USEPA
DateShipped: 7/17/2017
CarrierName: FedEx
AirbillNo:

CHAIN OF CUSTODY RECORD
Case #: 445
Contact Name: Patrick Buster
Contact Phone: 903-348-3917

No: 2-071417-134807-0007
Cooler #:
Lab: Eberline Analytical
Lab Phone: 865-481-0683

Lab #	Sample #	Analyses	Matrix	Collected	Sample Time	Numb Cont	Container	Lab QC	Sample_Remarks
	HTC-A01-S001-0006-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/13/2017	13:36	1	16 oz Poly Jar	N	1031.2 g
	HTC-A01-S001-0612-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/13/2017	13:33	1	16 oz Poly Jar	N	909.5 g
	HTC-A01-S001-1218-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/13/2017	13:30	1	16 oz Poly Jar	N	925.5 g
	HTC-A01-S001-1824-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/13/2017	13:27	1	16 oz Poly Jar	N	994.1 g
	HTC-A01-S001-2430-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/13/2017	13:24	1	16 oz Poly Jar	N	838.8 g
	HTC-A01-S001-3036-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/13/2017	13:21	1	16 oz Poly Jar	N	740.9 g
	HTC-A01-S001-3642-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/13/2017	13:18	1	16 oz Poly Jar	N	967.2 g
	HTC-A01-S001-4248-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/13/2017	13:15	1	16 oz Poly Jar	N	949.5 g
	HTC-A01-S002-0006-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/13/2017	11:26	1	16 oz Poly Jar	N	971.9 g
	HTC-A01-S002-0612-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/13/2017	11:23	1	16 oz Poly Jar	N	1051.7 g
	HTC-A01-S002-1218-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/13/2017	11:20	1	16 oz Poly Jar	N	1039.9 g
	HTC-A01-S002-1824-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/13/2017	11:17	1	16 oz Poly Jar	N	1049.4 g
	HTC-A01-S002-2430-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/13/2017	11:14	1	16 oz Poly Jar	N	830.7 g
	HTC-A01-S002-2430-02	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/13/2017	11:14	1	16 oz Poly Jar	N	830.7 g
	HTC-A01-S002-3036-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/13/2017	11:11	1	16 oz Poly Jar	N	945.0 g
	HTC-A01-S002-3642-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/13/2017	11:08	1	16 oz Poly Jar	N	1021.0 g
	HTC-A01-S002-4248-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/13/2017	11:05	1	16 oz Poly Jar	N	960.8 g
	HTC-A01-S003-0006-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/13/2017	10:44	1	16 oz Poly Jar	N	1009.8 g
	HTC-A01-S003-0612-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/13/2017	10:41	1	16 oz Poly Jar	N	1024.0 g
	HTC-A01-S003-1218-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/13/2017	10:40	1	16 oz Poly Jar	N	1089.6 g
	HTC-A01-S003-1824-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/13/2017	10:38	1	16 oz Poly Jar	N	1043.5 g
	HTC-A01-S003-2430-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/13/2017	10:35	1	16 oz Poly Jar	N	964.0 g

Special Instructions: Gamma Spec(EPA 901.0) analysis in jar "as is" for Ra-226 using 186keV peak for samples. From U decay chain "as is": Th-234, Pa-234 or Pa-234m, Pb-214, Bi-214. From the Th decay chain "as is": Ra-228 and/or Ac-228, Ra-224, Pb-212, Bi-212, Tl-208. For Gamma Spec (homogenized) after 21 day ingrowth: Ra-226 using Bi-214 and/or Pb-214. From U decay chain: Th-234, Pa-234 or Pa-234m. From Th decay chain: Ra-228 and/or Ac-228, Ra-224, Pb-212, Bi-212, Tl-208. Other radionuclides: Cs-137, K-40. Alpha Spec: Iso U (EPA 908.0 Modified): U-233/234, U-235/236, U-238. Iso Th (EPA 907.0 Modified): Th-230, 232, 228. No rocks should be removed, all samples to be pulverized.

