

ER PROGRAM DATA ASSESSMENT
SUMMARY REPORT FORM

Batch No. 8906L639 Site Solar Ponds
Laboratory Roy F. Weston - Lionville No. of Samples/Matrix 2/Water
SOW # 10/86 (Rev. 2/88) Reviewer Org. TechLaw, Inc.
Sample Numbers SW094003, SW095003

Data Assessment Summary

	VOA	Comments
1. Holding Times	<u>A</u>	<u>Action Item 1</u>
2. GC/MS Tune/Instr. Perf.	<u>V</u>	
3. Calibrations	<u>A</u>	<u>Action Item 2; Comments 1,2</u>
4. Blanks	<u>A</u>	<u>Action Item 3</u>
5. Surrogates	<u>V</u>	
6. Matrix Spike/Dup.	<u>V</u>	
7. Other QC	<u>V</u>	
8. Internal Standards	<u>V</u>	
9. Compound Identification	<u>X</u>	<u>Comments 3,4</u>
10. System Performance	<u>V</u>	
11. Overall Assessment	<u>A</u>	<u>Data acceptable with qualifications.</u>

V = Data had no problems.
A = Data acceptable but qualified due to problems.
R = Data rejected.
X = Problems, but do not affect data.

Data Quality: Data contained in this batch were reviewed and found to be acceptable with qualifications. Acceptable, qualified data may be used provided that individual values impacted by the "Action Items" listed below are appropriately flagged. (Refer to attached Results Summary Table.)

REVIEWED FOR CLASSIFICATION
By [Signature]
Date 10/28/91

Action Items: 1) Non-detected results for aromatic compounds in both samples are estimated and undetected (UJ) and the positive result for Toluene in sample SW094003 is estimated (J) because the holding time exceeded seven days.

2) 2-Butanone, 4-Methyl-2-pentanone and 2-Hexanone had RRFs less than 0.05 in the 6/15/89 initial and 6/20/89 continuing calibrations. Therefore, non-detected results for these compounds in both samples are rejected (R) and the positive result for 2-Butanone in sample SW094003 is estimated (J).

3) Acetone's %D exceeded 25% in the continuing calibration. The positive results for Acetone would have been estimated had blank criteria been met. See Action Item 4.

4) As a result of method blank contamination, the positive results for Methylene Chloride and Acetone in both samples and Carbon Disulfide in sample SW094003 are estimated and undetected (UJ) according to the Functional Guidelines (5x and 10x rules).

Comments: 1) The incorrect Form 6A and 7A were originally submitted with this case. The correct forms were resubmitted upon request, thus no action is necessary.

2) Vinyl Acetate's %D exceeded 25% in the continuing calibration. No action is necessary since it was not found in the samples.

3) The TIC, a Hexane, was found in both samples as well as the method blank and appears to be a systems contaminant. Three other TICs were reported in the method blank.

4) All positive results for both samples were detected below the CROQL and are estimated until instrument detection limits are supplied.

Note: Data Summary Tables are attached.

Willis T Fee
Reviewer Signature

5/22/90
Date

TABLE #: 8906L639
SITE NAME: Solar Ponds
CLP VOLATILE ORGANIC ANALYSIS: Low Water

