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Effluent Variability Study Results for the 200 Area Treated Effluent Disposal Facility

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Abstract: The variability of permitted constituents in grab samples and 24-hr composites of liquid effluent discharged to the Treated Effluent Disposal Facility (TEDF) in the 200 East Area of the Hanford Site was evaluated for the period July 1995 through April 1996. The variability study was required as a condition of the wastewater discharge permit issued by the State of Washington Department of Ecology. Results of the statistical evaluation indicated that 1) except for iron, and possibly chloride, there is a very low probability of exceeding existing permit limits, 2) seasonal effects related to intake water quality account for the variability in several chemical constituents and 3) sample type (grab vs 24-hr composite) have little if any effect on monthly mean constituent concentrations.

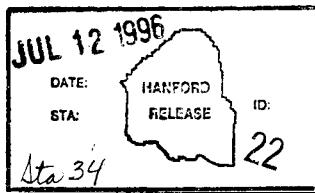
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EXECUTIVE SUMMARY

The Washington State Department of Ecology issued a State Waste Discharge Permit (No. ST 4502) on April 18, 1995 to the U.S. Department of Energy, Richland Operations Office to regulate the discharge of treated waste water to infiltration ponds. This disposal facility, known as the 200 Area Treated Effluent Disposal Facility is located east of the northeastern corner of the 200 East fenceline on the Hanford Site. A special Permit Condition (S.6) required that a study of effluent variability be conducted during the first year following issuance of the Permit. This document fulfills the reporting requirement for the State Waste Discharge Permit. The specific objectives of the statistical evaluation are as follows:

- Determine the overall variability of permitted constituents
- Evaluate comparability of grab samples and composites
- Determine if concentrations of permitted constituents vary with season.

Results of the statistical evaluation will be used by Washington State Department of Ecology to verify and or to modify the enforcement limits and early warning values of the listed constituents in the effluent if needed. In addition, if conditions warrant, Ecology will issue an administrative order or permit modification to the Permittee to modify monitoring or other permit requirements. The results also could be used by the Permittee to support a request for reduction in monitoring requirements where the requirements appear to be unnecessarily redundant or too extensive.

Methods. The statistical approach applied to effluent data collected from July 1995 through April 1996 consisted of both standard statistical methods (frequency of detection, monthly average concentrations, 95 percent confidence limits, coefficient of variation, standard deviation), and analysis of variance to evaluate seasonal and/or sample type effects (grabs versus composites). Sample population homogeneity was assessed using both Box-and-Whisker plots and goodness-of-fit test. If more than one population was indicated, the data were segregated into a high and a low concentration group. Statistical variability results also were used to calculate the probability of exceeding monthly average and daily maximum Permit limits under normal or baseline conditions.

Results. Detected analytes and concentrations relative to Permit limits during the period of observation for the variability study are summarized as follows.

Volatiles. Of the seven volatile organic constituents analyzed, only bromodichloromethane and chloroform were detected. Chloroform occurred during all seasons and was at a maximum during the summer months but did not approach the Permit limit. The presence of both of these constituents is attributed to reaction of chlorine and bromine (an impurity in the chlorine gas) with naturally occurring organics in Columbia River water.

Semivolatiles. Only bis(2-ethylhexyl)phthalate consistently was detected. This constituent is an ubiquitous organic compound in plastic pipe cements and related products, and is not associated with Hanford Site operations. There was one apparent detection of phenol (2 parts per billion).

Metals (total). Of the permit-required metals analyzed, only iron was consistently detected and present in concentrations that approached or exceeded Permit limits. The monthly average Permit limit of 258 parts per billion was exceeded for only the month of April, due to a single excursion event that occurred in both grab and composite samples collected on April 7th. Mercury was detected in 24 percent of the samples analyzed at concentrations that were at or below the practical quantitation limit of 2 parts per billion. Lead, arsenic, cadmium, and chromium were detected at very low frequencies (<10 percent). Manganese was detected about 50 percent of the time and appeared to be detected more frequently during summer (grab samples only). Manganese also appeared to be covariant with iron.

Anions. Sulfate, chloride, and nitrate were all consistently detected. However, only chloride concentrations approached a daily maximum Permit limit. For example, one large spike in chloride concentration occurred for a grab sample that slightly exceeded the daily maximum Permit limit of 116 parts per million during the first week of February (because the sample was taken to support the effluent variability study and not compliance monitoring, this was not considered a violation of the Permit limit). This was attributed to road salt in parking lot run-off from rapidly melting snow. Flow rate of the combined waste stream was more than double the average ($\bar{x} = 380$ gallons per minute) during the run-off event.

Cyanide. Total cyanide was detected in 17 percent of the samples analyzed and all results were at or below 10 parts per billion (practical quantitation limit and permit limit = 50 parts per billion).

Total petroleum hydrocarbons (WTPH-G)/oil and grease. Gasoline and related hydrocarbons were detected in 20 percent of the samples analyzed and oil and grease were detected in about 50 percent of the samples analyzed, none of which approached Permit limits. In the latter case, most of the detections were at or near the detection limit.

Gross alpha, gross beta and radium. Gross alpha and gross beta concentrations were near natural background levels for Columbia River water (<1 picocurie per liter) except during September and October. During these 2 months, a PUREX Facility related event caused monthly average gross beta in the TEDF waste stream to increase to a maximum of 43 picocuries per liter based on grab samples, and 31 picocuries per liter based on composite samples. Radium-226 and radium-228 were below detection in all samples analyzed.

Variability Analysis and Permit Exceedance Probability. A summary of variability and exceedance probability for those constituents consistently detected >50 percent of the time are summarized in the following table. Overall variability in effluent samples collected over the period of observation ranged from low [<25 percent coefficient of variation (CV)] to very high (>100 percent CV), depending on the constituent and time of year.

The very high variability for chloride and iron is attributed primarily to power plant operations. Routine releases from this source occur periodically over a short period (a few hours) during boiler blowdown and regeneration of water softeners. Seasonal effects for nitrate were attributed to changes in river water because of higher nitrate removal (higher photosynthetic activity) during the spring and summer months than during the winter months.

Even though variability was high for several constituents, the probability of exceeding a permit limit was very low for most of the detected analytes. The exception was for iron and chloride. Each exceeded or approached permit limits during individual sampling events. It also should be noted that based on the analysis of variance test results, there were no major sample type effects (i.e., similar mean compositions).

Constituent	Overall variability ^a percent	Seasonal effect?	Sample type effect?	Exceedance probability
Chloroform	31	Yes	NA	<0.0001%
Iron	94	Yes	No	2.5% ^b
Manganese	50	No	No	<0.0001% ^b
Chloride	150	Yes	No	6%
Nitrate	36	Yes	No	<0.0001%
Sulfate	24	No	No	<0.0001% ^b
Gross alpha	77 ^c	Yes ^c	No	<0.0001%
Gross beta	12 ^c	Yes ^c	No	<0.0001% ^d
Total dissolved solids	15	Yes	No	Not calculated

^aObtained by averaging the CV for the four seasons.

^bExceedance probability was calculated excluding the 04/07/96 excursion event.

^cAll samples were near the detection limit, which accounts for the apparent high variability and apparent seasonal effect.

^dExceedance probability was calculated excluding September and October 1995 data.

Conclusions. Based on statistical evaluation of effluent data for four consecutive seasons, it was concluded there is a very low probability of exceeding Permit limits under normal operating conditions. Excluding a one-time occurrence of slightly elevated gross beta and one observed monthly average Permit exceedance for iron, the effluent is similar in composition to local drinking water (i.e., chlorinated Columbia River water).

The seasonal effect (i.e., shift in mean concentrations) that occurs for chloroform and nitrate is attributed to biological changes in the source water or raw water (Columbia River water). An apparent seasonal effect for chloride, total dissolved solids, and iron might be more related to operational factors and/or parking lot run-off rather than to natural conditions. It also is concluded that grab samples and 24-hour composites should yield similar results under normal operating conditions.

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GLOSSARY

ANOVA	analysis of variance
CV	coefficient of variation
Ecology	Washington State Department of Ecology
EPA	U.S. Environmental Protection Agency
gpm	gallons per minute
mg/L	milligrams per liter
NA	not applicable
NC	not calculated
pCi/L	picocuries per liter
Permit	State Waste Discharge Permit No. ST 4502
ppb	parts per billion
ppm	parts per million
PUREX	Plutonium-uranium extraction (Plant)
SAP	sampling and analysis plan
TEDF	200 Area Treated Effluent Disposal Facility
TDS	total dissolved solids
Tri-Party Agreement	<i>Hanford Federal Facility Agreement and Consent Order</i>
UCL	upper confidence limit
UTL	upper tolerance limit
<	less than
>	greater than
%	percent

METRIC CONVERSION CHART

Into metric units

Out of metric units

If you know	Multiply by	To get	If you know	Multiply by	To get
Length					
inches	25.40	millimeters	millimeters	0.0393	inches
inches	2.54	centimeters	centimeters	0.393	inches
feet	0.3048	meters	meters	3.2808	feet
yards	0.914	meters	meters	1.09	yards
miles	1.609	kilometers	kilometers	0.62	miles
Area					
square inches	6.4516	square centimeters	square centimeters	0.155	square inches
square feet	0.092	square meters	square meters	10.7639	square feet
square yards	0.836	square meters	square meters	1.20	square yards
square miles	2.59	square kilometers	square kilometers	0.39	square miles
acres	0.404	hectares	hectares	2.471	acres
Mass (weight)					
ounces	28.35	grams	grams	0.0352	ounces
pounds	0.453	kilograms	kilograms	2.2046	pounds
short ton	0.907	metric ton	metric ton	1.10	short ton
Volume					
fluid ounces	29.57	milliliters	milliliters	0.03	fluid ounces
quarts	0.95	liters	liters	1.057	quarts
gallons	3.79	liters	liters	0.26	gallons
cubic feet	0.03	cubic meters	cubic meters	35.3147	cubic feet
cubic yards	0.76456	cubic meters	cubic meters	1.308	cubic yards
Temperature					
Fahrenheit	subtract 32 then multiply by 5/9ths	Celsius	Celsius	multiply by 9/5ths, then add 32	Fahrenheit
Force					
pounds per square inch	6.895	kilopascals	kilopascals	1.4504×10^{-4}	pounds per square inch

Source: *Engineering Unit Conversions*, M. R. Lindeburg, PE., Second Ed., 1990, Professional Publications, Inc., Belmont, California.

**EFFLUENT VARIABILITY STUDY RESULTS FOR THE 200 AREA
TREATED EFFLUENT DISPOSAL FACILITY (W049-H)**

State Waste Discharge Permit No. ST 4502

1.0 INTRODUCTION

The Washington State Department of Ecology (Ecology) issued a State Waste Discharge Permit (No. ST 4502) (Permit) on April 18, 1995 to the U.S. Department of Energy, Richland Operations Office to regulate the discharge of treated waste water to infiltration ponds. The disposal facility, known as the 200 Area Treated Effluent Disposal Facility (TEDF) is located east of the northeastern corner of the 200 East fenceline on the Hanford Site. Special Permit Condition (S.6) required that a study of effluent variability be conducted during the first year following issuance of the Permit. This document fulfills the reporting requirement for the State Waste Discharge Permit.

1.1 PURPOSE AND OBJECTIVES

The purpose of this document is to report the results of a statistical evaluation of the data acquired for the effluent variability study as specified in Permit Condition S.6. The specific objectives were to (1) determine the overall variability of permitted constituents, (2) evaluate comparability of grab samples and composites, and (3) determine if there are seasonal effects.

The results of the statistical evaluation will be used by Ecology, if needed, to verify and/or to modify the enforcement limits and early warning values of the listed constituents in the effluent. In addition, if modification warrant, Ecology will issue an administrative order or a permit modification to the Permittee to modify monitoring or other permit requirements. The statistical evaluation also might be used by the Permittee to support a request for reduction in monitoring program requirements where these requirements appear to be unnecessarily redundant or too extensive.

1.2 SCOPE

The evaluation of effluent data for this study is limited to (1) the total or combined data acquired from July 1995 through April 1996 and (2) a comparison of winter-summer seasonal conditions. Data validation, quality assurance, and related data management issues are addressed by the sampling and analysis plan and the related implementing work plans. Analytical methods, detection limit requirements, and effluent limits are as specified in the Permit and a sampling and analysis plan.

2.0 APPROACH

The analysis methods applied to the validated effluent data collected from July 1995 through April 1996 consisted of both standard statistical methods (frequency of detection, monthly average concentrations, 95 percent confidence limits, coefficient of variation, standard deviation); and analysis of variance (ANOVA) to evaluate seasonal and/or sample type effects (grabs versus composites). Sample population homogeneity was assessed using both Box-and-Whisker plots and goodness-of-fit test. If more than one population was indicated, the data were segregated into a high and low concentration group. Exceedance probabilities were calculated (based on the best fit distributions) to determine the likelihood of exceeding monthly average and daily maximum Permit limits under normal or baseline conditions (i.e., excluding spurious excursions). A generalized flow chart of the overall statistical evaluation process used is shown in Figure 1. A more detailed description of the statistical methods outlined in Figure 1 is included in Appendix A.

3.0 RESULTS

This section summarizes results of the statistical evaluation in both tabular and graphical forms. Correlation of trends or other spurious occurrences with operational conditions or events are included in the discussion of individual analytes.

3.1 DETECTED ANALYTES

Frequencies of detection, broken down by season and sample type (grabs and composites), are summarized in Table 1. Permit-required analytes and all other reported constituent results are included in the summary. The components of total trihalomethanes (bromoform, bromodichloromethane, chloroform, and dibromochloromethane) were analyzed throughout the study period. The summation of these components was reported as total trihalomethanes in the winter and spring season. Chloroform and bromodichloromethane were the only trihalomethanes observed and chloroform was the prime contributor to the total trihalomethanes. Discussion of occurrences within each analytical grouping are included in the following sections. Effluent data, listed by sample date and constituent, are included in Appendix B.

3.1.1 Volatiles

Of the seven volatile organic constituents analyzed (Table 1), only bromodichloromethane and chloroform were detected. Chloroform occurred during all seasons, was at a maximum during the summer months (Table 2) and did not approach the Permit limit.

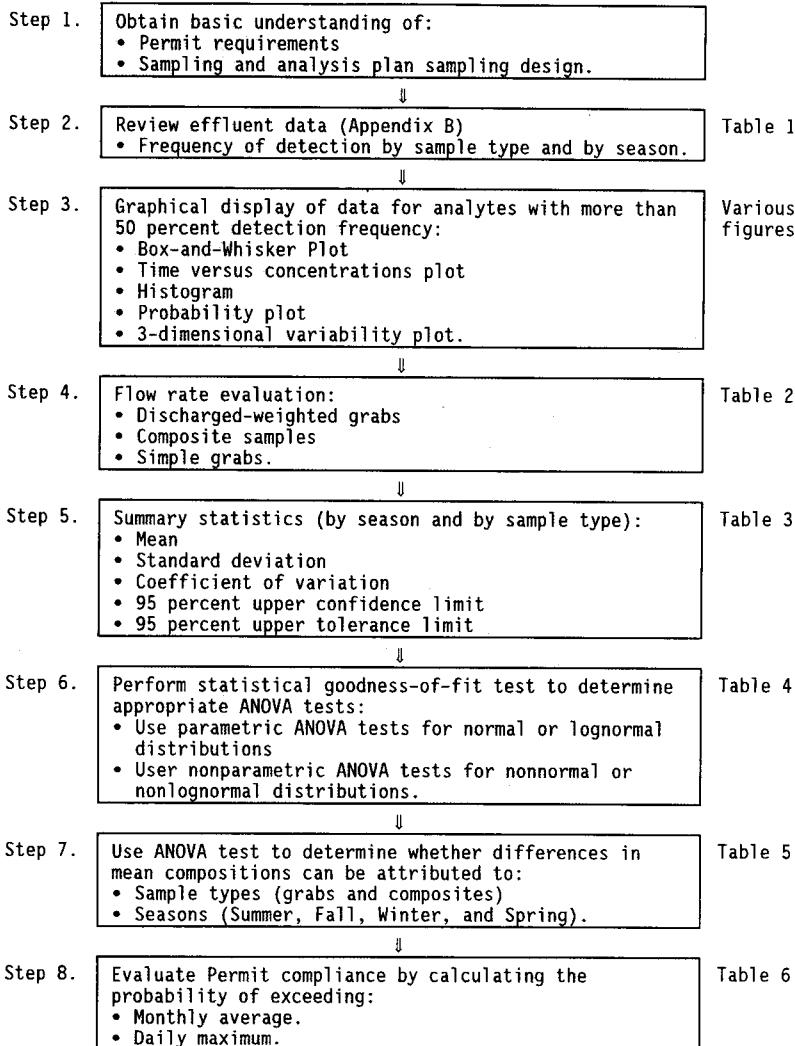


Figure 1. Process Flow Chart for the Effluent Variability Study.

Table 1. Detection^a Status of Constituents Analyzed for the W-049H Project Effluent Variability Study.
(sheet 1 of 2)

Parameter	Grab samples					Composite samples		
	Summer	Fall	Winter	Spring	Summer	Fall	Winter	Spring
Volatile organic compound:								
Carbon tetrachloride	0/32	0/8	0/29	0/9	---	---	---	---
Methylene chloride	0/32	0/8	0/29	0/9	---	---	---	---
1,1,1-Trichloroethane	0/32	0/8	0/29	0/9	---	---	---	---
Total trihalomethanes	---	--	10/10	9/9	---	---	---	---
Bromoform	0/32	0/8	0/29	0/9	---	---	---	---
Bromodichloromethane	17/32	0/8	0/29	2/9	---	---	---	---
Chloroform	32/32	8/8	29/29	9/9	---	---	---	---
Dibromoacromethane	0/32	0/8	0/29	0/9	---	---	---	---
Semi-volatile organic compounds:								
Bis(2-ethylhexyl)phthalate	5/32	2/8	4/30	2/8	0/12	1/9	2/12	1/9
Phenol	0/32	0/8	0/30	0/9	0/12	1/9	0/12	0/9
Total metals:								
Arsenic	3/32	0/8	0/28	0/9	4/13	0/9	0/12	0/9
Cadmium	0/32	0/8	0/28	0/9	0/13	0/9	0/12	1/9
Chromium	0/32	0/8	5/28	3/9	1/13	0/9	0/12	1/9
Lead	7/32	0/8	1/28	0/9	3/13	1/9	0/12	3/9
Mercury	7/32	4/8	10/28	0/9	0/13	4/9	4/12	0/9
Iron	32/32	8/8	28/28	9/9	13/13	9/9	12/12	9/9
Manganese	20/32	3/8	15/28	5/9	3/13	2/9	9/12	6/9

^aNumbers in the table denote detection frequency (= the number of times an analyte is detected over the total number of analyses performed during the 10-month study period (July 95 through April 96).

--- = not applicable.