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Contact Phone: 903-348-3917

No: 2-071417-134807-0007
Cooler #:
Lab: Eberline Analytical
Lab Phone: 865-481-0683

Lab #	Sample #	Analyses	Matrix	Collected	Sample Time	Numb Cont	Container	Lab QC	Sample_Remarks
	HTC-A01-S003-3036-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/13/2017	10:32	1	16 oz Poly Jar	N	1017.2 g
	HTC-A01-S003-3642-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/13/2017	10:29	1	16 oz Poly Jar	N	935.7 g
	HTC-A01-S003-4248-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/13/2017	10:26	1	16 oz Poly Jar	N	860.7 g
	HTC-A01-S004-0006-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/13/2017	14:21	1	16 oz Poly Jar	N	805.0 g
	HTC-A01-S004-0612-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/13/2017	14:18	1	16 oz Poly Jar	N	998.4 g
	HTC-A01-S004-1218-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/13/2017	14:15	1	16 oz Poly Jar	N	985.4 g
	HTC-A01-S004-1824-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/13/2017	14:12	1	16 oz Poly Jar	N	818.4 g
	HTC-A01-S004-2430-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/13/2017	14:09	1	16 oz Poly Jar	N	957.7 g
	HTC-A01-S004-3036-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/13/2017	14:06	1	16 oz Poly Jar	N	793.1 g
	HTC-A01-S004-3642-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/13/2017	14:03	1	16 oz Poly Jar	N	920.7 g
	HTC-A01-S004-4248-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/13/2017	14:00	1	16 oz Poly Jar	N	883.0 g
	HTC-A01-S005-0006-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/13/2017	10:01	1	16 oz Poly Jar	N	867.9 g
	HTC-A01-S005-0612-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/13/2017	09:58	1	16 oz Poly Jar	Y	833.8 g
	HTC-A01-S005-0612-02	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/13/2017	09:58	1	16 oz Poly Jar	N	811.8 g
	HTC-A01-S005-1218-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/13/2017	09:55	1	16 oz Poly Jar	N	950.0 g
	HTC-A01-S005-1824-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/13/2017	09:52	1	16 oz Poly Jar	N	985.3 g
	HTC-A01-S005-2430-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/13/2017	09:49	1	16 oz Poly Jar	N	808.8 g
	HTC-A01-S005-3036-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/13/2017	09:46	1	16 oz Poly Jar	N	1024.4 g
	HTC-A01-S005-3642-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/13/2017	09:43	1	16 oz Poly Jar	N	1080.9 g
	HTC-A01-S005-4248-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/13/2017	09:40	1	16 oz Poly Jar	N	973.2 g
	HTC-A01-S006-0006-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/13/2017	17:06	1	16 oz Poly Jar	N	891.6 g
	HTC-A01-S006-0612-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/13/2017	17:03	1	16 oz Poly Jar	N	940.2 g

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CHAIN OF CUSTODY RECORD
Case #: 445
Contact Name: Patrick Buster
Contact Phone: 903-348-3917

No: 2-071417-134807-0007
Cooler #:
Lab: Eberline Analytical
Lab Phone: 865-481-0683

Lab #	Sample #	Analyses	Matrix	Collected	Sample Time	Numb Cont	Container	Lab QC	Sample_Remarks
	HTC-A01-S006-1218-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/13/2017	17:00	1	16 oz Poly Jar	N	958.7 g
	HTC-A01-S006-1824-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/13/2017	16:57	1	16 oz Poly Jar	N	923.7 g
	HTC-A01-S006-2430-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/13/2017	16:54	1	16 oz Poly Jar	N	964.4 g
	HTC-A01-S006-3036-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/13/2017	16:51	1	16 oz Poly Jar	N	898.4 g
	HTC-A01-S006-3642-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/13/2017	16:48	1	16 oz Poly Jar	N	984.5 g
	HTC-A01-S006-4248-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/13/2017	16:45	1	16 oz Poly Jar	N	1012.1 g
	HTC-A01-S007-0006-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/13/2017	09:21	1	16 oz Poly Jar	N	880.6 g
	HTC-A01-S007-0612-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/13/2017	09:18	1	16 oz Poly Jar	N	821.5 g
	HTC-A01-S007-1218-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/13/2017	09:15	1	16 oz Poly Jar	N	985.0 g
	HTC-A01-S007-1824-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/13/2017	09:12	1	16 oz Poly Jar	N	996.5 g
	HTC-A01-S007-2430-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/13/2017	09:09	1	16 oz Poly Jar	N	1078.2 g
	HTC-A01-S007-3036-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/13/2017	09:06	1	16 oz Poly Jar	N	1041.1 g
	HTC-A01-S007-3642-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/13/2017	09:03	1	16 oz Poly Jar	N	1019.3 g
	HTC-A01-S007-4248-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/13/2017	09:00	1	16 oz Poly Jar	N	994.7 g
	HTC-A01-S008-0006-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/13/2017	08:21	1	16 oz Poly Jar	Y	1073.1 g
	HTC-A01-S008-0006-02	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/13/2017	08:21	1	16 oz Poly Jar	N	958.3 g
	HTC-A01-S008-0612-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/13/2017	08:18	1	16 oz Poly Jar	N	1047.0 g
	HTC-A01-S008-1218-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/13/2017	08:15	1	16 oz Poly Jar	N	918.7 g
	HTC-A01-S008-1824-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/13/2017	08:12	1	16 oz Poly Jar	N	949.7 g
	HTC-A01-S008-2430-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/13/2017	08:09	1	16 oz Poly Jar	N	1022.7 g
	HTC-A01-S008-3036-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/13/2017	08:06	1	16 oz Poly Jar	N	1071.6 g
	HTC-A01-S008-3642-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/13/2017	08:03	1	16 oz Poly Jar	N	1018.8 g

