7

55302-WES 504

0046639

9713530.1215

WESTON Analytics Use Only

Custody Transfer Record/Lab Work Request

WESTON

Page 1 of 1

Client: Weston
Est. Final Proj. Sampling Date:
Work Order #: 6168-02-01
Project Contact/Phone #:
AD Project Manager: Ch King
QC: CLP Del: CLP TAT:
Date Rec'd: Date Due:
Account #:

Refrigerator #																					
#/Type Container	Liquid																				
	Solid											1/G									
Volume	Liquid																				
	Solid											1/R									
Preservatives												None									
ANALYSES REQUESTED →		ORGANIC										Radio Chem			INORG						
		VOA	BNA	Pest/PCB	Herb										Metal	CN					

WESTON Analytics Use Only

MATRIX CODES:
S - Soil
SE - Sediment
SO - Solid
SL - Sludge
W - Water
O - Oil
A - Air
DS - Drum Solids
DL - Drum Liquids
L - EP/TCLP Leachate
WI - Wipe
X - Other
F - Fish

Lab ID	Client ID/Description	Matrix QC Chosen (✓) MS	MSD	Matrix	Date Collected	Time Collected															
	B015H3			S	10/9/91						✓				9110L994-001						
	B015H5			↓	↓						✓				↓	↓	-002				

Radiochem - Total Alpha/beta, Gamma Scan, TC99, SR-90, CS-137, CO-60, PU238, PU239/240, PU-106, Total Uranium

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

Special Instructions:
Run ① ms/msd

DATE/REVISIONS:
1.
2.
3.
4.
5.
6.

FEB 1997 RECEIVED EDMC

Relinquished by	Received by	Date	Time
[illegible]	[illegible]	10/21/91	6:30 am
	[illegible]	10-22-91	1200

Relinquished by	Received by	Date	Time

Discrepancies Between Samples Labels and COC Record? Y or N
NOTES:

WESTON Analytics Use Only

Samples were:
1) Shipped ___ or Hand Delivered ___ Airbill # _____
2) Ambient or Chilled
3) Received in Good Condition Y or N
4) Labels Indicate Properly Preserved Y or N
5) Received Within Holding Times Y or N

COC Tape was:
1) Present on Outer Package Y or N
2) Unbroken on Outer Package Y or N
3) Present on Sample Y or N
4) Unbroken on Sample Y or N
COC Record Present Upon Sample Rec't Y or N

RFW 21-21-001/A-7/91 ___ L372 ___ L373 ___ L375 ___ L377 ___ L378 Ref# _____ Cooler# _____ 381-596a

9713530.1216

TELEDYNE ISOTOPES

WESTON/WESTINGHOUSE/HANFORD

Case Narrative/Cover Sheet for Reports of Analysis and Lab Data

Date 04-13-92

TI #'s 55302 - 55305

WO #'s 4-4417

Comments:

Activity for Matrix Spike TI #55303 and Matrix Spike Duplicate TI #55304

Nuclide	Activity pCi/g	Acceptable Range
Technetium-99	20.	16. - 24.
Gross Alpha	33.6	25. - 42.
Gross Beta	68.	58. - 78.
Strontium-90	4.0	3.4 - 4.6
Cesium-137	0.051	0.036 - 0.066
Plutonium-239	0.329	0.26 - 0.39

Contents:

Reports of Analysis	4	Pages
Tc-99	4	Pages
Gross Alpha	2	Pages
Gross Beta	-	Pages
Sr-90	4	Pages
Gamma	6	Pages
Pu-238-239	4	Pages
C-O-C	1	Pages
Other	-	Pages

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OSM DMO

WO # 4-4417 CONTINUE

Gross Alpha, Gross Beta:

Spiked soil samples analyzed for Alpha and Beta activity can give results which are outside the expected range because the counting situation is different from the self-absorption calibration method.

In calibration, the radioactive standard solutions are evaporated together with varying amounts of sodium carbonate and sodium nitrate salts. The counting results of these standards are used to construct a self-absorption curve which indicates the effective counting efficiency as a function of residue mass. Experiments have shown that this method gives good agreement with finely divided silt sediments which have been spiked with standard solutions.

When soil samples are coarse, or contain mineral grains, the spiking solution does not penetrate to the interior of the solid particles. This results in a more efficient counting situation, so that the results are higher than expected. The disagreement, therefore is caused by the character of the soil sample.