Table 1. Detection^a Status of Constituents Analyzed for the W-049H Project Effluent Variability Study.
(sheet 2 of 2)

Parameter	Grab samples				Composite samples			
	Summer	Fall	Winter	Spring	Summer	Fall	Winter	Spring
Anions:								
Chloride	32/32	8/8	30/30	9/9	11/12	9/9	12/12	9/9
Nitrate (as N)	28/32	8/8	30/30	9/9	11/12	9/9	11/12	8/9
Sulfate	32/32	8/8	30/30	9/9	12/12	9/9	12/12	8/8
Other analyses:								
Cyanide	2/10	2/6	1/13	0/6	---	---	---	---
WPL+G	0/3	0/2	0/3	2/2	---	---	---	---
Oil and grease	2/4	0/2	2/9	9/9	6/13	1/1	3/12	9/9
Total dissolved solids	---	1/1	3/3	2/2	3/3	2/2	3/3	2/2
Total suspended solids	---	---	---	---	---	---	---	1/1
Conductivity (laboratory)	---	---	---	4/4	---	---	---	---
Gross Alpha	9/9	7/8	26/30	4/9	3/3	7/8	9/12	4/9
Gross Beta	9/9	8/8	30/30	8/9	3/3	8/8	11/12	8/9
Total radium	0/3	0/2	0/3	0/2	---	---	---	---
Radium-226	1/3	0/2	0/3	0/2	---	---	---	---

^aNumbers in the table denote detection frequency (= the number of times an analyte is detected over the total number of analyses performed during the 10-month study period (July '95 through April '96).

... = not applicable.

The presence of both of these constituents is attributed to reaction of chlorine and bromine (an impurity in the chlorine gas) with naturally occurring organics in Columbia River water.

3.1.2 Semivolatiles

Phenol was detected only once in 121 samples analyzed. Bis(2-ethylhexyl)phthalate was detected in about 10 percent of the samples (Table 1). This constituent is a ubiquitous organic compound in plastic pipe cements and related products, and is not associated with Hanford Site operations. There was one apparent detection of phenol (2 ppb).

3.1.3 Metals (total)

Of the Permit required metals analyzed, only iron consistently was detected and present in concentrations of regulatory concern. The monthly average Permit limit of 258 ppb was exceeded for only the month of April, due to a single excursion event that occurred in both grab and composite samples collected on April 7th. Mercury was detected in 24 percent of the samples analyzed at concentrations that were at or below the practical quantitation limit of 2 ppb. Lead, arsenic, cadmium, and chromium were detected at very low frequencies (<10 percent). Manganese was detected an average of about 50 percent of the time, and appeared to be detected more frequently during summer (grab samples only). Manganese also appeared to be covariant with iron.

3.1.4 Anions

Sulfate, chloride, and nitrate were all consistently detected. However, only chloride concentrations approached a daily maximum Permit limit. For example, one large spike in chloride concentration occurred for a grab sample that slightly exceeded the daily maximum Permit limit of 116 ppm during the first week of February (because the sample was taken to support the effluent variability study and not compliance monitoring, this was not considered a violation of the Permit limit). This was attributed to road salt in parking lot run-off from rapidly melting snow. Flow rate of the combined waste stream was more than double the average ($\bar{x} = 380$ gallons per minute) during the run-off event.

3.1.5 Cyanide

Total cyanide was detected in 17 percent of the samples analyzed and all results were at or below 10 ppb (practical quantitation limit and Permit limit = 50 ppb).

3.1.6 Total Petroleum Hydrocarbons (WTPH-G)/Oil and Grease

Gasoline and related hydrocarbons were detected in 20 percent of the samples analyzed, and oil and grease were detected in about 50 percent of the samples analyzed, none of which approached Permit limits.

3.1.7 Gross Alpha, Gross Beta, and Radium

Gross alpha and gross beta concentrations were near natural background levels for Columbia River water (<1 picocuries per liter) except during September and October. During these 2 months a PUREX Plant related event caused monthly average gross beta in the TEDF waste stream to increase to a maximum of 43 picocuries per liter based on grab samples and 31 picocuries per liter based on composite samples. Radium-226 and radium-228 were below detection limits in all samples analyzed.

3.2 MONTHLY AVERAGES OF GRABS AND COMPOSITES

Results of the statistical evaluation summarized in this section are limited to those analytes listed in Table 1 with a frequency of detection of at least 50 percent.

The monthly averages for analytes of interest for grabs, discharge-weighted grabs, and composite samples are shown in Table 2. The highest allowable monthly average effluent limit for each constituent is included in the footnotes for comparison with the highest monthly average values.

3.2.1 Comparison with Permit Limits

The only Permit exceedance evident from the monthly averages (April) was for iron (Table 2). The latter occurrence was the subject of a noncompliance report.

Table 2. Monthly Averages^a for Detected Analytes. (sheet 1 of 2)

Parameter	July 1995	August 1995	September 1995	October 1995	November 1995	December 1995	January 1996	February 1996	March 1996	April 1996
Chloroform ^b :										
Weighted grab	13.72	9.62	8.35	8.26	6.62	5.42	4.02	4.02	8.30	7.67
Composite	...	...	...	...	...	...	...	...	...	...
Simple grab	14.00	9.64	8.64	8.25	6.75	5.60	4.20	4.44	8.40	7.50
Iron ^c :										
Weighted grab	84.36	66.04	84.25	94.19	61.05	94.98	99.37	86.16	129.54	440.35
Composite	80.75	62.00	25.60	95.80	33.75	106.75	79.20	117.67	156.40	891.25
Simple grab	83.70	64.45	96.73	94.00	62.00	98.30	94.64	84.76	150.40	535.75
Manganese ^d :										
Weighted grab	8.26	5.49	6.78	5.25	5.97	4.72	5.10	4.44	4.39	13.22
Composite	6.25	4.25	4.00	6.00	4.00	6.75	6.40	4.67	4.60	14.00
Simple grab	7.80	5.65	7.36	5.25	6.00	4.80	4.91	4.33	4.40	15.50
Chloride ^e (ppm):										
Weighted grab	2.41	2.44	8.26	9.25	2.22	1.92	36.23	22.18		
Composite	2.07	6.35	4.34	28.93	2.01	4.64	18.75	3.58	8.04	2.47
Simple grab	2.47	2.50	10.46	9.15	2.35	2.36	1.93	18.98	22.48	3.44
Nitrate ^f (as N):										
Weighted grab	59	46	85	110	111	165	139	284	159	191
Composite	115	58	88	98	123	183	154	173	184	175
Simple grab	54	48	86	110	113	161	140	223	160	170
Sulfate ^g (ppm):										
Weighted grab	11.74	10.53	11.68	13.07	11.47	11.91	11.31	9.70	10.66	21.37
Composite	9.24	10.91	12.81	11.64	11.30	10.24	12.04	10.20	11.55	22.55
Simple grab	11.81	10.47	12.05	13.08	11.40	11.88	11.31	9.89	10.67	24.28

^aUnits are in parts per billion (ppb) unless otherwise specified.
^bCarcinogenic value in effluent for total trihalomethanes is 66 ppb.

Highest allowable average monthly effluent limit for total iron (unfiltered) is 258 ppb. Highest allowable average monthly effluent limit for total manganese (unfiltered) is 250 ppb.

For the purpose of demonstrating Permit compliance, nondecrets were replaced with the value of the detection limit (i.e., 4 ppb).

Highest allowable average monthly effluent limit for thionine (as N) is 620 ppb.

No Permit limit is set for sulfate; the WAC 173-200 groundwater quality standard is 250 ppm.

No Permit limit is set for gross alpha; the WAC 173-200 groundwater quality standard is 15 pCi/L.

No Permit limit is set for gross beta; the WAC 173-200 groundwater quality standard for beta activity is 50 pCi/L.

No Permit limit is set for strontium-90; the WAC 173-200 groundwater quality standard for strontium-90 is 8 pCi/L.

Anomalous values were attributed to strontium-90 and cesium-137 from one-time PUREx Plant release.

Table 2. Monthly Averages^a for Detected Analytes. (sheet 2 of 2)

Parameter	July 1995	August 1995	September 1995	October 1995	November 1995	December 1995	January 1996	February 1996	March 1996	April 1996
Gross Alpha:										
Weighted grab	---	---	1.14	0.96	0.34	0.50	0.38	0.55	1.14	1.05
Composite	---	---	0.87	1.12	0.29	0.56	0.45	1.18	0.88	0.96
Simple grab	---	---	1.22	0.97	0.36	0.54	0.37	0.53	1.15	1.03
Gross Beta ^b :										
Weighted grab	---	---	44.36 ^c	24.87 ^c	0.70	0.96	0.51	1.27	1.81	1.41
Composite	---	---	30.53 ^c	25.85 ^c	0.67	0.86	0.56	2.04	1.31	1.43
Simple grab	---	---	42.83 ^c	25.53 ^c	0.71	0.98	0.50	1.37	1.84	1.44
Total trihalomethanes:										
Weighted grab	---	---	---	---	---	---	---	4.02	8.30	8.04
Composite	---	---	---	---	---	---	---	4.44	8.40	8.04
Simple grab	---	---	---	---	---	---	---	---	---	---

^aUnits are in parts per billion (ppb) unless otherwise specified.

Early warning value in effluent for total trihalomethanes is 66 ppb.

Highest allowable average monthly effluent limit for total iron (unfiltered) is 258 ppb.

Highest allowable average monthly effluent limit for total manganese (unfiltered) is 50 ppb. For the purpose of demonstrating Permit compliance, non-detects were replaced with the value of the detection limit (i.e., 4 ppb).

Highest allowable average monthly effluent limit for chloride is 58 ppm.

Highest allowable average monthly effluent limit for nitrate (as N) is 620 ppb.

No Permit limit is set for sulfate; the MAC 173-200 groundwater quality standard is 15 pc/L.

No Permit limit is set for gross alpha; the MAC 173-200 groundwater quality standard is 50 pc/L.

No Permit limit is set for gross beta; the MAC 173-200 groundwater quality standard is 8 pc/L.

No Permit limit is set for strontium-90; the MAC 173-200 groundwater quality standard for beta activity is 50 pc/L.

Anomalous values were attributed to strontium-90 and cesium-137 from a one-time PUREX plant release.

3.2.2 Comparison of Grab, Weighted Grab, and Composite Results

As shown in Table 2, monthly averages based on simple grabs and discharge-weighted grabs are similar for nearly all months and for all constituents. However, some significant differences occur between 24-hour composites and grabs, especially for chloride, iron, and manganese. The largest differences appear to occur randomly. For example, the chloride composite monthly average is nearly 3-fold **higher** than the simple grab monthly average result for October and nearly 10-fold **higher** in January. However, in February, the composite average for chloride was over 10-fold **lower** than the discharge weighted result. The reasons for these perturbations might be related to water softener operation or other more random events. Whatever the cause, the discrepancies in chloride concentrations for some grabs, discharge-weighted grabs, and composite samples suggests that not all of the samples are from a single or homogeneous population.

The overall or general agreement between the discharge-weighted average values and the simple grabs and/or the composite averages, suggests analyte concentrations in the combined waste stream are, for the most part, independent of flow rate. However, as noted previously, excursions or departures from this general trend do occur. For example, there appears to be both flow dependent and flow independent chloride concentration 'spikes' in the grab sample data. Hypothetical deviations as well as the two types of observed chloride spikes or excursions are discussed as follows.

Flow dependent concentrations. Process or non-treatment related higher concentration spikes can coincide with higher effluent flow rates and also result in a weighted average that is **larger** than the simple average. The latter condition is illustrated in Figure 2 showing daily grab results for chloride and instantaneous flow rates at the time the grab samples were collected for the effluent variability study. The large chloride spike that occurred around the first week in February coincides with an unusually high flow rate (shaded vertical band on the right side of Figure 2). These deviations result in higher monthly weighted averages because the product of the concentration and flow rate (refer to Section 2.5) dominates the product sum for the month. This is especially true for the month of February, as the first week (Figure 2) included anomalously high flow rates and high chloride concentrations followed by lower than normal flow rates and very low chloride concentrations.

Variability Study for W-049H Project
Chloride Daily Grab vs Flow Rate

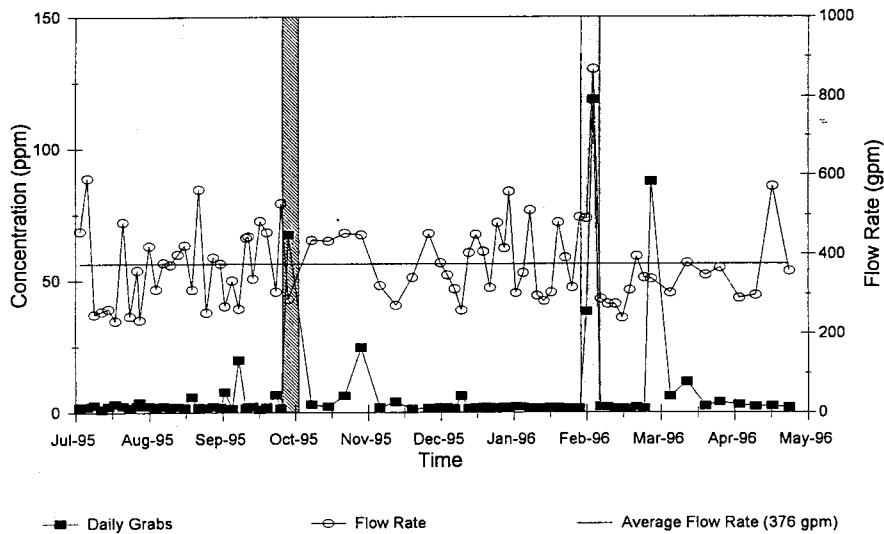


Figure 2. Comparison of Chloride Concentration in Grab Samples and Flow Rate.

This accounts for the 2-fold difference in grab and weighted average results for February (Table 2). It also should be noted that the composite result for February is much lower than the grab results for February, and lower than the composite results for January. This can be explained by the different sampling schedules for grabs and composites and the timing of the chloride excursion event. For example, the weekly composite samples were collected over 24-hour periods on January 31st and February 9th. The grabs were collected on January 31st and February 3rd, 6th and 9th. The chloride excursion must have started after the grab sample was collected on January 31st because only the 24-hour composite for this date shows elevated chloride. The high chloride composite result was included with the January average, which explains why the monthly average for the January composite is higher than the grab and weighted grab monthly average for January (Table 2). Conversely, most of the chloride excursion appears to have occurred in the first week of February during which no 24-hour composite was collected. Thus the February average chloride value for composites is much lower than the grab and weighted grab values.

The cause of the chloride excursion could be related to the rapid snow melt that occurred around the first week of February. It is possible that the resulting parking lot run-off carried dissolved road salt (primarily sodium and potassium chloride) into the drains that contribute to the combined TEDF waste stream.

Flow independent concentrations. In contrast to the flow dependent case discussed previously, concentration spikes can occur that are independent of flow rate and thus do not result in a difference between weighted average concentration and the simple average. This case is illustrated by the second largest chloride spike that occurred near the end of September (Figure 2). In this case, there is a high chloride concentration during a lower than normal flow rate (<the mean of 380 gallons per minute). Thus, the contribution of this excursion to the weighted average chloride concentration is suppressed even though a moderately high concentration occurs, resulting in a similar simple average and weighted average for the month. Likewise, Figure 2 shows that for most of the period of record, there is no obvious correlation between flow rate and chloride for which monthly averages and weighted averages are the same.

3.3 SUMMARY STATISTICS

Basic summary statistics were computed (Table 3) based on the assumption that all of the effluent data within a seasonal period are from a single population of values that follow a lognormal distribution (Section 2.1). Table 3 displays the results by both season and sample type (i.e., grab versus composite). Major features evident from the summary table are discussed, based primarily on the coefficient of variation and upper confidence and/or tolerance limits.

Table 3. Summary Statistics, Upper 95 Percent Confidence Limits and Upper 95 Percent Tolerance Limits for Detected Analytes. (sheet 1 of 5)

Summary statistics ^a	Chloroform (ppb)			Iron (ppb)			Manganese (ppb)			Chloride (ppm)		
	Grab	Composite	Grab	Composite	Grab	Composite	Grab	Composite	Grab	Composite	Grab	Composite
Summer:												
n	32	NA		32	13		32	13	32	32	11	
Mean	10.67	NA		78.84	48.58		6.68	4.70	3.92	3.92	4.33	
Standard deviation	3.30	NA		62.74	36.57		3.74	1.58	3.77	3.77	3.15	
CV (%)	30.9	NA		79.6	75.3		56.0	33.7	96.2	96.2	72.8	
95% UCL	11.8	NA		102.7	76.3		8.0	5.7	5.4	5.4	7.1	
95% URL	19.9	NA		287.6	232.3		18.3	10.7	16.7	16.7	22.0	
Fall:												
n	8	NA		8	9		8	9	8	8	9	
Mean	7.52	NA		79.30	61.31		5.62	5.04	5.41	5.41	17.40	
Standard deviation	1.64	NA		52.38	53.42		2.38	2.05	6.22	6.22	49.51	
CV (%)	21.8	NA		66.1	87.1		42.3	40.6	115.0	115.0	284.6	
95% UCL	8.8	NA		142.3	127.6		7.9	6.8	17.0	17.0	161.8	
95% URL	14.6	NA		430.6	451.0		18.9	15.3	66.2	66.2	521.3	

Table 3. Summary Statistics, Upper 95 Percent Confidence Limits and Upper 95 Percent Tolerance Limits for Detected Analytes. (sheet 2 of 5)

Summary statistics ^a	Chloroform (ppm)			Iron (ppm)			Manganese (ppm)			Chloride (ppm)		
	Grab	Composite	Grab	Grab	Composite	Grab	Grab	Composite	Grab	Composite	Grab	Composite
Winter:												
n	29	NA	30	12	30	12	30	12	30	12	30	12
Mean	4.79	NA	91.57	98.17	4.68	6.05	3.92	7.05				
Standard deviation	1.73	NA	41.84	39.56	1.10	2.63	4.68	11.39				
CV (%)	36.0	NA	45.7	40.3	23.5	43.4	119.4	161.6				
95% UCL	5.4	NA	106.6	126.2	5.0	7.8	5.9	22.4				
95% UTL	9.8	NA	219.0	263.2	7.6	17.9	20.4	82.4				
Spring:												
n	9	NA	8 ^c	8 ^c	8 ^c	8 ^c	8 ^c	8 ^c	9	9	9	9
Mean	7.98	NA	122.43 ^c	160.64 ^c	4.63 ^c	5.13 ^c	10.60	6.05				
Standard deviation	2.73	NA	39.35 ^c	104.80 ^c	0.72 ^c	1.50 ^c	19.19	4.87				
CV (%)	34.2	NA	32.1 ^c	65.2 ^c	15.6 ^c	29.3 ^c	181.0	80.5				
95% UCL	10.2	NA	157.0 ^c	286.1 ^c	5.2 ^c	6.4 ^c	64.1	11.8				
95% UTL	20.7	NA	316.7 ^c	898.0 ^c	7.5 ^c	12.3 ^c	197.9	40.1				

Table 3. Summary Statistics, Upper 95 Percent Confidence Limits and Upper 95 Percent Tolerance Limits for Detected Analytes. (sheet 3 of 5)