Special Instructions: Gamma Spec(EPA 901.0) analysis in jar "as is" for Ra-226 using 186keV peak for samples. From U decay chain "as is": Th-234, Pa-234 or Pa-234m, Pb-214, Bi-214. From the Th decay chain "as is": Ra-228 and/or Ac-228, Ra-224, Pb-212, Bi-212, Tl-208. For Gamma Spec (homogenized) after 21 day ingrowth: Ra-226 using Bi-214 and/or Pb-214. From U decay chain: Th-234, Pa-234 or Pa-234m. From Th decay chain: Ra-228 and/or Ac-228, Ra-224, Pb-212, Bi-212, Tl-208. Other radionuclides: Cs-137, K-40. Alpha Spec: Iso U (EPA 908.0 Modified): U-233/234, U-235/236, U-238. Iso Th (EPA 907.0 Modified): Th-230, 232, 228. No rocks should be removed, all samples to be pulverized.

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Lab #	Sample #	Analyses	Matrix	Collected	Sample Time	Numb Cont	Container	Lab QC	Sample_Remarks
	HTC-A01-S008-4248-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/13/2017	08:00	1	16 oz Poly Jar	N	1053.5 g
	HTC-A02-S001-0006-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	10:44	1	16 oz Poly Jar	Y	883.9 g
	HTC-A02-S001-0006-02	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	10:44	1	16 oz Poly Jar	N	878.1 g
	HTC-A02-S001-0612-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	10:41	1	16 oz Poly Jar	N	911.5 g
	HTC-A02-S001-1218-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	10:38	1	16 oz Poly Jar	N	938.7 g
	HTC-A02-S001-1824-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	10:35	1	16 oz Poly Jar	N	959.9 g
	HTC-A02-S001-2430-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	10:32	1	16 oz Poly Jar	N	909.3 g
	HTC-A02-S001-3036-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	10:29	1	16 oz Poly Jar	N	897.7 g
	HTC-A02-S001-3642-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	10:26	1	16 oz Poly Jar	N	880.7 g
	HTC-A02-S002-0006-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	11:57	1	16 oz Poly Jar	N	882.4 g
	HTC-A02-S002-0612-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	11:54	1	16 oz Poly Jar	N	969.6 g
	HTC-A02-S002-1218-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	11:51	1	16 oz Poly Jar	N	975.0 g
	HTC-A02-S002-1824-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	11:48	1	16 oz Poly Jar	N	886.3 g
	HTC-A02-S002-2430-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	11:45	1	16 oz Poly Jar	N	946.8 g
	HTC-A02-S002-3036-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	11:42	1	16 oz Poly Jar	N	1097.2 g
	HTC-A02-S002-3642-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	11:39	1	16 oz Poly Jar	N	1119.5 g
	HTC-A02-S002-4248-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	11:36	1	16 oz Poly Jar	N	1014.8 g
	HTC-A02-S003-0006-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	12:21	1	16 oz Poly Jar	Y	880.1 g
	HTC-A02-S003-0006-02	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	12:21	1	16 oz Poly Jar	N	863.7 g
	HTC-A02-S003-0612-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	12:18	1	16 oz Poly Jar	N	856.7 g
	HTC-A02-S003-1218-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	12:15	1	16 oz Poly Jar	N	830.1 g
	HTC-A02-S003-1824-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	12:12	1	16 oz Poly Jar	N	708.9 g

