1998 15:45
MBAU0205	MB	976185	mod. HASL 300	Uranium-233/234, Activity	0.3	pCi/L	0.2		0.1 Water		2/10/1998 15:45	2/10/1998 15:45
MBBPM0305	MB	976185	mod. HASL 300	Promethium 147	2.3	pCi/L	2.5		4.1 Water		4/4/1998 10:06	4/4/1998 10:06
ST1H30206	LCS	976185	CA-GLR-17.0	Tritium, Activity	82.8	% REC	1.8		2.3 Water		2/12/1998 12:39	2/12/1998 12:39



Table 2  
 Plutonium (Pu-239/240) Results for Background Sediment Sample Locations (pCi/g)  
 SEAD-12  
 Seneca Army Depot Activity, Romulus, NY

Sample Delivery Group (SDG)	Sample Location	Parsons ES Sample ID	Top Depth of Sample (ft)	Bottom Depth of Sample (ft)	Laboratory Result	Result Error +/-	Lower Limit of Detection (LLD)	Laboratory Qualifier	Parsons ES Validator Qualifier
976235	SWSD12-67	12447	0.2	0.4	ND	0.1	0.2	ND	UJ
976235	SWSD12-63	12448	0.2	0.4	0.1	0.1	0.1		
976235	SWSD12-63	12449	0.3	0.5	ND	0.1	0.1	ND	UJ
976235	SWSD12-59	12453	0.8	1	ND	0.1	0.1	ND	U
976235	SWSD12-60	12454	1	1.2	0.1	0.1	0.1		J
976240	SWSD12-61	12455	0.7	0.9	ND	0.1	0.4	ND	UJ
976240	SWSD12-64	12456	0.6	0.8	0.1	0.2	0.2		UJ
976240	SWSD12-65	12457	0.2	0.5	ND	0.1	0.3	ND	UJ
976240	SWSD12-66	12458	2.5	2.8	0.3	0.2	0.2		UJ
976237	SWSD12-51	12459	0.6	0.7	0.2	0.3	0.4		UJ
976237	SWSD12-50	12460	0.2	0.4	0.1	0.1	0.2		U
976237	SWSD12-49	12461	0.8	1	0.4	0.3	0.2		UJ
976237	SWSD12-48	12462	0.4	0.6	ND	0.1	0.2	ND	UJ
976460	SWSD12-58	12465	0.7	0.9	ND	0.1	0.3	ND	UJ
976460	SWSD12-57	12466	0.5	0.7	ND	0.2	0.2	ND	U
976460	SWSD12-56	12467	0.5	0.7	ND	0.1	0.2	ND	UJ
976460	SWSD12-55	12468	0.7	0.9	0.1	0.2	0.3		UJ
976460	SWSD12-52	12469	0.4	0.6	0.4	0.4	0.4		UJ
976460	SWSD12-53	12470	0.6	0.8	0.2	0.2	0.2		UJ
976460	SWSD12-54	12471	0.4	0.5	ND	0.1	0.3	ND	UJ





## ENVIRONMENTAL TESTING SERVICES

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### Sample Delivery Group Narrative

April 24, 1998

**Customer:** Parsons Engineering Science, Inc.

**Project:** SEAD-12

**Core Laboratories – Casper Job Number:** 976235

The following information is pertinent to the interpretation of the data.


On November 13, 1997, Core Laboratories - Casper received eleven soil samples in good condition.

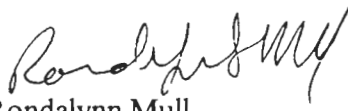
The tracer recovery for samples 12452 and 12453 were low for isotopic thorium. The samples were successfully reanalyzed at a reduced volume.

For the Th-227 results that are reported as C.N., there is no evidence that there is any Th-227 in those samples as there is no Ra-223, the daughter of Th-227, present in the samples.

The positive results that are reported for the gamma emitters have calculated MDAs based on the most abundant line of the gamma emitter in question. The activity and the error is calculated by the software for the positive results. The Ra226 activity by gamma is not reported using the 186kev line since Ra226 has a low abundance at that line and the U235 has a greater abundance with an energy very close to 186 which would cause interference. Therefore, the Ra226 is calculated from the Bi214 line, a daughter of Ra226. The Ra228 is calculated from the Ac228 line, the daughter of Ra228, as Ra228 is a beta emitter.

If you have any questions concerning this data, please call Ronni Mull at (307) 235-5741.

  
Debra Phillabaum  
QA/QC Coordinator

  
Rondalynn Mull  
Radiochemistry Supervisor

Cooler #104

◀ ◀ ◀ CORE LABORATORIES - CHAIN OF CUSTODY RECORD ▶ ▶ ▶

CUSTOMER INFORMATION		PROJECT INFORMATION	
Company...: Parsons		Project...: SEAD-12	
Report To: Mike Duchesneau		Bill To...: Mike Duchesneau	
101 Huntington Ave.		Address...: 101 Huntington Ave.	
Boston MA, 02199		Boston MA 02199	
Phone/Fax: 617-859-2492 617-859-2043		Phone/Fax: 617-859-2492 617-859-2043	



# ABC-012122

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File = 11129706.bar

LAB JOB NUMBER

976235

SMR	DATE	TIME	BARCODE	SAMPLE ID	PARAMETERS	COMMENTS	LAB NO.
ABS	11/11/97	1300	 10203	12534 ✓	SED-1A	OVER-FOR-PARAM-KEY	
ABS	11/11/97	1245	 10202	12209 ✓	SED-1A	OVER-FOR-PARAM-KEY	

SHIPMENT METHOD: Fed Ex AIRBILL NO.: 001952901924

REQUIRED TURNAROUND:\*\*  SAME DAY  24 HOURS  48 HOURS  72 HOURS  5 DAYS  10 DAYS  ROUTINE  \_\_\_\_\_ \*\* RUSH WORK MAY REQUIRE SURCHARGE

RELINQUISHED BY:		Date	RELINQUISHED BY:		Date	RELINQUISHED BY:		Date
Signature: D. Chaffin		11/12/97	Signature:			Signature:		
Printed Name/Company: D. Chaffin / Parsons ES		Time 1900	Printed Name/Company:		Time	Printed Name/Company:		Time
RECEIVED BY:		Date	RECEIVED BY:		Date	RECEIVED BY:		Date
Signature: Maria Lopez-Smith		11-13-97	Signature:			Signature:		
Printed Name/Company: MFLS/CORE LABS		Time 0900	Printed Name/Company:		Time	Printed Name/Company:		Time

- |  |  |   |  |
|--|--|---|--|
| <input checked="" type="checkbox"/> Anaheim, CA (714) 937-1094 | <input type="checkbox"/> Corpus Christi, TX (512) 289-2673 | <input type="checkbox"/> Houston, TX (Pet) (713) 943-9776 | <input type="checkbox"/> Long Beach, CA (310) 595-8401 |
| <input checked="" type="checkbox"/> Aurora, CO (303) 751-1780  | <input type="checkbox"/> Edison, NJ (908) 225-6700         | <input type="checkbox"/> Indianapolis, IN (317) 875-5894  | <input type="checkbox"/> Tampa, FL (813) 884-8268      |
| <input checked="" type="checkbox"/> Casper, WY (307) 235-5741  | <input type="checkbox"/> Houston, TX (Env) (713) 690-4444  | <input type="checkbox"/> Lake Charles, LA (318) 583-4926  | <input type="checkbox"/> Valparaiso, IN (219) 464-2389 |

Cooley #104

\*\*\* CORE LABORATORIES - CHAIN OF CUSTODY RECORD \*\*\*

CUSTOMER INFORMATION		PROJECT INFORMATION	
Company...: Parsons	Report To: Mike Duchesneau	Project...: SEAD-12	Bill To...: Mike Duchesneau
101 Huntington Ave.	Boston MA, 02199	Address...: 101 Huntington Ave.	Boston MA 02199
Phone/Fax: 617-859-2492 617-859-2043		Phone/Fax: 617-859-2492 617-859-2043	

# ABC-012112  
 Page 1 Of 2  
 File = 11129703.bar  
 LAB JOB NUMBER  
 976235

SMR	DATE	TIME	BARCODE	SAMPLE ID	PARAMETERS	COMMENTS	LAB NO.
KKS	11/09/97	1100	10087	12447 ✓	SED-1B	OVER-FOR-PARAM-KEY	
KKS	11/09/97	1150	10080	12448 ✓	SED-1B	OVER-FOR-PARAM-KEY	
BJP	11/10/97	1220	10051	12449 ✓	SED-1B	OVER-FOR-PARAM-KEY	
KKS	11/09/97	1500	10065	12451 ✓	SED-1A	OVER-FOR-PARAM-KEY	
NAS	11/10/97	1010	10058	12452 ✓	SED-1A	OVER-FOR-PARAM-KEY	
BJP	11/10/97	1400	10044	12453 ✓	SED-1B	OVER-FOR-PARAM-KEY	
BJP	11/10/97	1530	10037	12454 ✓	SED-1B	OVER-FOR-PARAM-KEY	
ABS	11/10/97	1055	10212	12532 ✓	SED-1A	OVER-FOR-PARAM-KEY	