Summary statistics*		Nitrate ^a (ppb)		Sulfate (ppm)		Gross Alpha (pCi/L)		Gross Beta ^a (pCi/L)	
	n	Grab	Composite	Grab	Composite	Grab	Composite	Grab	Composite
Summer:									
n	29	10		32	11		9	2	NC
Mean	72.08	101.18	11.44	11.92		1.06	0.99	NC	NC
Standard deviation	45.68	72.64	2.35	1.20		0.79	0.77	NC	NC
CV (%)	63.4	71.8	20.6	10.0		74.5	77.8	NC	NC
95% UCL	89.9	171.0	12.2	12.6		1.95	NC	NC	NC
95% UTL	219.4	537.0	17.5	15.6		6.4	NC	NC	NC
Fall:									
n	8	9		8	9		8	9	6
Mean	113.85	109.06	12.24	11.49		0.67	0.66	0.82	0.66
Standard deviation	14.68	16.83	1.11	1.22		0.52	0.60	0.24	0.35
CV (%)	12.9	15.4	9.1	10.6		77.0	90.2	28.8	53.5
95% UCL	124.8	120.7	13.1	12.3		1.36	1.43	1.09	1.2
95% UTL	170.0	171.6	16.3	15.7		4.7	5.1	1.9	3.7

Table 3. Summary Statistics, Upper 95 Percent Confidence Limits and Upper 95 Percent Tolerance Limits for Detected Analytes. (sheet 4 of 5)

Summary statistics*	Nitrate ^a (ppb)			Sulfate (ppm)			Gross Alpha (pCi/L)			Gross Beta ^a (pCi/L)		
	Grab	Composite	Grab	Grab	Composite	Grab	Composite	Grab	Composite	Grab	Composite	
Winter:												
n	30	12		30		12		30		12		30
Mean	169.68	168.91		11.08		11.00		0.47		0.65		0.91
Standard deviation	57.58	39.03		1.22		1.79		0.24		0.56		0.53
CV (%)	33.9	23.1		11.0		16.3		49.9		87.1		0.46
95% UCL	189.7	192.0		11.5		12.0		0.56		1.14		58.2
95% UTL	334.4	307.2		14.1		16.9		1.2		3.8		1.12
												3.0
Spring:												
n	9	9		8 ^c		7 ^c		9		9		9
Mean	165.13	180.66		10.99 ^c		11.69 ^c		1.10		0.94		1.39
Standard deviation	57.69	60.2		0.96 ^c		1.03 ^c		0.33		0.51		0.67
CV (%)	34.9	33.3		8.7 ^c		8.8 ^c		29.7		54.1		0.68
95% UCL	211.8	228.7		11.7 ^c		12.5 ^c		1.35		1.42		48.7
95% UTL	436.1	458.3		14.7 ^c		15.7 ^c		2.5		3.8		2.00
												5.0

Table 3. Summary Statistics, Upper 95 Percent Confidence Limits and Upper 95 Percent Tolerance Limits for Detected Analytes. (sheet 5 of 5)

Summary statistics ^a	TDS (ppm)			Total trihalomethanes (ppb)			Total trihalomethanes (ppb)		
	Grab	Composite	Grab	Composite	Grab	Composite	Grab	Composite	Grab
Summer:									
n	...	3	...	...	...	3	3	10	...
Mean	...	95.51	...	...	62.93	68.74	4.35	...	...
Standard deviation	...	33.03	...	...	19.79	5.62	1.73	...	...
CV (%)	...	34.6	...	...	31.4	8.2	39.8	...	...
95% UCL	...	NC	...	...	NC	NC	5.7	...	...
95% UTL	...	NC	...	...	NC	NC	12.3	...	...
Fall:									
n	1	2	...	...	...	2	2	9	...
Mean	NC	112.77	...	...	131.38	125.02	8.33	...	...
Standard deviation	NC	18.72	...	...	16.25	2.83	3.51	...	...
CV (%)	NC	16.6	...	...	10.9	2.3	42.1	...	...
95% UCL	NC	NC	...	...	NC	NC	11.6	...	...
95% UTL	NC	NC	...	...	NC	NC	26.1	...	...
Spring:									
n	...	...	...	...	...	...	...	...	...
Mean	...	...	...	...	...	...	...	...	...
Standard deviation	...	...	...	...	...	...	...	...	...
CV (%)	...	...	...	...	...	...	...	...	...
95% UCL	...	...	...	...	...	...	...	...	...
95% UTL	...	...	...	...	...	...	...	...	...

^acalculated based on assumed lognormal distribution.

bc = nitrogen in nitrate.

c'd = excluded excursion occurred on 4/7/96.

Excluded anomalous data (collected prior to 10/25/95) due to a one-time PUREX plant release.

NA = not applicable.

NC = not calculated.

... = no data.

ppb = parts per billion.

ppm = parts per million.

CV = coefficient of variation.

UCL = upper confidence limit.

UTL = upper 95 percent tolerance limit.
% = percent.

3.3.1 Coefficient of Variation

Coefficient of variation is a measure of variability (or spread) in the data set. Both seasonal and sample type differences and other trends are evident from the coefficient of variations calculated in Table 3. Figure 3 is a series of 3-dimensional plots of coefficient of variation for analytes listed in Table 3. The salient features evident in the data are discussed as follows.

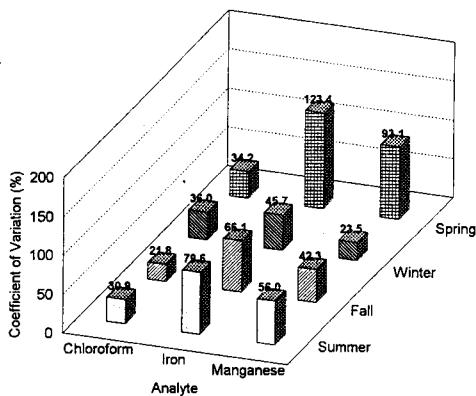
Seasonal and other trends. As evident in Figure 3, the highest overall variabilities are for chloride, iron, and manganese. Comparison among seasons suggests nitrate and possibly iron exhibit higher variation during the summer months than during fall and winter. The computed mean concentrations for nitrate appears to be lower for summer than for fall or winter. The latter might reflect the use of micronutrients by phytoplankton that 'bloom' in Columbia River water during the spring and summer months. This also is consistent with the higher concentrations of chloroform during the summer (i.e., greater amounts of natural organics from algae or phytoplankton that react with the chlorine during treatment of raw Columbia River water).

The largest variation among all analytes occurs for chloride, which appears to be lowest during the summer months. The mean concentrations, especially for composites, also are highest during fall and winter, and in all cases are above the mean chloride content of Columbia River water (about 1 milligram per liter; DOE 1988). Thus, chloride must be added regularly (e.g., water softener regeneration) and on a more random basis (e.g., dissolved road salt from parking lot and walkway snow melt and/or run-off).

Composites versus Grabs. The greatest difference between sample types occurs in the fall group, and for both chloride and gross beta the composite variation is greater than the grabs by about a factor of 2. This difference also was clearly evident in the Box-and-Whisker plots, as illustrated in Figure 4b. In addition, it is noted that the coefficient of variation for the other analytes tends to be larger for the composites than for the simple grab samples. This observation was unexpected because a flow proportional composite sample generally is assumed to smooth out short-term fluctuations and thus result in less variability.

Detection-Limit-Related Variability. In addition to sampling related variations, it also should be noted that some constituents might exhibit relatively high variations (e.g., gross alpha) because these are near the limit of detection. This is an analytical constraint and not related to variability of the constituent in the waste stream.

Variability for Detected Analytes
Grab Samples



Variability for Detected Analytes
Composite Samples

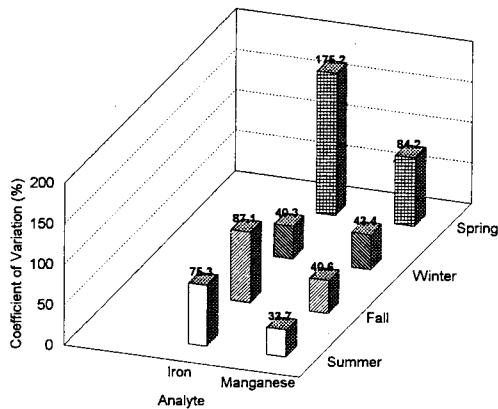
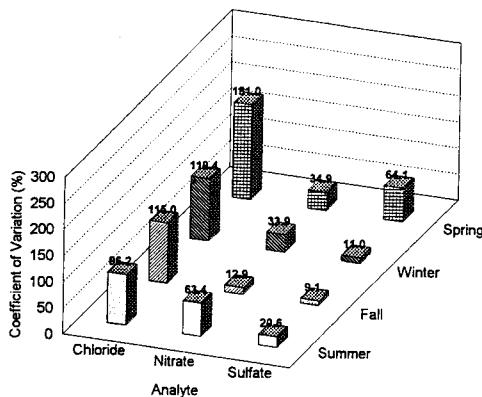


Figure 3. 3-Dimensional Coefficient of Variation Plots. (sheet 1 of 3)

Variability for Detected Analytes
Grab Samples



Variability for Detected Analytes
Composite Samples

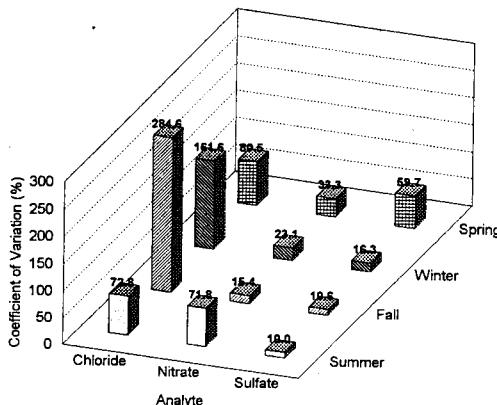
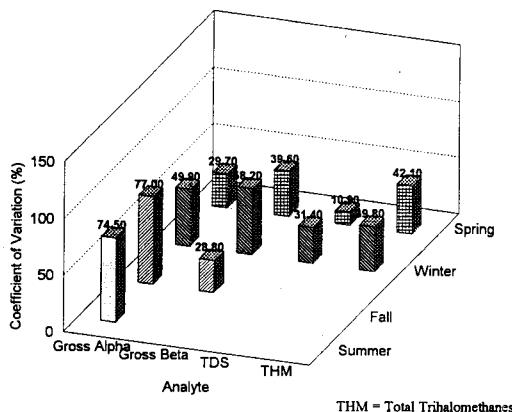


Figure 3. 3-Dimensional Coefficient of Variation Plots. (sheet 2 of 3)

Variability for Detected Analytes
Grab Samples



Variability for Detected Analytes
Composite Samples

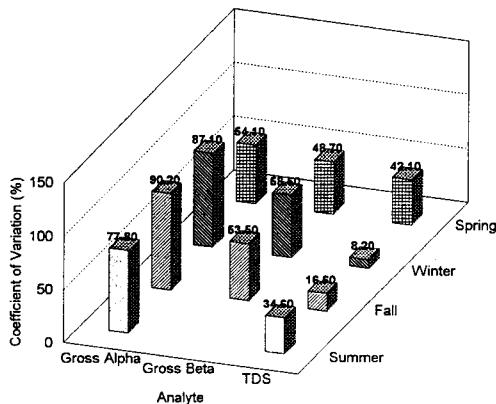


Figure 3. 3-Dimensional Coefficient of Variation Plots. (sheet 3 of 3)

3.3.2 Upper Confidence and Tolerance Limits

The 95 percent upper confidence limit constructed for the mean gives information concerning the upper limit of the population average with a 95 percent level of confidence. Comparison of the upper confidence limits with the applicable Permit limits for reference purpose suggests that chloride, for example, (fall composite) is one constituent having the potential to exceed the maximum monthly average allowed in the Permit (because the 95 percent upper confidence limit of 162 ppm is greater than the Permit limit of 58 ppm). Potential for exceedance of monthly average iron concentrations also is indicated based on the spring sample period (Table 3).

For excursion analysis that identifies unusual occurrence(s) in individual samples, the appropriate comparison limit is the upper tolerance limit because it is designed to cover a designated proportion (say 95 percent) of all possible sample measurements (Appendix A, Section 1.2). Comparison of the upper tolerance limit with the applicable Permit limits (i.e., daily maximum values) again suggests that chloride (fall composite) is the constituent having the potential to exceed the highest allowable daily maximum (because the 95 percent upper tolerance limit of 521 ppm is greater than the Permit limit of 116 ppm). The higher calculated upper confidence limit and upper tolerance limit for chloride (fall composite samples) are attributed to higher variability observed in the October 1995 data (coefficient of variation equals 285 percent).

3.4 ANALYSIS OF VARIANCE (ANOVA)

The ANOVA test was used to determine if there are significant differences in the average discharge compositions due to either seasonal effects or because of the type of sample (grabs versus composites). The test was applied to those analytes that consistently were detected (Table 1). Because parametric ANOVA usually assumes that the data are distributed normally with equal variance, the goodness-of-fit tests (to check normality of data) were performed, and the Bartlett's test for homogeneity of variance (Snedecor and Cochran 1980, page 252-253) and Box-and-Whisker plots were used to check for equal variance to determine whether parametric or nonparametric (Kruskal-Wallis distribution-free) ANOVA should be employed (as discussed in Appendix A, Sections 2.0 and 3.0). Results of goodness-of-fit tests for all individual grab and composite samples combined are summarized in Table 4. Results of ANOVA tests are summarized in Table 5.

Table 4. Summary of Goodness-of-Fit Test Results for All Individual Grab and Composite Samples Combined.

Parameter	n ^a	Normal distribution		Lognormal distribution		Distribution type
		Test statistic	Critical value ^b	Test statistic	Critical value ^b	
Chloroform	78	0.135 s	0.100	0.115 s	0.100	Neither
Manganese ^c	120	0.333 s	0.081	0.315 s	0.081	Neither
Iron ^c	120	0.159 s	0.081	0.039 ns	0.081	Lognormal
Chloride >10 ppm	15	0.236 s	0.220	0.169 ns	0.220	Lognormal
<10 ppm	106	0.252 s	0.086	0.171 ^d s	0.087 ^d	Neither
Nitrate (as N)	121	0.113 s	0.080	0.125 ^d s	0.083 ^d	Neither
Sulfate ^e	117	0.071 ns	0.082	0.079 ns	0.082	Both
Gross alpha	88	0.172 s	0.094	0.062 ns	0.094	Lognormal
Gross beta ^f	72	0.180 s	0.104	0.074 ns	0.104	Lognormal
Total dissolved solids	16	0.166 ns	0.213	0.183 ns	0.213	Both

^aIncluded both grab and composite samples.^bFor n >30, the critical value (at the 5 percent level of significance, $\sigma = 0.05$) equals $0.886/\sqrt{n}$.^cFor n <30, the critical value is obtained from Conover (1980, page 433).^dExcluded 04/07/96 excursion.^eCalculated based on 105 and 114 non-zero observations for chloride and nitrate, respectively.^fExcluded anomalous data collected before 10/23/95 due to a one-time PUREX plant release.

s = significant at the 5 percent level of significance.

ns = not significant at the 5 percent level of significance.

ppm = parts per million.

Table 5. Summary of Analysis of Variance Test Results.

Parameter	Sample type			Season		
	Test-statistic	Critical value	Effect	Test-statistic	Critical value	Effect
Chloroform ^a	NA	NA	NA	68.568 s	7.815	Yes
Hanganese ^{b,c}	0.563 ns	3.841	No	0.693 ns	7.815	No
Iron ^{b,c}	2.207 ns	3.925	No	10.968 s	2.684	Yes
Chloride: >10 ppm ^d	1.197 ns	4.967	No	0.634 ns	3.708	No
<10 ppm ^d	8.227 s	3.841	Yes	19.395 s	7.815	Yes
Nitrate ^e (as N)	1.584 ns	3.841	No	76.572 s	7.815	Yes
Sulfate ^{b,c}	0.179 ns	3.928	No	1.022 ns	2.686	No
Gross Alpha ^b	0.033 ns	3.958	No	8.948 s	2.715	Yes
Gross Beta ^{b,d}	0.621 ns	3.984	No	9.760 s	3.132	Yes
Total dissolved solids ^b	0.021 ns	4.847	No	9.915 s	3.587	Yes

^a For non-normal or non-lognormal distribution, the test employed is the Kruskal-Wallis nonparametric ANOVA. The critical value is the 0.95 quantile of the chi-square distribution with $(k - 1)$ degrees of freedom, where k = the number of groups to be tested.

^b For normal or lognormal distribution, the test employed is the parametric ANOVA. The critical value is the 0.95 quantile of the F-distribution with v_1 and v_2 degrees of freedom, where v_1 and v_2 are the degrees of freedom in the numerator and the denominator of the F-test statistic, respectively.

^c Excluded 4/7/96 excursion.

^d Excluded animals data collected prior to 10/23/95 due to a one-time PUREX Plant release.

^e s = significant at the 5 percent level of significance.

ns = not significant at the 5 percent level of significance.

NA = not applicable

ppm = parts per million.

The following discussion emphasizes chloride and iron, the two analytes previously identified as potential problems. However, the approach used to evaluate chloride and iron was applied to all the analytes listed in Tables 4 and 5.

3.4.1 Chloride

As noted previously, proper application of the parametric ANOVA test requires that the data normally are (lognormally) distributed or 'homogeneous' with equal variance. To test for population homogeneity, the data were first displayed in Box-and-Whisker plots (Figures 4a and 4b). These plots indicated there were clearly two different populations within both sample types (Figure 4a), as well as for each season (Figure 4b).

Cumulative distribution and histogram plots of the chloride data also suggested there are two population groups, as illustrated in Figure 5. The histogram plot (Figure 5a) and the inflection in the cumulative distribution plot (Figure 5b) both indicate that a large portion (about 80 percent) of the observed values lie between 1 and 5 ppm. The change from a steep to a shallow slope in Figure 5b occurs at concentrations above about 10 ppm. The steep portion of the plot corresponds to the majority of the samples in which chloride concentrations are rather tightly grouped between 1 and 5 ppm. The portion of the distribution plot with a shallow slope comprises a data group consisting of higher concentrations (>10 ppm) that are distributed randomly (Figure 5a) over a relatively wide range (up to 118 ppm). The chloride concentrations in the high concentration group occur as 'spikes' that occur periodically (Figure 6). The latter observation reinforces the idea that the following two populations seem to exist: (1) a large group of typically low concentrations that occur over a rather narrow range (<10 ppm with most samples between 1 to 5 ppm), which are slightly higher than raw makeup water; and (2) a smaller group consisting of much higher concentrations scattered over a wide range. The high concentration group (>10 to 118 ppm) was shown to follow a lognormal distribution; i.e., a reasonable approximation to a straight line is obtained when concentration data are displayed on log probability plot (Figure 7). Based on these observations, the data set was separated into two populations (≤ 10 ppm and >10 to 118 ppm) for subsequent ANOVA testing.

As shown in Table 5, the ANOVA test results indicate that there are no seasonal effects evident in the high population group and no difference between grabs and composites for the high population group. However, there does appear to be a seasonal effect, and a difference between grabs and composites for the low population group.

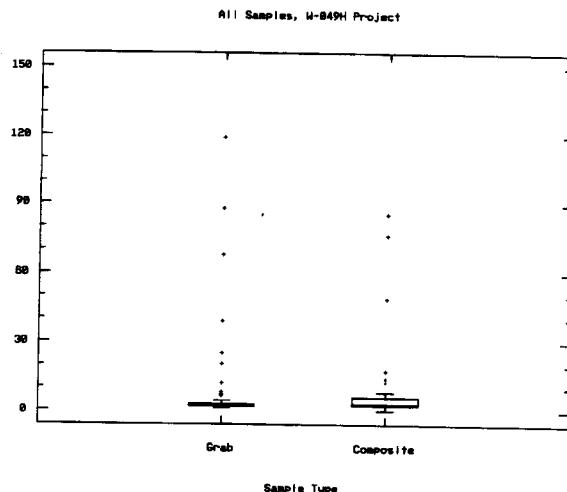


Figure 4a. Box-and-Whisker Plot of Chloride Concentrations Classified by Sample Type.

