START 9213539.1840

65529-WES-559-7

0046921

TELEDYNE ISOTOPES

WESTON/WESTINGHOUSE/HANFORD

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

Date 06-22-92

TI #'s 66037 - 66039

WO # 4-6191

JUN 1992 RECEIVED OSM DMO

Comments:

Technetium-99: The MSD result for TI #66039 was lower than expected however within an acceptable range when the two sigma counting error is considered.

Activity for Matrix Spike TI #66038 and Matrix Spike Dupplicate TI #66039

Nuclide	Activity pCi/g	Acceptable Range
Technitium-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	0.50	0.35 - 0.65
Plutonium-239	0.328	0.26 - 0.39

Contents:

Reports of Analysis		4	Pages
TC-99	PRO-032-78	3	Pages
Gross Alpha	PRO-032-1	2	Pages
Gross Beta		-	Pages
Sr-90	PRO-032-38	3	Pages
Gamma	PRO-042-5	6	Pages
Pu-238-239	PRO-052-32	6	Pages
C-O-C		1	Pages
Other		-	Pages

CASE NARRATIVE CONTINUED WO #6191

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 06/18/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE	PAGE 1
4-6191	LL-0850-F4	02/03/92	03/07/92	

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.
46037	9201L101-004	~~B01597~~	01/21				TC-99	8.7 +-0.4 E 01		03/11			3
		B01579					GR-A	5.7 +-4.0 E 00		03/10			3
							GR-B	6.0 +-0.4 E 01		03/10			3
		M.H. 07.24.92					SR-90	L.T. 2. E-01		03/17			3
							GR-A	L.T. 3. E 00		03/10			3
							GR-B	L.T. 2. E 00		03/10			3
							SR-90	9.0 +-10.6E-02		03/17			3
							TC-99	L.T. 1. E 00		03/11			3
							BE-7	L.T. 6. E-01		03/04			4
							K-40	1.47+-0.15E 01		03/04			4
							MN-54	L.T. 4. E-02		03/04			4
							CO-58	L.T. 7. E-02		03/04			4
							FE-59	L.T. 2. E-01		03/04			4
							CO-60	1.62+-0.16E 00		03/04			4
							ZN-65	L.T. 1. E-01		03/04			4
							ZR-95	L.T. 8. E-02		03/04			4
							RU-103	L.T. 1. E-01		03/04			4
							RU-106	L.T. 3. E-01		03/04			4
							I-131	L.T. 3. E 01		03/04			4
							CS-134	L.T. 4. E-02		03/04			4
							CS-137	L.T. 3. E-02		03/04			4
							BA-140	L.T. 2. E 00		03/04			4
							CE-141	L.T. 2. E-01		03/04			4
							CE-144	L.T. 2. E-01		03/04			4
							RA-226	8.31+-3.41E-01		03/04			4
							TH-228	5.89+-0.59E-01		03/04			4
							TOTAL-U	1.40+-0.80E 00		03/04			4
							PU-238	L.T. 1. E-02		06/05			6
							PU-239	L.T. 4. E-03		06/05			6
							PU-238	1.4 +-5.8 E-03		06/05			6
							PU-239	1.1 +-3.2 E-03		06/05			6

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TELEDYNE ISOTOPES

REPORT OF ANALYSIS

RUN DATE 06/18/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE	PAGE 2
4-6191	LL-0850-F4	02/03/92	03/07/92	

