PASS 1.7v1
9/6/85 TDD
HH56, II58

ecology and environment, inc.

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International Specialists in the Environmental Sciences

MEMORANDUM

DATE: September 6, 1985

TO: John Osborn, FIT RPO, USEPA, Region X

FROM: Roger McGinnis, Chemist, E&E, Seattle
Andrew Hafferty, Senior Chemist, E&E, Seattle

SUBJ: QA of Case 4679
Resource Recovery WA 0280

THRU: Dave Buecker, FIT RPM, E&E, Seattle

REF: TDD-R10-8507-01

CC: Gerald Muth, EPA, Manchester
Jack Sceva, EPA, Seattle
Harold Takenaka, DPO, EPA, Region IX
Bill Ritthaler, E&E, Seattle

The Quality Assurance review of two samples, Case 4679, collected at Resource Recovery has been completed. Two water samples were analyzed at low level for inorganics by California Analytical Laboratories of West Sacramento, California. The samples were numbered:

MJA234
MJA238

Data Qualifications

The following comments refer to the laboratory performance in meeting the Quality Control Specifications outlined in IFB WA 84J091.

1) Timeliness - Acceptable

2) Calibration Verification - Acceptable

3) Blanks - Acceptable

Beryllium, chromium, iron, and vanadium were present in the laboratory blank but at levels less than the CRDL.

USEPA SF
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recycled paper

4) Instrument Detection Limits - Acceptable

5) ICP Interference Check - Acceptable

6) Laboratory Control Sample - Acceptable

7) Duplicate Sample Analysis - Acceptable

8) Spike Recoveries

One out of 24 elements was out of control.

Element	% Recovery	QC Limit
Mercury	70%	75-125%

9) Furnace AA - Acceptable

10) Mercury Analysis - Acceptable

11) Samples

Mercury results were flagged as estimated (J) based on low spike recovery.

Data Use

The usefulness of the data is based on the criteria outlined in the "Laboratory Data Validation Functional Guidelines for Evaluating Inorganic Analyses (R-582-5-5-01)."

The data are ACCEPTABLE for use except where flagged with data qualifiers which modify the usefulness of the individual values.

Data Qualifiers

U - The material was analyzed for, but was not detected. The associated numerical value is the estimated sample quantitation limit.

J - The associated numerical value is an estimated quantity because quality control criteria were not met.

R - Quality control indicates that data are unusable (compound may or may not be present). Resampling and analysis is necessary for verification.

Q - No analytical result.

N - Presumptive evidence of presence of material (tentative identification).

U.S. EPA CONTRACT LABORATORY PROGRAM
SAMPLE MANAGEMENT OFFICE
P.O. BOX 818 ALEXANDRIA,VA 22313
703/557-2490 FTS:8-557-2490

EPA SAMPLE NO:
MJA234
DATE:8/22/85

INORGANIC ANALYSIS SHEET

LAB NAME: CALIF.ANAL.LAB.
SOW NO.: 784
LAB.SAMPLE NO.: P2671

CASE NO:4679
QC RPT.#4679

ELEMENTS IDENTIFIED AND MEASURED

CONC.: LOW: XX MEDIUM
MATRIX: WATER: XX

ELEMENTS..METHOD	UG/L
1. ALUMINIUM...P	4846
2. ANTIMONY....P	12 U
3. ARSENIC.....F	10.0U
4. BARIUM.....P	154
5. BERYLLIUM...P	1.2
6. CADMIUM.....P	3.5
7. CALCIUM.....P	65940
8. CHROMIUM....P	16
9. COBALT.....P	5
10.COPPER.....P	13
11.IRON.....P	10630
12.LEAD.....F	10.5
13.MAGNESIUM...P	21330
14.MANGANESE...P	244
15.MERCURY....CV	0.40 U J
16.NICKEL.....P	19
17.POTASSIUM...P	7563
18.SELENIUM....F	TC 25.0U
19.SILVER.....P	4.0
20.SODIUM.....P	32540
21.THALLIUM....F	10U
22.TIN.....P	<18 U
23.VANADIUM....P	38.7
24.ZINC.....P	142
25.CYANIDE.....C	N/R

COMMENTS:

LAB MANAGER: JRB

R M M
9/3/85

U.S. EPA CONTRACT LABORATORY PROGRAM
SAMPLE MANAGEMENT OFFICE
P.O. BOX 818 ALEXANDRIA,VA 22313
703/557-2490 FTS:8-557-2490

EPA SAMPLE NO:
MJA238
DATE:8/22/85

INORGANIC ANALYSIS SHEET

LAB NAME: CALIF.ANAL.LAB.
SOW NO.: 784
LAB.SAMPLE NO.: P2672

CASE NO:4679
QC RPT.#4679

ELEMENTS IDENTIFIED AND MEASURED

CONC.: LOW: XX MEDIUM
MATRIX: WATER: XX

ELEMENTS..METHOD	UG/L
1. ALUMINIUM...P	51330
2. ANTIMONY....P	12 U
3. ARSENIC.....F	10.0U
4. BARIUM.....P	2148
5. BERYLLIUM...P	4.3
6. CADMIUM.....P	2.9
7. CALCIUM.....P	145500
8. CHROMIUM....P	83
9. COBALT.....P	70
10.COPPER.....P	118
11.IRON.....P	123700
12.LEAD.....F	17.9
13.MAGNESIUM...P	49050
14.MANGANESE...P	2736
15.MERCURY....CV	0.20U J
16.NICKEL.....P	80
17.POTASSIUM...P	13800
18,SELENIUM....F	25.0U
19.SILVER.....P	7.6
20.SODIUM.....P	37270
21.THALLIUM....F	10U
22.TIN.....P	<18 U
23.VANADIUM....P	191.8
24.ZINC.....P	336
25.CYANIDE.....C	N/R

COMMENTS:

LAB MANAGER: JRF

R7124
9/3/85