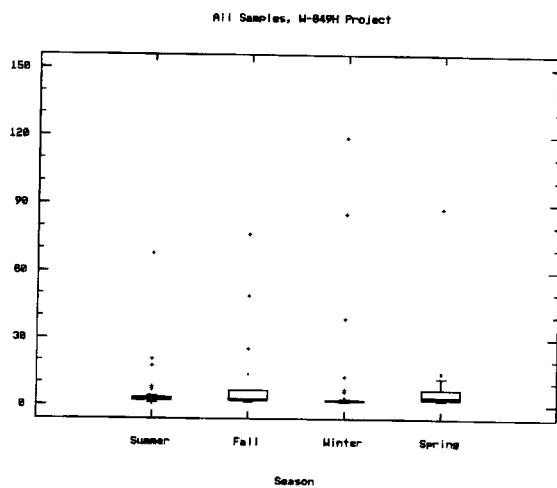


Figure 4b. Box-and-Whisker Plot of Chloride Concentrations Classified by Season.

Histogram for Chloride

All Samples, W-049H Project

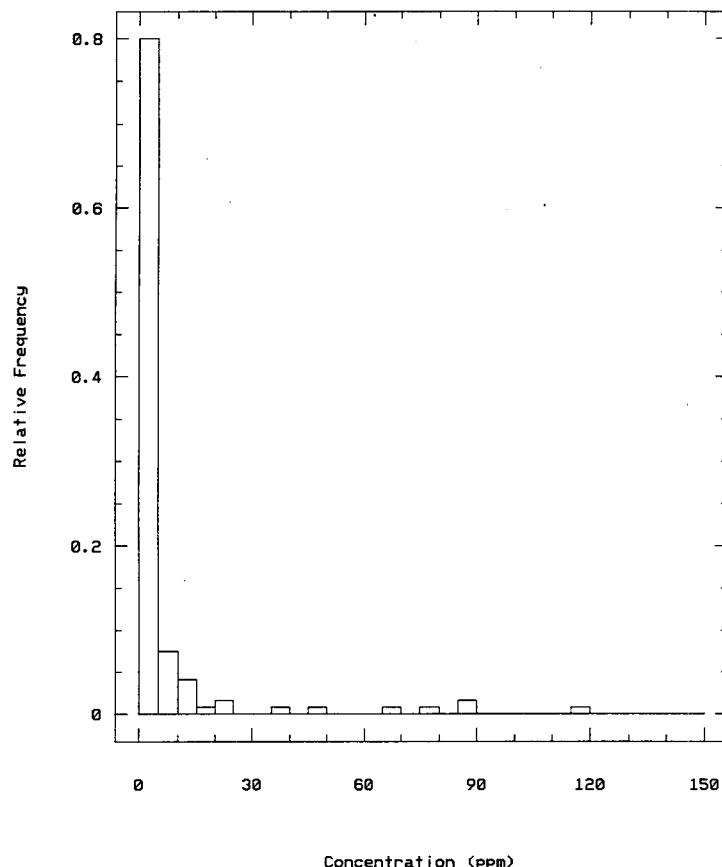


Figure 5a. Histogram of Chloride Concentrations (All Samples).

C.D.F. for Chloride

All Samples, W-049H Project

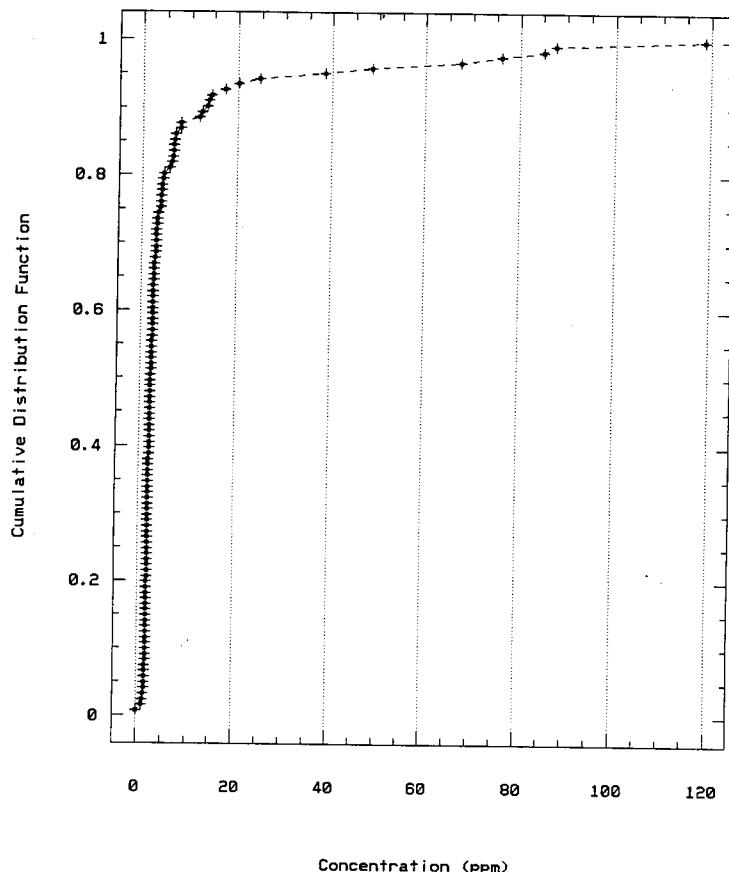


Figure 5b. Cumulative Distribution Function of Chloride Concentrations.

Variability Study for W-049H Project
Daily Grab Results for Chloride

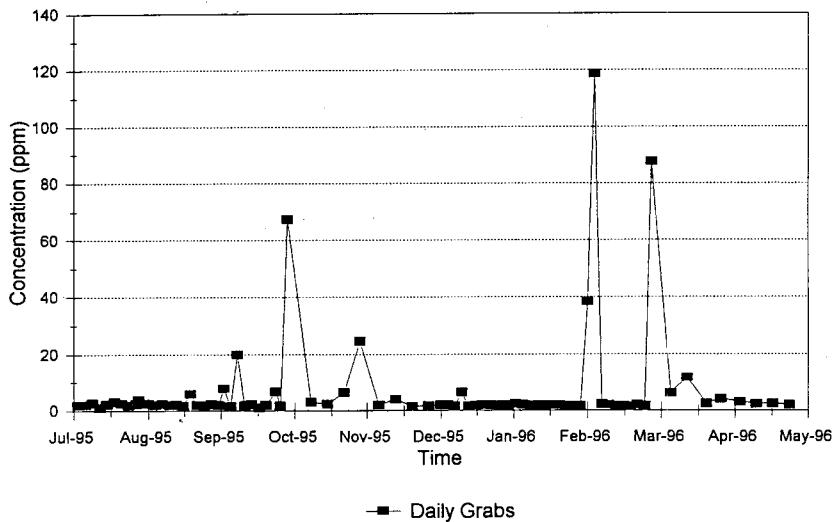


Figure 6. Chloride Concentration Versus Time Plot (Grab Samples).

Normal Probability Plot for Chloride

All Samples (> 10 ppm), W-049H Project

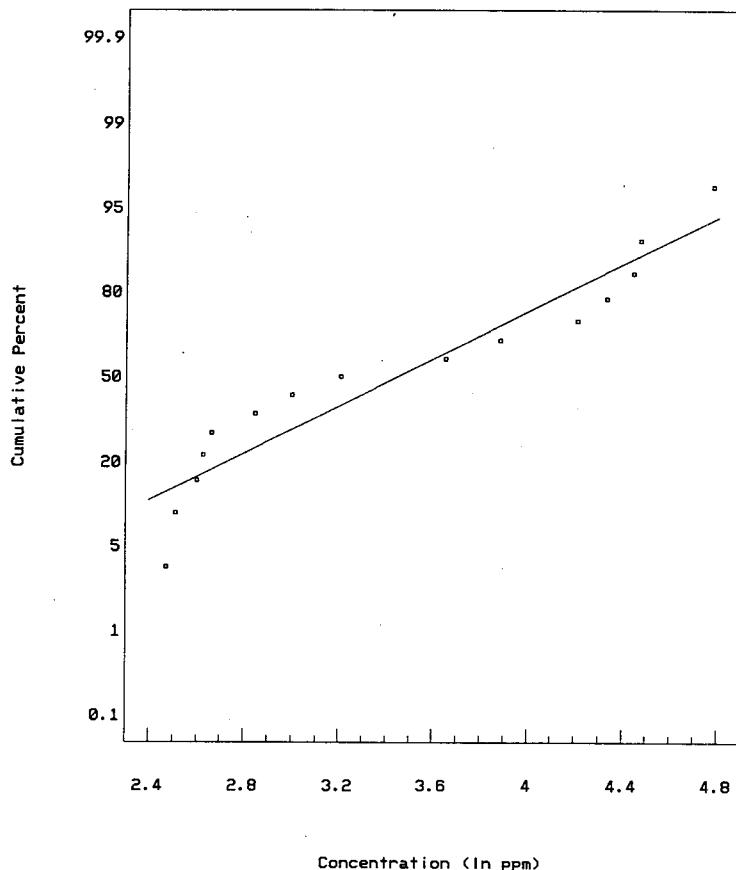


Figure 7. Normal Probability Plot of Chloride Concentrations > 10 ppm.

3.4.2 Iron

The same process as described previously for chloride was used to evaluate the iron data. Excluding an abnormal excursion that occurred on April 7th, the data appeared to follow a lognormal distribution (Table 4) and there were no obvious breaks evident in the histograms, Box-and-Whisker plots, or in the time series plots. The anomalously high April 7th iron results were excluded from the data set used for the ANOVA test.

Results of the ANOVA test for iron (Table 5) suggest there is a seasonal effect (higher concentrations in winter and spring than in summer and fall). In contrast, there were no differences between grabs or composites. Both sample types apparently are able to represent the average discharge composition in the waste stream.

The excursion that resulted in high iron concentrations on April 7th is discussed in detail in the 200 Area Treated Effluent Disposal Permit No. ST 4502 Noncompliance Report (Appendix C).

3.4.3 Other Analytes

The salient features of the ANOVA results for the other analytes listed in Table 5 are summarized as follows.

Chloroform. The entire sample population was neither normal or lognormally distributed and the ANOVA results indicate seasonal differences with higher concentrations occurring in summer. As previously noted, this is attributed to chlorination and higher algae production during summer months.

Manganese. The data were neither lognormal or normal and no seasonal or sample type differences were evident. However, a large portion of the data set (approximately 50 percent) were nondetects.

Nitrate. Some deviation from lognormal distribution was noted but not enough to suggest separation of data. No sample type effects were detected, but seasonal effects clearly are evident with higher concentrations in winter months than in summer months. As previously noted, this could be related to greater micronutrient use during summer months.

Sulfate. This constituent followed a lognormal (or a normal) distribution and there was no evidence of seasonal effects or differences due to sample type. Sulfate is present naturally in Columbia River water at concentrations nearly identical to those observed in the TEDF waste stream during the study period. For example, sulfate in Columbia River water at Vernita Bridge (near the northern Hanford Site boundary) was 11.2 ± 1.5 ppm (1σ , $n = 5$ quarters, DOE 1988) as compared to the effluent mean of 11.4 ± 1.6 ppm (1σ , $n = 117$) for the combined grab and composite data set (excluding the April 7th result).

Gross alpha. All data fit a lognormal distribution and there were no differences between grab and composite samples. There appeared to be a difference between summer and winter for the grab data only. However, as

previously noted, the results are near the detection limit for this measurement.

Gross beta. All data appeared to be lognormal if results before 10/23/95 are excluded. Before this time, a one-time release of water containing modest levels of fission products occurred that previously was reported to Ecology. Thus, this period was excluded from the analysis. Based on the censored data set, no sample type effects were evident. Apparent seasonal effects were indicated from the ANOVA; the results also were very close to the method detection limit.

3.4.4 Analysis of Variance Summary

The general conclusions and overall significance of the ANOVA test results discussed previously are summarized as follows.

Sample type effects. The most significant feature of the ANOVA results, summarized in Table 5 is that test results for all analytes indicate that either sample type (column 4 of Table 5) should yield similar analyte means or averages provided an artificial bias is not introduced by the sampling schedule (refer to discussion in Section 3.2.2). Thus, monthly averages based on either sample type should be comparable.

Seasonal effects. Excluding radionuclides, the seasonal effects (i.e., shift in mean concentrations) observed for nitrate and chloroform are attributable either directly or indirectly to natural conditions that occur in the source water (e.g., raw Columbia River water). Apparent seasonal effects indicated for chloride, total dissolved solids, and iron could be related to operational activities and/or surface water run-off.

3.5 EXCEEDANCE PROBABILITY

Probabilities of exceedance under normal operating conditions using the approach described in Appendix A (Section 6.0) were computed for the major constituents of concern for which Permit limits or standards (WAC 173-200) are available. Goodness-of-fit results for both monthly averages and daily maximums and the corresponding exceedance probabilities are summarized in Table 6.

Table 6. Best Fit Distribution for the Monthly Average and Daily Maximum^a and Associated Probability of Exceedance Under Normal Operating Conditions.

Parameter (unit)	n	Goodness-of-fit test result				Permit limit ^c	Probability of exceedance ^e
		Normal	Lognormal	Critical value	Best fit		
Monthly average:							
Chloroform (ppb)	10	0.177 ns	0.132 ns	0.258	LN	7.80	2.94
Iron ^f (ppb)	20	0.123 ns	0.212 s	0.190	N	90.48	34.89
Manganese ^f (ppb)	20	0.144 ns	0.130 ns	0.190	N	5.41	1.10
Chloride (ppm)	20	0.255 s	0.189 ns	0.190	LN	7.75	8.66
Sulfate ^f (ppm)	20	0.153 ns	0.169 ns	0.190	N	11.29	0.96
Nitrate (ppb)	20	0.132 ns	0.161 ns	0.190	N	150.80	49.07
Gross alpha (pCi/L)	16	0.186 ns	0.230 s	0.213	N	0.78	0.33
Gross beta (pCi/L)	12	0.137 ns	0.191 ns	0.242	N	1.14	0.51
Daily maximum							
Chloride ^g (ppm)	15	0.236 s	0.169 ns	0.220	LN	44.67	45.20
Nitrate ^h (ppb)	60	0.197 s	0.106 ns	0.114	LN	170.09	53.38
						1,240	0.06

^aApplicable to chloride and nitrate only.
^bHighest allowable monthly average concentration and highest allowable daily concentration per permit.

^cHighest level of exceedance = 0 means <10%,
^dEarly warning value in effluent for total trihalomethanes of 66 ppb is used.

^eNo applicable Permit limit, the limit used is based on MAC 173-200 groundwater quality standard.
^fExcluded 04/07/96 excursion.

^gBased on samples with chloride concentration >10 ppm.
^hBased on samples collected during the winter months (i.e., highest concentration).

Not tested because of the presence of negative numbers (i.e., background readings).

N = Normal distribution.

LN = Lognormal distribution.

s = significant at the 5 percent level of significance.

ns = not significant at the 5 percent level of significance.

ppb = parts per billion.

ppm = parts per million.

pCi/L = picocuries per liter.

As indicated by Table 6, the constituent that comes closest to exceeding a Permit limit (chloride) was found to have a probability of only about 6 percent of exceeding the daily maximum limit of 116 ppm. The probability of exceeding a monthly average is nearly zero. Excluding the iron results for April 7th, the probability of the iron concentration in a *single sample* exceeding 258 ppb (the Permit limit) was calculated to be about 2.5 percent using the best fit lognormal distribution (with mean of 88.3 ppb; standard deviation of 65.2 ppb).

The probability of a *monthly average* iron concentration exceeding the Permit limit is essentially zero. Because the Permit limit for iron is based on monthly averages, the likelihood of iron exceeding a Permit limit (under normal or expected conditions) is very small. Spurious occurrences due to release of rust, or corrosion products, however, can and do occur (refer to Appendix C). Elevated iron concentrations due to actions that can be reasonably expected to cause release of iron and associated corrosion products represent a different sample population (refer to chloride discussion). As previously noted (Appendix A), the exceedance probability estimate requires that the data represent random observations from a single or homogenous population. The high iron excursion is clearly an outlier (normal probability plots, Appendix C) and not part of the same sample population as the other data acquired during the variability study. Accordingly, it was not included in the data set used to estimate the probability of exceedance for typical or average operating conditions (i.e., based on the homogeneous sample population acquired during the observation period). Under conditions during which the excursion occurred (i.e., high iron concentration population group), the probability of exceeding the Permit limit could be 100 percent.

In addition to iron, the probability of either an individual or monthly average chloroform concentration exceeding a Permit limit was essentially zero. Similar exceedance probabilities (near zero) were obtained for the other constituents.

3.6 COVARIANCE OF ANALYTES

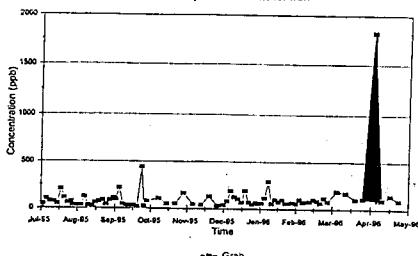
In addition to the individual analyte variabilities, some constituents exhibited simultaneous, periodic excursions or deviations from baseline or 'normal' conditions. The most noticeable covariance of this type was for sulfate, iron, manganese, and pH (Figure 8). The decrease in pH corresponds to the increase in the other constituent concentrations during the excursion event the first week of April (since pH is the negative log of the hydrogen ion concentration, the hydrogen ion concentration actually increased). In addition to the April event, a few smaller deviations from the baseline or normal conditions occur for manganese and iron.

The cause of the strong correlation between iron and manganese might be due to a common source material. One possible source is corrosion products from carbon steel that typically consist of about 1 percent manganese, 1 percent carbon, and 98 percent iron. The 'spikes' shown in Figure 8 suggest manganese is about 2 to 4 percent relative to iron. The simultaneous increase in sulfate and hydrogen ion concentration might be related to sulfuric acid.

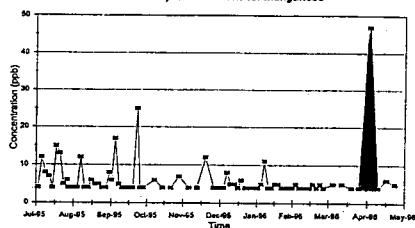
The apparent correlation among all the parameters illustrated in Figure 8 could be explained by reaction of sulfuric acid with carbon steel surfaces (elemental iron) or with oxidized steel surfaces (rust or iron oxide). While this is a possible explanation, no operational activity involving either the use or discharge of sulfuric acid is known to have occurred at this time.

The duration of the excursion event associated with the April 7th grab sample (Figure 8) was limited to a week or less. This was because constituent concentrations in the weekly grab and 24-hour composite samples collected for the week before and the week afterward were at normal or baseline levels. The duration also was evident in the continuous conductivity monitoring results that showed a moderate but noticeable increase (140 to a maximum of 300 μ mhos per centimeter) that persisted from about April 2nd through April 9th. This illustrates the potential value of continuous monitoring as a 'real-time' or early warning indicator of offnormal events that might occur, and as a record of conditions between periodic sampling events.