SHIPMENT METHOD: Fed Ex AIRBILL NO.: 801 952 781 524  
 REQUIRED TURNAROUND:\*\* [ ] SAME DAY [ ] 24 HOURS [ ] 48 HOURS [ ] 72 HOURS [ ] 5 DAYS [ ] 10 DAYS [X] ROUTINE [ ] \_\_\_\_\_ \*\* RUSH WORK MAY REQUIRE SURCHARGE

RELINQUISHED BY: Signature: <u>A. Martin</u>	Date: <u>11/12/97</u>	RELINQUISHED BY: Signature:	Date:	RELINQUISHED BY: Signature:	Date:
Printed Name/Company: <u>O. Chaffin / Parsons ES</u>	Time: <u>19:00</u>	Printed Name/Company:	Time:	Printed Name/Company:	Time:
RECEIVED BY: Signature: <u>Maria Lopez-Smith</u>	Date: <u>11-13-97</u>	RECEIVED BY: Signature:	Date:	RECEIVED BY: Signature:	Date:
Printed Name/Company: <u>MFLS/CORE LABS</u>	Time: <u>0900</u>	Printed Name/Company:	Time:	Printed Name/Company:	Time:

- Anaheim, CA (714) 937-1094
- Aurora, CO (303) 751-1780
- Casper, WY (307) 235-5741
- Corpus Christi, TX (512) 289-2673
- Edison, NJ (908) 225-6700
- Houston, TX (Env) (713) 690-4444
- Houston, TX (Pet) (713) 943-9776
- Indianapolis, IN (317) 875-5894
- Lake Charles, LA (318) 583-4926
- Long Beach, CA (310) 595-8401
- Tampa, FL (813) 884-8268
- Valparaiso, IN (219) 464-2389

◀ ◀ ◀ CORE LABORATORIES - CHAIN OF CUSTODY RECORD ▶ ▶ ▶

CUSTOMER INFORMATION		PROJECT INFORMATION		#
Company...: Parsons	Report To: Mike Duchesneau	Project...: SEAD-12	Bill To...: Mike Duchesneau	ABC-012113
101 Huntington Ave.	Boston MA, 02199	Address...: 101 Huntington Ave.	Boston MA 02199	Page 2 Of 2
Phone/Fax: 617-859-2492 617-859-2043	Phone/Fax: 617-859-2492 617-859-2043			File = 11129703.bar
				LAB JOB NUMBER
				976235

SMP	DATE	TIME	BARCODE	SAMPLE ID	PARAMETERS	COMMENTS	LAB NO.
ABS	11/10/97	1215	 10211	12533 ✓	SED-1A	OVER-FOR-PARAM-KEY	

SHIPMENT METHOD: Sea Ex AIRBILL NO.: 801 952 981524

REQUIRED TURNAROUND:\*\* [ ] SAME DAY [ ] 24 HOURS [ ] 48 HOURS [ ] 72 HOURS [ ] 5 DAYS [ ] 10 DAYS  ROUTINE [ ] \_\_\_\_\_ \*\* RUSH WORK MAY REQUIRE SURCHARGE

RELINQUISHED BY:	Date	RELINQUISHED BY:	Date	RELINQUISHED BY:	Date
Signature: <u>D. Maffin</u>	<u>11/12/97</u>	Signature:		Signature:	
Printed Name/Company: <u>D. Maffin / Parsons ES</u>	Time: <u>1400</u>	Printed Name/Company:		Printed Name/Company:	
RECEIVED BY:	Date	RECEIVED BY:	Date	RECEIVED BY:	Date
Signature: <u>Maria Lopez-Smith</u>	<u>11-13-97</u>	Signature:		Signature:	
Printed Name/Company: <u>MFLS / CORE LABS</u>	Time: <u>2900</u>	Printed Name/Company:		Printed Name/Company:	

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|--|--|---|--|
| <input checked="" type="checkbox"/> Anaheim, CA (714) 937-1094 | <input type="checkbox"/> Corpus Christi, TX (512) 289-2673 | <input type="checkbox"/> Houston, TX (Pet) (713) 943-9776 | <input type="checkbox"/> Long Beach, CA (310) 595-8401 |
| <input checked="" type="checkbox"/> Aurora, CO (303) 751-1780  | <input type="checkbox"/> Edison, NJ (908) 225-6700         | <input type="checkbox"/> Indianapolis, IN (317) 875-5894  | <input type="checkbox"/> Tampa, FL (813) 884-8268      |
| <input checked="" type="checkbox"/> Casper, WY (307) 235-5741  | <input type="checkbox"/> Houston, TX (Env) (713) 690-4444  | <input type="checkbox"/> Lake Charles, LA (318) 583-4926  | <input type="checkbox"/> Valparaiso, IN (219) 464-2389 |