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	HTC-A02-S003-2430-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	12:09	1	16 oz Poly Jar	N	943.9 g
	HTC-A02-S003-3036-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	12:06	1	16 oz Poly Jar	N	828.3 g
	HTC-A02-S003-3642-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	12:03	1	16 oz Poly Jar	N	800.3 g
	HTC-A02-S003-4248-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	12:00	1	16 oz Poly Jar	N	736.5 g
	HTC-A02-S004-0006-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	08:29	1	16 oz Poly Jar	N	Weight N/A
	HTC-A02-S004-0612-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	08:27	1	16 oz Poly Jar	N	Weight N/A
	HTC-A02-S004-1218-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	08:25	1	16 oz Poly Jar	N	Weight N/A
	HTC-A02-S004-1824-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	08:23	1	16 oz Poly Jar	N	Weight N/A
	HTC-A02-S004-2430-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	08:21	1	16 oz Poly Jar	N	Weight N/A
	HTC-A02-S004-3036-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	08:19	1	16 oz Poly Jar	N	Weight N/A
	HTC-A02-S004-3642-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	08:17	1	16 oz Poly Jar	N	Weight N/A
	HTC-A02-S004-4248-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	08:15	1	16 oz Poly Jar	N	Weight N/A
	HTC-A03-S001-0006-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	08:26	1	16 oz Poly Jar	Y	712.01
	HTC-A03-S001-0006-02	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	08:26	1	16 oz Poly Jar	N	784.5 g
	HTC-A03-S001-0612-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	08:23	1	16 oz Poly Jar	N	852.4 g
	HTC-A03-S001-1218-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	08:20	1	16 oz Poly Jar	N	1092.2 g
	HTC-A03-S001-1824-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	08:17	1	16 oz Poly Jar	N	1084.3 g
	HTC-A03-S001-2430-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	08:14	1	16 oz Poly Jar	N	937.8 g
	HTC-A03-S001-3036-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	08:11	1	16 oz Poly Jar	N	1029.5 g
	HTC-A03-S001-3642-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	08:08	1	16 oz Poly Jar	N	826.3 g
	HTC-A03-S001-4248-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	08:05	1	16 oz Poly Jar	N	1045.3 g
	HTC-A03-S002-0006-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	09:39	1	16 oz Poly Jar	N	1029.3 g

Special Instructions: Gamma Spec(EPA 901.0) analysis in jar "as is" for Ra-226 using 186keV peak for samples. From U decay chain "as is": Th-234, Pa-234 or Pa-234m, Pb-214, Bi-214. From the Th decay chain "as is": Ra-228 and/or Ac-228, Ra-224, Pb-212, Bi-212, Tl-208. For Gamma Spec (homogenized) after 21 day ingrowth: Ra-226 using Bi-214 and/or Pb-214. From U decay chain: Th-234, Pa-234 or Pa-234m. From Th decay chain: Ra-228 and/or Ac-228, Ra-224, Pb-212, Bi-212, Tl-208. Other radionuclides: Cs-137, K-40. Alpha Spec: Iso U (EPA 908.0 Modified): U-233/234, U-235/236, U-238. Iso Th (EPA 907.0 Modified): Th-230, 232, 228. No rocks should be removed, all samples to be pulverized.

SAMPLES TRANSFERRED FROM

CHAIN OF CUSTODY #

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
all Samples all Analysis	Chad Conway - Weston	7-17-17/1600			

USEPA
DateShipped: 7/17/2017
CarrierName: FedEx
AirbillNo:

CHAIN OF CUSTODY RECORD
Case #: 445
Contact Name: Patrick Buster
Contact Phone: 903-348-3917

No: 2-071417-134807-0007
Cooler #:
Lab: Eberline Analytical
Lab Phone: 865-481-0683

