



Reuter-Stokes

Calibration Data

Sensor Type: 100 R/Hr Source (CS-137): BB-400
Serial Number: 07J00KM1 Date of Certification: 12/1/94
Calibration Date: 6/19/08 Exposure Rate at 1 meter: 4.226 mR/h
Customer Name: ENVIRONMENTAL RESTORATION
Sensitivity (Ra-226): 10.21 mV/ μ R/h

Distance		Exposure Rate	P+S+A	S+A	P	k(CS-137)
Feet	cm	μ R/h	V	V	V	mV/ μ R/h
11.8	359	235.064	3.692	1.264	2.428	10.33
13.8	420	171.114	3.202	1.435	1.768	10.33
15.8	481	129.972	3.173	1.832	1.341	10.31
17.8	542	101.968	3.335	2.283	1.052	10.32

$$k(\text{CS-137}) = 10.32 \text{ mv}/\mu\text{R/h}$$

$$\bar{k} = 10.32 \text{ mv}/\mu\text{R/h}$$

$$k(\text{Ra-226}) = .9892 k(\text{CS-137})$$

$$\sigma = .008 \text{ mv}/\mu\text{R/h}$$

$$k(\text{Ra-226}) = 10.21 \text{ mv}/\mu\text{R/h}$$

$$V = \frac{\sigma}{k} = 0.074\%$$

By:

Date:

6/19/08



Reuter-Stokes

RSS-131 FIRMWARE PARAMETERS

S/N 07J00KM1

RAC	2.210E-08
ZLN	0.000E-00
ZMN	4.324E-01
ZHN	-2.127E-03
ZLD	0.000E-00
ZMD	-2.414E-04
ZHD	-6.174E-07
RLN	4.619E+11
RMN	2.231E+09
RHN	1.001E+07
RLV	-1.524E+08
RMV	2.094E+04
RHV	-1.548E+02

Only change in constants is
In the RAC from 2.228E-08

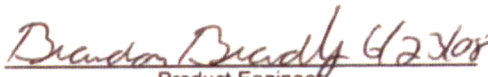
By:


Level 2 Nuclear / Electrical Inspector

Date:

4/19/08

Reviewed By:


Product Engineer

Function Check Form

Ratemeter: Ludlum 2221Serial No. 149958 ^{TA} 149953Cal. Due Date: 5/13/10Detector: Ludlum 44-10Serial No. PR19805Cal. Due Date: 5/13/10Source: Cs-137Activity: 5 μ CiSerial No. ~~N5~~ 77^MComments: Fc Done SW of mine site off 566.

Date	Time	Battery	High Voltage	Threshold	Gross Counts	Background	Net Counts	Efficiency	Initial
5/18/09	11:45	5.2	1148	99	83375	10488	72887	/	TA
5/18/09	1645	5.1	1147	101	81070	10306	70764		TA
5/19/09	0700	6.0	1153	101	83727	10635	73092		TA
5/19/09	1630	5.7	1152	104	81418	10220	71198		TA
5/20/09	0700	5.8	1153	101	82067	10917	71150		TA
5/20/09	1440	5.6	1155	106	81591	11106	70485		TA
5/21/09	0715	5.5	1153	101	83442	10666	72776		TA
5/21/09	1530	5.5	1152	100	83338	10467	72871		TA
5/22/09	0700	5.6	1155	100	81720	10541	71179		TA
5/22/09	11:55	5.4	1152	100	82571	11563	71008		TA
5/28/09	08:42	5.5	1154	101	82875 10220 NW	10220	72655		NW
5/28/09	1415	5.4	1151	100	81588	9931	71657		NW