PARSONS ES SAMPLE		ANALYSIS							EXTRACT	ANALYZED		
SAMP ID	TYPE	SDG	METHOD	PARAMETER	RESULT	UNIT	ERROR	LLD	MATRIX	RCVD DATE	DATE	DATE
12209	SA1	976235	mod. HASL 300	Plutonium-239/240	ND	pCi/g	0.1		0.2 SEDIMENT	11/13/97 9:00	2/23/98 16:16	2/23/98 16:16
12209	SA1	976235	mod. HASL 300	Thorium-232, Activity		1.1 pCi/g	0.5		0.3 SEDIMENT	11/13/97 9:00	2/20/98 8:37	2/20/98 8:37
12209	SA1	976235	mod. HASL 300	Thorium-230, Activity		1.1 pCi/g	0.6		0.3 SEDIMENT	11/13/97 9:00	2/20/98 8:37	2/20/98 8:37
12209	SA1	976235	mod. HASL 300	Thorium-227	ND	pCi/g	0.1		0.2 SEDIMENT	11/13/97 9:00	2/20/98 8:37	2/20/98 8:37
12209	SA1	976235	CA-GLR-R160	Moisture (@ 104 deg. C)		18.4 % by Wt			SEDIMENT	11/13/97 9:00	11/19/97 12:00	11/19/97 12:00
12209	SA1	976235	EPA 901.1	Radium-228, Activity		1.7 pCi/g	0.4		0.1 SEDIMENT	11/13/97 9:00	3/18/98 15:29	3/18/98 15:29
12209	SA1	976235	EPA 901.1	Bismuth-214, Activity		1.9 pCi/g	0.4		0.2 SEDIMENT	11/13/97 9:00	3/18/98 15:29	3/18/98 15:29
12209	SA1	976235	EPA 901.1	Radium-226, Activity		1.9 pCi/g	0.4		0.2 SEDIMENT	11/13/97 9:00	3/18/98 15:29	3/18/98 15:29
12209	SA1	976235	CA-GLR-17.0	Tritium, Activity		0.1 pCi/g	0.1		0.1 SEDIMENT	11/13/97 9:00	2/10/98 13:45	2/10/98 13:45
12209	SA1	976235	mod. HASL 300	Uranium-233/234, Activity		1 pCi/g	0.3		0.1 SEDIMENT	11/13/97 9:00	2/20/98 13:46	2/20/98 13:46
12209	SA1	976235	EPA 901.1	Cobalt-60, Activity	ND	pCi/g			0.1 SEDIMENT	11/13/97 9:00	3/18/98 15:29	3/18/98 15:29
12209	SA1	976235	mod. HASL 300	Uranium-238, Activity		0.7 pCi/g	0.3		0.1 SEDIMENT	11/13/97 9:00	2/20/98 13:46	2/20/98 13:46
12209	SA1	976235	mod. HASL 300	Uranium-235, Activity	ND	pCi/g	0.1		0.1 SEDIMENT	11/13/97 9:00	2/20/98 13:46	2/20/98 13:46
12209	SA1	976235	EPA 901.1	Cobalt-57, Activity	ND	pCi/g			0.1 SEDIMENT	11/13/97 9:00	3/18/98 15:29	3/18/98 15:29
12209	SA1	976235	EPA 901.1	Lead-214, Activity		1.7 pCi/g	0.4		0.2 SEDIMENT	11/13/97 9:00	3/18/98 15:29	3/18/98 15:29
12209	SA1	976235	EPA 901.1	Radium-223, Activity		1.5 pCi/g	0.7		0.4 SEDIMENT	11/13/97 9:00	3/18/98 15:29	3/18/98 15:29
12209	SA1	976235	EPA 901.1	Lead-211, Activity	ND	pCi/g			1.9 SEDIMENT	11/13/97 9:00	3/18/98 15:29	3/18/98 15:29
12209	SA1	976235	EPA 901.1	Lead-210, Activity	ND	pCi/g			3.3 SEDIMENT	11/13/97 9:00	3/18/98 15:29	3/18/98 15:29
12209	SA1	976235	EPA 901.1	Cesium-137, Activity	ND	pCi/g			0.3 SEDIMENT	11/13/97 9:00	3/18/98 15:29	3/18/98 15:29
12209	MS	976235	CA-GLR-17.0	Tritium, Activity		84.9 % REC	244		289 Soil		2/10/98 13:45	2/10/98 13:45
12209	MS	976235	mod. HASL 300	Plutonium-239/240		118.8 % REC	0.9		0.1 Soil		2/23/98 16:16	2/23/98 16:16
12425	MD	976192	mod. HASL 300	Thorium-227		0 RPD			Soil		3/23/98 15:00	3/23/98 15:00
12425	MD	976192	mod. HASL 300	Thorium-232, Activity		26.1 RPD	0.7		0.5 Soil		3/23/98 15:00	3/23/98 15:00
12425	MD	976192	mod. HASL 300	Thorium-230, Activity		0.9 RPD	0.7		1 Soil		3/23/98 15:00	3/23/98 15:00
12436	MS	976192	mod. HASL 300	Thorium-227		% REC			Soil		3/23/98 15:00	3/23/98 15:00
12436	MS	976192	mod. HASL 300	Thorium-230, Activity		77.5 % REC	1.4		0.5 Soil		3/23/98 15:00	3/23/98 15:00
12447	SA1	976235	mod. HASL 300	Uranium-238, Activity		0.4 pCi/g	0.2		0.1 SEDIMENT	11/13/97 9:00	2/20/98 13:46	2/20/98 13:46
12447	SA1	976235	mod. HASL 300	Uranium-235, Activity	ND	pCi/g	0.1		0.1 SEDIMENT	11/13/97 9:00	2/20/98 13:46	2/20/98 13:46
12447	SA1	976235	mod. HASL 300	Uranium-233/234, Activity		0.5 pCi/g	0.2		0.1 SEDIMENT	11/13/97 9:00	2/20/98 13:46	2/20/98 13:46
12447	SA1	976235	CA-GLR-R160	Moisture (@ 104 deg. C)		60.5 % by Wt			SEDIMENT	11/13/97 9:00	11/19/97 12:00	11/19/97 12:00
12447	SA1	976235	CA-GLR-17.0	Tritium, Activity		0.1 pCi/g	0.1		0.2 SEDIMENT	11/13/97 9:00	2/10/98 13:45	2/10/98 13:45
12447	SA1	976235	EPA 901.1	Radium-228, Activity		1.6 pCi/g	0.4		0.2 SEDIMENT	11/13/97 9:00	3/18/98 15:29	3/18/98 15:29
12447	SA1	976235	mod. HASL 300	Plutonium-239/240	ND	pCi/g	0.1		0.2 SEDIMENT	11/13/97 9:00	2/23/98 16:16	2/23/98 16:16
12447	SA1	976235	mod. HASL 300	Thorium-232, Activity		1.4 pCi/g	0.7		0.3 SEDIMENT	11/13/97 9:00	2/20/98 8:37	2/20/98 8:37
12447	SA1	976235	mod. HASL 300	Thorium-230, Activity		0.9 pCi/g	0.5		0.3 SEDIMENT	11/13/97 9:00	2/20/98 8:37	2/20/98 8:37
12447	SA1	976235	mod. HASL 300	Thorium-227		0.1 pCi/g	0.1		0.2 SEDIMENT	11/13/97 9:00	2/20/98 8:37	2/20/98 8:37
12447	SA1	976235	EPA 901.1	Radium-226, Activity		2 pCi/g	0.4		0.1 SEDIMENT	11/13/97 9:00	3/18/98 15:29	3/18/98 15:29
12447	SA1	976235	EPA 901.1	Cobalt-57, Activity	ND	pCi/g			0.1 SEDIMENT	11/13/97 9:00	3/18/98 15:29	3/18/98 15:29
12447	SA1	976235	EPA 901.1	Cobalt-60, Activity	ND	pCi/g			0.1 SEDIMENT	11/13/97 9:00	3/18/98 15:29	3/18/98 15:29
12447	SA1	976235	EPA 901.1	Cesium-137, Activity	ND	pCi/g			0.5 SEDIMENT	11/13/97 9:00	3/18/98 15:29	3/18/98 15:29
12447	SA1	976235	EPA 901.1	Lead-210, Activity	ND	pCi/g			28.4 SEDIMENT	11/13/97 9:00	3/18/98 15:29	3/18/98 15:29
12447	SA1	976235	EPA 901.1	Lead-211, Activity	ND	pCi/g			10.2 SEDIMENT	11/13/97 9:00	3/18/98 15:29	3/18/98 15:29
12447	SA1	976235	EPA 901.1	Lead-214, Activity		2 pCi/g	0.4		0.2 SEDIMENT	11/13/97 9:00	3/18/98 15:29	3/18/98 15:29