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.
66038	9201L101-004 MSB01579		01/21				TC-99	1.0 +-0.1 E 02		03/10			3
							GR-A	8.4 +-1.3 E 01		03/10			3
							GR-B	1.7 +-0.1 E 02		03/10			3
							SR-90	4.1 +-0.2 E 00		03/12			3
							GR-A	L.T. 3. E 00		03/10			3
							GR-B	L.T. 2. E 00		03/10			3
							SR-90	L.T. 4. E-02		03/12			3
							TC-99	L.T. 1. E 00		03/10			3
							BE-7	L.T. 1. E 00		05/26			4
							K-40	1.47+-0.15E 01		05/26			4
							MN-54	L.T. 5. E-02		05/26			4
							CO-58	L.T. 1. E-01		05/26			4
							FE-59	L.T. 6. E-01		05/26			4
							CO-60	1.65+-0.16E 00		05/26			4
							ZN-65	L.T. 1. E-01		05/26			4
							ZR-95	L.T. 2. E-01		05/26			4
							RU-103	L.T. 3. E-01		05/26			4
							RU-106	L.T. 4. E-01		05/26			4
							I-131	L.T. 2. E 03		05/26			4
							CS-134	L.T. 5. E-02		05/26			4
							CS-137	4.28+-0.46E-01		05/26			4
							BA-140	L.T. 3. E 01		05/26			4
							CE-141	L.T. 7. E-01		05/26			4
							CE-144	L.T. 3. E-01		05/26			4
							EU-152	L.T. 1. E-01		05/26			4
							EU-154	L.T. 1. E-01		05/26			4
							EU-155	L.T. 1. E-01		05/26			4
							RA-226	1.49+-0.56E 00		05/26			4
							TH-228	8.25+-0.83E-01		05/26			4
							TH-234	L.T. 7. E-01		05/26			4
							PU-238	L.T. 2. E-02		06/04			6
							PU-239	3.4 +-0.4 E-01		06/04			6

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TELEDYNE ISOTOPES

REPORT OF ANALYSIS

RUN DATE 06/18/92

	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	4-6191	LL-0850-F4	02/03/92	03/07/92	

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.
66038	9201L101-004 MSB01579		01/21				PU-238	7.5 +-11.2E-03		06/04			6
							PU-239	L.T. 4. E-03		06/04			6
66039	9201L101-004MSDB01579		01/21				TC-99	8.2 +-0.4 E 01		03/11			3
							GR-A	6.3 +-1.2 E 01		03/10			3
							GR-B	1.6 +-0.1 E 02		03/10			3
							SR-90	4.3 +-0.2 E 00		03/12			3
							GR-A	L.T. 3. E 00		03/10			3
							GR-B	L.T. 2. E 00		03/10			3
							SR-90	L.T. 4. E-02		03/12			3
							TC-99	L.T. 9. E-01		03/11			3
							BE-7	L.T. 2. E 00		06/11			4
							K-40	1.45+-0.15E 01		06/11			4
							MN-54	L.T. 6. E-02		06/11			4
							CO-58	L.T. 2. E-01		06/11			4
							FE-59	L.T. 8. E-01		06/11			4
							CO-60	1.55+-0.16E 00		06/11			4
							ZN-65	L.T. 2. E-01		06/11			4
							ZR-95	L.T. 2. E-01		06/11			4
							RU-103	L.T. 5. E-01		06/11			4
							RU-106	L.T. 5. E-01		06/11			4
							I-131	L.T. 8. E 03		06/11			4
							CS-134	L.T. 6. E-02		06/11			4
							CS-137	3.87+-0.44E-01		06/11			4
							BA-140	L.T. 6. E 01		06/11			4
							CE-141	L.T. 1. E 00		06/11			4
							CE-144	L.T. 4. E-01		06/11			4
							EU-152	L.T. 1. E-01		06/11			4
							EU-154	L.T. 1. E-01		06/11			4
							EU-155	L.T. 2. E-01		06/11			4
							RA-226	L.T. 9. E-01		06/11			4
							TH-228	6.94+-0.69E-01		06/11			4

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TELEDYNE ISOTOPES

REPORT OF ANALYSIS

RUN DATE 06/18/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE	PAGE 4
4-6191	LL-0850-F4	02/03/92	03/07/92	

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.
66039	9201L101-004MSDB01579		01/21				TH-234	L.T. 1.	E 00	06/11			4
							PU-238	L.T. 2.	E-02	06/05			6
							PU-239	3.4 +-0.4	E-01	06/05			6
							PU-238	2.5 +-9.4	E-03	06/05			6
							PU-239	L.T. 4.	E-03	06/05			6

LAST PAGE OF REPORT

J Guenther
APPROVED BY J. GUENTHER 06/18/92

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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TELEDYNE ISOTOPES

WESTON/WESTINGHOUSE/HANFORD

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

JUN 1992 RECEIVED OSM DMO

Date 06-15-92

TI #'s 65529 - 65533

WO # 4-6095

Comments:

The matrix spike and matrix spike duplicate analysis for gamma have been deleted according to instructions by Westinghouse Hanford Company.