Reviewed By: Charles P. L.Date: 6/1/09



Function Check Form

 Ratemeter: Ludlum 2221

 Serial No. 117648

 Cal. Due Date: 5/13/10

 Detector: Ludlum 44-10

 Serial No. 178936

 Cal. Due Date: 5/13/10

 Source: Cs-137

 Activity: 5 μ Ci

 Serial No. ~~115~~ 7771

 Comments: FC Done SW of mine site off 566

Date	Time	Battery	High Voltage	Threshold	Gross Counts	Background	Net Counts	Efficiency	Initial
5/18/09	11:45	5.8	1145	98	81996	9647	72349	A	TA
5/18/09	1645	5.6	1147	100	81745	9519	72226		TA
5/19/09	0700	5.2	1154	100	83003	9995	73008		TA
5/19/09	1630	5.4	1145	99	81674	9664	72010		TA
5/20/09	0700	5.5	1153	101	81995	10366	71129		TA
5/20/09	1440	5.3	1150	100	83749	10991	72758		TA
5/21/09	0720	5.4	1152	99	83686	9998	73688		TA
5/21/09	1530	5.2	1152	100	83189	9732	73457		TA
5/22/09	700	5.3	1158	104	83660	10315	73345		TA
5/22/09	1150	5.1	1154	100	83600	10886	72714		TA
5/28/09	0844	5.4	1154	101	82444	9801	72643		NW
5/28/09	1414	5.4	1152	99	81176	9309	71867		NW

 Reviewed By: Cheryl P.

 Date: 6/1/09

Function Check Form

Ratemeter: Ludlum 2221Serial No. 108878Cal. Due Date: 5/13/10Detector: Ludlum 44-10Serial No. PR150642Cal. Due Date: 5/13/10Source: Cs-137Activity: 5 μ CiSerial No. ~~15~~ 7771Comments: FC Done SW of mine site off 566

Date	Time	Battery	High Voltage	Threshold	Gross Counts	Background	Net Counts	Efficiency	Initial
5/18/09	11:45	5.9	1150	105	83720	10654	73066		TA
5/18/09	1645	5.8	1154	114	83093	10686	72407		TA
5/19/09	0700	5.9	1178	127	84217	11225			TA
5/19/09	0700	5.9	1187	100	85498	11476	74022		TA
5/19/09	1630	5.4	1184	101	84780	11200	73580	N	TA
5/20/09	0700	5.5	1158	100	83352	11188	72164	A	TA
5/20/09	1440	5.6	1147	93	82755	10715	72040		TA
5/21/09	0715	5.7	1147	101	84338	10907	73431		TA
5/21/09	1530	5.6	1146	101	81980	10098	71150		TA
5/22/09	0700	5.7	1148	102	84924	11557	73367		TA
5/22/09	11:55	5.6	1148	101	84105	11551	72554		TA

u adj.

Reviewed By: cramp LDate: 6/1/09

Function Check Form

Ratemeter: Ludlum 2221

Serial No. 108878

Cal. Due Date: 7/2/10

Detector: Ludlum 44-10

Serial No. PR150642

Cal. Due Date: 7/2/10

Source: Cs-137

Activity: 5 μ ci

Serial No. 77

Comments: FC Done SW of site off 566

Date	Time	Battery	High Voltage	Threshold	Gross Counts	Background	Net Counts	Efficiency	Initial
7/7/09	0945	5.3	1145	102	87068	10443	76625	N	M/S
7/7/09	1345	5.2	1143	103	86873	10494	76379	*	M/S

Reviewed By: Chen P L

Date: 7/15/09



Function Check Form

Rate meter: Ludlum 2221

Serial No. 147753

Cal. Due Date: 7/2/10

Detector: Ludlum 44-10

Serial No. PR122612

Cal. Due Date: 7/2/10

Source: CS-137

Activity: 5, 10, 15

Serial No. 77

SOURCE DATE:

Comments: FC done SW of site off 566

DISTANCE FROM DETECTOR TO SOURCE $\sim 6''$

[illegible]

Reviewed By: clay p. h

Date: 7/15/09



Function Check Form

Ratemeter: Ludlum 2221Serial No. 190206Cal. Due Date: 5/13/10Detector: Ludlum 44-10Serial No. PR122612Cal. Due Date: 5/13/10Source: Cs - 137Activity: 5 μ CiSerial No. 77Comments: Function check done off Hwy 566 SW from site.