PARSONS ES SAMPLE		ANALYSIS		PARAMETER	RESULT	UNIT	ERROR	LLD	MATRIX	EXTRACT		ANALYZED
SAMP ID	TYPE	SDG	METHOD							RCVD DATE	DATE	DATE
12447	SA1	976235	EPA 901.1	Radium-223, Activity	ND	pCi/g			0.5 SEDIMENT	11/13/97 9:00	3/18/98 15:29	3/18/98 15:29
12447	SA1	976235	EPA 901.1	Bismuth-214, Activity		2 pCi/g	0.4		0.1 SEDIMENT	11/13/97 9:00	3/18/98 15:29	3/18/98 15:29
12447	SA1	976235	mod. HASL 300	Promethium 147		13.5 pCi/g	5.3		8.5 SEDIMENT	11/13/97 9:00	4/7/98 6:35	4/7/98 6:35
12447	MD	976235	mod. HASL 300	Thorium-232, Activity		0 RPD	0.8		0.3 Soil		2/20/98 8:37	2/20/98 8:37
12447	MD	976235	mod. HASL 300	Thorium-227		0 RPD	0.2		0.3 Soil		2/20/98 8:37	2/20/98 8:37
12447	MD	976235	mod. HASL 300	Thorium-230, Activity		50 RPD	0.9		0.5 Soil		2/20/98 8:37	2/20/98 8:37
12448	SA1	976235	mod. HASL 300	Plutonium-239/240		0.1 pCi/g	0.1		0.1 SEDIMENT	11/13/97 9:00	2/23/98 16:16	2/23/98 16:16
12448	SA1	976235	mod. HASL 300	Thorium-232, Activity		1 pCi/g	0.6		0.3 SEDIMENT	11/13/97 9:00	2/20/98 8:37	2/20/98 8:37
12448	SA1	976235	mod. HASL 300	Thorium-230, Activity		1.2 pCi/g	0.7		0.4 SEDIMENT	11/13/97 9:00	2/20/98 8:37	2/20/98 8:37
12448	SA1	976235	CA-GLR-17.0	Tritium, Activity		0.1 pCi/g	0.1		0.1 SEDIMENT	11/13/97 9:00	2/10/98 13:45	2/10/98 13:45
12448	SA1	976235	mod. HASL 300	Thorium-227		0.1 pCi/g	0.2		0.3 SEDIMENT	11/13/97 9:00	2/20/98 8:37	2/20/98 8:37
12448	SA1	976235	CA-GLR-R160	Moisture (@ 104 deg. C)		48.4 % by Wt			SEDIMENT	11/13/97 9:00	11/19/97 12:00	11/19/97 12:00
12448	SA1	976235	mod. HASL 300	Uranium-238, Activity		0.5 pCi/g	0.2		0.1 SEDIMENT	11/13/97 9:00	2/20/98 13:46	2/20/98 13:46
12448	SA1	976235	mod. HASL 300	Uranium-235, Activity	ND	pCi/g	0.1		0.1 SEDIMENT	11/13/97 9:00	2/20/98 13:46	2/20/98 13:46
12448	SA1	976235	mod. HASL 300	Uranium-233/234, Activity		0.6 pCi/g	0.2		0.1 SEDIMENT	11/13/97 9:00	2/20/98 13:46	2/20/98 13:46
12448	SA1	976235	EPA 901.1	Radium-228, Activity		1.9 pCi/g	0.4		0.1 SEDIMENT	11/13/97 9:00	3/19/98 7:47	3/19/98 7:47
12448	SA1	976235	EPA 901.1	Bismuth-214, Activity	ND	pCi/g			1.4 SEDIMENT	11/13/97 9:00	3/19/98 7:47	3/19/98 7:47
12448	SA1	976235	EPA 901.1	Radium-226, Activity	ND	pCi/g			1.4 SEDIMENT	11/13/97 9:00	3/19/98 7:47	3/19/98 7:47
12448	SA1	976235	EPA 901.1	Cobalt-57, Activity	ND	pCi/g			0.1 SEDIMENT	11/13/97 9:00	3/19/98 7:47	3/19/98 7:47
12448	SA1	976235	EPA 901.1	Cobalt-60, Activity	ND	pCi/g			0.2 SEDIMENT	11/13/97 9:00	3/19/98 7:47	3/19/98 7:47
12448	SA1	976235	EPA 901.1	Cesium-137, Activity		0.6 pCi/g	0.2		0.1 SEDIMENT	11/13/97 9:00	3/19/98 7:47	3/19/98 7:47
12448	SA1	976235	mod. HASL 300	Promethium 147		15.8 pCi/g	5.3		8.5 SEDIMENT	11/13/97 9:00	4/7/98 6:35	4/7/98 6:35
12448	SA1	976235	EPA 901.1	Lead-210, Activity	ND	pCi/g			4.6 SEDIMENT	11/13/97 9:00	3/19/98 7:47	3/19/98 7:47
12448	SA1	976235	EPA 901.1	Radium-223, Activity	ND	pCi/g			0.4 SEDIMENT	11/13/97 9:00	3/19/98 7:47	3/19/98 7:47
12448	SA1	976235	EPA 901.1	Lead-211, Activity	ND	pCi/g			2.5 SEDIMENT	11/13/97 9:00	3/19/98 7:47	3/19/98 7:47
12448	SA1	976235	EPA 901.1	Lead-214, Activity		2.1 pCi/g	0.5		0.2 SEDIMENT	11/13/97 9:00	3/19/98 7:47	3/19/98 7:47
12448	MS	976235	mod. HASL 300	Promethium 147		105.2 % REC	10.4		8.5 Soil		4/7/98 6:35	4/7/98 6:35
12448	MS	976235	mod. HASL 300	Thorium-232, Activity		80 % REC	1.5		0.3 Soil		2/20/98 8:37	2/20/98 8:37
12449	SA1	976235	mod. HASL 300	Plutonium-239/240	ND	pCi/g	0.1		0.1 SEDIMENT	11/13/97 9:00	2/23/98 16:16	2/23/98 16:16
12449	SA1	976235	CA-GLR-17.0	Tritium, Activity	ND	pCi/g	0.1		0.2 SEDIMENT	11/13/97 9:00	2/10/98 13:45	2/10/98 13:45
12449	SA1	976235	mod. HASL 300	Thorium-230, Activity		0.7 pCi/g	0.4		0.3 SEDIMENT	11/13/97 9:00	2/20/98 8:37	2/20/98 8:37
12449	SA1	976235	mod. HASL 300	Thorium-232, Activity		1 pCi/g	0.5		0.2 SEDIMENT	11/13/97 9:00	2/20/98 8:37	2/20/98 8:37
12449	SA1	976235	mod. HASL 300	Uranium-238, Activity		0.6 pCi/g	0.2		0.1 SEDIMENT	11/13/97 9:00	2/20/98 13:46	2/20/98 13:46
12449	SA1	976235	mod. HASL 300	Uranium-235, Activity		0.1 pCi/g	0.1		0.1 SEDIMENT	11/13/97 9:00	2/20/98 13:46	2/20/98 13:46
12449	SA1	976235	mod. HASL 300	Uranium-233/234, Activity		0.7 pCi/g	0.3		0.1 SEDIMENT	11/13/97 9:00	2/20/98 13:46	2/20/98 13:46
12449	SA1	976235	CA-GLR-R160	Moisture (@ 104 deg. C)		54.5 % by Wt			SEDIMENT	11/13/97 9:00	11/19/97 12:00	11/19/97 12:00
12449	SA1	976235	EPA 901.1	Radium-228, Activity		2.3 pCi/g	0.5		0.2 SEDIMENT	11/13/97 9:00	3/19/98 7:47	3/19/98 7:47
12449	SA1	976235	EPA 901.1	Bismuth-214, Activity		1.8 pCi/g	0.5		0.2 SEDIMENT	11/13/97 9:00	3/19/98 7:47	3/19/98 7:47
12449	SA1	976235	EPA 901.1	Radium-226, Activity		1.8 pCi/g	0.5		0.2 SEDIMENT	11/13/97 9:00	3/19/98 7:47	3/19/98 7:47
12449	SA1	976235	EPA 901.1	Cobalt-57, Activity	ND	pCi/g			0.1 SEDIMENT	11/13/97 9:00	3/19/98 7:47	3/19/98 7:47
12449	SA1	976235	mod. HASL 300	Thorium-227		0.1 pCi/g	0.2		0.4 SEDIMENT	11/13/97 9:00	2/20/98 8:37	2/20/98 8:37
12449	SA1	976235	EPA 901.1	Cobalt-60, Activity	ND	pCi/g			0.3 SEDIMENT	11/13/97 9:00	3/19/98 7:47	3/19/98 7:47
12449	SA1	976235	mod. HASL 300	Promethium 147		12 pCi/g	5.3		8.5 SEDIMENT	11/13/97 9:00	4/7/98 6:35	4/7/98 6:35