Activity for Matrix Spike TI #65530 and Matrix Spike Duplicate TI #65531

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
Plutonium-239	0.328	0.26 - 0.39

Contents:

Reports of Analysis		6	Pages
TC-99	PRO-032-78	5	Pages
Gross Alpha	PRO-032-1	2	Pages
Gross Beta		-	Pages
Sr-90	PRO-032-38	5	Pages
Gamma	PRO-042-5	8	Pages
U-235-238	PRO-052-32	10	Pages
C-O-C		1	Pages
Other		-	Pages

CONTINUED CASE NARRATIVE FOR WO #4-6095

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 06/09/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE	PAGE 1
4-6095	LL-0850-F4	02/03/92	03/07/92	

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.
65529	9201L101-001	8015J6	01/20				TC-99	2.1 +-0.1 E 02		03/04			3
							GR-A	8.2 +-4.7 E 00		03/06			3
							GR-B	1.3 +-0.1 E 02		03/06			3
							SR-90	L.T. 5. E-02		03/06			3
							GR-A	L.T. 3. E 00		03/06			3
							GR-B	L.T. 3. E 00		03/06			3
							SR-90	4.7 +-3.48E-02		03/06			3
							TC-99	L.T. 1. E 00		03/04			3
							BE-7	L.T. 6. E-01		03/13			4
							K-40	1.33+-0.13E 01		03/13			4
							MN-54	L.T. 5. E-02		03/13			4
							CO-58	L.T. 8. E-02		03/13			4
							FE-59	L.T. 2. E-01		03/13			4
							CO-60	2.00+-0.20E 00		03/13			4
							ZN-65	L.T. 1. E-01		03/13			4
							ZR-95	L.T. 8. E-02		03/13			4
							RU-103	L.T. 9. E-02		03/13			4
							RU-106	L.T. 4. E-01		03/13			4
							I-131	L.T. 4. E 00		03/13			4
							CS-134	L.T. 6. E-02		03/13			4
							CS-137	L.T. 4. E-02		03/13			4
							BA-140	L.T. 5. E-01		03/13			4
							CE-141	L.T. 2. E-01		03/13			4
							CE-144	L.T. 3. E-01		03/13			4
							RA-226	L.T. 1. E-01		03/13			4
							TH-228	4.40+-0.53E-01		03/13			4
							TOTAL-U	L.T. 1. E 00		03/13			4
							PU-238	L.T. 1. E-02		06/06			6
							PU-239	L.T. 6. E-03		06/06			6
							PU-238 -	2.6 +-4.8 E-03		06/06			6
							PU-239	1.4 +-30.5E-04		06/06			6

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TELEDYNE ISOTOPES

REPORT OF ANALYSIS

RUN DATE 06/09/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE	PAGE 2
4-6095	LL-0850-F4	02/03/92	03/07/92	