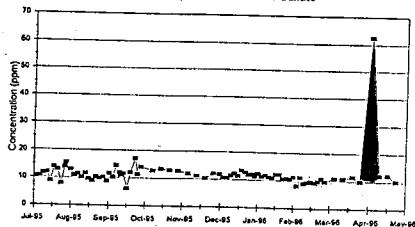
Variability Study for W-049H Project
Daily Grab Results for Iron



Variability Study for W-049H Project
Daily Grab Results for Manganese



Variability Study for W-049H Project
Daily Grab Results for Sulfate



Variability Study for W-049H Project
pH

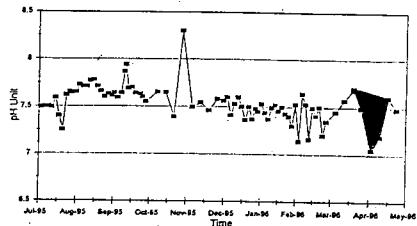


Figure 8. Covariance of Related Analytes.

4.0 CONCLUSIONS

Based on statistical evaluation of effluent data for four consecutive seasons, the probability of exceeding Permit limits under normal operating conditions is <0.0001 percent for those permitted constituents other than iron and chloride. In the latter case, the exceedance probability could be 100 percent for the high iron and chloride concentration excursions. Excluding a one-time occurrence of slightly elevated gross beta and one observed monthly average Permit exceedance for iron, the effluent is similar in composition to local drinking water (i.e., chlorinated Columbia River water).

The seasonal variability in chloroform and nitrate concentrations is attributed to biological changes in the source water (Columbia River water). An apparent seasonal effect for chloride, total dissolved solids, and iron could be more related to operational factors and/or parking lot run-off than to natural conditions. It also is concluded that grab samples and 24-hour composite samples should yield similar results under normal operating conditions.

Operational factors that could have influenced effluent water quality during the study period include the following: (1) release of water softener regenerant (e.g., sodium chloride), (2) boiler blowdown chemicals, (3) steel corrosion products, and (4) surface water run-off and entrainment of road salt.

Continuous conductivity data might be useful for determining the duration of excursion events and as an indicator of upward trends. In addition, use of the variability study results, combined with field screening measurements, could be one approach to enhancing the monitoring program and reducing analytical costs.

5.0 REFERENCES

- Conover, W. J., 1980, *Practical Nonparametric Statistics*, Second Edition, John Wiley and Sons, Inc., New York, New York, pp. 215-237, 357-361, 463.
- DOE, 1988, *Site Characterization Plan, Reference Repository Location, Hanford Site, Washington*, Vol. 2 (Section 3.4), DOE/RW-0164, U. S. Department of Energy, Richland, Washington.
- EPA, 1989, *Methods for Evaluating the Attainment of Cleanup Standards*, Volume 1: Soils and Solid Media, EPA 230/02-89-042, U.S. Environmental Protection Agency, Washington, D.C., pp. 7-23.
- EPA, 1992, *Statistical Analysis of Groundwater Monitoring Data at RCRA Facilities Draft Addendum to Interim Final Guidance*, EPA/530-R-93-003, U.S. Environmental Protection Agency, Washington, D.C., pp. 2-3, 20-22.
- Gilbert, R. O., 1987, *Statistical Methods for Environmental Pollution Monitoring*, Van Nostrand Reinhold Company, New York, New York, pp. 164-171, 204-213, 225-228, 265.
- Land, C. E., 1971, Confidence Intervals for Linear Functions of the Normal Mean and Variance, *Annals of Mathematical Statistics* 42:1187-1205.
- Land, C. E., 1975, Tables of Confidence Limits for Linear Functions of the Normal Mean and Variance, in *Selected Tables in Mathematical Statistics*, Vol. III, America Mathematical Society, Providence, R.I., pp. 385-419.
- Natrella, M. G., 1966, *Experimental Statistics*, National Bureau of Standard Handbook 91, Second Printing, U.S. Government Printing Office, Washington, D.C., Table A-7.
- Ostle, B. and L. C. Malone, 1988, *Statistics in Research*, Fourth Edition, Iowa State University Press, Ames, Iowa, pp.65-67.
- Snedecor, G. W. and W. G. Cochran, 1980, *Statistical Methods*, Seventh Edition, The Iowa State University Press, Ames, Iowa, pp. 89-98, 215-237, 252-264.

APPENDIX A

STATISTICAL METHODS

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APPENDIX A**STATISTICAL METHODS****1.0 STANDARD DESCRIPTIVE STATISTICS**

Before any statistical analyses were performed on the validated effluent concentration data, a set of descriptive statistics and various plots were generated. These are useful tools to describe central tendency and spread in the data set and to identify apparent patterns and outliers. Effluent concentration data generally are highly skewed and a lognormal distribution appears to be a better default statistical model than the normal distribution (EPA 1992). Therefore, all data were log-transformed (natural logarithm) before summary statistics were calculated. Formulas to calculate the mean, standard deviation, and confidence limits for the mean of a lognormal distribution are described in detail in Gilbert (1987). Formulas are reproduced here to serve as a quick reference.

1.1 MEAN, STANDARD DEVIATION, AND VARIANCE

Analyte concentrations (x) in samples of the waste stream are used to represent the total population or 'universe' of possible concentrations. Computation of standard sample statistics and their relationship to the total population or universe of concentrations is described as follows.

Let x_i be the i^{th} sample value (in original scale) for an analyte of interest, where $i = 1, 2, \dots, n$ (number of samples). Transform the data by taking the natural logarithm (base e) of each value,

$$y_i = \ln x_i \quad (1)$$

and calculate the mean (\bar{y}) and variance (s_y^2) of y from the samples using the following equations:

$$\bar{y} = \frac{\sum y_i}{n} \quad (2)$$

$$s_y^2 = \frac{\sum (y_i - \bar{y})^2}{(n-1)} \quad (3)$$

¹STATGRAPHICS is a trademark of Statistical Graphics Corporation.

Estimators of the population parameters [mean μ , standard deviation σ , and coefficient of variation (CV)] are calculated from the observed sample values as follows:

$$\hat{\mu}_x = \exp (\bar{y} + s_y^2/2) \quad (4)$$

$$\hat{\sigma}_x = \hat{\mu}_x [\exp (s_y^2) - 1]^{1/2} \quad (5)$$

$$CV = (\hat{\sigma}_x / \hat{\mu}_x) * 100 \quad (6)$$

The hat symbol over the population parameter symbols indicates that the computed statistic is an estimate of the corresponding population parameter.

1.2 CONFIDENCE AND TOLERANCE LIMITS

A method for calculating the upper one-sided confidence limit for the mean of a lognormal distribution is provided by Land (1971 and 1975). This method also is described in Gilbert (1987). For a 95 percent upper confidence interval ($\alpha = 0.05$), the upper confidence limit is:

$$UCL_{0.95} = \exp (\bar{y} + 0.5s_y^2 + \frac{s_y H_{0.95}}{\sqrt{n - 1}}) \quad (7)$$

where \bar{y} and s_y are the mean and standard deviation of the \log_e -transformed data. The values of $H_{0.95}$ depend on s_y , n , and the chosen confidence level ($1 - \alpha$) and can be obtained in Gilbert (1987, Table A12).

The confidence interval for the mean gives information concerning the average concentration level and offers little information concerning the extreme sample one is likely to observe over time. A tolerance interval is designed to contain a designated proportion of the population (e.g., 95 percent of all possible sample measurements) with a certain degree of confidence (e.g., 95 percent level of confidence). An upper tolerance limit that covers 95 percent of the population (i.e., lognormal) with 95 percent confidence is given by:

$$UTL_{95/95} = \exp (\bar{y} + k * s_y) \quad (8)$$

where the first number in the subscript denotes the coverage and the second number denotes the confidence level; and the \bar{y} and s_y are defined earlier and the value of k can be obtained in Natrella (1966). The $UTL_{95/95}$ is useful as a

tool for excursion analysis because if the upper limit of this interval exceeds the compliance limit, the concentration of the analyte could exceed the compliance limit more than 5 percent of the time, indicating the potential of noncompliance.

2.0 ANALYSIS OF TRENDS AND SEASONALITY

An important objective of many environmental monitoring programs is to detect changes or trends in analyte concentration levels over time. Statistical techniques for trend detection and estimation (such as the Mann-Kendall nonparametric test and the Sen's method to estimate the change per unit of time) are described in Gilbert (1987). To assess trends (i.e., long-term changes), it is necessary that data be collected over a substantial number of years. Because of the short span covered by the effluent variability study, long-term trends were not evaluated.

The presence of temporal cycles (seasonality) were examined visually by using multiple Box-and-Whisker plots where the distributions of effluent concentrations (for a particular analyte) over different seasons are displayed. A Box-and-Whisker plot is a summary display of the data (refer to text, Figure 4 for examples). In this plot, the upper (Q_3) and lower (Q_1) quartiles of the data are shown by the top and bottom of a box and the median (Q_2) is indicated by a line segment within the box. The box covers the middle 50 percent of the data values. The 'whiskers' extend out to the extremes (minimum and maximum observations). When extremely large or small values occur, these values are plotted as individual points. The whiskers extend only to those points that are within 1.5 times the interquartile range ($Q_3 - Q_1$). Any data point that falls outside the whisker could be classified as a suspected outlier (Ostle and Malone 1988). Outliers could be due to either erroneous data or because there might be more than one population. Box-and-Whisker plots also can be used to see if the assumption of equal variances is reasonable (EPA 1992, page 20), a requirement for application of the analysis of variance methods described in the following paragraphs.

Testing for the particular form of seasonality where one season differs from the other could be accomplished by a two-sample comparison of means (e.g., comparing summer with winter). The most common test to compare two means is the Student's t-test (Snedecor and Cochran, 1980, pages 89-98). The calculated statistic is compared to tabulated values of the t-distribution. The t-test for the two sample case (i.e., two groups) assumes that the data are independent and come from normally (or lognormally) distributed populations with equal variance. It is robust against departures from normality if the sample sizes of the two groups are nearly equal.

The assumption of equal variances (for the two-sample case) was checked using both Box-and-Whisker plots to ensure that the box length for each group was less than three times the length of the shortest box (EPA 1992, p. 21), and the F-test for equality of variances (Snedecor and Cochran, 1980, page 98). In some cases, the F-test indicated a difference in variances but the difference was not large enough to exceed the Box-and-Whisker three-times rule

noted previously. In these cases, the sample groups being compared were considered close enough to assume equal group variances (EPA 1992, p. 21). In cases where both variance tests indicated differences, the homogeneity of variance requirement was satisfied when the data were separated into two population groups (e.g., chloride was separated into a >10 ppm group and a ≤ 10 ppm group), or the variability was clearly explainable (e.g., high summertime variability for nitrate attributable to natural cycles). For the F-test at the 5 percent level of significance ($\alpha = 0.05$), the F-statistic is computed by putting the larger of the set (s_1^2, s_2^2) as the numerator and the smaller of the set (s_1^2, s_2^2) as the denominator, where s_1^2 and s_2^2 are the sample variance of population 1 and 2, respectively. If the calculated F-statistic is larger than the tabulated upper 2.5 percent F value (i.e., the critical value) with v_1 and v_2 degrees of freedom, the null hypothesis of equal variance is rejected. Note that v_1 and v_2 are the degrees of freedom associated with the numerator and denominator of the F-statistic.

When the data obviously are nonnormal (or nonlognormal), the Mann-Whitney nonparametric (distribution-free) test (also called the Wilcoxon test) could be used in lieu of the t-test. The test statistic is based on the sums of the ranks of the two samples. Test procedure and tabulated critical values of the test statistic are provided in Conover (1980).

3.0 GOODNESS-OF-FIT TEST

The assumption of normality (or log-normal distribution) is required for many statistical intervals (e.g., confidence intervals) and statistical tests (e.g., t-test and parametric analysis of variance). Gross departures from normality can invalidate the test results. To evaluate the effluent data for normality, a normal probability plot of each detected analyte was constructed. If data points can be approximated by a straight line, these data were assumed to be drawn from a normal distribution. Or, alternatively, one could perform a statistical test. The statistical tests used for evaluating whether or not the data follow a specified distribution are called 'goodness-of-fit' tests. One problem with statistical goodness-of-fit tests is that few tests are useful when the sample size is small. In these cases, the Lilliefors test (Conover 1980) for normality of data (EPA 1989) was used. Results of the goodness-of-fit tests are presented in the text, Section 3.0, Table 4.

4.0 ANALYSIS OF VARIANCE

To test whether effluent concentrations differ seasonally or differ because of sample type, the analysis of variance test was employed. The null hypothesis is that all the means are equal versus the alternative hypothesis that the means are not equal. It is an extension of the t-test to include k groups (where k can be more than 2). Similar assumptions and constraints as discussed in Section 2.0 apply. The parametric analysis of variance test (for normal or lognormal distributions) is conducted by comparing a test statistic with a tabulated value of the F-distribution (i.e., the critical value or the

$(1 - \alpha)^{\text{th}}$ quantile of the F-distribution). If the calculated F statistic is larger than the critical value, the null hypothesis is rejected (at the α level of significance). Multiple comparison procedures are available to determine which seasons are different in the event that the null hypothesis is rejected (Snedecor and Cochran, 1980). Note that when two samples are being compared using the analysis of variance method, the F-test is equivalent to the t-test because the relation $F = t^2$ holds for $k = 2$ (Snedecor and Cochran, 1980, page 222).

Where the data were not distributed normally (or lognormally), a nonparametric analysis of variance method known as the Kruskal-Wallis test was used for the k-sample case ($k \geq 2$). It is an extension of the Mann-Whitney test.

In addition to testing for seasonal effects, the influence of different sampling techniques (grab samples versus composite samples) was tested. For this purpose, a two-way classification (season and sample type) analysis of variance was conducted. Results of the ANOVA tests are presented in the text, Section 3.0, Table 5.

5.0 DISCHARGE WEIGHTED AVERAGE

In calculating the mean of a set of sample values, it is assumed that all values are of equal importance. However, where the concentrations are flow dependent, the discharge-weighted average is more representative of the true concentration of the total volume of waste water discharged. If there is no difference between the discharge weighted average and the simple average of a sample set, a homogeneous or single population is implied. Thus, this parameter also can be used to test for population homogeneity.

To compute the discharge weighted average, let x_i , $i = 1, 2, \dots, n$, be the observed effluent concentration values (for a particular analyte), and let q_i be the corresponding flow rate (expressed in gallons per minute). The discharge-weighted sample mean is then:

$$\bar{x}_q = \frac{\sum q_i x_i}{\sum q_i} \quad (9)$$

The weighted sample variance is

$$s_q^2 = \frac{\sum q_i (x_i - \bar{x})^2}{(n - 1)} \quad (10)$$

A comparison of the monthly average effluent concentrations based on discharge-weighted grab samples, composite samples, and simple grab samples is presented in the text, Section 3.0, Table 2.

6.0 EXCEEDANCE PROBABILITY

Exceedance probability is evaluated for the detected analytes where standards are provided in the Permit. These standards are expressed as early warning values (monthly averages) and/or maximum monthly averages and/or daily maximum concentrations in the effluent. In cases where Permit standards are not given, applicable WAC 173-200 groundwater quality standards are used as the default limits. With the exception of daily maximums, all the standards (or Permit limits) are applied to monthly average concentrations. The calculated monthly averages (Table 2 in text) for grab samples and 24-hour composite samples were pooled together to provide a larger sample size. This is justified because the sample type (grab or composite samples) does not have a significant effect on the effluent composition as indicated by the analysis of variance tests (Table 5 in text).

For a particular detected analyte, the monthly averages are considered as random observations. Whatever the shape of the parent distribution of individual samples, the distribution of averages tends to become normal as sample size n increases because of the central limit theorem. It is very difficult to determine how large n must be to use the normal distribution for the averages. Therefore, the Lilliefors test for normality was performed on these monthly averages to check the best fit distribution form. If the Lilliefors test could not reject the hypothesis of either a normal or a lognormal distribution, the distribution associated with the smaller test-statistic was selected as the best fit distribution.

Once the best fit distribution was identified, the exceedance probability was calculated (Section 3.0 in text, Table 6). For example, in the case of chloride, the maximum monthly average allowed in the Permit is 58 ppm, the best fit distribution is a lognormal distribution. Therefore, the monthly average concentrations must first be log-transformed and then the mean and standard deviation of these transformed values calculated. The mean is found to be 1.642 (\ln ppm) and the standard deviation is 0.900 (\ln ppm). Next, the Permit limit is transformed: $\ln 58 \text{ ppm} = 4.06$ (\ln ppm). The probability of a lognormal random variable X exceeding the Permit limit of 58 ppm is equivalent to a normal random variable Y , which exceeds the limit of 4.06 (\ln ppm), where $Y = \ln X$. The probability of exceedance is calculated by:

$$\begin{aligned}
 \text{Prob. of exceedance} &= \text{Prob}\{X > 58 \text{ ppm}\} \\
 &= \text{Prob}\{Y > 4.06 \text{ ln ppm}\} \\
 &= 1 - \text{Prob}\{Y \leq 4.06 \text{ ln ppm}\} \\
 &= 1 - \text{Prob}\left\{\frac{(Y - 1.642)}{0.900} \leq \frac{(4.06 - 1.642)}{0.900}\right\} \\
 &= 1 - \text{Prob}\{Z \leq 2.687\} \\
 &= 1 - 0.996 \\
 &= 0.004
 \end{aligned}$$

Where Z is a standard normal random variable with mean zero and standard deviation 1.

Because daily maximum limits are set for chloride and nitrate, it is not appropriate to evaluate the probability of exceeding the daily maximum by using the sampling distribution of the monthly averages. The method to calculate the probability of exceedance is similar to the above; however, the appropriate distribution of the individual sample results must be used (rather than that of the averages). Because the chloride distribution suggested two population groups (i.e., concentration > 10 ppm and concentration ≤ 10 ppm, refer to text, Section 3.4.1), it was deemed more conservative to use the higher concentration group to demonstrate Permit compliance.

As for nitrate, the analysis of variance test (Table 5 in text) indicates there is a seasonal effect (winter and spring concentration is the highest; also refer to Table 2 in text) but grab and 24-hour composite samples are similar. Therefore, it is deemed more conservative to use the samples collected during the winter and spring months (higher concentrations) to calculate the probability of exceedance.

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APPENDIX B

EFFLUENT MONITORING DATA LISTING

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APPENDIX B

EFFLUENT MONITORING DATA LISTING

This appendix provides the complete listing of data acquired for the effluent variability study for the period of July 1995 through April 1996. Data storage and retrieval and data table organization and descriptors used are described as follows.

Data Storage and Retrieval

Laboratory analytical results were downloaded electronically from LEMIS to GEODAT to facilitate preparation of a data file compatible with the statistical software package (STATGRAPHICS¹) used for the variability analysis. Flow rate, pH and conductivity corresponding to the sample collection dates were retrieved from the sample chain-of-custody sheets and were entered manually into GEODAT.

Data Organization and Descriptors

Data are listed by analyte in alphabetical order. Results for each analyte are listed in chronological order beginning with the earliest collection date. The sample type for each collection date is indicated with either "GRAB" or "COMP" for grab samples or 24-hour composite samples, respectively. Instantaneous flow rate (gpm), pH and specific conductance ($\mu\text{mho}/\text{cm}$) obtained from the continuous monitoring system at the time each grab sample was collected are listed under the column headings "Flow", "pH" and "Cond", respectively.