Date	Time	Battery	High Voltage	Threshold	Gross Counts	Background	Net Counts	Efficiency	Initial
5/18/09	11:45	5.7	1096	100	86236	10793	75443	N/A	TA
5/18/09	1645	5.6	1096	100	84486	10724	73762		TA
5/19/09	0700	5.7	1103	101	87736	11114	76822		TA
5/19/09	1630	5.6	1095	100	87057	10569	76488		TA
5/20/09	0700	5.6	1102	101	84258	11245	73013		TA
5/20/09	1715	5.5	1100	100	85115	11015	74100		TA
5/21/09	0730	5.6	1102	101	86711	11257	75454		TA
5/21/09	1530	5.4	1100	101	87141	10618	76523		TA
5/22/09	0700	5.4	1101	101	TA 86542	11456	75086		TA

Reviewed By: Clark P. 2Date: 7/15/09

Daily Function Check Form for PIC

PIC Model RSS-133

Serial No. 07500KM1

Site: Old Church Rock Mine

Source: Cs-137

Activity: 5µCi

Cal. Due Date 6/19/09

Serial No. MS 77 TA

Placement of Source: Top of PIC

Function Check Location off Hwy 566 SW from site. PIC left in vehicle during FC

Notes: _____

Date mm:dd:yy	Batteries Charged (Y/N)	Start Time (hh:mm)	Stop Time (hh:mm)	Approx Exposure Rate (µR/h) <i>MA</i>	Integrated Exposure (µR)	Calculated Exposure Rate (µR/h) <i>MA</i>
5/21/09	Inverter used	0755	800	0.0119 11.9	—	0.0119 11.9
<i>Cs</i> 5/21/09	" "	0801	0804	38.6	—	38.6
5/22/09	" "	0729	0731	12.9	—	12.9
<i>Cs</i> 5/22/09	" "	0732	0734	40.4	—	40.4
5/28/09	" "	0900	0905	11.9	—	11.9
<i>Cs</i> 5/28/09	" "	0906	0909	38.8	—	38.8

Reviewed By: *mf*

Date: 6/03/09

*Cs DENOTES FUNCTION CHECK w/
Cs-137 SOURCE, ELSE NO SOURCE*



Function Check Form

Ratemeter: Ludlum 2221

Serial No. 190166

Cal. Due Date: 9/16/10

Detector: Ludlum 44-10

Serial No. PR198936

Cal. Due Date: 9/16/10

Source: Cs-137

Activity: 5 μ Ci on 01/2004

Serial No. 77

Comments: FC Done off Highway 566

Date	Time	Battery	High Voltage	Threshold	Gross Counts	Background	Net Counts	Efficiency	Initial
9/22	13:15	5.8	1150	100	81496	9793	71703	N	TA
9/22	15:30	5.7	1149	100	80631	9650	72981	A	TA

Reviewed By: Charles

Date: 9/24/09

Appendix C
Soil Sample Results

Total URANIUM

Method SW6020

Sample Results

Lab Name: ALS Laboratory Group -- FC

Client Name: Environmental Restoration Group, Inc.

Client Project ID:

Work Order Number: 0906096

Reporting Basis: Dry Weight

Final Volume: 100 ml

Matrix: SOIL

Result Units: MG/G

Client Sample ID	Lab ID	Date Collected	Date Prepared	Date Analyzed	Percent Moisture	Dilution Factor	Result	Reporting Limit	IDL	Flag	Sample Aliquot
SID-01	0906096-1	6/5/2009	6/17/2009	06/19/2009	N/A	50	0.003	0.00005	0.0000022		1.0036 g
SID-06	0906096-2	6/5/2009	6/17/2009	06/19/2009	N/A	50	0.014	0.00005	0.0000022		1.0074 g
SID-07	0906096-3	6/5/2009	6/17/2009	06/19/2009	N/A	50	0.029	0.00005	0.0000022		1.0027 g
SID-08	0906096-4	6/5/2009	6/17/2009	06/19/2009	N/A	50	0.0039	0.00005	0.0000022		1.0022 g
SID-09	0906096-5	6/5/2009	6/17/2009	06/19/2009	N/A	50	0.0089	0.00005	0.0000022		1.0072 g
SID-10	0906096-6	6/5/2009	6/17/2009	06/19/2009	N/A	50	0.034	0.00005	0.0000022		1.0036 g
SID-12	0906096-7	6/5/2009	6/17/2009	06/19/2009	N/A	50	0.033	0.00005	0.0000022		1.0036 g
SID-12D	0906096-8	6/5/2009	6/17/2009	06/19/2009	N/A	50	0.03	0.00005	0.0000022		1.0019 g
SID-14	0906096-9	6/5/2009	6/17/2009	06/19/2009	N/A	50	0.013	0.00005	0.0000022		1.0061 g
SID-14D	0906096-10	6/5/2009	6/17/2009	06/19/2009	N/A	50	0.017	0.00005	0.0000022		1.0017 g
SID-20	0906096-11	6/5/2009	6/17/2009	06/19/2009	N/A	50	0.035	0.00005	0.0000022		1.0021 g
SID-21	0906096-12	6/5/2009	6/17/2009	06/19/2009	N/A	50	0.0026	0.00005	0.0000022		1.0016 g
SID-25	0906096-13	6/5/2009	6/17/2009	06/19/2009	N/A	50	0.021	0.00005	0.0000022		1.0011 g
SID-23	0906096-14	6/5/2009	6/17/2009	06/19/2009	N/A	50	0.0022	0.00005	0.0000022		1.0014 g
SID-24	0906096-15	6/5/2009	6/17/2009	06/19/2009	N/A	500	0.22	0.0005	0.000022		1.0049 g
SID-26	0906096-16	6/5/2009	6/17/2009	06/19/2009	N/A	100	0.055	0.0001	0.0000045		1.0015 g
SID-28	0906096-17	6/5/2009	6/17/2009	06/19/2009	N/A	50	0.017	0.00005	0.0000022		1.0068 g

Comments:

1. ND or U = Not Detected at or above the client requested detection limit.

Data Package ID: IM0906096-1

Date Printed: Thursday, June 25, 2009

ALS Laboratory Group -- FC

LIMS Version: 6.271A

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Gamma Spectroscopy Results

PAI 713 Rev 10

Sample Results

Lab Name: ALS Laboratory Group -- FC

Work Order Number: 0906096

Client Name: Environmental Restoration Group, Inc.

ClientProject ID:

Field ID: SID-01	Sample Matrix: SOIL	Prep Batch: GS090620-2	Final Aliquot: 173 g
Lab ID: 0906096-1	Prep SOP: PAI 739 Rev 9	QCBatchID: GS090620-2-1	Prep Basis: Dry Weight
Library: RA226.LIB	Date Collected: 05-Jun-09	Run ID: GS090620-2A	Moisture(%): NA
	Date Prepared: 20-Jun-09	Count Time: 30 minutes	Result Units: pCi/g
	Date Analyzed: 11-Jul-09	Report Basis: Dry Weight	File Name: 090938d04A

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
13982-63-3	Ra-226	1.45 +/- 0.33	0.48	0.2	M3,G

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC or less than the associated TPU

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

BDL - Below Detection Limit

SQ - Spectral quality prevents accurate quantitation.

SI - Nuclide identification and/or quantitation is tentative.

TI - Nuclide identification is tentative.

R - Nuclide has exceeded 8 half-lives.

G - Sample density differs by more than 15% of LCS density.

Data Package ID: GSS0906096-1

Gamma Spectroscopy Results

PAI 713 Rev 10

Sample Results

Lab Name: ALS Laboratory Group -- FC

Work Order Number: 0906096

Client Name: Environmental Restoration Group, Inc.

ClientProject ID:

Field ID: SID-01
Lab ID: 0906096-1

Library: FANP.LIB

Sample Matrix: SOIL
Prep SOP: PAI 739 Rev 9

Date Collected: 05-Jun-09

Date Prepared: 20-Jun-09

Date Analyzed: 11-Jul-09

Prep Batch: GS090620-2
QCBatchID: GS090620-2-1

Run ID: GS090620-2A

Count Time: 30 minutes

Report Basis: Dry Weight

Final Aliquot: 173 g
Prep Basis: Dry Weight
Moisture(%): NA
Result Units: pCi/g
File Name: 090938d04

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
14331-83-0	Ac-228	1.73 +/- 0.74	0.84		G, TI
13966-00-2	K-40	16.6 +/- 4.0	2.2		G
15100-28-4	Pa-234m	4 +/- 21	39		U, G
15065-10-8	Th-234	0.1 +/- 1.5	2.7		U, G
14913-50-9	Tl-208	0.25 +/- 0.15	0.21		G

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC or less than the associated TPU

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

SQ - Spectral quality prevents accurate quantitation.