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.
65530	9201L101-001MS B015J6		01/20				TC-99	2.0 +-0.1 E 02		03/04			3
							GR-A	9.8 +-1.5 E 01		03/06			3
							GR-B	2.2 +-0.1 E 02		03/06			3
							SR-90	4.2 +-0.2 E 00		03/06			3
							GR-A	L.T. 3. E 00		03/06			3
							GR-B	L.T. 3. E 00		03/06			3
							SR-90	L.T. 5. E-02		03/06			3
							TC-99	L.T. 7. E-01		03/04			3
							BE-7	L.T. 1. E 00		05/19			4
							K-40	1.49+-0.15E 01		05/19			4
							MN-54	L.T. 4. E-02		05/19			4
							CO-58	L.T. 1. E-01		05/19			4
							FE-59	L.T. 5. E-01		05/19			4
							CO-60	2.05+-0.21E 00		05/19			4
							ZN-65	L.T. 1. E-01		05/19			4
							ZR-95	L.T. 1. E-01		05/19			4
							RU-103	L.T. 2. E-01		05/19			4
							RU-106	L.T. 3. E-01		05/19			4
							I-131	L.T. 9. E 02		05/19			4
							CS-134	L.T. 4. E-02		05/19			4
							CS-137	4.97+-0.50E-01		05/19			4
							BA-140	L.T. 2. E 01		05/19			4
							CE-141	L.T. 4. E-01		05/19			4
							CE-144	L.T. 2. E-01		05/19			4
							EU-152	L.T. 8. E-02		05/19			4
							EU-154	L.T. 1. E-01		05/19			4
							EU-155	L.T. 1. E-01		05/19			4
							RA-226	L.T. 5. E-01		05/19			4
							TH-228	5.44+-0.54E-01		05/19			4
							TH-234	L.T. 6. E-01		05/19			4
							PU-238	L.T. 3. E-02		06/05			6
							PU-239	3.0 +-0.7 E-01		06/05			6

9713539.1849

TELEDYNE ISOTOPES

REPORT OF ANALYSIS

RUN DATE 06/09/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE	PAGE 3
4-6095	LL-0850-F4	02/03/92	03/07/92	

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.
65530	9201L101-001MS B015J6		01/20				PU-238	5.2 +-15.8E-03		06/05			6
							PU-239	L.T. 6. E-03		06/05			6
65531	9201L101-001MSDB015J6		01/20				TC-99	2.3 +-0.1 E 02		03/04			3
							GR-A	1.2 +-0.2 E 02		03/06			3
							GR-B	2.5 +-0.1 E 02		03/06			3
							SR-90	3.8 +-0.2 E 00		03/14			3
							GR-A	L.T. 3. E 00		03/06			3
							GR-B	L.T. 3. E 00		03/06			3
							SR-90	L.T. 5. E-02		03/14			3
							TC-99	L.T. 1. E 00		03/04			3
							BE-7	L.T. 1. E 00		05/20			4
							K-40	1.47+-0.15E 01		05/20			4
							MN-54	L.T. 4. E-02		05/20			4
							CO-58	L.T. 9. E-02		05/20			4
							FE-59	L.T. 4. E-01		05/20			4
							CO-60	2.08+-0.21E 00		05/20			4
							ZN-65	L.T. 1. E-01		05/20			4
							ZR-95	L.T. 1. E-01		05/20			4
							RU-103	L.T. 2. E-01		05/20			4
							RU-106	L.T. 3. E-01		05/20			4
							I-131	L.T. 8. E 02		05/20			4
							CS-134	L.T. 4. E-02		05/20			4
							CS-137	4.92+-0.49E-01		05/20			4
							BA-140	L.T. 2. E 01		05/20			4
							CE-141	L.T. 5. E-01		05/20			4
							CE-144	L.T. 2. E-01		05/20			4
							EU-152	L.T. 7. E-02		05/20			4
							EU-154	L.T. 8. E-02		05/20			4
							EU-155	L.T. 8. E-02		05/20			4
							RA-226	8.90+-3.84E-01		05/20			4
							TH-228	5.32+-0.53E-01		05/20			4

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TELEDYNE ISOTOPES

REPORT OF ANALYSIS

RUN DATE 06/09/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE	PAGE 4
4-6095	LL-0850-F4	02/03/92	03/07/92	