Lab #	Sample #	Analyses	Matrix	Collected	Sample Time	Numb Cont	Container	Lab QC	Sample_Remarks
	HTC-A03-S002-0612-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	08:36	1	16 oz Poly Jar	N	984.2 g
	HTC-A03-S002-1218-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	08:33	1	16 oz Poly Jar	N	1005.0 g
	HTC-A03-S002-1824-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	08:27	1	16 oz Poly Jar	N	Weight N/A
	HTC-A03-S002-2430-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	08:24	1	16 oz Poly Jar	N	Weight N/A
	HTC-A03-S002-3036-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	08:21	1	16 oz Poly Jar	Y	Weight N/A
	HTC-A03-S002-3036-02	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	08:21	1	16 oz Poly Jar	N	Weight N/A
	HTC-A03-S002-3642-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	08:18	1	16 oz Poly Jar	N	1069.3 g
	HTC-A03-S002-4248-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	08:15	1	16 oz Poly Jar	N	1066.5 g
	HTC-A03-S003-0006-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	08:48	1	16 oz Poly Jar	N	Weight N/A
	HTC-A03-S003-0612-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	08:45	1	16 oz Poly Jar	N	Weight N/A
	HTC-A03-S003-1218-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	08:42	1	16 oz Poly Jar	N	Weight N/A
	HTC-A03-S003-1824-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	08:39	1	16 oz Poly Jar	N	Weight N/A
	HTC-A03-S003-2430-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	08:36	1	16 oz Poly Jar	N	Weight N/A
	HTC-A03-S003-3036-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	08:33	1	16 oz Poly Jar	N	Weight N/A
	HTC-A03-S003-3642-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	08:30	1	16 oz Poly Jar	N	Weight N/A
	HTC-A03-S003-4248-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	08:27	1	16 oz Poly Jar	N	Weight N/A
	HTC-A03-S004-0006-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/13/2017	15:51	1	16 oz Poly Jar	N	Weight N/A
	HTC-A03-S004-0612-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/13/2017	15:48	1	16 oz Poly Jar	N	Weight N/A
	HTC-A03-S004-1218-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/13/2017	15:45	1	16 oz Poly Jar	N	Weight N/A
	HTC-A03-S004-1824-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/13/2017	15:42	1	16 oz Poly Jar	N	Weight N/A
	HTC-A03-S004-2430-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/13/2017	15:39	1	16 oz Poly Jar	N	Weight N/A
	HTC-A03-S004-3036-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/13/2017	15:36	1	16 oz Poly Jar	N	Weight N/A

Special Instructions: Gamma Spec(EPA 901.0) analysis in jar "as is" for Ra-226 using 186keV peak for samples. From U decay chain "as is": Th-234, Pa-234 or Pa-234n, Pb-214, Bi-214. From the Th decay chain "as is": Ra-228 and/or Ac-228, Ra-224, Pb-212, Bi-212, Tl-208. For Gamma Spec (homogenized) after 21 day ingrowth: Ra-226 using Bi-214 and/or Pb-214. From U decay chain: Th-234, Pa-234 or Pa-234m. From Th decay chain: Ra-228 and/or Ac-228, Ra-224, Pb-212, Bi-212, Tl-208. Other radionuclides: Cs-137, K-40. Alpha Spec: Iso U (EPA 908.0 Modified): U-233/234, U-235/236, U-238. Iso Th (EPA 907.0 Modified): Th-230, 232, 228. No rocks should be removed, all samples to be pulverized.

SAMPLES TRANSFERRED FROM

CHAIN OF CUSTODY #

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
all Samples all Analysis	Chad Conway - Weston	7-17-17/1600			

USEPA
DateShipped: 7/17/2017
CarrierName: FedEx
AirbillNo:

CHAIN OF CUSTODY RECORD
Case #: 445
Contact Name: Patrick Buster
Contact Phone: 903-348-3917

No: 2-071417-134807-0007
Cooler #:
Lab: Eberline Analytical
Lab Phone: 865-481-0683

Lab #	Sample #	Analyses	Matrix	Collected	Sample Time	Numb Cont	Container	Lab QC	Sample_Remarks
	HTC-A03-S004-3642-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/13/2017	15:33	1	16 oz Poly Jar	N	Weight N/A
	HTC-A03-S004-4248-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/13/2017	15:30	1	16 oz Poly Jar	Y	Weight N/A
	HTC-A03-S004-4248-02	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/13/2017	15:30	1	16 oz Poly Jar	N	Weight N/A
	HTC-A04-S001-0006-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	10:11	1	16 oz Poly Jar	N	Weight N/A
	HTC-A04-S001-0612-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	10:08	1	16 oz Poly Jar	N	Weight N/A
	HTC-A04-S001-1218-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	10:05	1	16 oz Poly Jar	N	Weight N/A
	HTC-A04-S001-1824-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	10:02	1	16 oz Poly Jar	N	Weight N/A
	HTC-A04-S001-2430-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	09:59	1	16 oz Poly Jar	N	Weight N/A
	HTC-A04-S001-3036-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	09:56	1	16 oz Poly Jar	N	Weight N/A
	HTC-A04-S001-3642-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	09:53	1	16 oz Poly Jar	N	Weight N/A
	HTC-A04-S001-4248-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	09:50	1	16 oz Poly Jar	N	Weight N/A
	HTC-A04-S002-0006-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/16/2017	08:04	1	16 oz Poly Jar	N	Weight N/A
	HTC-A04-S002-0612-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/16/2017	08:02	1	16 oz Poly Jar	N	Weight N/A
	HTC-A04-S002-1218-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/16/2017	08:00	1	16 oz Poly Jar	N	Weight N/A
	HTC-A04-S002-1824-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/16/2017	07:58	1	16 oz Poly Jar	N	Weight N/A
	HTC-A04-S002-2430-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/16/2017	07:56	1	16 oz Poly Jar	N	Weight N/A
	HTC-A04-S002-3036-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/16/2017	07:54	1	16 oz Poly Jar	N	Weight N/A
	HTC-A04-S002-3642-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/16/2017	07:52	1	16 oz Poly Jar	N	Weight N/A
	HTC-A04-S002-4248-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/16/2017	07:50	1	16 oz Poly Jar	N	Weight N/A
	HTC-A06-S001-0006-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/16/2017	14:28	1	16 oz Poly Jar	N	Weight N/A
	HTC-A06-S001-0612-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/16/2017	14:26	1	16 oz Poly Jar	N	Weight N/A
	HTC-A06-S001-1218-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/16/2017	14:24	1	16 oz Poly Jar	N	Weight N/A