PARSONS ES SAMPLE		ANALYSIS									EXTRACT	ANALYZED
SAMP ID	TYPE	SDG	METHOD	PARAMETER	RESULT	UNIT	ERROR	LLD	MATRIX	RCVD DATE	DATE	DATE
12449	SA1	976235	EPA 901.1	Cesium-137, Activity	ND	pCi/g			0.4 SEDIMENT	11/13/97 9:00	3/19/98 7:47	3/19/98 7:47
12449	SA1	976235	EPA 901.1	Lead-210, Activity	ND	pCi/g			27.1 SEDIMENT	11/13/97 9:00	3/19/98 7:47	3/19/98 7:47
12449	SA1	976235	EPA 901.1	Lead-211, Activity	ND	pCi/g			5.5 SEDIMENT	11/13/97 9:00	3/19/98 7:47	3/19/98 7:47
12449	SA1	976235	EPA 901.1	Lead-214, Activity		1.7 pCi/g		0.5	0.2 SEDIMENT	11/13/97 9:00	3/19/98 7:47	3/19/98 7:47
12449	SA1	976235	EPA 901.1	Radium-223, Activity	ND	pCi/g			0.5 SEDIMENT	11/13/97 9:00	3/19/98 7:47	3/19/98 7:47
12449	MD	976235	mod. HASL 300	Uranium-235, Activity		0 RPD		0.1	0.1 Soil		2/20/98 13:46	2/20/98 13:46
12449	MD	976235	mod. HASL 300	Uranium-234, Activity		25 RPD		0.3	0.2 Soil		2/20/98 13:46	2/20/98 13:46
12449	MD	976235	mod. HASL 300	Uranium-238, Activity		15.4 RPD		0.3	0.1 Soil		2/20/98 13:46	2/20/98 13:46
12449	MD	976235	mod. HASL 300	Uranium-233/234, Activity		25 RPD		0.3	0.2 Soil		2/20/98 13:46	2/20/98 13:46
12451	SA1	976235	mod. HASL 300	Thorium-232, Activity		0.9 pCi/g		0.6	0.3 SEDIMENT	11/13/97 9:00	2/20/98 8:37	2/20/98 8:37
12451	SA1	976235	mod. HASL 300	Thorium-230, Activity		0.6 pCi/g		0.5	0.4 SEDIMENT	11/13/97 9:00	2/20/98 8:37	2/20/98 8:37
12451	SA1	976235	mod. HASL 300	Thorium-227	ND	pCi/g		0.2	0.4 SEDIMENT	11/13/97 9:00	2/20/98 8:37	2/20/98 8:37
12451	SA1	976235	EPA 901.1	Radium-226, Activity		1.8 pCi/g		0.6	0.2 SEDIMENT	11/13/97 9:00	3/19/98 8:51	3/19/98 8:51
12451	SA1	976235	EPA 901.1	Cobalt-57, Activity	ND	pCi/g			0.1 SEDIMENT	11/13/97 9:00	3/19/98 8:51	3/19/98 8:51
12451	SA1	976235	EPA 901.1	Cobalt-60, Activity	ND	pCi/g			0.2 SEDIMENT	11/13/97 9:00	3/19/98 8:51	3/19/98 8:51
12451	SA1	976235	mod. HASL 300	Plutonium-239/240		0.1 pCi/g		0.1	0.1 SEDIMENT	11/13/97 9:00	2/23/98 16:16	2/23/98 16:16
12451	SA1	976235	mod. HASL 300	Uranium-238, Activity		0.7 pCi/g		0.3	0.1 SEDIMENT	11/13/97 9:00	2/20/98 13:46	2/20/98 13:46
12451	SA1	976235	EPA 901.1	Cesium-137, Activity	ND	pCi/g			1.2 SEDIMENT	11/13/97 9:00	3/19/98 8:51	3/19/98 8:51
12451	SA1	976235	mod. HASL 300	Uranium-235, Activity		0.1 pCi/g		0.1	0.1 SEDIMENT	11/13/97 9:00	2/20/98 13:46	2/20/98 13:46
12451	SA1	976235	mod. HASL 300	Uranium-233/234, Activity		0.7 pCi/g		0.3	0.1 SEDIMENT	11/13/97 9:00	2/20/98 13:46	2/20/98 13:46
12451	SA1	976235	CA-GLR-R160	Moisture (@ 104 deg. C)		32.2 % by Wt			SEDIMENT	11/13/97 9:00	11/19/97 12:00	11/19/97 12:00
12451	SA1	976235	EPA 901.1	Radium-228, Activity		2.6 pCi/g		0.6	0.1 SEDIMENT	11/13/97 9:00	3/19/98 8:51	3/19/98 8:51
12451	SA1	976235	EPA 901.1	Bismuth-214, Activity		1.8 pCi/g		0.6	0.2 SEDIMENT	11/13/97 9:00	3/19/98 8:51	3/19/98 8:51
12451	SA1	976235	CA-GLR-17.0	Tritium, Activity	ND	pCi/g		0.1	0.1 SEDIMENT	11/13/97 9:00	2/10/98 13:45	2/10/98 13:45
12451	SA1	976235	EPA 901.1	Lead-210, Activity	ND	pCi/g			4 SEDIMENT	11/13/97 9:00	3/19/98 8:51	3/19/98 8:51
12451	SA1	976235	EPA 901.1	Lead-211, Activity	ND	pCi/g			6.5 SEDIMENT	11/13/97 9:00	3/19/98 8:51	3/19/98 8:51
12451	SA1	976235	EPA 901.1	Radium-223, Activity	ND	pCi/g			0.5 SEDIMENT	11/13/97 9:00	3/19/98 8:51	3/19/98 8:51
12451	SA1	976235	EPA 901.1	Lead-214, Activity		2.1 pCi/g		0.4	0.2 SEDIMENT	11/13/97 9:00	3/19/98 8:51	3/19/98 8:51
12451	MS	976235	mod. HASL 300	Uranium-234, Activity		88.9 % REC		1	0.2 Soil		2/20/98 13:46	2/20/98 13:46
12451	MS	976235	mod. HASL 300	Uranium-238, Activity		94 % REC		1	0.1 Soil		2/20/98 13:46	2/20/98 13:46
12451	MS	976235	mod. HASL 300	Uranium-233/234, Activity		88.9 % REC		1	0.2 Soil		2/20/98 13:46	2/20/98 13:46
12452	SA1	976235	mod. HASL 300	Plutonium-239/240		0.1 pCi/g		0.1	0.1 SEDIMENT	11/13/97 9:00	2/23/98 16:16	2/23/98 16:16
12452	SA1	976235	mod. HASL 300	Uranium-238, Activity		0.9 pCi/g		0.3	0.1 SEDIMENT	11/13/97 9:00	2/20/98 13:46	2/20/98 13:46
12452	SA1	976235	mod. HASL 300	Uranium-235, Activity		0.1 pCi/g		0.1	0.2 SEDIMENT	11/13/97 9:00	2/20/98 13:46	2/20/98 13:46
12452	SA1	976235	mod. HASL 300	Uranium-233/234, Activity		0.9 pCi/g		0.3	0.2 SEDIMENT	11/13/97 9:00	2/20/98 13:46	2/20/98 13:46
12452	SA1	976235	CA-GLR-17.0	Tritium, Activity	ND	pCi/g		0.1	0.1 SEDIMENT	11/13/97 9:00	2/10/98 13:45	2/10/98 13:45
12452	SA1	976235	CA-GLR-R160	Moisture (@ 104 deg. C)		37.2 % by Wt			SEDIMENT	11/13/97 9:00	11/19/97 12:00	11/19/97 12:00
12452	SA1	976235	EPA 901.1	Lead-214, Activity		1.4 pCi/g		0.4	0.1 SEDIMENT	11/13/97 9:00	3/19/98 8:51	3/19/98 8:51
12452	SA1	976235	EPA 901.1	Radium-228, Activity		2.1 pCi/g		0.5	0.1 SEDIMENT	11/13/97 9:00	3/19/98 8:51	3/19/98 8:51
12452	SA1	976235	EPA 901.1	Bismuth-214, Activity	ND	pCi/g			1.7 SEDIMENT	11/13/97 9:00	3/19/98 8:51	3/19/98 8:51
12452	SA1	976235	EPA 901.1	Radium-226, Activity	ND	pCi/g			1.7 SEDIMENT	11/13/97 9:00	3/19/98 8:51	3/19/98 8:51
12452	SA1	976235	EPA 901.1	Cobalt-57, Activity	ND	pCi/g			0.1 SEDIMENT	11/13/97 9:00	3/19/98 8:51	3/19/98 8:51
12452	SA1	976235	EPA 901.1	Cobalt-60, Activity	ND	pCi/g			0.1 SEDIMENT	11/13/97 9:00	3/19/98 8:51	3/19/98 8:51