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.
65531	9201L101-001MSD8015J6		01/20				TH-234	L.T. 5. E-01		05/20			4
							PU-238	L.T. 1. E-02		06/06			6
							PU-239	3.0 +-0.4 E-01		06/06			6
							PU-238 -	1.7 +-4.7 E-03		06/06			6
							PU-239	L.T. 3. E-03		06/06			6
65532	9201L101-002	8015P2	01/20				TC-99	L.T. 1. E 00		03/04			3
							GR-A	1.5 +-0.6 E 01		03/06			3
							GR-B	3.8 +-0.3 E 01		03/06			3
							SR-90	1.7 +-0.1 E 00		03/14			3
							GR-A	L.T. 3. E 00		03/06			3
							GR-B	L.T. 3. E 00		03/06			3
							SR-90	L.T. 5. E-02		03/14			3
							TC-99	3.7 +-6.74E-01		03/04			3
							BE-7	L.T. 2. E 00		05/28			4
							K-40	1.12+-0.11E 01		05/28			4
							MN-54	L.T. 3. E-02		05/28			4
							CO-58	L.T. 7. E-02		05/28			4
							FE-59	L.T. 3. E-01		05/28			4
							CO-60	L.T. 2. E-02		05/28			4
							ZN-65	L.T. 8. E-02		05/28			4
							ZR-95	L.T. 1. E-01		05/28			4
							RU-103	L.T. 3. E-01		05/28			4
							RU-106	L.T. 3. E-01		05/28			4
							I-131	L.T. 3. E 03		05/28			4
							CS-134	L.T. 3. E-02		05/28			4
							CS-137	3.26+-0.33E 00		05/28			4
							BA-140	L.T. 3. E 01		05/28			4
							CE-141	L.T. 7. E-01		05/28			4
							CE-144	L.T. 3. E-01		05/28			4
							EU-152	L.T. 9. E-02		05/28			4
							EU-154	L.T. 8. E-02		05/28			4
							Total U	L.T. 6. E-01		05/28			4

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TELEDYNE ISOTOPES

REPORT OF ANALYSIS

RUN DATE 06/09/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE
4-6095	LL-0850-F4	02/03/92	03/07/92

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.
65532	9201L101-002	B015P2	01/20				EU-155	L.T. 9. E-02		05/28			4
							RA-226	L.T. 6. E-01		05/28			4 SPEC
							TH-228	5.38+-0.54E-01		05/28			4
							TH-234	L.T. 6. E-01		05/28			4
							PU-238	L.T. 2. E-02		06/06			6
							PU-239	L.T. 7. E-03		06/06			6
							PU-238 -	3.9 +-8.0 E-03		06/06			6
							PU-239	2.6 +-5.5 E-03		06/06			6
65533	9201L101-003	B015Q0	01/20				TC-99	L.T. 1. E 00		03/04			3
							GR-A	1.1 +-0.5 E 01		03/06			3
							GR-B	2.4 +-0.3 E 01		03/06			3
							SR-90	3.1 +-0.6 E-01		03/14			3
							GR-A	L.T. 3. E 00		03/06			3
							GR-B	L.T. 3. E 00		03/06			3
							SR-90	L.T. 5. E-02		03/14			3
							TC-99	4.4 +-9.27E-01		03/04			3
							BE-7	L.T. 4. E-01		03/19			4
							K-40	1.16+-0.12E 01		03/19			4
							MN-54	L.T. 3. E-02		03/19			4
							CO-58	L.T. 3. E-02		03/19			4
							FE-59	L.T. 1. E-01		03/19			4
							CO-60	L.T. 2. E-02		03/19			4
							ZN-65	L.T. 6. E-02		03/19			4
							ZR-95	L.T. 5. E-02		03/19			4
							RU-103	L.T. 6. E-02		03/19			4
							RU-106	L.T. 2. E-01		03/19			4
							I-131	L.T. 3. E 00		03/19			4
							CS-134	L.T. 3. E-02		03/19			4
							CS-137	3.78+-0.38E-01		03/19			4
							BA-140	L.T. 6. E-01		03/19			4
							CE-141	L.T. 1. E-01		03/19			4