Special Instructions: Gamma Spec(EPA 901.0) analysis in jar "as is" for Ra-226 using 186keV peak for samples. From U decay chain "as is": Th-234, Pa-234 or Pa-234m, Pb-214, Bi-214. From the Th decay chain "as is": Ra-228 and/or Ac-228, Ra-224, Pb-212, Bi-212, Tl-208. For Gamma Spec (homogenized) after 21 day ingrowth: Ra-226 using Bi-214 and/or Pb-214. From U decay chain: Th-234, Pa-234 or Pa-234m. From Th decay chain: Ra-228 and/or Ac-228, Ra-224, Pb-212, Bi-212, Tl-208. Other radionuclides: Cs-137, K-40. Alpha Spec: Iso U (EPA 908.0 Modified): U-233/234, U-235/236, U-238. Iso Th (EPA 907.0 Modified): Th-230, 232, 228. No rocks should be removed, all samples to be pulverized.

SAMPLES TRANSFERRED FROM

CHAIN OF CUSTODY #

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
all Samples all analysis	Chad Conway - Weston	7-17-17/1600			

USEPA
DateShipped: 7/17/2017
CarrierName: FedEx
AirbillNo:

CHAIN OF CUSTODY RECORD
Case #: 445
Contact Name: Patrick Buster
Contact Phone: 903-348-3917

No: 2-071417-134807-0007
Cooler #:
Lab: Eberline Analytical
Lab Phone: 865-481-0683

Lab #	Sample #	Analyses	Matrix	Collected	Sample Time	Numb Cont	Container	Lab QC	Sample_Remarks
	HTC-A06-S001-1824-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/16/2017	14:22	1	16 oz Poly Jar	N	Weight N/A
	HTC-A06-S001-2430-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/16/2017	14:20	1	16 oz Poly Jar	N	Weight N/A
	HTC-A06-S001-3036-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/16/2017	14:18	1	16 oz Poly Jar	N	Weight N/A
	HTC-A06-S001-3642-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/16/2017	14:16	1	16 oz Poly Jar	N	Weight N/A
	HTC-A06-S001-4248-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/16/2017	14:14	1	16 oz Poly Jar	N	Weight N/A
	HTC-A07-S001-0006-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/16/2017	15:14	1	16 oz Poly Jar	N	Weight N/A
	HTC-A07-S001-0612-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/16/2017	15:12	1	16 oz Poly Jar	N	Weight N/A
	HTC-A07-S001-0612-02	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/16/2017	15:12	1	16 oz Poly Jar	N	Weight N/A
	HTC-A07-S001-1218-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/16/2017	15:10	1	16 oz Poly Jar	N	Weight N/A
	HTC-A07-S001-1824-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/16/2017	15:08	1	16 oz Poly Jar	N	Weight N/A
	HTC-A07-S001-2430-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/16/2017	15:06	1	16 oz Poly Jar	N	Weight N/A
	HTC-A07-S001-3036-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/16/2017	15:04	1	16 oz Poly Jar	N	Weight N/A
	HTC-A07-S001-3642-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/16/2017	15:02	1	16 oz Poly Jar	N	Weight N/A
	HTC-A07-S001-4248-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/16/2017	15:00	1	16 oz Poly Jar	N	Weight N/A
	HTC-A08-BKGD01-0006-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	16:41	1	16 oz Poly Jar	Y	Weight N/A
	HTC-A08-BKGD01-0006-02	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	16:41	1	16 oz Poly Jar	N	Weight N/A
	HTC-A08-BKGD01-0612-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	16:38	1	16 oz Poly Jar	N	Weight N/A
	HTC-A08-BKGD01-1218-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	16:35	1	16 oz Poly Jar	N	Weight N/A
	HTC-A08-BKGD01-1824-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	16:32	1	16 oz Poly Jar	N	Weight N/A
	HTC-A08-BKGD01-2430-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	16:29	1	16 oz Poly Jar	N	Weight N/A
	HTC-A08-BKGD01-3036-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	16:26	1	16 oz Poly Jar	N	Weight N/A
	HTC-A08-BKGD01-3642-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	16:23	1	16 oz Poly Jar	N	Weight N/A