PARSONS ES SAMPLE		ANALYSIS		PARAMETER	RESULT	UNIT	ERROR	LLD	MATRIX	EXTRACT		ANALYZED
SAMP ID	TYPE	SDG	METHOD							RCVD DATE	DATE	DATE
12452	SA1	976235	EPA 901.1	Cesium-137, Activity	ND	pCi/g			0.7 SEDIMENT	11/13/97 9:00	3/19/98 8:51	3/19/98 8:51
12452	SA1	976235	EPA 901.1	Lead-210, Activity	ND	pCi/g			22.7 SEDIMENT	11/13/97 9:00	3/19/98 8:51	3/19/98 8:51
12452	SA1	976235	EPA 901.1	Lead-211, Activity	ND	pCi/g			5.9 SEDIMENT	11/13/97 9:00	3/19/98 8:51	3/19/98 8:51
12452	SA1	976235	EPA 901.1	Radium-223, Activity	ND	pCi/g			0.5 SEDIMENT	11/13/97 9:00	3/19/98 8:51	3/19/98 8:51
12452	SA1	976235	mod. HASL 300	Thorium-232, Activity	0.4	pCi/g	0.4		0.6 SEDIMENT	11/13/97 9:00	3/23/98 15:00	3/23/98 15:00
12452	SA1	976235	mod. HASL 300	Thorium-227	C.N	pCi/g			SEDIMENT	11/13/97 9:00	3/23/98 15:00	3/23/98 15:00
12452	SA1	976235	mod. HASL 300	Thorium-230, Activity	1.6	pCi/g	1		0.8 SEDIMENT	11/13/97 9:00	3/23/98 15:00	3/23/98 15:00
12453	SA1	976235	mod. HASL 300	Plutonium-239/240	ND	pCi/g	0.1		0.1 SEDIMENT	11/13/97 9:00	2/23/98 16:16	2/23/98 16:16
12453	SA1	976235	mod. HASL 300	Uranium-238, Activity	0.6	pCi/g	0.2		0.1 SEDIMENT	11/13/97 9:00	2/20/98 13:46	2/20/98 13:46
12453	SA1	976235	mod. HASL 300	Uranium-235, Activity	0.2	pCi/g	0.1		0.1 SEDIMENT	11/13/97 9:00	2/20/98 13:46	2/20/98 13:46
12453	SA1	976235	mod. HASL 300	Uranium-233/234, Activity	0.8	pCi/g	0.3		0.2 SEDIMENT	11/13/97 9:00	2/20/98 13:46	2/20/98 13:46
12453	SA1	976235	CA-GLR-17.0	Tritium, Activity	ND	pCi/g	0.1		0.1 SEDIMENT	11/13/97 9:00	2/10/98 13:45	2/10/98 13:45
12453	SA1	976235	CA-GLR-R160	Moisture (@ 104 deg. C)	26.5	% by WT			SEDIMENT	11/13/97 9:00	11/19/97 12:00	11/19/97 12:00
12453	SA1	976235	EPA 901.1	Lead-211, Activity	ND	pCi/g			12.3 SEDIMENT	11/13/97 9:00	3/19/98 10:22	3/19/98 10:22
12453	SA1	976235	mod. HASL 300	Promethium 147	7	pCi/g	5.2		8.5 SEDIMENT	11/13/97 9:00	4/7/98 6:35	4/7/98 6:35
12453	SA1	976235	EPA 901.1	Radium-228, Activity	ND	pCi/g			2.4 SEDIMENT	11/13/97 9:00	3/19/98 10:22	3/19/98 10:22
12453	SA1	976235	EPA 901.1	Bismuth-214, Activity	2	pCi/g	0.5		0.2 SEDIMENT	11/13/97 9:00	3/19/98 10:22	3/19/98 10:22
12453	SA1	976235	EPA 901.1	Radium-226, Activity	2	pCi/g	0.5		0.2 SEDIMENT	11/13/97 9:00	3/19/98 10:22	3/19/98 10:22
12453	SA1	976235	EPA 901.1	Cobalt-57, Activity	ND	pCi/g			0.1 SEDIMENT	11/13/97 9:00	3/19/98 10:22	3/19/98 10:22
12453	SA1	976235	EPA 901.1	Cobalt-60, Activity	ND	pCi/g			0.1 SEDIMENT	11/13/97 9:00	3/19/98 10:22	3/19/98 10:22
12453	SA1	976235	EPA 901.1	Cesium-137, Activity	ND	pCi/g			0.1 SEDIMENT	11/13/97 9:00	3/19/98 10:22	3/19/98 10:22
12453	SA1	976235	EPA 901.1	Lead-210, Activity	ND	pCi/g			6.1 SEDIMENT	11/13/97 9:00	3/19/98 10:22	3/19/98 10:22
12453	SA1	976235	EPA 901.1	Radium-223, Activity	ND	pCi/g			0.5 SEDIMENT	11/13/97 9:00	3/19/98 10:22	3/19/98 10:22
12453	SA1	976235	EPA 901.1	Lead-214, Activity	ND	pCi/g			0.4 SEDIMENT	11/13/97 9:00	3/19/98 10:22	3/19/98 10:22
12453	SA1	976235	mod. HASL 300	Thorium-232, Activity	1.7	pCi/g	1		0.7 SEDIMENT	11/13/97 9:00	3/23/98 15:00	3/23/98 15:00
12453	SA1	976235	mod. HASL 300	Thorium-227	C.N	pCi/g			SEDIMENT	11/13/97 9:00	3/23/98 15:00	3/23/98 15:00
12453	SA1	976235	mod. HASL 300	Thorium-230, Activity	0.9	pCi/g	0.8		1 SEDIMENT	11/13/97 9:00	3/23/98 15:00	3/23/98 15:00
12454	SA1	976235	mod. HASL 300	Plutonium-239/240	0.1	pCi/g	0.1		0.1 SEDIMENT	11/13/97 9:00	2/23/98 16:16	2/23/98 16:16
12454	SA1	976235	mod. HASL 300	Thorium-232, Activity	1.3	pCi/g	0.7		0.3 SEDIMENT	11/13/97 9:00	2/20/98 8:37	2/20/98 8:37
12454	SA1	976235	mod. HASL 300	Thorium-230, Activity	1.4	pCi/g	0.8		0.4 SEDIMENT	11/13/97 9:00	2/20/98 8:37	2/20/98 8:37
12454	SA1	976235	CA-GLR-17.0	Tritium, Activity	0.1	pCi/g	0.1		0.2 SEDIMENT	11/13/97 9:00	2/10/98 13:45	2/10/98 13:45
12454	SA1	976235	mod. HASL 300	Thorium-227	ND	pCi/g	0.1		0.4 SEDIMENT	11/13/97 9:00	2/20/98 8:37	2/20/98 8:37
12454	SA1	976235	mod. HASL 300	Promethium 147	11.6	pCi/g	5.3		8.5 SEDIMENT	11/13/97 9:00	4/7/98 6:35	4/7/98 6:35
12454	SA1	976235	mod. HASL 300	Uranium-238, Activity	0.6	pCi/g	0.2		0.1 SEDIMENT	11/13/97 9:00	2/20/98 13:46	2/20/98 13:46
12454	SA1	976235	mod. HASL 300	Uranium-235, Activity	0.1	pCi/g	0.1		0.1 SEDIMENT	11/13/97 9:00	2/20/98 13:46	2/20/98 13:46
12454	SA1	976235	mod. HASL 300	Uranium-233/234, Activity	0.6	pCi/g	0.2		0.2 SEDIMENT	11/13/97 9:00	2/20/98 13:46	2/20/98 13:46
12454	SA1	976235	CA-GLR-R160	Moisture (@ 104 deg. C)	67.3	% by WT			SEDIMENT	11/13/97 9:00	11/19/97 12:00	11/19/97 12:00
12454	SA1	976235	EPA 901.1	Cesium-137, Activity	ND	pCi/g			0.5 SEDIMENT	11/13/97 9:00	3/19/98 10:22	3/19/98 10:22
12454	SA1	976235	EPA 901.1	Radium-228, Activity	2	pCi/g	0.7		0.2 SEDIMENT	11/13/97 9:00	3/19/98 10:22	3/19/98 10:22
12454	SA1	976235	EPA 901.1	Lead-210, Activity	ND	pCi/g			18.1 SEDIMENT	11/13/97 9:00	3/19/98 10:22	3/19/98 10:22
12454	SA1	976235	EPA 901.1	Bismuth-214, Activity	ND	pCi/g			2.2 SEDIMENT	11/13/97 9:00	3/19/98 10:22	3/19/98 10:22
12454	SA1	976235	EPA 901.1	Radium-226, Activity	ND	pCi/g			2.2 SEDIMENT	11/13/97 9:00	3/19/98 10:22	3/19/98 10:22
12454	SA1	976235	EPA 901.1	Lead-211, Activity	ND	pCi/g			12.5 SEDIMENT	11/13/97 9:00	3/19/98 10:22	3/19/98 10:22