The data are listed on pages 1 through 123 following the appendix text. Page 123 lists the results that were excluded from the statistical analysis due to a "UR" flag or a "B" flag (for organic constituents) in the data file (see following description of data validation qualifiers).

Laboratory and validation qualifier flags used in the two columns following the "units" column are defined as follows:

Laboratory Qualifiers ("Lab qflr")

U - Indicates the constituent was analyzed but not detected in the sample. The concentration reported is the sample quantitation limit corrected for dilution.

¹STATGRAPHICS is a trademark of Statistical Graphics Corporation.

- J - Indicates an estimated value. This flag is used when estimating concentrations of tentatively identified compounds or when the presence of a TCL compound is confirmed at a concentration of less than the Contract Required Quantitation Limit (CQRL) but greater than the instrument detection limit.
- B - For inorganic constituents, this flag indicates the analyte concentration is less than the CQRL but greater than the instrument detection limit. For organic constituents, this flag applies to results in which the analyte was detected in both the sample and the associated blank.

Validation Qualifiers ("Val_qflr")

- UJ - Indicates the compound or analyte was analyzed but not detected in the sample. Due to a quality control deficiency identified during validation the associated quantitation limit is an estimate.
- J - Indicates the compound or analyte was analyzed for and detected. The associated concentration is an estimate but the data are usable for decision making purposes.
- UR - Indicates the compound or analyte was analyzed and not detected in the sample. Due to an identified QC deficiency the reported value is unusable.

Sample No	Con ID	Method	Sample Date	Results Units	Lab qfr	Grab/ qfr	Val	Flow Comp	Flow pH	pH	Cond
1,1,1-TRICHLOROETHANE											
L00010	71-55-6	SW-846 8260A	6/08/95	0.00	UG/L	GRAB	569	7.45	140.00		
L00012	71-55-6	SW-846 8260A	6/15/95	0.00	UG/L	GRAB	630	7.35	25.65		
L00014	71-55-6	SW-846 8260A	6/22/95	0.00	UG/L	GRAB	466	7.56	142.90		
L00016	71-55-6	SW-846 8260A	6/29/95	0.00	UG/L	GRAB	396	7.55	141.00		
L00024	71-55-6	SW-846 8260A	7/03/95	0.00	UG/L	GRAB	458	7.49	144.20		
L00026	71-55-6	SW-846 8260A	7/06/95	0.00	UG/L	GRAB	592	7.50	145.00		
L00029	71-55-6	SW-846 8260A	7/09/95	0.00	UG/L	GRAB	249	7.50	157.10		
L00031	71-55-6	SW-846 8260A	7/12/95	0.00	UG/L	GRAB	256	7.49	156.00		
L00034	71-55-6	SW-846 8260A	7/15/95	0.00	UG/L	GRAB	262	7.59	150.30		
L00036	71-55-6	SW-846 8260A	7/18/95	0.00	UG/L	GRAB	232	7.40	155.40		
L00039	71-55-6	SW-846 8260A	7/21/95	0.00	UG/L	GRAB	482	7.25	155.50		
L00041	71-55-6	SW-846 8260A	7/24/95	0.00	UG/L	GRAB	244	7.62	132.40		
L00044	71-55-6	SW-846 8260A	7/27/95	0.00	UG/L	GRAB	360	7.65	104.50		
L00046	71-55-6	SW-846 8260A	7/28/95	0.00	UG/L	GRAB	235	7.64	112.20		
L00048	71-55-6	SW-846 8260A	8/01/95	0.00	UG/L	GRAB	421	7.65	120.70		
L00050	71-55-6	SW-846 8260A	8/04/95	0.00	UG/L	GRAB	312	7.73	148.50		
L00053	71-55-6	SW-846 8260A	8/07/95	0.00	UG/L	GRAB	379	7.71	148.70		
L00055	71-55-6	SW-846 8260A	8/10/95	0.00	UG/L	GRAB	374	7.71	143.67		
L00058	71-55-6	SW-846 8260A	8/13/95	0.00	UG/L	GRAB	400	7.77	153.45		
L00060	71-55-6	SW-846 8260A	8/16/95	0.00	UG/L	GRAB	423	7.78	129.90		
L00066	71-55-6	SW-846 8260A	8/19/95	0.00	UG/L	GRAB	311	7.71	139.00		
L00068	71-55-6	SW-846 8260A	8/22/95	0.00	UG/L	GRAB	565	7.66	129.80		
L00071	71-55-6	SW-846 8260A	8/25/95	0.00	UG/L	GRAB	253	7.60	134.00		
L00072	71-55-6	SW-846 8260A	8/28/95	0.00	UG/L	GRAB	393	7.63	137.00		
L00075	71-55-6	SW-846 8260A	8/31/95	0.00	UG/L	GRAB	376	7.61	141.40		
L00156	71-55-6	SW-846 8260A	9/03/95	0.00	UG/L	GRAB	270	7.64	172.40		
L00159	71-55-6	SW-846 8260A	9/05/95	0.00	UG/L	GRAB	334	7.59	101.80		
L00161	71-55-6	SW-846 8260A	9/08/95	0.00	UG/L	GRAB	263	7.64	125.10		
L00164	71-55-6	SW-846 8260A	9/11/95	0.00	UG/L	GRAB	443	7.87	142.90		

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Sample No	Con ID	Method	Sample Date	Results	Units	Lab qfr	Val qfr	Grab/ Comp	Flow	pH	Cond
1,1,1-TRICHLOROETHANE											
L00166	71-55-6	SW-846	8260A	9/14/95	0.00	UG/L		GRAB	339	7.69	128.00
L00169	71-55-6	SW-846	8260A	9/17/95	0.00	UG/L		GRAB	485	7.70	116.60
L00171	71-55-6	SW-846	8260A	9/20/95	0.00	UG/L		GRAB	456	7.64	110.70
L00173	71-55-6	SW-846	8260A	9/24/95	0.00	UG/L		GRAB	306	7.63	132.00
L00176	71-55-6	SW-846	8260A	9/26/95	0.00	UG/L		GRAB	529	7.60	113.00
L00178	71-55-6	SW-846	8260A	9/29/95	0.00	UG/L		GRAB	287	7.55	111.90
L00183	71-55-6	SW-846	8260A	9/12/95	0.00	UG/L		GRAB	445	7.94	121.20
L00186	71-55-6	SW-846	8260A	10/09/95	0.00	UG/L		GRAB	436	7.65	91.20
L00189	71-55-6	SW-846	8260A	10/16/95	0.00	UG/L		GRAB	434	7.65	99.60
L00192	71-55-6	SW-846	8260A	10/23/95	0.00	UG/L		GRAB	454	7.39	106.20
L00195	71-55-6	SW-846	8260A	10/30/95	0.00	UG/L		GRAB	450	8.30	132.25
L00215	71-55-6	SW-846	8260A	11/07/95	0.00	UG/L		GRAB	321	7.49	1151.00
L00218	71-55-6	SW-846	8260A	11/14/95	0.00	UG/L		GRAB	271	7.54	1200.00
L00221	71-55-6	SW-846	8260A	11/21/95	0.00	UG/L		GRAB	341	7.46	135.40
L00224	71-55-6	SW-846	8260A	11/28/95	0.00	UG/L		GRAB	453	7.58	150.10
L00241	71-55-6	SW-846	8260A	12/03/95	0.00	UG/L		GRAB	378	7.56	148.80
L00244	71-55-6	SW-846	8260A	12/06/95	0.00	UG/L		GRAB	348	7.60	823.00
L00246	71-55-6	SW-846	8260A	12/09/95	0.00	UG/L		GRAB	313	7.41	122.00
L00248	71-55-6	SW-846	8260A	12/12/95	0.00	UG/L		GRAB	260	7.53	135.80
L00251	71-55-6	SW-846	8260A	12/15/95	0.00	UG/L		GRAB	404	7.60	142.70
L00253	71-55-6	SW-846	8260A	12/18/95	0.00	UG/L		GRAB	451	7.50	140.00
L00256	71-55-6	SW-846	8260A	12/21/95	0.00	UG/L		GRAB	408	7.36	112.00
L00258	71-55-6	SW-846	8260A	12/24/95	0.00	UG/L		GRAB	316	7.50	148.00
L00261	71-55-6	SW-846	8260A	12/27/95	0.00	UG/L		GRAB	480	7.37	112.90
L00263	71-55-6	SW-846	8260A	12/30/95	0.00	UG/L		GRAB	416	7.48	150.90
L00297	71-55-6	SW-846	8260A	1/01/96	0.00	UG/L		GRAB	559	7.45	150.00
L00299	71-55-6	SW-846	8260A	1/04/96	0.00	UG/L		GRAB	303	7.53	151.70
L00302	71-55-6	SW-846	8260A	1/07/96	0.00	UG/L		GRAB	353	7.44	145.00
L00306	71-55-6	SW-846	8260A	1/10/96	0.00	UG/L		GRAB	512	7.37	49.30
L00309	71-55-6	SW-846	8260A	1/13/96	0.00	UG/L		GRAB	296	7.49	142.20

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Sample No	Con ID	Method	Sample Date	Results Units	Lab qfr	Val qfr	Grab/ Comp	Flow	pH	Cond
1,1,1-TRICHLOROETHANE										
U00311	71-55-6	SW-846	8260A	1/16/96	0.00	UG/L	GRAB	283	7.52	138.60
U00314	71-55-6	SW-846	8260A	1/19/96	0.00	UG/L	GRAB	305	7.46	142.70
U00316	71-55-6	SW-846	8260A	1/22/96	0.00	UG/L	GRAB	482	7.50	141.00
U00318	71-55-6	SW-846	8260A	1/25/96	0.00	UG/L	GRAB	393	7.43	143.00
U00323	71-55-6	SW-846	8260A	1/31/96	0.00	UG/L	GRAB	495	7.30	73.00
U00347	71-55-6	SW-846	8260A	2/03/96	0.00	UG/L	GRAB	492	7.53	340.00
U00349	71-55-6	SW-846	8260A	2/06/96	0.00	UG/L	GRAB	869	7.14	333.00
U00351	71-55-6	SW-846	8260A	2/09/96	0.00	UG/L	GRAB	288	7.64	152.50
U00354	71-55-6	SW-846	8260A	2/12/96	0.00	UG/L	GRAB	275	7.53	147.00
U00356	71-55-6	SW-846	8260A	2/15/96	0.00	UG/L	GRAB	275	7.16	246.10
U00359	71-55-6	SW-846	8260A	2/18/96	0.00	UG/L	GRAB	240	7.49	144.90
U00361	71-55-6	SW-846	8260A	2/21/96	0.00	UG/L	GRAB	310	7.41	151.30
U00364	71-55-6	SW-846	8260A	2/24/96	0.00	UG/L	GRAB	396	7.50	148.00
U00366	71-55-6	SW-846	8260A	2/27/96	0.00	UG/L	GRAB	341	7.20	137.00
U00368	71-55-6	SW-846	8260A	3/01/96	0.00	UG/L	GRAB	339	7.35	574.00
U00396	71-55-6	SW-846	8260A	3/09/96	0.00	UG/L	GRAB	303	7.45	224.59
U00401	71-55-6	SW-846	8260A	3/16/96	0.00	UG/L	GRAB	379	7.57	170.90
U00404	71-55-6	SW-846	8260A	3/24/96	0.00	UG/L	GRAB	348	7.70	144.00
U00407	71-55-6	SW-846	8260A	3/30/96	0.00	UG/L	GRAB	366	7.49	159.90
U00443	71-55-6	SW-846	8260A	4/07/96	0.00	UG/L	GRAB	290	7.05	268.00
U00446	71-55-6	SW-846	8260A	4/14/96	0.00	UG/L	GRAB	297	7.19	156.10
U00449	71-55-6	SW-846	8260A	4/21/96	0.00	UG/L	GRAB	572	7.60	158.00
U00452	71-55-6	SW-846	8260A	4/28/96	0.00	UG/L	GRAB	357	7.48	162.80
LTEOP00001	71-55-6	SW-846	8260A	5/04/95	0.00	UG/L	GRAB	124	7.88	143.00
LTEOP00002	71-55-6	SW-846	8260A	5/11/95	0.00	UG/L	GRAB	325	7.55	124.30
LTEOP00003	71-55-6	SW-846	8260A	5/15/95	0.00	UG/L	GRAB	334	7.65	122.00
LTEOP00004	71-55-6	SW-846	8260A	5/19/95	0.00	UG/L	GRAB	343	7.86	183.70
LTEOP00005	71-55-6	SW-846	8260A	5/08/95	0.00	UG/L	GRAB	135	7.78	148.00
LTEOP00006	71-55-6	SW-846	8260A	5/22/95	0.00	UG/L	GRAB	490	7.90	149.00
LTEOP00007	71-55-6	SW-846	8260A	5/25/95	0.00	UG/L	GRAB	341	7.92	152.66

WHC-SD-LFET-EV-001, ω_D

Sample No	Con ID	Method	Sample Date	Results Units	Lab qfr	Val qfr	Grab/ Comp	Flow	pH	Cond
1,1,1-TRICHLOROETHANE										
LTEOP00008	71-55-6	SW-846 8260A	5/29/95	0.00 ug/l	U	J	GRAB	353	7.77	150.20
ANTIMONY										
L00010	7440-36-0	SW-846 7041	6/08/95	1.00 ug/l	U	J	GRAB	569	7.45	140.00
ANTIMONY-125										
L00194	14234-35-6	GAMMA SCAN	10/30/95	21.00	PCI/L	U	COMP	GRAB	450	8.30
L00195	14234-35-6	GAMMA SCAN	10/30/95	21.00	PCI/L	U	COMP	GRAB	321	7.49
L00215	14234-35-6	GAMMA SCAN	11/07/95	20.00	PCI/L	U	COMP	GRAB	321	7.49
L00217	14234-35-6	GAMMA SCAN	11/07/95	21.00	PCI/L	U	COMP	GRAB	271	7.54
L00218	14234-35-6	GAMMA SCAN	11/14/95	13.00	PCI/L	U	COMP	GRAB	271	7.54
L00220	14234-35-6	GAMMA SCAN	11/14/95	22.00	PCI/L	U	COMP	GRAB	271	7.54
L00221	14234-35-6	GAMMA SCAN	11/21/95	15.00	PCI/L	U	COMP	GRAB	341	7.46
L00223	14234-35-6	GAMMA SCAN	11/21/95	21.00	PCI/L	U	COMP	GRAB	348	7.60
L00224	14234-35-6	GAMMA SCAN	11/28/95	22.00	PCI/L	U	COMP	GRAB	313	7.41
L00226	14234-35-6	GAMMA SCAN	11/28/95	22.00	PCI/L	U	COMP	GRAB	260	7.53
L00241	14234-35-6	GAMMA SCAN	12/03/95	20.00	PCI/L	U	COMP	GRAB	378	7.56
L00242	14234-35-6	GAMMA SCAN	12/06/95	23.00	PCI/L	U	COMP	GRAB	404	7.60
L00244	14234-35-6	GAMMA SCAN	12/06/95	22.00	PCI/L	U	COMP	GRAB	348	823.00
L00246	14234-35-6	GAMMA SCAN	12/09/95	21.00	PCI/L	U	COMP	GRAB	313	122.00
L00248	14234-35-6	GAMMA SCAN	12/12/95	20.00	PCI/L	U	COMP	GRAB	260	135.80
L00249	14234-35-6	GAMMA SCAN	12/12/95	20.00	PCI/L	U	COMP	GRAB	408	7.36
L00251	14234-35-6	GAMMA SCAN	12/15/95	21.00	PCI/L	U	COMP	GRAB	316	112.00
L00253	14234-35-6	GAMMA SCAN	12/18/95	21.00	PCI/L	U	COMP	GRAB	451	142.70
L00254	14234-35-6	GAMMA SCAN	12/20/95	22.00	PCI/L	U	COMP	GRAB	7.50	140.00
L00256	14234-35-6	GAMMA SCAN	12/21/95	27.00	PCI/L	U	COMP	GRAB	408	148.00
L00258	14234-35-6	GAMMA SCAN	12/24/95	22.00	PCI/L	U	COMP	GRAB	316	7.50
L00259	14234-35-6	GAMMA SCAN	12/27/95	22.00	PCI/L	U	COMP	GRAB	316	7.50

Sample No	Con ID	Method	Sample Date	Results Units	Lab qfr	Val qfr	Grab/ Comp	Flow	pH	Cond
ANTIMONY-125										
L00261	14234-35-6	GAMMA SCAN	12/27/95	20.00	PCI/L		GRAB	480	7.37	112.90
L00263	14234-35-6	GAMMA SCAN	12/30/95	20.00	PCI/L		GRAB	416	7.48	150.00
L00297	14234-35-6	GAMMA SCAN	1/01/96	27.00	PCI/L		GRAB	559	7.45	150.00
L00299	14234-35-6	GAMMA SCAN	1/04/96	22.00	PCI/L		GRAB	303	7.53	151.70
L00301	14234-35-6	GAMMA SCAN	1/04/96	21.00	PCI/L		COMP			
L00302	14234-35-6	GAMMA SCAN	1/07/96	20.00	PCI/L		GRAB	353	7.44	145.00
L00306	14234-35-6	GAMMA SCAN	1/10/96	23.00	PCI/L		GRAB	512	7.37	49.30
L00308	14234-35-6	GAMMA SCAN	1/10/96	22.00	PCI/L		COMP			
L00309	14234-35-6	GAMMA SCAN	1/13/96	21.00	PCI/L		GRAB	296	7.49	142.20
L00311	14234-35-6	GAMMA SCAN	1/16/96	21.00	PCI/L		GRAB	283	7.52	138.60
L00313	14234-35-6	GAMMA SCAN	1/18/96	21.00	PCI/L		COMP			
L00314	14234-35-6	GAMMA SCAN	1/19/96	21.00	PCI/L		GRAB	305	7.46	142.70
L00316	14234-35-6	GAMMA SCAN	1/22/96	23.00	PCI/L		GRAB	482	7.50	141.00
L00318	14234-35-6	GAMMA SCAN	1/25/96	20.00	PCI/L		GRAB	333	7.43	143.00
L00320	14234-35-6	GAMMA SCAN	1/25/96	21.00	PCI/L		COMP			
L00321	14234-35-6	GAMMA SCAN	1/28/96	20.00	PCI/L		GRAB	318	7.40	140.90
L00323	14234-35-6	GAMMA SCAN	1/31/96	20.00	PCI/L		GRAB	495	7.30	73.00
L00325	14234-35-6	GAMMA SCAN	1/31/96	20.00	PCI/L		COMP			
L00347	14234-35-6	GAMMA SCAN	2/03/96	20.00	PCI/L		GRAB	492	7.53	340.00
L00349	14234-35-6	GAMMA SCAN	2/06/96	20.00	PCI/L		GRAB	869	7.14	333.00
L00351	14234-35-6	GAMMA SCAN	2/09/96	20.00	PCI/L		GRAB	288	7.64	152.50
L00353	14234-35-6	GAMMA SCAN	2/09/96	20.00	PCI/L		COMP			
L00354	14234-35-6	GAMMA SCAN	2/12/96	20.00	PCI/L		GRAB	275	7.53	147.00
L00356	14234-35-6	GAMMA SCAN	2/15/96	20.00	PCI/L		GRAB	275	7.16	246.10
L00358	14234-35-6	GAMMA SCAN	2/15/96	20.00	PCI/L		COMP			
L00359	14234-35-6	GAMMA SCAN	2/18/96	20.00	PCI/L		GRAB	240	7.49	144.90
L00361	14234-35-6	GAMMA SCAN	2/21/96	20.00	PCI/L		GRAB	310	7.41	151.30
L00363	14234-35-6	GAMMA SCAN	2/23/96	20.00	PCI/L		COMP			
L00364	14234-35-6	GAMMA SCAN	2/24/96	20.00	PCI/L		GRAB	396	7.50	148.00
L00366	14234-35-6	GAMMA SCAN	2/27/96	20.00	PCI/L		GRAB	341	7.20	137.00