Special Instructions: Gamma Spec(EPA 901.0) analysis in jar "as is" for Ra-226 using 186keV peak for samples. From U decay chain "as is": Th-234, Pa-234 or Pa-234m, Pb-214, Bi-214. From the Th decay chain "as is": Ra-228 and/or Ac-228, Ra-224, Pb-212, Bi-212, Tl-208. For Gamma Spec (homogenized) after 21 day ingrowth: Ra-226 using Bi-214 and/or Pb-214. From U decay chain: Th-234, Pa-234 or Pa-234m. From Th decay chain: Ra-228 and/or Ac-228, Ra-224, Pb-212, Bi-212, Tl-208. Other radionuclides: Cs-137, K-40. Alpha Spec: Iso U (EPA 908.0 Modified): U-233/234, U-235/236, U-238. Iso Th (EPA 907.0 Modified): Th-230, 232, 228. No rocks should be removed, all samples to be pulverized.

SAMPLES TRANSFERRED FROM

CHAIN OF CUSTODY #

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
all Samples all Analysis	Chad Conway - Weston	7-17-17/1000			

USEPA
DateShipped: 7/17/2017
CarrierName: FedEx
AirbillNo:

CHAIN OF CUSTODY RECORD
Case #: 445
Contact Name: Patrick Buster
Contact Phone: 903-348-3917

No: 2-071417-134807-0007
Cooler #:
Lab: Eberline Analytical
Lab Phone: 865-481-0683

Lab #	Sample #	Analyses	Matrix	Collected	Sample Time	Numb Cont	Container	Lab QC	Sample_Remarks
	HTC-A08-BKGD01-4248-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	16:20	1	16 oz Poly Jar	N	Weight N/A
	HTC-A08-BKGD02-0006-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	15:56	1	16 oz Poly Jar	N	Weight N/A
	HTC-A08-BKGD02-0612-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	15:53	1	16 oz Poly Jar	N	Weight N/A
	HTC-A08-BKGD02-1218-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	15:50	1	16 oz Poly Jar	N	Weight N/A
	HTC-A08-BKGD02-1824-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	15:47	1	16 oz Poly Jar	N	Weight N/A
	HTC-A08-BKGD02-2430-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	15:44	1	16 oz Poly Jar	N	Weight N/A
	HTC-A08-BKGD02-3036-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	15:41	1	16 oz Poly Jar	N	Weight N/A
	HTC-A08-BKGD02-3642-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	15:38	1	16 oz Poly Jar	N	Weight N/A
	HTC-A08-BKGD02-4248-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	15:35	1	16 oz Poly Jar	N	Weight N/A
	HTC-A08-S001-0006-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/16/2017	15:01	1	16 oz Poly Jar	N	Weight N/A
	HTC-A08-S001-0612-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/16/2017	14:58	1	16 oz Poly Jar	Y	Weight N/A
	HTC-A08-S001-0612-02	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/16/2017	14:58	1	16 oz Poly Jar	N	Weight N/A
	HTC-A08-S001-1218-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	14:55	1	16 oz Poly Jar	N	Weight N/A
	HTC-A08-S001-1824-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	14:52	1	16 oz Poly Jar	N	Weight N/A
	HTC-A08-S001-2430-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	14:49	1	16 oz Poly Jar	N	Weight N/A
	HTC-A08-S001-3036-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	14:46	1	16 oz Poly Jar	N	Weight N/A
	HTC-A08-S001-3642-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	14:43	1	16 oz Poly Jar	N	Weight N/A
	HTC-A08-S001-4248-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/15/2017	14:40	1	16 oz Poly Jar	N	Weight N/A
	HTC-A09-S001-0006-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/16/2017	12:50	1	16 oz Poly Jar	Y	Weight N/A
	HTC-A09-S001-0006-02	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/16/2017	12:50	1	16 oz Poly Jar	N	Weight N/A
	HTC-A09-S001-0612-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/16/2017	12:48	1	16 oz Poly Jar	N	Weight N/A
	HTC-A09-S001-1218-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/16/2017	12:46	1	16 oz Poly Jar	N	Weight N/A