Sample Location	VBLK	SW094003	SW095003	
Sample Number		6/8/89	6/8/89	
Sampling Date				
Remarks	Method Blank			
Volatiles	CRQL	DQ	DQ	DQ
Compound	ug/L (ppb)			
Chloromethane	10	10 U V	10 U V	
Bromomethane	10	10 U V	10 U V	
Vinyl chloride	10	10 U V	10 U V	
Chloroethane	10	10 U V	10 U V	
Methylene chloride	5	4 ppb	5 U A	
Acetone	10	20 ppb	21 U A	
Carbon disulfide	5	4 ppb	5 U V	
1,1-Dichloroethane	5	5 U V	5 U V	
1,1-Dichloroethane	5	5 U V	5 U V	
1,2-Dichloroethane (Total)	5	5 U V	5 U V	
Chloroform	5	2 J A	1 J A	
1,2-Dichloroethane	5	5 U V	5 U V	
2-Butanone	10	4 J A	10 U R	
1,1,1-Trichloroethane	5	5 U V	5 U V	
Carbon tetrachloride	5	2 J A	1 J A	
Vinyl acetate	10	10 U V	10 U V	
Bromodichloromethane	5	5 U V	5 U V	
1,2-Dichloropropane	5	5 U V	5 U V	
cis-1,3-Dichloropropene	5	5 U V	5 U V	
Trichloroethene	5	4 J A	3 J A	
Dibromochloromethane	5	5 U V	5 U V	
1,1,2-Trichloroethane	5	5 U V	5 U V	
Benzene	5	5 U A	5 U A	
trans-1,3-Dichloropropene	5	5 U V	5 U V	
Bromoform	5	5 U V	5 U V	
4-Methyl-2-pentanone	10	10 U R	10 U R	
2-Hexanone	10	10 U R	10 U R	
Tetrachloroethene	5	5 U V	5 U V	
1,1,2,2-Tetrachloroethane	5	5 U V	5 U V	
Toluene	5	1 J A	5 U A	
Chlorobenzene	5	5 U A	5 U A	
Ethylbenzene	5	5 U A	5 U A	
Styrene	5	5 U A	5 U A	
Xylenes (Total)	5	5 U A	5 U A	
Total Organic		28	13	5

Concentration (ppb)

U Indicates the compound was not detected above the Required Quantitation Limit.
 J Quantitation is approximate due to limitations identified during the quality control review.
 E Exceeds calibration range, dilute & reanalyze.
 CRQL Contract Required Quantitation Limit in Micrograms per Liter (ug/L), Parts per billion (ppb).

DQ Data Qualifier
 V Valid
 A Acceptable with qualifications
 R Rejected

WESTON Analytics Use Only
 89062648
 639

Custody Transfer Record/Lab Work Request



Client: Rockwell (Plastics)
 Work Order: 2029 33 04
 Date Rec'd: 6/10/89 Date Due: 7/8/89
 RFW Contact: Janeil Bergman
 Client Contact/Phone: (303) 980 6800

Refrigerator#	#Type Container	Volume	Preservative	ANALYSES REQUESTED	Matrix	Date Collected
	1 gal	1/2 gal	1-L	NOA CN	W	6-8-89
	1-L	1-L			W	6-8-89
					W	6/8/89
					W	6/8/89

WA Use Only Lab ID	Client ID/Description
001	SW094003
2	SW095003
3	SW095003 SW094003
4	SW095003

Special Instructions: 1 - vos 2 - bna 3 - pest/pcb 4 - cyanide
 5 - Filtered tcl metals, Mo, Sr, Cs, Li, Sn
 6 - unfiltered tcl metals, Mo, Sr, Cs, Li, Sn

Item/Reason	Relinquished by	Received by	Date	Time
7-Me... 7... 7...	7-Me... 7... 7...	7-Me... 7... 7...	6-8-89	17:00
7... 7... 7...	7... 7... 7...	7... 7... 7...	6-10-89	9:00
7... 7... 7...	7... 7... 7...	7... 7... 7...	6-10-89	9:00
7... 7... 7...	7... 7... 7...	7... 7... 7...	6-14	8:00
7... 7... 7...	7... 7... 7...	7... 7... 7...	6-14	3:00

WESTON Analytics Use Only

Sample Were:
 1. Shipped or Hand-Delivered
 NOTES: (Chilled)

2. Ambient or Chilled
 NOTES:

3. Received Broken/Leaking (Improperly Sealed)
 Y (N)

4. Properly Preserved
 Y (N)

5. Received Within Stipulating Times
 Y (N)

COC Tape Was:
 1. Present on Outer Package (Y) (N)
 2. Unbroken on Outer Package (Y) (N)
 3. Present on Sample (Y) (N)
 4. Unbroken on Sample (Y) (N)

COC Record Was:
 1. Present Upon Receipt of Samples (Y) (N)
 Discrepancies Between Sample Labels and COC Record? (Y) (N)

RFW 21-21-001/A-12/88 SW094003 = less than 200pCi/L
 SW095003 = less than 250pCi/L
 Transferred from COC WU B06089001