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TELEDYNE ISOTOPES

REPORT OF ANALYSIS

RUN DATE 06/09/92

WORK ORDER NUMBER	CUSTOMER P.O. NUMBER	DATE RECEIVED	DELIVERY DATE	PAGE 6
4-6095	LL-0850-F4	02/03/92	03/07/92	

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.
65533	9201L101-003	B01500	01/20				CE-144	L.T. 2. E-01		03/19			4
							RA-226	7.76+-3.71E-01		03/19			4
							TH-228	5.18+-0.52E-01		03/19			4
							TOTAL U	L.T. 5. E-01		03/19			4
							PU-238	L.T. 3. E-02		06/05			6
							PU-239	L.T. 1. E-02		06/05			6
							PU-238	2.4 +-15.1E-03		06/05			6
							PU-239	3.4 +-76.1E-04		06/05			6

LAST PAGE OF REPORT

APPROVED BY J. GUENTHER 06/09/92

SEND 1 COPIES TO WE284S 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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WESTON
MANAGERS DESIGNERS/CONSULTANTS

208 WELSH POOL ROAD
PICKERING CREEK INDUSTRIAL PARK
LIONVILLE, PA 19341-1313
PHONE: (215) 524-7360
TELEX: 83-5348

JUL 1992
RECEIVED
OSM DMO

14 July 1992

Ms. Jeanette Duncan
Westinghouse-Hanford
2355 Stevens Drive
200 W/MO-346/T6-08
Richland, WA 99352

Dear Jeanette:

This letter is to inform you of an incorrect client ID number throughout the data packages that was inadvertantly missed. The client ID is shown as B01597 in the Radiochemistry packages and the correct number should be B01S79. The RFW number is 9201L101.

Please give me a call if you have any questions.

Very truly yours,

ROY F. WESTON, INC.

Deb Haydt

for Josie King
Project Information Analyst

/clk

Enclosure:

WESTON Analytics Use Only

Custody Transfer Record/Lab Work Request

WESTON

Page ____ of ____

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

Refrigerator #:
#/Type Container: Liquid / Solid
Volume: Liquid / Solid
Preservatives:

ANALYSES REQUESTED →

ORGANIC: VOA, BNA, Pest/PCB, Herb, Radio Chem
INORG: Metal, CN

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	VOA	BNA	Pest/PCB	Herb	Radio Chem	Metal	CN	WESTON Analytics Use Only
	B015J6			S	1-20-92						✓			9201L101-001
	B015P2										✓			-002
	B015Q0										✓			-003
	B015T9			S	1/20/92						✓			9201L101-004
	Radio Chem: Total Alpha/Beta, Gamma Scan, Tc-99, Sr-90, Cs-137, Co-60, Pu-238, Pu-239/240, Ru-106, Total Uranium													

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

Special Instructions:

DATE/REVISIONS:
2/6/92 1. 004 added
2.
3.
4.
5.
6.

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

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

Relinquished by	Received by	Date	Time	Relinquished by	Received by	Date	Time
M Jason	Fed Ex			[illegible]	[illegible]	2/18/92	12:00

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

9713539.1855

WESTON Analytics Use Only

Custody Transfer Record/Lab Work Request

WESTON

Page ____ of ____

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

Refrigerator #		
#/Type Container	Liquid	
	Solid	
Volume	Liquid	
	Solid	
Preservatives		

ANALYSES REQUESTED →

ORGANIC					INORG	
VOA	BNA	Pest/PCB	Herb	Radio Chem	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	ISUB	
	B015J6			S	1-20-92		✓	9201L101-001
	B015P2			↓	↓		✓	-002
	B015Q0			↓	↓		✓	↓ -003

Radio Chem: Total Alpha/Beta, Gamma Scan, Tc99, Sr-90, Cs-137, Co-60, Pu-238, Pu-239/240, Ru-106, Total Uranium

FIELD PERSONNEL: COMPLETE ONLY SHADED AREAS

Special Instructions:

Run ① MS/MSD Per JK 2/3/92

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

Relinquished by	Received by	Date	Time	Relinquished by	Received by	Date	Time
M Jason	Fed Ex						
	S Jackson	1-31-92	1200				

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

9713539.1856