PARSONS ES SAMPLE		ANALYSIS			EXTRACT							ANALYZED
SAMP ID	TYPE	SDG	METHOD	PARAMETER	RESULT	UNIT	ERROR	LLD	MATRIX	RCVD DATE	DATE	DATE
12454	SA1	976235	EPA 901.1	Cobalt-57, Activity	ND	pCi/g			0.1 SEDIMENT	11/13/97 9:00	3/19/98 10:22	3/19/98 10:22
12454	SA1	976235	EPA 901.1	Lead-214, Activity	1.9	pCi/g	0.4		0.1 SEDIMENT	11/13/97 9:00	3/19/98 10:22	3/19/98 10:22
12454	SA1	976235	EPA 901.1	Cobalt-60, Activity	ND	pCi/g			0.1 SEDIMENT	11/13/97 9:00	3/19/98 10:22	3/19/98 10:22
12454	SA1	976235	EPA 901.1	Radium-223, Activity	ND	pCi/g			0.6 SEDIMENT	11/13/97 9:00	3/19/98 10:22	3/19/98 10:22
12454	MD	976235	mod. HASL 300	Promethium 147	1.2	RPD	5.2		8.5 Soil		4/7/98 6:35	4/7/98 6:35
12460	MD	976237	EPA 901.1	Lead-210, Activity	0	RPD			8.5 Soil		3/19/98 15:39	3/19/98 15:39
12460	MD	976237	EPA 901.1	Lead-211, Activity	0	RPD			7.6 Soil		3/19/98 15:39	3/19/98 15:39
12460	MD	976237	EPA 901.1	Lead-214, Activity	13.3	RPD	0.3		0.1 Soil		3/19/98 15:39	3/19/98 15:39
12460	MD	976237	EPA 901.1	Radium-226, Activity	0	RPD	0.3		0.1 Soil		3/19/98 15:39	3/19/98 15:39
12460	MD	976237	EPA 901.1	Radium-223, Activity	0	RPD			0.4 Soil		3/19/98 15:39	3/19/98 15:39
12460	MD	976237	EPA 901.1	Cobalt-57, Activity	0	RPD			0.1 Soil		3/19/98 15:39	3/19/98 15:39
12460	MD	976237	EPA 901.1	Cobalt-60, Activity	0	RPD			0.2 Soil		3/19/98 15:39	3/19/98 15:39
12460	MD	976237	EPA 901.1	Cesium-137, Activity	0.2	RPD	0.1		0.1 Soil		3/19/98 15:39	3/19/98 15:39
12460	MD	976237	EPA 901.1	Bismuth-214, Activity	0	RPD	0.3		0.1 Soil		3/19/98 15:39	3/19/98 15:39
12460	MD	976237	EPA 901.1	Radium-228, Activity	20	RPD	0.5		0.1 Soil		3/19/98 15:39	3/19/98 15:39
12532	SA1	976235	mod. HASL 300	Uranium-238, Activity	0.8	pCi/g	0.3		0.1 SEDIMENT	11/13/97 9:00	2/20/98 13:46	2/20/98 13:46
12532	SA1	976235	mod. HASL 300	Uranium-235, Activity	0.1	pCi/g	0.1		0.1 SEDIMENT	11/13/97 9:00	2/20/98 13:46	2/20/98 13:46
12532	SA1	976235	mod. HASL 300	Uranium-233/234, Activity	0.7	pCi/g	0.3		0.1 SEDIMENT	11/13/97 9:00	2/20/98 13:46	2/20/98 13:46
12532	SA1	976235	CA-GLR-R160	Moisture (@ 104 deg C)	13.4	% by Wt			SEDIMENT	11/13/97 9:00	11/19/97 12:00	11/19/97 12:00
12532	SA1	976235	EPA 901.1	Radium-228, Activity	1.6	pCi/g	0.5		0.2 SEDIMENT	11/13/97 9:00	3/19/98 11:32	3/19/98 11:32
12532	SA1	976235	EPA 901.1	Bismuth-214, Activity	2.4	pCi/g	0.3		0.1 SEDIMENT	11/13/97 9:00	3/19/98 11:32	3/19/98 11:32
12532	SA1	976235	EPA 901.1	Radium-226, Activity	2.4	pCi/g	0.3		0.1 SEDIMENT	11/13/97 9:00	3/19/98 11:32	3/19/98 11:32
12532	SA1	976235	EPA 901.1	Cobalt-57, Activity	ND	pCi/g			0.1 SEDIMENT	11/13/97 9:00	3/19/98 11:32	3/19/98 11:32
12532	SA1	976235	mod. HASL 300	Thorium-227	0.1	pCi/g	0.2		0.3 SEDIMENT	11/13/97 9:00	2/20/98 8:37	2/20/98 8:37
12532	SA1	976235	EPA 901.1	Cesium-137, Activity	ND	pCi/g			0.2 SEDIMENT	11/13/97 9:00	3/19/98 11:32	3/19/98 11:32
12532	SA1	976235	EPA 901.1	Radium-223, Activity	ND	pCi/g			0.4 SEDIMENT	11/13/97 9:00	3/19/98 11:32	3/19/98 11:32
12532	SA1	976235	EPA 901.1	Lead-214, Activity	3	pCi/g	0.5		0.1 SEDIMENT	11/13/97 9:00	3/19/98 11:32	3/19/98 11:32
12532	SA1	976235	EPA 901.1	Cobalt-60, Activity	ND	pCi/g			0.1 SEDIMENT	11/13/97 9:00	3/19/98 11:32	3/19/98 11:32
12532	SA1	976235	EPA 901.1	Lead-211, Activity	ND	pCi/g			2 SEDIMENT	11/13/97 9:00	3/19/98 11:32	3/19/98 11:32
12532	SA1	976235	EPA 901.1	Lead-210, Activity	ND	pCi/g			2.9 SEDIMENT	11/13/97 9:00	3/19/98 11:32	3/19/98 11:32
12532	SA1	976235	mod. HASL 300	Thorium-230, Activity	1.7	pCi/g	0.9		0.3 SEDIMENT	11/13/97 9:00	2/20/98 8:37	2/20/98 8:37
12532	SA1	976235	mod. HASL 300	Plutonium-239/240	ND	pCi/g	0.1		0.1 SEDIMENT	11/13/97 9:00	2/23/98 16:16	2/23/98 16:16
12532	SA1	976235	CA-GLR-17.0	Tritium, Activity	ND	pCi/g	0.1		0.1 SEDIMENT	11/13/97 9:00	2/10/98 13:45	2/10/98 13:45
12532	SA1	976235	mod. HASL 300	Thorium-232, Activity	0.5	pCi/g	0.4		0.3 SEDIMENT	11/13/97 9:00	2/20/98 8:37	2/20/98 8:37
12533	SA1	976235	mod. HASL 300	Plutonium-239/240	0.2	pCi/g	0.1		0.1 SEDIMENT	11/13/97 9:00	2/23/98 16:16	2/23/98 16:16
12533	SA1	976235	CA-GLR-17.0	Tritium, Activity	ND	pCi/g	0.1		0.1 SEDIMENT	11/13/97 9:00	2/10/98 13:45	2/10/98 13:45
12533	SA1	976235	mod. HASL 300	Uranium-238, Activity	0.6	pCi/g	0.2		0.1 SEDIMENT	11/13/97 9:00	2/20/98 13:46	2/20/98 13:46
12533	SA1	976235	mod. HASL 300	Uranium-235, Activity	0.1	pCi/g	0.1		0.1 SEDIMENT	11/13/97 9:00	2/20/98 13:46	2/20/98 13:46
12533	SA1	976235	mod. HASL 300	Uranium-233/234, Activity	0.7	pCi/g	0.3		0.1 SEDIMENT	11/13/97 9:00	2/20/98 13:46	2/20/98 13:46
12533	SA1	976235	CA-GLR-R160	Moisture (@ 104 deg C)	10.8	% by Wt			SEDIMENT	11/13/97 9:00	11/19/97 12:00	11/19/97 12:00
12533	SA1	976235	EPA 901.1	Radium-228, Activity	1.6	pCi/g	0.5		0.1 SEDIMENT	11/13/97 9:00	3/19/98 11:32	3/19/98 11:32
12533	SA1	976235	EPA 901.1	Bismuth-214, Activity	ND	pCi/g			1.5 SEDIMENT	11/13/97 9:00	3/19/98 11:32	3/19/98 11:32
12533	SA1	976235	mod. HASL 300	Thorium-232, Activity	1.1	pCi/g	0.7		0.4 SEDIMENT	11/13/97 9:00	2/20/98 8:37	2/20/98 8:37