WHC-SD-LEF-EV-001, $\Delta\nu\delta$

Sample No	Con ID	Method	Sample Date	Results Units	Lab qfr	Val qfr	Grab/ Comp	Flow	pH	Cond
ANTIMONY-125										
L00368	14234-35-6	GAMMA SCAN	3/01/96	20.00	PC1/L	U	GRAB	339	7.35	574.00
L00370	14234-35-6	GAMMA SCAN	3/01/96	20.00	PC1/L	U	COMP	303	7.45	224.59
L00396	14234-35-6	GAMMA SCAN	3/09/96	20.00	PC1/L	U	GRAB	303	7.45	224.59
L00400	14234-35-6	GAMMA SCAN	3/09/96	20.00	PC1/L	U	COMP	303	7.45	224.59
L00401	14234-35-6	GAMMA SCAN	3/16/96	20.00	PC1/L	U	GRAB	379	7.57	170.90
L00403	14234-35-6	GAMMA SCAN	3/16/96	20.00	PC1/L	U	COMP	303	7.45	224.59
L00404	14234-35-6	GAMMA SCAN	3/24/96	20.00	PC1/L	U	GRAB	348	7.70	144.00
L00406	14234-35-6	GAMMA SCAN	3/24/96	20.00	PC1/L	U	COMP	303	7.45	224.59
L00407	14234-35-6	GAMMA SCAN	3/30/96	20.00	PC1/L	U	GRAB	366	7.49	159.90
L00409	14234-35-6	GAMMA SCAN	3/30/96	20.00	PC1/L	U	COMP	303	7.45	224.59
L00443	14234-35-6	GAMMA SCAN	4/07/96	20.00	PC1/L	U	GRAB	290	7.05	268.00
L00445	14234-35-6	GAMMA SCAN	4/07/96	20.00	PC1/L	U	COMP	303	7.45	224.59
L00446	14234-35-6	GAMMA SCAN	4/14/96	21.00	PC1/L	U	GRAB	297	7.19	156.10
L00448	14234-35-6	GAMMA SCAN	4/14/96	20.00	PC1/L	U	COMP	303	7.45	224.59
L00449	14234-35-6	GAMMA SCAN	4/21/96	20.00	PC1/L	U	GRAB	572	7.60	158.00
L00451	14234-35-6	GAMMA SCAN	4/21/96	20.00	PC1/L	U	COMP	303	7.45	224.59
L00452	14234-35-6	GAMMA SCAN	4/28/96	20.00	PC1/L	U	GRAB	357	7.48	162.80
L00454	14234-35-6	GAMMA SCAN	4/28/96	20.00	PC1/L	U	COMP	303	7.45	224.59
ARSENIC										
L00010	7440-38-2	SW-846 7060A	6/08/95	.27	UG/L	U	J	COMP		
L00012	7440-38-2	SW-846 7060A	6/15/95	1.19	UG/L	U	J	COMP		
L00014	7440-38-2	SW-846 7060A	6/22/95	1.11	UG/L	U	J	COMP		
L00016	7440-38-2	SW-846 7060A	6/29/95	1.51	UG/L	U	J	COMP		
L00024	7440-38-2	SW-846 7060A	7/03/95	0.00	UG/L	U	J	COMP		
L00026	7440-38-2	SW-846 7060A	7/06/95	0.00	UG/L	U	J	COMP		
L00027	7440-38-2	SW-846 7060A	7/06/95	0.00	UG/L	U	J	COMP		
L00029	7440-38-2	SW-846 7060A	7/09/95	1.00	UG/L	U	J	COMP		
L00031	7440-38-2	SW-846 7060A	7/12/95	0.00	UG/L	U	J	COMP		

WHC-SD-LEF-EV-001, Rev 0

Sample No	Con ID	Method	Sample Date	Results	Units	Lab qfr	Grab/ Comp	Val qfr	Flow	pH	Cond
ARSENIC											
L00032	7440-38-2	SW-846	7060A	7/14/95	0.00	UG/L	COMP	262	7.59	150.30	
L00034	7440-38-2	SW-846	7060A	7/15/95	0.00	UG/L	GRAB	232	7.40	155.40	
L00036	7440-38-2	SW-846	7060A	7/18/95	0.00	UG/L	GRAB	232	7.40	155.40	
L00037	7440-38-2	SW-846	7060A	7/21/95	1.20	UG/L	COMP	482	7.25	155.50	
L00039	7440-38-2	SW-846	7060A	7/21/95	0.00	UG/L	GRAB	244	7.62	132.40	
L00041	7440-38-2	SW-846	7060A	7/24/95	0.00	UG/L	COMP	360	7.65	104.50	
L00042	7440-38-2	SW-846	7060A	7/27/95	0.00	UG/L	GRAB	235	7.64	112.20	
L00044	7440-38-2	SW-846	7060A	7/27/95	0.00	UG/L	GRAB	421	7.65	120.70	
L00046	7440-38-2	SW-846	7060A	7/28/95	0.00	UG/L	GRAB	312	7.73	148.50	
L00048	7440-38-2	SW-846	7060A	8/01/95	0.00	UG/L	COMP	379	7.71	148.70	
L00050	7440-38-2	SW-846	7060A	8/04/95	0.00	UG/L	GRAB	374	7.71	143.67	
L00051	7440-38-2	SW-846	7060A	8/05/95	0.00	UG/L	COMP	400	7.77	153.45	
L00053	7440-38-2	SW-846	7060A	8/07/95	0.00	UG/L	GRAB	423	7.78	129.90	
L00055	7440-38-2	SW-846	7060A	8/10/95	0.00	UG/L	COMP	393	7.63	137.00	
L00056	7440-38-2	SW-846	7060A	8/11/95	.10	UG/L	GRAB	311	7.71	139.00	
L00058	7440-38-2	SW-846	7060A	8/13/95	0.00	UG/L	COMP	565	7.66	129.80	
L00060	7440-38-2	SW-846	7060A	8/16/95	0.00	UG/L	GRAB	270	7.64	172.40	
L00064	7440-38-2	SW-846	7060A	8/19/95	.61	UG/L	COMP	253	7.60	134.00	
L00066	7440-38-2	SW-846	7060A	8/19/95	.04	UG/L	GRAB	376	7.61	141.40	
L00068	7440-38-2	SW-846	7060A	8/22/95	.71	UG/L	COMP	334	7.59	101.80	
L00069	7440-38-2	SW-846	7060A	8/26/95	1.00	UG/L	GRAB	263	7.64	125.10	
L00071	7440-38-2	SW-846	7060A	8/25/95	0.00	UG/L	COMP	393	7.63	137.00	
L00072	7440-38-2	SW-846	7060A	8/28/95	0.00	UG/L	GRAB	376	7.61	141.40	
L00075	7440-38-2	SW-846	7060A	8/31/95	1.10	UG/L	COMP	334	7.59	101.80	
L00156	7440-38-2	SW-846	7060A	9/03/95	0.00	UG/L	GRAB	443	7.87	142.90	
L00157	7440-38-2	SW-846	7060A	9/03/95	0.00	UG/L	COMP	393	7.63	137.00	
L00159	7440-38-2	SW-846	7060A	9/05/95	1.10	UG/L	GRAB	270	7.64	172.40	
L00161	7440-38-2	SW-846	7060A	9/08/95	0.00	UG/L	COMP	334	7.59	101.80	
L00162	7440-38-2	SW-846	7060A	9/11/95	0.00	UG/L	GRAB	263	7.64	125.10	
L00164	7440-38-2	SW-846	7060A	9/11/95	0.00	UG/L	COMP	376	7.61	141.40	

WHC-SD-LEF-EV-001, Revision D

Sample No	Con ID	Method	Sample Date	Results	Units	Lab qfr	Val qfr	Grab/ Comp	Flow	pH	Cond
ARSENIC											
L00166	7440-38-2	SW-846	7060A	9/14/95	0.00	UG/L		GRAB	339	7.69	128.00
L00167	7440-38-2	SW-846	7060A	9/17/95	2.40	UG/L		COMP			
L00169	7440-38-2	SW-846	7060A	9/17/95	0.00	UG/L		GRAB	485	7.70	116.60
L00171	7440-38-2	SW-846	7060A	9/20/95	0.00	UG/L		GRAB	456	7.64	110.70
L00173	7440-38-2	SW-846	7060A	9/24/95	1.70	UG/L		GRAB	306	7.63	132.00
L00174	7440-38-2	SW-846	7060A	9/24/95	1.30	UG/L		COMP			
L00176	7440-38-2	SW-846	7060A	9/26/95	0.00	UG/L		GRAB	529	7.60	113.00
L00178	7440-38-2	SW-846	7060A	9/29/95	0.00	UG/L		GRAB	287	7.55	111.90
L00179	7440-38-2	SW-846	7060A	10/01/95	0.00	UG/L		COMP			
L00183	7440-38-2	SW-846	7060A	9/12/95	0.00	UG/L		GRAB	445	7.94	121.20
L00184	7440-38-2	SW-846	7060A	9/17/95	1.70	UG/L		COMP			
L00185	7440-38-2	SW-846	7060A	10/09/95	0.00	UG/L		GRAB	436	7.65	91.20
L00186	7440-38-2	SW-846	7060A	10/09/95	0.00	UG/L		COMP			
L00188	7440-38-2	SW-846	7060A	10/16/95	0.00	UG/L		GRAB	434	7.65	99.60
L00189	7440-38-2	SW-846	7060A	10/16/95	0.00	UG/L		COMP			
L00191	7440-38-2	SW-846	7060A	10/23/95	0.00	UG/L		GRAB	454	7.39	106.20
L00192	7440-38-2	SW-846	7060A	10/23/95	0.00	UG/L		COMP			
L00194	7440-38-2	SW-846	7060A	10/30/95	0.00	UG/L		GRAB	450	8.30	132.25
L00195	7440-38-2	SW-846	7060A	10/30/95	0.00	UG/L		COMP			
L00215	7440-38-2	SW-846	7060A	11/07/95	0.00	UG/L		GRAB	321	7.49	1151.00
L00217	7440-38-2	SW-846	7060A	11/07/95	0.00	UG/L		COMP			
L00218	7440-38-2	SW-846	7060A	11/14/95	0.00	UG/L		GRAB	271	7.54	1200.00
L00220	7440-38-2	SW-846	7060A	11/14/95	0.00	UG/L		COMP			
L00221	7440-38-2	SW-846	7060A	11/21/95	0.00	UG/L		GRAB	341	7.46	135.40
L00223	7440-38-2	SW-846	7060A	11/21/95	0.00	UG/L		COMP			
L00224	7440-38-2	SW-846	7060A	11/28/95	0.00	UG/L		GRAB	453	7.58	150.10
L00226	7440-38-2	SW-846	7060A	11/28/95	0.00	UG/L		COMP			
L00241	7440-38-2	SW-846	7060A	12/03/95	0.00	UG/L		GRAB	378	7.56	148.80
L00242	7440-38-2	SW-846	7060A	12/06/95	0.00	UG/L		COMP			
L00244	7440-38-2	SW-846	7060A	12/06/95	0.00	UG/L		GRAB	348	7.60	823.00

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Sample No	Can ID	Method	Sample Date	Results Units	Lab Val	Grab/ Comp	Flow	pH	Cond
ARSENIC									
L00246	7440-38-2	SW-846	7060A	12/09/95	0.00	UG/L			
L00248	7440-38-2	SW-846	7060A	12/12/95	0.00	UG/L			
L00249	7440-38-2	SW-846	7060A	12/12/95	0.00	UG/L			
L00251	7440-38-2	SW-846	7060A	12/15/95	0.00	UG/L			
L00253	7440-38-2	SW-846	7060A	12/18/95	0.00	UG/L			
L00254	7440-38-2	SW-846	7060A	12/20/95	0.00	UG/L			
L00256	7440-38-2	SW-846	7060A	12/21/95	0.00	UG/L			
L00258	7440-38-2	SW-846	7060A	12/24/95	0.00	UG/L			
L00259	7440-38-2	SW-846	7060A	12/27/95	0.00	UG/L			
L00261	7440-38-2	SW-846	7060A	12/27/95	0.00	UG/L			
L00263	7440-38-2	SW-846	7060A	12/30/95	0.00	UG/L			
L00297	7440-38-2	SW-846	7060A	1/01/96	0.00	UG/L			
L00299	7440-38-2	SW-846	7060A	1/04/96	0.00	UG/L			
L00301	7440-38-2	SW-846	7060A	1/04/96	0.00	UG/L			
L00302	7440-38-2	SW-846	7060A	1/07/96	0.00	UG/L			
L00306	7440-38-2	SW-846	7060A	1/10/96	0.00	UG/L			
L00308	7440-38-2	SW-846	7060A	1/10/96	0.00	UG/L			
L00309	7440-38-2	SW-846	7060A	1/13/96	0.00	UG/L			
L00311	7440-38-2	SW-846	7060A	1/16/96	0.00	UG/L			
L00313	7440-38-2	SW-846	7060A	1/18/96	0.00	UG/L			
L00314	7440-38-2	SW-846	7060A	1/19/96	0.00	UG/L			
L00316	7440-38-2	SW-846	7060A	1/22/96	0.00	UG/L			
L00318	7440-38-2	SW-846	7060A	1/25/96	0.00	UG/L			
L00320	7440-38-2	SW-846	7060A	1/25/96	0.00	UG/L			
L00321	7440-38-2	SW-846	7060A	1/28/96	0.00	UG/L			
L00323	7440-38-2	SW-846	7060A	1/31/96	0.00	UG/L			
L00325	7440-38-2	SW-846	7060A	1/31/96	0.00	UG/L			
L00347	7440-38-2	SW-846	7060A	2/03/96	0.00	UG/L			
L00349	7440-38-2	SW-846	7060A	2/06/96	0.00	UG/L			
L00351	7440-38-2	SW-846	7060A	2/09/96	0.00	UG/L			

WHC-SD-LFF-EV-001, Rev D

Sample No	Con ID	Method	Sample Date	Results Units	Lab qfr	Va qfr	Grab/ Comp	Flow	pH	Cond
ARSENIC										
L00353	7440-38-2	SW-846 7060A	2/09/96	0.00	UG/L	U	COMP	275	7.53	147.00
L00354	7440-38-2	SW-846 7060A	2/12/96	0.00	UG/L	U	GRAB	275	7.16	246.10
L00356	7440-38-2	SW-846 7060A	2/15/96	0.00	UG/L	U	GRAB	275	7.16	246.10
L00358	7440-38-2	SW-846 7060A	2/15/96	0.00	UG/L	U	COMP	240	7.49	144.90
L00359	7440-38-2	SW-846 7060A	2/18/96	0.00	UG/L	U	GRAB	310	7.41	151.30
L00361	7440-38-2	SW-846 7060A	2/21/96	0.00	UG/L	U	COMP	396	7.50	148.00
L00363	7440-38-2	SW-846 7060A	2/23/96	0.00	UG/L	U	GRAB	341	7.20	137.00
L00364	7440-38-2	SW-846 7060A	2/24/96	0.00	UG/L	U	GRAB	339	7.35	574.00
L00366	7440-38-2	SW-846 7060A	2/27/96	0.00	UG/L	U	COMP	303	7.45	224.59
L00368	7440-38-2	SW-846 7060A	3/01/96	0.00	UG/L	U	GRAB	379	7.57	170.90
L00370	7440-38-2	SW-846 7060A	3/01/96	0.00	UG/L	U	COMP	348	7.70	144.00
L00396	7440-38-2	SW-846 7060A	3/09/96	0.00	UG/L	U	GRAB	366	7.49	159.90
L00400	7440-38-2	SW-846 7060A	3/09/96	0.00	UG/L	U	COMP	290	7.05	268.00
L00401	7440-38-2	SW-846 7060A	3/16/96	0.00	UG/L	U	GRAB	297	7.19	156.10
L00403	7440-38-2	SW-846 7060A	3/16/96	0.00	UG/L	U	COMP	572	7.60	158.00
L00404	7440-38-2	SW-846 7060A	3/24/96	0.00	UG/L	U	GRAB	357	7.48	162.80
L00406	7440-38-2	SW-846 7060A	4/14/96	0.00	UG/L	U	COMP	J	J	J
L00407	7440-38-2	SW-846 7060A	4/14/96	0.00	UG/L	U	GRAB	J	J	J
L00409	7440-38-2	SW-846 7060A	4/21/96	1.50	UG/L	U	COMP	J	J	J
L00443	7440-38-2	SW-846 7060A	4/07/96	0.00	UG/L	U	GRAB	J	J	J
L00445	7440-38-2	SW-846 7060A	4/01/96	0.00	UG/L	U	COMP	J	J	J
L00446	7440-38-2	SW-846 7060A	4/14/96	0.00	UG/L	U	GRAB	J	J	J
L00448	7440-38-2	SW-846 7060A	4/14/96	0.00	UG/L	U	COMP	J	J	J
L00449	7440-38-2	EPA-600 200-8	4/21/96	1.50	UG/L	U	GRAB	J	J	J
L00451	7440-38-2	EPA-600 200-8	4/21/96	1.50	UG/L	U	COMP	J	J	J
L00452	7440-38-2	EPA-600 200-8	4/28/96	1.50	UG/L	U	GRAB	J	J	J
L00454	7440-38-2	EPA-600 200-8	4/28/96	1.50	UG/L	U	COMP	J	J	J
LTEOP00001	7440-38-2	SW-846 7060A	5/04/95	1.00	UG/L	U	COMP	J	J	J
LTEOP00002	7440-38-2	SW-846 7060A	5/11/95	.30	UG/L	U	COMP	J	J	J
LTEOP00003	7440-38-2	SW-846 7060A	5/15/95	.30	UG/L	U	COMP	J	J	J