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

RUN DATE 04/08/92

	WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE	PAGE 1
MS JOSIE KING WESTON/WESTINGHOUSE/HANFORD 208 WELSH POOL ROAD PICKERING CREEK INDUSTRIAL PARK LIONVILLE PA 19341-1313	4-4417	LL-0850-F4	10/22/91	11/24/91	

S O I L

TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	TIME	STOP DATE	TIME	NUCLIDE	ACTIVITY (PCI/GM DRY)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
55302	9110L994-001	B015H3	10/09				TC-99	1.3 +-0.6 E 00		11/07			3
							GR-A	5.7 +-2.9 E 00		12/27			3
							GR-B	2.4 +-0.1 E 03		11/14			3
							SR-90	2.5 +-0.1 E 02		11/09			3
							BE-7	L.T. 5. E 01		02/20			4
							K-40	1.24+-0.14E 01		02/20			4
							MN-54	L.T. 2. E-01		02/20			4
							CO-58	L.T. 4. E-01		02/20			4
							FE-59	L.T. 2. E 00		02/20			4
							CO-60	L.T. 1. E-01		02/20			4
							ZN-65	L.T. 4. E-01		02/20			4
							ZR-95	L.T. 6. E-01		02/20			4
							RU-103	L.T. 1. E 01		02/20			4
							RU-106	L.T. 8. E 00		02/20			4
							I-131	L.T. 1. E 05		02/20			4
							CS-134	L.T. 2. E-01		02/20			4
							CS-137	1.03+-0.10E 03		02/20			4
							BA-140	L.T. 8. E 01		02/20			4
							CE-141	L.T. 2. E 01		02/20			4
							CE-144	L.T. 7. E 00		02/20			4
							RA-226	3.38+-1.28E 01		02/20			4
							TH-228	L.T. 1. E 00		02/20			4
							TOTAL-U	L.T. 1. E 01		02/20			4
							PU-238	L.T. 9. E-03		03/04			6
							PU-239	2.4 +-0.4 E-01		03/04			6
55303	9110L994-001MS	B015H3	10/09				TC-99	2.3 +-0.3 E 01		11/07			3
							GR-A	1.2 +-0.4 E 02		11/14			3
							GR-B	2.7 +-0.1 E 03		11/14			3
							SR-90	2.6 +-0.1 E 02		11/09			3
							BE-7	L.T. 8. E 01		03/30			4
							K-40	1.32+-0.14E 01		03/30			4

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TELEDYNE ISOTOPES

REPORT OF ANALYSIS

RUN DATE 04/08/92

	WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE	PAGE 2
MS JOSIE KING WESTON/WESTINGHOUSE/HANFORD 208 WELSH POOL ROAD PICKERING CREEK INDUSTRIAL PARK LIONVILLE PA 19341-1313	4-4417	LL-0850-F4	10/22/91	11/24/91	

S O I L

TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	TIME	STOP DATE	TIME	NUCLIDE	ACTIVITY (PCI/GM DRY)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
55303	9110L994-001MS B015H3		10/09				MN-54	L.T. 2. E-01		03/30			4
							CO-58	L.T. 6. E-01		03/30			4
							FE-59	L.T. 3. E 00		03/30			4
							CO-60	L.T. 1. E-01		03/30			4
							ZN-65	L.T. 4. E-01		03/30			4
							ZR-95	L.T. 8. E-01		03/30			4
							RU-103	L.T. 2. E 01		03/30			4
							RU-106	L.T. 7. E 00		03/30			4
							CS-134	L.T. 2. E-01		03/30			4
							CS-137	1.02+-0.10E 03		03/30			4
							BA-140	L.T. 6. E 02		03/30			4
							CE-141	L.T. 3. E 01		03/30			4
							CE-144	L.T. 6. E 00		03/30			4
							RA-226	L.T. 1. E 01		03/30			4
							TH-228	L.T. 1. E 00		03/30			4
							PU-238	L.T. 1. E-02		03/05			6
							PU-239	5.6 +-0.6 E-01		03/05			6
55304	9110L994-001MSDB015H3		10/09				TC-99	1.9 +-0.2 E 01		11/07			3
							GR-A	1.2 +-0.4 E 02		11/14			3
							GR-B	2.5 +-0.1 E 03		11/14			3
							SR-90	2.2 +-0.1 E 02		11/13			3
							BE-7	L.T. 8. E 01		03/31			4
							K-40	1.34+-0.14E 01		03/31			4
							MN-54	L.T. 2. E-01		03/31			4
							CO-58	L.T. 8. E-01		03/31			4
							FE-59	L.T. 3. E 00		03/31			4
							CO-60	L.T. 1. E-01		03/31			4
							ZN-65	L.T. 3. E-01		03/31			4
							ZR-95	L.T. 9. E-01		03/31			4
							RU-103	L.T. 2. E 01		03/31			4
							RU-106	L.T. 7. E 00		03/31			4