PARSONS ES SAMPLE		ANALYSIS							EXTRACT	ANALYZED		
SAMP ID	TYPE	SDG	METHOD	PARAMETER	RESULT	UNIT	ERROR	LLD	MATRIX	RCVD DATE	DATE	DATE
12533	SA1	976235	EPA 901.1	Radium-226, Activity	ND	pCi/g			1.5 SEDIMENT	11/13/97 9:00	3/19/98 11:32	3/19/98 11:32
12533	SA1	976235	mod. HASL 300	Thorium-230, Activity		0.6 pCi/g	0.6		0.6 SEDIMENT	11/13/97 9:00	2/20/98 8:37	2/20/98 8:37
12533	SA1	976235	EPA 901.1	Cobalt-57, Activity	ND	pCi/g			0.1 SEDIMENT	11/13/97 9:00	3/19/98 11:32	3/19/98 11:32
12533	SA1	976235	EPA 901.1	Cobalt-60, Activity	ND	pCi/g			0.3 SEDIMENT	11/13/97 9:00	3/19/98 11:32	3/19/98 11:32
12533	SA1	976235	EPA 901.1	Cesium-137, Activity	ND	pCi/g			0.2 SEDIMENT	11/13/97 9:00	3/19/98 11:32	3/19/98 11:32
12533	SA1	976235	EPA 901.1	Lead-210, Activity	ND	pCi/g			40.8 SEDIMENT	11/13/97 9:00	3/19/98 11:32	3/19/98 11:32
12533	SA1	976235	EPA 901.1	Lead-211, Activity	ND	pCi/g			5.4 SEDIMENT	11/13/97 9:00	3/19/98 11:32	3/19/98 11:32
12533	SA1	976235	EPA 901.1	Lead-214, Activity		1.1 pCi/g	0.3		0.1 SEDIMENT	11/13/97 9:00	3/19/98 11:32	3/19/98 11:32
12533	SA1	976235	EPA 901.1	Radium-223, Activity	ND	pCi/g			0.3 SEDIMENT	11/13/97 9:00	3/19/98 11:32	3/19/98 11:32
12533	SA1	976235	mod. HASL 300	Thorium-227	ND	pCi/g	0.1		0.3 SEDIMENT	11/13/97 9:00	2/20/98 8:37	2/20/98 8:37
12534	SA1	976235	mod. HASL 300	Plutonium-239/240	ND	pCi/g	0.1		0.1 SEDIMENT	11/13/97 9:00	2/23/98 16:16	2/23/98 16:16
12534	SA1	976235	mod. HASL 300	Thorium-232, Activity		0.8 pCi/g	0.4		0.3 SEDIMENT	11/13/97 9:00	2/20/98 8:37	2/20/98 8:37
12534	SA1	976235	mod. HASL 300	Thorium-230, Activity		0.8 pCi/g	0.4		0.3 SEDIMENT	11/13/97 9:00	2/20/98 8:37	2/20/98 8:37
12534	SA1	976235	mod. HASL 300	Thorium-227	ND	pCi/g	0.1		0.3 SEDIMENT	11/13/97 9:00	2/20/98 8:37	2/20/98 8:37
12534	SA1	976235	mod. HASL 300	Uranium-238, Activity		0.7 pCi/g	0.3		0.1 SEDIMENT	11/13/97 9:00	2/20/98 13:46	2/20/98 13:46
12534	SA1	976235	mod. HASL 300	Uranium-235, Activity		0.1 pCi/g	0.1		0.1 SEDIMENT	11/13/97 9:00	2/20/98 13:46	2/20/98 13:46
12534	SA1	976235	mod. HASL 300	Uranium-233/234, Activity		0.7 pCi/g	0.3		0.1 SEDIMENT	11/13/97 9:00	2/20/98 13:46	2/20/98 13:46
12534	SA1	976235	CA-GLR-R160	Moisture (@ 104 deg. C)		17.6 % by Wt			SEDIMENT	11/13/97 9:00	11/19/97 12:00	11/19/97 12:00
12534	SA1	976235	CA-GLR-17.0	Tritium, Activity		0.3 pCi/g	0.1		0.1 SEDIMENT	11/13/97 9:00	2/10/98 13:45	2/10/98 13:45
12534	SA1	976235	EPA 901.1	Radium-228, Activity		1.2 pCi/g	0.3		0.1 SEDIMENT	11/13/97 9:00	3/18/98 14:14	3/18/98 14:14
12534	SA1	976235	EPA 901.1	Radium-223, Activity	ND	pCi/g			0.4 SEDIMENT	11/13/97 9:00	3/18/98 14:14	3/18/98 14:14
12534	SA1	976235	EPA 901.1	Bismuth-214, Activity		1.7 pCi/g	0.4		0.2 SEDIMENT	11/13/97 9:00	3/18/98 14:14	3/18/98 14:14
12534	SA1	976235	EPA 901.1	Radium-226, Activity		1.7 pCi/g	0.4		0.2 SEDIMENT	11/13/97 9:00	3/18/98 14:14	3/18/98 14:14
12534	SA1	976235	EPA 901.1	Cobalt-57, Activity	ND	pCi/g			0.1 SEDIMENT	11/13/97 9:00	3/18/98 14:14	3/18/98 14:14
12534	SA1	976235	EPA 901.1	Cobalt-60, Activity	ND	pCi/g			0.1 SEDIMENT	11/13/97 9:00	3/18/98 14:14	3/18/98 14:14
12534	SA1	976235	EPA 901.1	Cesium-137, Activity	ND	pCi/g			0.7 SEDIMENT	11/13/97 9:00	3/18/98 14:14	3/18/98 14:14
12534	SA1	976235	EPA 901.1	Lead-210, Activity	ND	pCi/g			3.9 SEDIMENT	11/13/97 9:00	3/18/98 14:14	3/18/98 14:14
12534	SA1	976235	EPA 901.1	Lead-211, Activity	ND	pCi/g			10.8 SEDIMENT	11/13/97 9:00	3/18/98 14:14	3/18/98 14:14
12534	SA1	976235	EPA 901.1	Lead-214, Activity		1.4 pCi/g	0.3		0.2 SEDIMENT	11/13/97 9:00	3/18/98 14:14	3/18/98 14:14
12534	MD	976235	CA-GLR-17.0	Tritium, Activity		420 RPD	308		490 Soil		2/10/98 13:45	2/10/98 13:45
12534	MD	976235	mod. HASL 300	Plutonium-239/240		0.1 RPD	0.1		0.1 Soil		2/23/98 16:16	2/23/98 16:16
GEM031898S	LCS	976235	EPA 901.1	Cesium-137, Activity		102.9 % REC	1160		324 Water		3/18/98 7:26	3/18/98 7:26
GEM031898S	LCS	976235	EPA 901.1	Cobalt-60, Activity		100.3 % REC	1820		279 Water		3/18/98 7:26	3/18/98 7:26
GEM031998S	LCS	976235	EPA 901.1	Cobalt-60, Activity		106 % REC	1730		274 Water		3/19/98 7:26	3/19/98 7:26
GEM031998S	LCS	976235	EPA 901.1	Cesium-137, Activity		102.9 % REC	2310		404 Water		3/19/98 7:26	3/19/98 7:26
GMX031898S	LCS	976235	EPA 901.1	Cesium-137, Activity		107.3 % REC	907		250 Water		3/18/98 7:13	3/18/98 7:13
GMX031898S	LCS	976235	EPA 901.1	Cobalt-60, Activity		101.2 % REC	1180		237 Water		3/18/98 7:13	3/18/98 7:13
GMX031998S	LCS	976235	EPA 901.1	Cesium-137, Activity		102.9 % REC	862		231 Water		3/19/98 7:14	3/19/98 7:14
GMX031998S	LCS	976235	EPA 901.1	Cobalt-60, Activity		102.7 % REC	1220		254 Water		3/19/98 7:14	3/19/98 7:14
LC1H30210	LCS	976235	CA-GLR-17.0	Tritium, Activity		96.5 % REC	2.4		2.8 Water		2/10/98 13:45	2/10/98 13:45
LCAPM0303	LCS	976235	mod. HASL 300	Promethium 147		104.3 % REC	5.1		4.3 Water		4/7/98 6:35	4/7/98 6:35
LCSAPU0217	LCS	976235	mod. HASL 300	Plutonium-239/240		93.8 % REC	0.7		0.1 Water		2/23/98 16:16	2/23/98 16:16
LCSAT0217	LCS	976235	mod. HASL 300	Thorium-232, Activity		117.1 % REC	1		0.1 Water		2/20/98 8:37	2/20/98 8:37

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PARSONS ES SAMPLE		ANALYSIS		PARAMETER	RESULT	UNIT	ERROR	LLD	MATRIX	RCVD DATE	EXTRACT	ANALYZED
SAMP ID	TYPE	SDG	METHOD								DATE	DATE
LCSAU0217	LCS	976235	mod. HASL 300	Uranium-233/234, Activity	85.2	% REC		1	0.1 Water		2/20/98 13:46	2/20/98 13:46
LCSAU0217	LCS	976235	mod. HASL 300	Uranium-234, Activity	85.2	% REC		1	0.1 Water		2/20/98 13:46	2/20/98 13:46
LCSAU0217	LCS	976235	mod. HASL 300	Uranium-238, Activity	108	% REC		1.1	0.1 Water		2/20/98 13:46	2/20/98 13:46
LCST0319	LCS	976235	mod. HASL 300	Thorium-227		% REC			Water		3/23/98 15:00	3/23/98 15:00
LCST0319	LCS	976235	mod. HASL 300	Thorium-230, Activity	90	% REC		0.4	0.2 Water		3/23/98 15:00	3/23/98 15:00
MB2H30210	MB	976235	CA-GLR-17.0	Tritium, Activity	0.3	pCi/L		1.6	2.7 Water		2/10/98 13:45	2/10/98 13:45
MBAPU0217	MB	976235	mod. HASL 300	Plutonium-239/240	ND	pCi/L		0.1	0.1 Water		2/23/98 16:16	2/23/98 16:16
MBAT0217	MB	976235	mod. HASL 300	Thorium-227	ND	pCi/L		0.1	0.1 Water		2/20/98 8:37	2/20/98 8:37
MBAT0217	MB	976235	mod. HASL 300	Thorium-232, Activity	ND	pCi/L		0.1	0.1 Water		2/20/98 8:37	2/20/98 8:37
MBAT0217	MB	976235	mod. HASL 300	Thorium-230, Activity	0.1	pCi/L		0.1	0.2 Water		2/20/98 8:37	2/20/98 8:37
MBAU0217	MB	976235	mod. HASL 300	Uranium-234, Activity	0.1	pCi/L		0.1	0.1 Water		2/20/98 13:46	2/20/98 13:46
MBAU0217	MB	976235	mod. HASL 300	Uranium-235, Activity	ND	pCi/L		0.1	0.1 Water		2/20/98 13:46	2/20/98 13:46
MBAU0217	MB	976235	mod. HASL 300	Uranium-233/234, Activity	0.1	pCi/L		0.1	0.1 Water		2/20/98 13:46	2/20/98 13:46
MBAU0217	MB	976235	mod. HASL 300	Uranium-238, Activity	0.1	pCi/L		0.1	0.1 Water		2/20/98 13:46	2/20/98 13:46
MBBPM0303	MB	976235	mod. HASL 300	Promethium 147	ND	pCi/L		2.5	4.3 Water		4/7/98 6:35	4/7/98 6:35
MBCT0319	MB	976235	mod. HASL 300	Thorium-232, Activity	ND	pCi/L		0.1	0.1 Water		3/23/98 15:00	3/23/98 15:00
MBCT0319	MB	976235	mod. HASL 300	Thorium-227	C.N	pCi/L			Water		3/23/98 15:00	3/23/98 15:00
MBCT0319	MB	976235	mod. HASL 300	Thorium-230, Activity	0.1	pCi/L		0.1	0.1 Water		3/23/98 15:00	3/23/98 15:00
ST1H30210	LCS	976235	CA-GLR-17.0	Tritium, Activity	102.5	% REC		2.4	2.8 Water		2/10/98 13:45	2/10/98 13:45