

Rockwell ER Program  
Rocky Flats Plant

(09/11/89)

ER PROGRAM DATA ASSESSMENT  
SUMMARY REPORT FORM

Batch No. E88-2939/3rd Quarter 1988 Site Area 2 - 881 Hillside  
 Laboratory Rockwell 881 General Labs No. of Samples/Matrix 17/Water  
 Method L-Procedures Reviewer Org. TechLaw, Inc.  
 Sample Numbers 9-74, 10-74, 56-86, 62-86, 69-86, 70-86, 2-87, 3-87, 4-87, 5-87, 8-87, 43-87, 45-87, 52-87, FB, TB, EB

Data Assessment Summary

	Alkalinity	Chloride	Nitrate /Nitrite	Sulfate	Gravimetric	Comments
1. Holding Times	<u>V</u>	<u>V</u>	<u>V</u>	<u>V</u>	<u>A</u>	<u>TDS holding times were exceeded</u>
2. Calibrations	<u>V</u>	<u>V</u>	<u>A</u>	<u>V</u>	<u>V</u>	<u>Incorrect number performed</u>
3. Blanks	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>	<u>V</u>	<u>Blank contamination</u>
4. Lab Control Sample Results	<u>A</u>	<u>V</u>	<u>V</u>	<u>V</u>	<u>V</u>	<u>LCS not performed</u>
5. Duplicate Sample Results	<u>V</u>	<u>V</u>	<u>V</u>	<u>V</u>	<u>V</u>	
6. Matrix Spike Sample Results	<u>V</u>	<u>X</u>	<u>X</u>	<u>V</u>	<u>V</u>	<u>Not performed</u>
7. Sample Verification	<u>X</u>	<u>X</u>	<u>X</u>	<u>V</u>	<u>V</u>	<u>Transcription errors</u>
8. Other QC	<u>X</u>	<u>X</u>	<u>X</u>	<u>V</u>	<u>V</u>	
9. Overall Assessment	<u>A</u>	<u>A</u>	<u>A</u>	<u>A</u>	<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 Tables).

"REVIEWED FOR CLASSIFICATION

By R. B. Hoffman (C)

Date 2.11.90

ADMIN RECORD

REVIEWED FOR CLASSIFICATION/UCNI

1

By George H. Salook 2939/rk11

Date 6/27/90

A-0101-000039

**Action Items:** 1) All total dissolved solids results are estimated (J) because the TDS holding time was exceeded.

2) The values for Nitrate in samples 10-74, 70-86, 56-86, and 2-87 were estimated (J) because no blanks were run with these samples.

3) The values for Chloride in samples 43-87, 3-87, and 5-87 were estimated (J) because no blanks were run with these samples.

4) The values for Nitrate in samples 3-87, 4-87, 5-87, 9-74, 43-87, 45-87, 52-87, 62-86, and 69-86 were estimated (J) because only one blank was run with the batch.

5) The values for Chloride in samples 52-87, 69-86, 4-87, 9-74, TB, and FB were estimated (J) because only one blank was run with the batch.

6) The value for Nitrate in sample 10-74 was estimated (J) because the calibration verification had a high percent recovery.

7) The positive values for Nitrate in samples 70-86, 56-86, 2-87, EB, 45-87, 9-74, 3-87, 5-87, 43-87, and 8-87 were estimated (J) and non-detects were undetected and estimated (UJ) because only one calibration verification was done.

8) The value for Chloride in sample 45-87 was estimated (J) because of negative bias in the blank.

9) Non-detect values for Alkalinity were estimated (UJ) for TB, FB, and EB because no blanks were run with the batch.

10) All positive values for Sulfate were estimated (J) because no blanks were run with the batch.

11) All positive values for Alkalinity were estimated (J) because no laboratory control samples were analyzed.

**Comments:** 1) No spikes were analyzed.

2) The net weight calibration for sample 70-86 for total dissolved solids was incorrect. The value was recalculated and used for validation purposes.

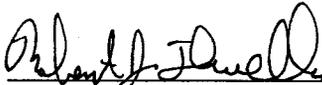
3) The value for Chloride in sample 5-87 was calculated incorrectly.

**Comments:** (cont.) 4) Several transcription errors were found between the raw data and the summary sheets.

The following transcription errors were found: Chloride sample 52-87; total dissolved solids samples 3-87

and EB; and Nitrate samples 9-74, 10-74, 3-87, 5-87, 8-87, 43-87, 45-87, and EB.