SI - Nuclide identification and/or quantitation is tentative.

TI - Nuclide identification is tentative.

R - Nuclide has exceeded 8 half-lives.

G - Sample density differs by more than 15% of LCS density.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

BDL - Below Detection Limit

Data Package ID: GSS0906096-1

Gamma Spectroscopy Results

PAI 713 Rev 10

Sample Results

Lab Name: ALS Laboratory Group -- FC

Work Order Number: 0906096

Client Name: Environmental Restoration Group, Inc.

ClientProject ID:

Field ID: SID-06	Sample Matrix: SOIL	Prep Batch: GS090620-2	Final Aliquot: 167 g
Lab ID: 0906096-2	Prep SOP: PAI 739 Rev 9	QCBatchID: GS090620-2-1	Prep Basis: Dry Weight
Library: RA226.LIB	Date Collected: 05-Jun-09	Run ID: GS090620-2A	Moisture(%): NA
	Date Prepared: 20-Jun-09	Count Time: 30 minutes	Result Units: pCi/g
	Date Analyzed: 11-Jul-09	Report Basis: Dry Weight	File Name: 091061d07A

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
13982-63-3	Ra-226	15.3 +/- 2.0	0.9	0.2	M3,G

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC or less than the associated TPU
Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.
Y2 - Chemical Yield outside default limits.
LT - Result is less than Requested MDC, greater than sample specific MDC.
M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.
M - The requested MDC was not met.

SQ - Spectral quality prevents accurate quantitation.
SI - Nuclide identification and/or quantitation is tentative.
TI - Nuclide identification is tentative.
R - Nuclide has exceeded 8 half-lives.
G - Sample density differs by more than 15% of LCS density.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)
MDC - Minimum Detectable Concentration (see PAI SOP 709)
BDL - Below Detection Limit

Data Package ID: GSS0906096-1

Gamma Spectroscopy Results

PAI 713 Rev 10

Sample Results

Lab Name: ALS Laboratory Group -- FC

Work Order Number: 0906096

Client Name: Environmental Restoration Group, Inc.

ClientProject ID:

Field ID: SID-06

Lab ID: 0906096-2

Library: FANP.LIB

Sample Matrix: SOIL

Prep SOP: PAI 739 Rev 9

Date Collected: 05-Jun-09

Date Prepared: 20-Jun-09

Date Analyzed: 11-Jul-09

Prep Batch: GS090620-2

QCBatchID: GS090620-2-1

Run ID: GS090620-2A

Count Time: 30 minutes

Report Basis: Dry Weight

Final Aliquot: 167 g

Prep Basis: Dry Weight

Moisture(%): NA

Result Units: pCi/g

File Name: 091061d07

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
14331-83-0	Ac-228	0.93 +/- 0.90	1.42		U,G
13966-00-2	K-40	12.4 +/- 4.2	4.8		G
15100-28-4	Pa-234m	-16 +/- 43	80		U,G
15065-10-8	Th-234	6.3 +/- 3.6	5.6		G,TI
14913-50-9	Tl-208	0.32 +/- 0.27	0.43		U,G

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC or less than the associated TPU

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

BDL - Below Detection Limit

SQ - Spectral quality prevents accurate quantitation.

SI - Nuclide identification and/or quantitation is tentative.

TI - Nuclide identification is tentative.

R - Nuclide has exceeded 8 half-lives.

G - Sample density differs by more than 15% of LCS density.

Data Package ID: GSS0906096-1

Date Printed: Wednesday, July 15, 2009

ALS Laboratory Group -- FC

LIMS Version: 6.279A

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Gamma Spectroscopy Results

PAI 713 Rev 10

Sample Results

Lab Name: ALS Laboratory Group -- FC

Work Order Number: 0906096

Client Name: Environmental Restoration Group, Inc.