ER PROGRAM DATA ASSESSMENT
SUMMARY REPORT FORM

Batch No. 8906L639 Site Area 6 - Solar Ponds
 Laboratory Roy F. Weston-Lionville No. of Samples/Matrix 4/Water
 SOW # 7/87 Reviewer Org. TechLaw, Inc.
 Sample Numbers SW094003 (total and soluble), SW095003 (total and soluble)

Data Assessment Summary

	ICP	AA	Hg	CN	Comments
1. Holding Times	<u>V</u>	<u>V</u>	<u>V</u>	<u>V</u>	
2. Calibrations	<u>V</u>	<u>V</u>	<u>V</u>	<u>V</u>	
3. Blanks	<u>A</u>	<u>A</u>	<u>V</u>	<u>V</u>	<u>Action Items 1-2</u>
4. ICP Interference Check Sample	<u>A</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>Action Items 3-4</u>
5. Lab Control Sample Results	<u>V</u>	<u>V</u>	<u>V</u>	<u>V</u>	
6. Duplicate Sample Results	<u>X</u>	<u>X</u>	<u>V</u>	<u>V</u>	<u>Comment 1</u> <u>Comment 2</u>
7. Matrix Spike Sample Results	<u>X</u>	<u>A</u>	<u>V</u>	<u>V</u>	<u>Action Items 5-7</u>
8. Method of Standard Addition	<u>N/A</u>	<u>V</u>	<u>N/A</u>	<u>N/A</u>	
9. Serial Dilution	<u>X</u>	<u>N/A</u>	<u>N/A</u>	<u>N/A</u>	<u>Comment 3</u>
10. Sample Verification	<u>V</u>	<u>V</u>	<u>V</u>	<u>X</u>	<u>Comment 4</u>
11. Other QC	<u>V</u>	<u>V</u>	<u>V</u>	<u>V</u>	
12. Overall Assessment	<u>A</u>	<u>A</u>	<u>V</u>	<u>V</u>	<u>Data acceptable with qualifications</u>

V = Data had no problems.

A = Data acceptable but qualified due to problems.

R = Data rejected.

X = Problems, but do not affect data.

N/A = Not applicable.

Data Quality: Data contained in this batch were reviewed and found to be acceptable with qualifications. Acceptable, qualified data may be used provided that individual values impacted by the "Action Items" listed below are appropriately flagged. (Refer to attached Results Summary Tables).

Action Items: 1) The Thallium non-detects for SW094003 (total and soluble) are rejected (R) because of negative bias indicated in the blanks.

2) All Beryllium values are estimated (J) because of negative bias indicated in the blanks.

3) The Antimony value for SW094003 (soluble) is estimated (J) because of possible Calcium interference as indicated in the ICP interference check sample.

4) All Manganese and Zinc values are estimated (J) because of possible Calcium interference as indicated in the ICP interference check sample.

5) The Arsenic values for SW094003 (total and soluble) are estimated (J) because the post-digestion matrix spike recovery criteria were not met.

6) All Lead non-detects are estimated and undetected (UJ) because the post-digestion matrix spike recovery criteria were not met.

7) The Thallium non-detects for SW095003 (total and soluble) are estimated and undetected (UJ) because the post-digestion matrix spike recovery criteria were not met.

Comments: 1) Duplicate analyses for AA and ICP were not performed.

2) Pre-digestion matrix spikes were not performed for AA and ICP analyses.

3) Serial dilution analysis was not performed.

4) The Cyanide non-detect for SW095003 (total) was changed to a detect because the data indicated Cyanide was present.

Note: Data Summary Tables are attached.