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TELEDYNE ISOTOPES

REPORT OF ANALYSIS

RUN DATE 04/08/92

	WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE	PAGE 3
MS JOSIE KING WESTON/WESTINGHOUSE/HANFORD 208 WELSH POOL ROAD PICKERING CREEK INDUSTRIAL PARK LIONVILLE PA 19341-1313	4-4417	LL-0850-F4	10/22/91	11/24/91	

S O I L

TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	TIME	STOP DATE	TIME	NUCLIDE	ACTIVITY (PCI/GM DRY)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
55304	9110L994-001MSDB015H3		10/09				CS-134	L.T. 2. E-01		03/31			4
							CS-137	1.04+-0.10E 03		03/31			4
							BA-140	L.T. 8. E 02		03/31			4
							CE-141	L.T. 3. E 01		03/31			4
							CE-144	L.T. 6. E 00		03/31			4
							RA-226	1.68+-0.93E 01		03/31			4
							TH-228	L.T. 1. E 00		03/31			4
							PU-238	7.0 +-6.4 E-03		03/05			6
							PU-239	5.0 +-0.5 E-01		03/05			6
55305	9110L994-002 B015H5		10/09				TC-99	1.2 +-0.1 E 02		11/04			3
							GR-A	7.0 +-4.7 E 00		11/14			3
							GR-B	1.0 +-0.1 E 02		11/14			3
							SR-90	3.9 +-1.9 E-01		11/14			3
							BE-7	L.T. 1. E 00		02/19			4
							K-40	1.35+-0.13E 01		02/19			4
							MN-54	L.T. 5. E-02		02/19			4
							CO-58	L.T. 1. E-01		02/19			4
							FE-59	L.T. 7. E-01		02/19			4
							CO-60	1.86+-0.19E 00		02/19			4
							ZN-65	L.T. 2. E-01		02/19			4
							ZR-95	L.T. 2. E-01		02/19			4
							RU-103	L.T. 3. E-01		02/19			4
							RU-106	L.T. 4. E-01		02/19			4
							I-131	L.T. 3. E 03		02/19			4
							CS-134	L.T. 5. E-02		02/19			4
							CS-137	L.T. 4. E-02		02/19			4
							BA-140	L.T. 4. E 01		02/19			4
							CE-141	L.T. 6. E-01		02/19			4
							CE-144	L.T. 2. E-01		02/19			4
							RA-226	L.T. 5. E-01		02/19			4
							TH-228	5.42+-0.54E-01		02/19			4

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TELEDYNE ISOTOPES

REPORT OF ANALYSIS

RUN DATE 04/08/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE	PAGE 4
4-4417	LL-0850-F4	10/22/91	11/24/91	

MS JOSIE KING
WESTON/WESTINGHOUSE/HANFORD
208 WELSH POOL ROAD
PICKERING CREEK INDUSTRIAL PARK
LIONVILLE PA 19341-1313

S O I L

TELEDYNE SAMPLE NUMBER	CUSTOMER'S IDENTIFICATION	STA NUM	COLLECTION-DATE START DATE	START TIME	STOP DATE	STOP TIME	NUCLIDE	ACTIVITY (PCI/GM DRY)	NUCL-UNIT-% U/M *	MID-COUNT TIME DATE	MID-COUNT TIME TIME	VOLUME - UNITS ASH-WGHT-% *	LAB.
55305	9110L994-002	B015H5	10/09				TOTAL-U	2.40+-0.80E 00		02/19			4
							PU-238	L.T. 3. E-03		03/05			6
							PU-239	L.T. 3. E-03		03/05			6

LAST PAGE OF REPORT

APPROVED BY J. GUENTHER 04/08/92

SEND 1 COPIES TO WE884S MS JOSIE KING

2 - GAS LAB. 3 - RADIO CHEMISTRY LAB. 4 - GE(LI) GAMMA SPEC LAB. 5 - TRITIUM GAS/L.S. LAB. 6 - ALPHA SPEC LAB.

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