ClientProject ID:

Field ID: SID-07
Lab ID: 0906096-3

Library: RA226.LIB

Sample Matrix: SOIL

Prep SOP: PAI 739 Rev 9

Date Collected: 05-Jun-09

Date Prepared: 20-Jun-09

Date Analyzed: 11-Jul-09

Prep Batch: GS090620-2

QCBatchID: GS090620-2-1

Run ID: GS090620-2A

Count Time: 30 minutes

Report Basis: Dry Weight

Final Aliquot: 164 g

Prep Basis: Dry Weight

Moisture(%): NA

Result Units: pCi/g

File Name: 090836d08A

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
13982-63-3	Ra-226	30.1 +/- 3.7	0.9	0.2	M3,G

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC or less than the associated TPU

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

SQ - Spectral quality prevents accurate quantitation.

SI - Nuclide identification and/or quantitation is tentative.

TI - Nuclide identification is tentative.

R - Nuclide has exceeded 8 half-lives.

G - Sample density differs by more than 15% of LCS density.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

BDL - Below Detection Limit

Data Package ID: GSS0906096-1

Date Printed: Wednesday, July 15, 2009

ALS Laboratory Group -- FC

LIMS Version: 6.279A

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Gamma Spectroscopy Results

PAI 713 Rev 10

Sample Results

Lab Name: ALS Laboratory Group -- FC

Work Order Number: 0906096

Client Name: Environmental Restoration Group, Inc.

ClientProject ID:

Field ID: SID-07

Lab ID: 0906096-3

Library: FANP.LIB

Sample Matrix: SOIL

Prep SOP: PAI 739 Rev 9

Date Collected: 05-Jun-09

Date Prepared: 20-Jun-09

Date Analyzed: 11-Jul-09

Prep Batch: GS090620-2

QCBatchID: GS090620-2-1

Run ID: GS090620-2A

Count Time: 30 minutes

Report Basis: Dry Weight

Final Aliquot: 164 g

Prep Basis: Dry Weight

Moisture(%): NA

Result Units: pCi/g

File Name: 090836d08

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
14331-83-0	Ac-228	1.12 +/- 0.85	1.28		U,G
13966-00-2	K-40	19.9 +/- 4.9	4.4		G
15100-28-4	Pa-234m	15 +/- 36	62		U,G
15065-10-8	Th-234	4.2 +/- 1.8	3.0		G
14913-50-9	Tl-208	0.20 +/- 0.18	0.28		U,G

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC or less than the associated TPU

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

BDL - Below Detection Limit

SQ - Spectral quality prevents accurate quantitation.

SI - Nuclide identification and/or quantitation is tentative.

TI - Nuclide identification is tentative.

R - Nuclide has exceeded 8 half-lives.

G - Sample density differs by more than 15% of LCS density.

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Gamma Spectroscopy Results

PAI 713 Rev 10

Sample Results

Lab Name: ALS Laboratory Group -- FC

Work Order Number: 0906096

Client Name: Environmental Restoration Group, Inc.

ClientProject ID:

Field ID: SID-08	Sample Matrix: SOIL	Prep Batch: GS090620-2	Final Aliquot: 191 g
Lab ID: 0906096-4	Prep SOP: PAI 739 Rev 9	QCBatchID: GS090620-2-1	Prep Basis: Dry Weight
Library: RA226.LIB	Date Collected: 05-Jun-09	Run ID: GS090620-2A	Moisture(%): NA
	Date Prepared: 20-Jun-09	Count Time: 30 minutes	Result Units: pCi/g
	Date Analyzed: 11-Jul-09	Report Basis: Dry Weight	File Name: 090617d10A

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
13982-63-3	Ra-226	1.36 +/- 0.32	0.53	0.2	M3

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC or less than the associated TPU

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

BDL - Below Detection Limit

SQ - Spectral quality prevents accurate quantitation.

SI - Nuclide identification and/or quantitation is tentative.

TI - Nuclide identification is tentative.

R - Nuclide has exceeded 8 half-lives.

G - Sample density differs by more than 15% of LCS density.