William H. Truse
Reviewer Signature

3/30/90
Date

Sample Location	SW094003	SW095003	SW094003	SW095003
Sample Number	6/8/89	6/8/89	6/8/89	6/8/89
Sample Date				
Remarks	Total	Total	Soluble	Soluble
Inorganic				
Analyte	DL ug/L	DQ	DQ	DQ
Aluminum	Al 200	247	V	201
Antimony	Sb 60	50.0 U	V	51.6 J
Arsenic	As 10	1.6 J	A	1.3 U
Barium	Ba 200	158	V	157
Beryllium	Be 5	0.67 J	A	0.69 J
Cadmium	Cd 5	2.2 U	V	2.2 U
Calcium	Ca 5000	309000	V	314000
Cesium	Cs 1000	1000 U	V	1000 U
Chromium	Cr 10	2.6 U	V	2.6 U
Cobalt	Co 60	4.0 U	V	4.0 U
Copper	Cu 25	15.5	V	21.8
Iron	Fe 100	182	V	234
Lead	Pb 5	1.5 UJ	A	1.5 UJ
Lithium	Li 100	404	V	409
Magnesium	Mg 5000	77100	V	77000
Manganese	Mn 15	17.6 J	A	20.3 J
Mercury	Hg 0.2	0.20 U	V	0.20 U
Molybdenum	Mo 200	100 U	V	100 U
Nickel	Ni 40	8.4	V	16.9
Potassium	K 5000	75000	V	77000
Selenium	Se 5	16.0	V	12.8
Silver	Ag 10	6.7 U	V	6.7 U
Sodium	Na 5000	37000	V	362000
Strontium	Sr 200	2220	V	2210
Thallium	Tl 10	1.5 U	R	1.5 UJ
Tin	Sn 200	149	V	144
Vanadium	V 50	2.1 U	V	2.1 U
Zinc	Zn 20	88.1 J	A	54.1 J
Cyanide	CN 10	10.0 U	V	10.6

E Estimated by the Laboratory
 U Indicates the compound was not detected above the Instrument Quantization Limit
 J Quantitation is approximate due to limitations identified during the quality control review
 DL Detection Limit in Micrograms per Liter (ug/L)
 N/R Not reported

DQ Data Qualifier
 V Valid
 A Acceptable with qualifications
 R Rejected

Lionville

FAM 060989004



Custody Transfer Record/Lab Work Request

WESTON Analytics Use Only
 89062648
 639

Client: Rockwell
 Work Order: 2029 33 04
 Date Rec'd: 4/10/89 Date Due: 7/8/89
 RFW Contact: Janel Bergman
 Client Contact Phone: (303) 980 6800

Refrigerator#	#Type Container	Volume	Preservative	ANALYSES REQUESTED	Matrix	Date Collected
	1 gal	1 gal	1-L		W	6-8-89
	1-L	1-L	1-L		W	6-8-89
	1-L	1-L	1-L		W	6/8/89
	1-L	1-L	1-L		W	6/8/89

Lab ID	Client ID/Description	Special Instructions
01	SW 094003	1 - vos 2 - bne 3 - pest/pcb 4 - arsenide
2	SW 095003	5 - filtered tcl metals, Mo, Sr, Cs, Li, Sn
3	SW 095003 SW094003	6 - unfiltered tcl metals, Mo, Sr, Cs, Li, Sn
4	SW 095003	

Item/Reason	Relinquished by	Received by	Date	Time	Item/Reason	Relinquished by	Received by	Date	Time
3 - Soil	F. M. ...	F. M. ...	6-9-89	17:00	10A	...	...	6/19	11:00
SE - Sediment	...	...	6-10-89	9:00	...	...	...	6/19	9:00
SO - Solid	...	...	6-10-89	9:00	...	...	...	6/19	12:00

WESTON Analytics Use Only

Sample Were: Shipped or Hand-Delivered

NOTES: 2 Ambient or Chilled

3 Received Broken/Leaking (Improperly Sealed) Y N

NOTES: 4 Properly Preserved N

5 Received Within Sticking Times Y N

NOTES: 6 Coc Tape Was: 1 Present on Outer Package Y N 2 Unbroken on Outer Package Y N 3 Present on Sample Y N 4 Unbroken on Sample Y N

NOTES: 7 Coc Record Was: 1 Present Upon Receipt of Samples Y N

Discrepancies Between Sample Labels and Coc Record? Y N

NOTES:

SW 094003 = Jess + then 2009 C. 13
 SW 095003 = 0... + then 9500 C. 10
 Transferred from COC WLB B06089001