Special Instructions: Gamma Spec(EPA 901.0) analysis in jar "as is" for Ra-226 using 186keV peak for samples. From U decay chain "as is": Th-234, Pa-234 or Pa-234m, Pb-214, Bi-214. From the Th decay chain "as is": Ra-228 and/or Ac-228, Ra-224, Pb-212, Bi-212, Tl-208. For Gamma Spec (homogenized) after 21 day ingrowth: Ra-226 using Bi-214 and/or Pb-214. From U decay chain: Th-234, Pa-234 or Pa-234m. From Th decay chain: Ra-228 and/or Ac-228, Ra-224, Pb-212, Bi-212, Tl-208. Other radionuclides: Cs-137, K-40. Alpha Spec: Iso U (EPA 908.0 Modified): U-233/234, U-235/236, U-238. Iso Th (EPA 907.0 Modified): Th-230, 232, 228. No rocks should be removed, all samples to be pulverized.

SAMPLES TRANSFERRED FROM

CHAIN OF CUSTODY #

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
all Samples all Analysis	Chad Conway-Weston	7-17-17/1600			

USEPA
DateShipped: 7/17/2017
CarrierName: FedEx
AirbillNo:

CHAIN OF CUSTODY RECORD
Case #: 445
Contact Name: Patrick Buster
Contact Phone: 903-348-3917

No: 2-071417-134807-0007
Cooler #:
Lab: Eberline Analytical
Lab Phone: 865-481-0683

Lab #	Sample #	Analyses	Matrix	Collected	Sample Time	Numb Cont	Container	Lab QC	Sample_Remarks
	HTC-A09-S001-1824-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/16/2017	12:44	1	16 oz Poly Jar	N	Weight N/A
	HTC-A09-S001-2430-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/16/2017	12:42	1	16 oz Poly Jar	N	Weight N/A
	HTC-A09-S001-3036-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/16/2017	12:39	1	16 oz Poly Jar	N	Weight N/A
	HTC-A09-S001-3642-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/16/2017	12:37	1	16 oz Poly Jar	N	Weight N/A
	HTC-A09-S001-4248-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/16/2017	12:35	1	16 oz Poly Jar	N	Weight N/A
	HTC-A09-S002-0006-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/16/2017	09:48	1	16 oz Poly Jar	N	Weight N/A
	HTC-A09-S002-0612-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/16/2017	09:46	1	16 oz Poly Jar	N	Weight N/A
	HTC-A09-S002-1218-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/16/2017	09:44	1	16 oz Poly Jar	N	Weight N/A
	HTC-A09-S002-1824-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/16/2017	09:42	1	16 oz Poly Jar	N	Weight N/A
	HTC-A09-S002-2430-01	Gamma Spec (Modified), Isotopic Th and U	Soil/Rock/Slag	5/16/2017	09:40	1	16 oz Poly Jar	N	Weight N/A

Chad Conway

Special Instructions: Gamma Spec(EPA 901.0) analysis in jar "as is" for Ra-226 using 186keV peak for samples. From U decay chain "as is": Th-234, Pa-234 or Pa-234m, Pb-214, Bi-214. From the Th decay chain "as is": Ra-228 and/or Ac-228, Ra-224, Pb-212, Bi-212, Tl-208. For Gamma Spec (homogenized) after 21 day ingrowth: Ra-226 using Bi-214 and/or Pb-214. From U decay chain: Th-234, Pa-234 or Pa-234m. From Th decay chain: Ra-228 and/or Ac-228, Ra-224, Pb-212, Bi-212, Tl-208. Other radionuclides: Cs-137, K-40. Alpha Spec: Iso U (EPA 908.0 Modified): U-233/234, U-235/236, U-238. Iso Th (EPA 907.0 Modified): Th-230, 232, 228. No rocks should be removed, all samples to be pulverized.

SAMPLES TRANSFERRED FROM

CHAIN OF CUSTODY #

Items/Reason	Relinquished by (Signature and Organization)	Date/Time	Received by (Signature and Organization)	Date/Time	Sample Condition Upon Receipt
all Samples all Analysis	Chad Conway-Weston	7-17-17/1600			