Data Package ID: GSS0906096-1

Gamma Spectroscopy Results

PAI 713 Rev 10

Sample Results

Lab Name: ALS Laboratory Group -- FC

Work Order Number: 0906096

Client Name: Environmental Restoration Group, Inc.

ClientProject ID:

Field ID: SID-08
Lab ID: 0906096-4

Library: FANP.LIB

Sample Matrix: SOIL
Prep SOP: PAI 739 Rev 9

Date Collected: 05-Jun-09

Date Prepared: 20-Jun-09

Date Analyzed: 11-Jul-09

Prep Batch: GS090620-2

QCBatchID: GS090620-2-1

Run ID: GS090620-2A

Count Time: 30 minutes

Report Basis: Dry Weight

Final Aliquot: 191 g

Prep Basis: Dry Weight

Moisture(%): NA

Result Units: pCi/g

File Name: 090617d10

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
14331-83-0	Ac-228	1.62 +/- 0.57	0.85		TI
13966-00-2	K-40	17.2 +/- 4.1	3.2		
15100-28-4	Pa-234m	3 +/- 22	40		U
15065-10-8	Th-234	-0.3 +/- 2.2	3.9		U
14913-50-9	Tl-208	0.30 +/- 0.16	0.22		

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC or less than the associated TPU

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

SQ - Spectral quality prevents accurate quantitation.

SI - Nuclide identification and/or quantitation is tentative.

TI - Nuclide identification is tentative.

R - Nuclide has exceeded 8 half-lives.

G - Sample density differs by more than 15% of LCS density.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

BDL - Below Detection Limit

Data Package ID: GSS0906096-1

Gamma Spectroscopy Results

PAI 713 Rev 10

Sample Results

Lab Name: ALS Laboratory Group -- FC

Work Order Number: 0906096

Client Name: Environmental Restoration Group, Inc.

ClientProject ID:

Field ID: SID-09	Sample Matrix: SOIL	Prep Batch: GS090620-2	Final Aliquot: 184 g
Lab ID: 0906096-5	Prep SOP: PAI 739 Rev 9	QCBatchID: GS090620-2-1	Prep Basis: Dry Weight
Library: RA226.LIB	Date Collected: 05-Jun-09	Run ID: GS090620-2A	Moisture(%): NA
	Date Prepared: 20-Jun-09	Count Time: 30 minutes	Result Units: pCi/g
	Date Analyzed: 11-Jul-09	Report Basis: Dry Weight	File Name: 090939d04A

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
13982-63-3	Ra-226	3.04 +/- 0.49	0.40	0.2	M3

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC or less than the associated TPU
Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.
Y2 - Chemical Yield outside default limits.
LT - Result is less than Requested MDC, greater than sample specific MDC.
M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.
M - The requested MDC was not met.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)
MDC - Minimum Detectable Concentration (see PAI SOP 709)
BDL - Below Detection Limit

SQ - Spectral quality prevents accurate quantitation.
SI - Nuclide identification and/or quantitation is tentative.
TI - Nuclide identification is tentative.
R - Nuclide has exceeded 8 half-lives.
G - Sample density differs by more than 15% of LCS density.

Data Package ID: GSS0906096-1

Gamma Spectroscopy Results

PAI 713 Rev 10

Sample Results

Lab Name: ALS Laboratory Group -- FC

Work Order Number: 0906096

Client Name: Environmental Restoration Group, Inc.

ClientProject ID:

Field ID: SID-09	Sample Matrix: SOIL	Prep Batch: GS090620-2	Final Aliquot: 184 g
Lab ID: 0906096-5	Prep SOP: PAI 739 Rev 9	QCBatchID: GS090620-2-1	Prep Basis: Dry Weight
Library: FANP.LIB	Date Collected: 05-Jun-09	Run ID: GS090620-2A	Moisture(%): NA
	Date Prepared: 20-Jun-09	Count Time: 30 minutes	Result Units: pCi/g
	Date Analyzed: 11-Jul-09	Report Basis: Dry Weight	File Name: 090939d04

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
14331-83-0	Ac-228	1.41 +/- 0.47	0.77		
13966-00-2	K-40	14.3 +/- 3.6	2.5		
15100-28-4	Pa-234m	15 +/- 20	33		U
15065-10-8	Th-234	4.6 +/- 3.1	4.8		U
14913-50-9	Tl-208	0.42 +/- 0.17	0.20		

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC or less than the associated TPU

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

BDL - Below Detection Limit

SQ - Spectral quality prevents accurate quantitation.