**Note:** Data Summary Tables are attached.

 for April Sammers  
Reviewer Signature

10/3/89  
Date

# WATER QUALITY PARAMETERS

TABLE #: E88-2939 Page 1 of 2

SITE NAME: Area 2 - 881 Hillside  
 AQUEOUS ANALYSIS: Low Water ANALYTICAL RESULTS (mg/L)

Sample Location	9-74	10-74	56-86	62-86	69-86	70-86	2-87	3-87	4-87	5-87
Sample Number	7/21/88	7/20/88	7/14/88	7/15/88	7/19/88	7/14/88	7/14/88	7/22/88	7/15/88	7/20/88
Sample Date										
Remarks										
Water Quality Analyte	DL	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ	DQ
Alkalinity	10	272 JA	269 JA	99.9 JA	151 JA	382 JA	124 JA	381 JA	212 JA	411 JA
Bicarbonate	10									469 JA
Carbonate	5	290 JA	325 V	16.4 V	30.2 V	104 JA	28.1 V	94.2 V	87.6 JA	189 JA
Chloride	0.5									251 JA
Dissolved Oxygen	5									
Grease & Oil	0.01									
Hex Chrome	5	10.34 JA	41.7 JA	0.04 JA	2.99 JA	4.29 JA	0.05 JA	0.02 JA	0.05 JA	4.99 JA
Nitrate/Nitrite	5	300 JA	313 JA	10.72 JA	57.6 JA	256 JA	77.3 JA	102 JA	3.09 JA	449 JA
Sulfate	5									658 JA
Sulfide	5									
TDS	5	1231 JA	1530 JA	150 JA	283 JA	915 JA	284 JA	595 JA	394 JA	1264 JA
TSS	10									1464 JA

SITE NAME: \_\_\_\_\_  
 SOIL ANALYSIS: N/A

## ANALYTICAL RESULTS (mg/kg)

Sample Location										
Sample Number										
Sample Date										
Percent Solids										
Water Quality Analyte	DL	DQ								
Chloride	60									
Grease & Oil	60									
Hex Chrome	1									
Nitrate/Nitrite	60									
Sulfate	60									
Sulfide	4									

- U Indicates the compound was not detected above the Instrument Quantitation Limit
  - J Quantitation is approximate due to limitations identified during the quality control review
  - Value is rejected due to other contractual criteria examined during the quality control review
  - \*\* Value is rejected due to blank contamination identified during the quality control review
  - mg/kg Milligrams per Kilogram
  - E Exceeds Calibration Range
  - DL Detection Limit
- DQ Data Qualifier  
 V Valid  
 A Acceptable with qualifications  
 R Rejected

# WATER QUALITY PARAMETERS

TABLE #: E88-2939

Page 2 of 2

SITE NAME: Area 2 - 881 Hillside

AQUEOUS ANALYSIS: Low Water

ANALYTICAL RESULTS (mg/L)

Sample Location	8-87	43-87	45-87	52-87	TB	FB	EB		
Sample Number	7/22/88	7/21/88	7/22/88	7/19/88	7/19/88	7/19/88	7/22/88		
Sample Date									
Remarks									
Water Quality	DL	DC	DC	DC	DC	DC	DC		
Analyte	mg/L								
Alkalinity									
Bicarbonate	10	347 JA	356 JA	232 JA	460 JA	1 UJA	1 UJA	1 UJA	
Carbonate	10								
Chloride	5	43.8 V	246 JA	11 JA	85.5 JA	20.4 JA	20.7 JA	27.1 V	
Dissolved Oxygen	0.5								
Grease & Oil	5								
Hex Chrome	0.01								
Nitrate/Nitrite	5	0.05 JA	4.32 JA	0.04 JA	0.06 JA	0.07 V	0.19 V	0.1 JA	
Sulfate	5	773 JA	332 JA	47 JA	225 JA	0.11 JA	0.03 JA	0.14 JA	
Sulfide									
TDS	5	1214 JA	1232 JA	341 JA	878 JA	22 JA	18 JA	10 JA	
TSS	10								

SITE NAME: \_\_\_\_\_

SOIL ANALYSIS: N/A

ANALYTICAL RESULTS (mg/kg)

Sample Location									
Sample Number									
Sample Date									
Percent Solids									
Water Quality	DL								
Analyte	mg/Kg	DC							
Chloride	60								
Grease & Oil	60								
Hex Chrome	1								
Nitrate/Nitrite	60								
Sulfate	60								
Sulfide	4								

U Indicates the compound was not detected above the Instrument Quantitation Limit

J Quantitation is approximate due to limitations identified during the quality control review

\* Value is rejected due to other contractual criteria examined during the quality control review

\*\* Value is rejected due to blank contamination identified during the quality control review

mg/Kg Milligrams per Kilogram

E Exceeds Calibration Range

DL Detection Limit

DC Data Qualifier

V Valid

A Acceptable with qualifications

R Rejected