SI - Nuclide identification and/or quantitation is tentative.

TI - Nuclide identification is tentative.

R - Nuclide has exceeded 8 half-lives.

G - Sample density differs by more than 15% of LCS density.

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Gamma Spectroscopy Results

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Sample Results

Lab Name: ALS Laboratory Group -- FC

Work Order Number: 0906096

Client Name: Environmental Restoration Group, Inc.

ClientProject ID:

Field ID: SID-10	Sample Matrix: SOIL	Prep Batch: GS090620-2	Final Aliquot: 216 g
Lab ID: 0906096-6	Prep SOP: PAI 739 Rev 9	QC Batch ID: GS090620-2-1	Prep Basis: Dry Weight
Library: RA226.LIB	Date Collected: 05-Jun-09	Run ID: GS090620-2A	Moisture(%): NA
	Date Prepared: 20-Jun-09	Count Time: 120 minutes	Result Units: pCi/g
	Date Analyzed: 11-Jul-09	Report Basis: Dry Weight	File Name: 091065d07A

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
13982-63-3	Ra-226	122 +/- 14	1	0.2	M3

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC or less than the associated TPU

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

M3 - The requested MDC was not met, but the reported activity is greater than the reported MDC.

M - The requested MDC was not met.

Abbreviations:

TPU - Total Propagated Uncertainty (see PAI SOP 743)

MDC - Minimum Detectable Concentration (see PAI SOP 709)

BDL - Below Detection Limit

SQ - Spectral quality prevents accurate quantitation.

SI - Nuclide identification and/or quantitation is tentative.

TI - Nuclide identification is tentative.

R - Nuclide has exceeded 8 half-lives.

G - Sample density differs by more than 15% of LCS density.

Data Package ID: GSS0906096-1

Gamma Spectroscopy Results

PAI 713 Rev 10

Sample Results

Lab Name: ALS Laboratory Group -- FC

Work Order Number: 0906096

Client Name: Environmental Restoration Group, Inc.

ClientProject ID:

Field ID: SID-10	Sample Matrix: SOIL	Prep Batch: GS090620-2	Final Aliquot: 216 g
Lab ID: 0906096-6	Prep SOP: PAI 739 Rev 9	QCBatchID: GS090620-2-1	Prep Basis: Dry Weight
Library: FANP.LIB	Date Collected: 05-Jun-09	Run ID: GS090620-2A	Moisture(%): NA
	Date Prepared: 20-Jun-09	Count Time: 120 minutes	Result Units: pCi/g
	Date Analyzed: 11-Jul-09	Report Basis: Dry Weight	File Name: 091065d07

CASNO	Target Nuclide	Result +/- 2 s TPU	MDC	Requested MDC	Lab Qualifier
14331-83-0	Ac-228	0.88 +/- 0.70	1.36		U
13966-00-2	K-40	17.0 +/- 3.7	4.5		
15100-28-4	Pa-234m	21 +/- 36	60		U
15065-10-8	Th-234	11.3 +/- 4.3	6.9		TI
14913-50-9	Tl-208	0.31 +/- 0.21	0.35		U

Comments:

Qualifiers/Flags:

U - Result is less than the sample specific MDC or less than the associated TPU

Y1 - Chemical Yield is in control at 100-110%. Quantitative Yield is assumed.

Y2 - Chemical Yield outside default limits.

LT - Result is less than Requested MDC, greater than sample specific MDC.

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Abbreviations:

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MDC - Minimum Detectable Concentration (see PAI SOP 709)

BDL - Below Detection Limit

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TI - Nuclide identification is tentative.

R - Nuclide has exceeded 8 half-lives.

G - Sample density differs by more than 15% of LCS density.

Data Package ID: GSS0906096-1