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Sample No	Con ID	Method	Sample Date	Results Units	Lab qlfr	Val qlfr	Grab/ Comp	Flow	pH	Cond
ARSENIC										
LTEOP00004	7440-38-2	SW-846 7060A	5/19/95	.07	UG/L	U	J	COMP		
LTEOP00005	7440-38-2	SW-846 7060A	5/08/95	0.0	UG/L	U	U	COMP		
LTEOP00006	7440-38-2	SW-846 7060A	5/22/95	.40	UG/L	U	J	COMP		
LTEOP00007	7440-38-2	SW-846 7060A	5/25/95	.28	UG/L	U	J	COMP		
LTEOP00008	7440-38-2	SW-846 7060A	5/29/95	.40	UG/L	U	J	COMP		
BIS(2-ETHYLHEXYL) PHthalATE										
L00010	117-81-7	SW-846 8270B	6/08/95	0.00	UG/L	U	U	COMP		
L00012	117-81-7	SW-846 8270B	6/15/95	0.00	UG/L	U	U	COMP		
L00014	117-81-7	SW-846 8270B	6/22/95	0.00	UG/L	U	U	COMP		
L00016	117-81-7	SW-846 8270B	6/29/95	1.00	UG/L	U	U	COMP		
L00024	117-81-7	SW-846 8270B	7/03/95	.50	UG/L	U	U	GRAB	458	7.49
L00026	117-81-7	SW-846 8270B	7/06/95	0.00	UG/L	U	U	GRAB	592	7.50
L00027	117-81-7	SW-846 8270B	7/06/95	0.00	UG/L	U	U	COMP		
L00029	117-81-7	SW-846 8270B	7/09/95	0.00	UG/L	U	U	GRAB	249	7.50
L00031	117-81-7	SW-846 8270B	7/12/95	0.00	UG/L	U	U	GRAB	256	7.49
L00032	117-81-7	SW-846 8270B	7/14/95	0.00	UG/L	U	U	COMP		
L00034	117-81-7	SW-846 8270B	7/15/95	0.00	UG/L	U	U	GRAB	262	7.59
L00036	117-81-7	SW-846 8270B	7/18/95	.60	UG/L	U	U	GRAB	232	7.40
L00037	117-81-7	SW-846 8270B	7/21/95	0.00	UG/L	U	U	COMP		
L00039	117-81-7	SW-846 8270B	7/21/95	0.00	UG/L	U	U	GRAB	482	7.25
L00041	117-81-7	SW-846 8270B	7/24/95	0.00	UG/L	U	U	GRAB	244	7.62
L00042	117-81-7	SW-846 8270B	7/27/95	0.00	UG/L	U	U	COMP		
L00044	117-81-7	SW-846 8270B	7/27/95	0.00	UG/L	U	U	GRAB	360	7.65
L00046	117-81-7	SW-846 8270B	7/28/95	0.00	UG/L	U	U	GRAB	235	7.64
L00048	117-81-7	SW-846 8270B	8/01/95	0.00	UG/L	U	U	GRAB	421	7.65
L00050	117-81-7	SW-846 8270B	8/04/95	0.00	UG/L	U	U	GRAB	312	7.73
L00051	117-81-7	SW-846 8270B	8/05/95	0.00	UG/L	U	U	COMP		
L00053	117-81-7	SW-846 8270B	8/07/95	0.00	UG/L	U	U	GRAB	379	7.71
PHthalATE										
L00010	117-81-7	SW-846 8270B	6/08/95	0.00	UG/L	U	U	COMP		
L00012	117-81-7	SW-846 8270B	6/15/95	0.00	UG/L	U	U	COMP		
L00014	117-81-7	SW-846 8270B	6/22/95	0.00	UG/L	U	U	COMP		
L00016	117-81-7	SW-846 8270B	6/29/95	1.00	UG/L	U	U	COMP		
L00024	117-81-7	SW-846 8270B	7/03/95	.50	UG/L	U	U	GRAB	458	144.20
L00026	117-81-7	SW-846 8270B	7/06/95	0.00	UG/L	U	U	GRAB	592	145.00
L00027	117-81-7	SW-846 8270B	7/06/95	0.00	UG/L	U	U	COMP		
L00029	117-81-7	SW-846 8270B	7/09/95	0.00	UG/L	U	U	GRAB	249	157.10
L00031	117-81-7	SW-846 8270B	7/12/95	0.00	UG/L	U	U	GRAB	256	156.00
L00032	117-81-7	SW-846 8270B	7/14/95	0.00	UG/L	U	U	COMP		
L00034	117-81-7	SW-846 8270B	7/15/95	0.00	UG/L	U	U	GRAB	262	150.30
L00036	117-81-7	SW-846 8270B	7/18/95	.60	UG/L	U	U	GRAB	232	155.40
L00037	117-81-7	SW-846 8270B	7/21/95	0.00	UG/L	U	U	COMP		
L00039	117-81-7	SW-846 8270B	7/21/95	0.00	UG/L	U	U	GRAB	482	155.50
L00041	117-81-7	SW-846 8270B	7/24/95	0.00	UG/L	U	U	GRAB	244	132.40
L00042	117-81-7	SW-846 8270B	7/27/95	0.00	UG/L	U	U	COMP		
L00044	117-81-7	SW-846 8270B	7/27/95	0.00	UG/L	U	U	GRAB	360	104.50
L00046	117-81-7	SW-846 8270B	7/28/95	0.00	UG/L	U	U	GRAB	235	112.20
L00048	117-81-7	SW-846 8270B	8/01/95	0.00	UG/L	U	U	GRAB	421	120.70
L00050	117-81-7	SW-846 8270B	8/04/95	0.00	UG/L	U	U	GRAB	312	148.50
L00051	117-81-7	SW-846 8270B	8/05/95	0.00	UG/L	U	U	COMP		
L00053	117-81-7	SW-846 8270B	8/07/95	0.00	UG/L	U	U	GRAB	379	148.70

Sample No	Con ID	Method	Sample Date	Results Units	Lab qfr	Grab/ Comp qfr	Flow pH	Cond
BIS(2-ETHYLHEXYL) PHthalATE								
U00055	117-81-7	SW-846 8270B	8/10/95	0.00	UG/L	GRAB 374	7.71	143.67
U00056	117-81-7	SW-846 8270B	8/11/95	0.00	UG/L	COMP		
U00058	117-81-7	SW-846 8270B	8/13/95	0.00	UG/L	GRAB 400	7.77	153.45
U00060	117-81-7	SW-846 8270B	8/16/95	0.00	UG/L	GRAB 423	7.78	129.90
U00064	117-81-7	SW-846 8270B	8/19/95	0.00	UG/L	COMP		
U00066	117-81-7	SW-846 8270B	8/19/95	0.00	UG/L	GRAB 311	7.71	139.00
U00068	117-81-7	SW-846 8270B	8/22/95	0.00	UG/L	GRAB 565	7.66	129.80
U00069	117-81-7	SW-846 8270B	8/26/95	0.00	UG/L	COMP		
U00071	117-81-7	SW-846 8270B	8/25/95	0.00	UG/L	GRAB 253	7.60	134.00
U00072	117-81-7	SW-846 8270B	8/28/95	0.00	UG/L	GRAB 393	7.63	137.00
U00075	117-81-7	SW-846 8270B	8/31/95	.60	UG/L	GRAB 376	7.61	141.40
U00156	117-81-7	SW-846 8270B	9/03/95	0.00	UG/L	GRAB 270	7.64	172.40
U00157	117-81-7	SW-846 8270B	9/03/95	0.00	UG/L	COMP		
U00159	117-81-7	SW-846 8270B	9/05/95	.70	UG/L	GRAB 334	7.59	101.80
U00161	117-81-7	SW-846 8270B	9/08/95	0.00	UG/L	GRAB 263	7.64	125.10
U00162	117-81-7	SW-846 8270B	9/11/95	0.00	UG/L	COMP		
U00164	117-81-7	SW-846 8270B	9/11/95	0.00	UG/L	GRAB 443	7.87	142.90
U00166	117-81-7	SW-846 8270B	9/14/95	0.00	UG/L	GRAB 339	7.69	128.00
U00167	117-81-7	SW-846 8270B	9/17/95	0.00	UG/L	COMP		
U00169	117-81-7	SW-846 8270B	9/17/95	0.00	UG/L	GRAB 485	7.70	116.60
U00171	117-81-7	SW-846 8270B	9/20/95	0.00	UG/L	UJ GRAB	456	7.64
U00173	117-81-7	SW-846 8270B	9/24/95	0.00	UG/L	UJ GRAB	306	7.63
U00174	117-81-7	SW-846 8270B	9/24/95	0.00	UG/L	COMP		
U00176	117-81-7	SW-846 8270B	9/26/95	0.00	UG/L	UJ GRAB	529	7.60
U00178	117-81-7	SW-846 8270B	9/29/95	1.00	UG/L	J GRAB	287	7.55
U00179	117-81-7	SW-846 8270B	10/01/95	0.00	UG/L	COMP		
U00183	117-81-7	SW-846 8270B	9/12/95	0.00	UG/L	GRAB 445	7.94	121.20
U00185	117-81-7	SW-846 8270B	10/09/95	0.00	UG/L	COMP		
U00186	117-81-7	SW-846 8270B	10/09/95	0.00	UG/L	GRAB 436	7.65	91.20
U00188	117-81-7	SW-846 8270B	10/16/95	0.00	UG/L	COMP		

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Sample No	Con ID	Method	Sample Date	Results Units	Lab q1fr	Val q1fr	Grab/ Comp	Flow	pH	Cond
BIS(2-ETHYLHEXYL) PHthalate										
L00189	117-81-7	SW-846 8270B	10/16/95	.60	UG/L	J	GRAB	434	7.65	99.60
L00191	117-81-7	SW-846 8270B	10/23/95	.60	UG/L	J	COMP			
L00192	117-81-7	SW-846 8270B	10/23/95	.70	UG/L	J	GRAB	454	7.39	106.20
L00194	117-81-7	SW-846 8270B	10/30/95	0.00	UG/L	J	COMP			
L00195	117-81-7	SW-846 8270B	10/30/95	0.00	UG/L	J	GRAB	450	8.30	132.25
L00215	117-81-7	SW-846 8270B	11/07/95	0.00	UG/L	J	GRAB	321	7.49	1151.00
L00217	117-81-7	SW-846 8270B	11/07/95	0.00	UG/L	J	COMP			
L00218	117-81-7	SW-846 8270B	11/14/95	0.00	UG/L	J	GRAB	271	7.54	1200.00
L00220	117-81-7	SW-846 8270B	11/14/95	0.00	UG/L	J	COMP			
L00221	117-81-7	SW-846 8270B	11/21/95	0.00	UG/L	J	GRAB	341	7.46	135.40
L00223	117-81-7	SW-846 8270B	11/21/95	0.00	UG/L	J	COMP			
L00224	117-81-7	SW-846 8270B	11/28/95	0.00	UG/L	J	GRAB	453	7.58	150.10
L00226	117-81-7	SW-846 8270B	11/28/95	0.00	UG/L	J	COMP			
L00241	117-81-7	SW-846 8270B	12/03/95	0.00	UG/L	J	GRAB	378	7.56	148.80
L00242	117-81-7	SW-846 8270B	12/06/95	0.00	UG/L	J	COMP			
L00244	117-81-7	SW-846 8270B	12/06/95	0.00	UG/L	J	GRAB	348	7.60	823.00
L00246	117-81-7	SW-846 8270B	12/09/95	0.00	UG/L	J	GRAB	313	7.41	122.00
L00248	117-81-7	SW-846 8270B	12/12/95	0.00	UG/L	J	GRAB	260	7.53	135.80
L00249	117-81-7	SW-846 8270B	12/12/95	.50	UG/L	J	COMP			
L00251	117-81-7	SW-846 8270B	12/15/95	.90	UG/L	J	GRAB	404	7.60	142.70
L00253	117-81-7	SW-846 8270B	12/18/95	0.00	UG/L	J	GRAB	451	7.50	140.00
L00254	117-81-7	SW-846 8270B	12/20/95	0.00	UG/L	J	COMP			
L00256	117-81-7	SW-846 8270B	12/21/95	0.00	UG/L	J	GRAB	408	7.36	112.00
L00258	117-81-7	SW-846 8270B	12/24/95	0.00	UG/L	J	GRAB	316	7.50	148.00
L00259	117-81-7	SW-846 8270B	12/27/95	0.00	UG/L	J	COMP			
L00261	117-81-7	SW-846 8270B	12/27/95	0.00	UG/L	J	GRAB	480	7.37	112.90
L00263	117-81-7	SW-846 8270B	12/30/95	0.00	UG/L	J	GRAB	416	7.48	150.90
L00297	117-81-7	SW-846 8270B	1/01/96	0.00	UG/L	J	GRAB	559	7.45	150.00
L00299	117-81-7	SW-846 8270B	1/04/96	0.00	UG/L	J	GRAB	303	7.53	151.70
L00301	117-81-7	SW-846 8270B	1/04/96	0.00	UG/L	J	COMP			

WHC-SD-LEF-EV-001, $\rho_{\text{H}_2}\text{O}$

Sample No	Con ID	Method	Sample Date	Results Units	Lab qfr	Grab/ Comp qfr	Val qfr	Flow pH	Cond
BIS(2-ETHYLHEXYL) PHthalate									
L00302	117-81-7	SW-846 8270B	1/07/96	0.00	UG/L	GRAB	353	7.44	145.00
L00306	117-81-7	SW-846 8270B	1/10/96	0.00	UG/L	GRAB	512	7.37	49.30
L00308	117-81-7	SW-846 8270B	1/10/96	0.00	UG/L	COMP	296	7.49	142.20
L00309	117-81-7	SW-846 8270B	1/13/96	0.00	UG/L	GRAB	283	7.52	138.60
L00311	117-81-7	SW-846 8270B	1/16/96	.20	UG/L	COMP	305	7.46	142.70
L00313	117-81-7	SW-846 8270B	1/18/96	.40	UG/L	GRAB	482	7.50	141.00
L00314	117-81-7	SW-846 8270B	1/19/96	0.00	UG/L	GRAB	393	7.43	143.00
L00316	117-81-7	SW-846 8270B	1/22/96	0.00	UG/L	COMP	318	7.40	140.90
L00318	117-81-7	SW-846 8270B	1/25/96	0.00	UG/L	GRAB	495	7.30	73.00
L00320	117-81-7	SW-846 8270B	1/25/96	0.00	UG/L	COMP	492	7.53	340.00
L00321	117-81-7	SW-846 8270B	1/28/96	.80	UG/L	GRAB	869	7.14	333.00
L00323	117-81-7	SW-846 8270B	1/31/96	0.00	UG/L	GRAB	288	7.64	152.50
L00325	117-81-7	SW-846 8270B	1/31/96	0.00	UG/L	COMP	275	7.53	147.00
L00347	117-81-7	SW-846 8270B	2/03/96	0.00	UG/L	GRAB	275	7.16	246.10
L00349	117-81-7	SW-846 8270B	2/06/96	.60	UG/L	COMP	310	7.41	151.30
L00351	117-81-7	SW-846 8270B	2/09/96	0.00	UG/L	GRAB	396	7.50	148.00
L00353	117-81-7	SW-846 8270B	2/09/96	0.00	UG/L	GRAB	341	7.20	137.00
L00354	117-81-7	SW-846 8270B	2/12/96	0.00	UG/L	GRAB	339	7.35	574.00
L00356	117-81-7	SW-846 8270B	2/15/96	0.00	UG/L	COMP	303	7.45	224.59
L00358	117-81-7	SW-846 8270B	2/18/96	0.00	UG/L	GRAB	379	7.57	170.90
L00359	117-81-7	SW-846 8270B	2/18/96	0.00	UG/L	GRAB	240	7.49	144.90
L00361	117-81-7	SW-846 8270B	2/21/96	0.00	UG/L	GRAB	310	7.41	
L00363	117-81-7	SW-846 8270B	2/23/96	0.00	UG/L	COMP			
L00364	117-81-7	SW-846 8270B	2/24/96	0.00	UG/L	GRAB			
L00366	117-81-7	SW-846 8270B	2/27/96	0.00	UG/L	GRAB			
L00368	117-81-7	SW-846 8270B	3/01/96	0.00	UG/L	COMP			
L00370	117-81-7	SW-846 8270B	3/01/96	0.00	UG/L	GRAB			
L00396	117-81-7	SW-846 8270B	3/09/96	0.00	UG/L	COMP			
L00400	117-81-7	SW-846 8270B	3/09/96	0.00	UG/L	GRAB			
L00401	117-81-7	SW-846 8270B	3/16/96	0.00	UG/L	GRAB			

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Sample No	Con ID	Method	Sample Date	Results Units	Lab q1fr	Val q1fr	Grab/ Comp	Flow	pH	Cond
BIS(2-ETHYLHEXYL) PHthalATE										
L00403	117-81-7	SW-846 8270B	3/16/96	0.00	UG/L	U	COMP			
L00404	117-81-7	SW-846 8270B	3/24/96	0.00	UG/L	U	GRAB	348	7.70	144.00
L00406	117-81-7	SW-846 8270B	3/24/96	0.00	UG/L	U	COMP			
L00407	117-81-7	SW-846 8270B	3/30/96	1.00	UG/L	JB	GRAB	366	7.49	159.90
L00409	117-81-7	SW-846 8270B	3/30/96	0.00	UG/L	U	COMP			
L00443	117-81-7	SW-846 8270B	4/07/96	.50	UG/L	J	GRAB	290	7.05	268.00
L00445	117-81-7	SW-846 8270B	4/07/96	.30	UG/L	J	COMP			
L00446	117-81-7	SW-846 8270B	4/14/96	1.00	UG/L	J	GRAB	297	7.19	156.10
L00448	117-81-7	SW-846 8270B	4/14/96	0.00	UG/L	U	COMP			
L00449	117-81-7	SW-846 8270B	4/21/96	0.00	UG/L	U	GRAB	572	7.60	158.00
L00451	117-81-7	SW-846 8270B	4/21/96	0.00	UG/L	U	COMP			
L00452	117-81-7	SW-846 8270B	4/28/96	0.00	UG/L	U	GRAB	357	7.48	162.80
L00454	117-81-7	SW-846 8270B	4/28/96	0.00	UG/L	U	COMP			
LTEOP00001	117-81-7	SW-846 8270B	5/04/95	0.00	UG/L	U	COMP			
LTEOP00002	117-81-7	SW-846 8270B	5/11/95	0.00	UG/L	U	COMP			
LTEOP00003	117-81-7	SW-846 8270B	5/15/95	0.00	UG/L	U	COMP			
LTEOP00004	117-81-7	SW-846 8270B	5/19/95	0.00	UG/L	J	COMP			
LTEOP00005	117-81-7	SW-846 8270B	5/08/95	.50	UG/L	J	COMP			
LTEOP00006	117-81-7	SW-846 8270B	5/22/95	0.00	UG/L	J	COMP			
LTEOP00007	117-81-7	SW-846 8270B	5/25/95	0.00	UG/L	U	COMP			
LTEOP00008	117-81-7	SW-846 8270B	5/29/95	0.00	UG/L	U	COMP			
BROMIDE										
LTEOP00004	24959-67-9	EPA-600 300.0	5/19/95	0.00	MG/L	U	COMP			
LTEOP00007	24959-67-9	EPA-600 300.0	5/25/95	0.00	MG/L	U	COMP			
BROMODICHLOROMETHANE										
L00010	75-27-4	SW-846 8260A	6/08/95	1.00	UG/L		GRAB	569	7.45	140.00

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WHC-SD-LFF-EV-001, $\rho_{\text{H}_2}\text{O}$

Sample No	Con ID	Method	Sample Date	Results Units	Lab qfr	Val qfr	Grab/ Comp	Flow	pH	Cond
BROMODICHLOROMETHANE										
L00012	75-27-4	SW-846 8260A	6/15/95	0.00	UG/L	U	GRAB	630	7.35	25.65
L00014	75-27-4	SW-846 8260A	6/22/95	.70	UG/L	J	GRAB	466	7.56	142.90
L00016	75-27-4	SW-846 8260A	6/29/95	0.00	UG/L	U	GRAB	396	7.55	141.00
L00024	75-27-4	SW-846 8260A	7/03/95	0.00	UG/L	U	GRAB	458	7.49	144.20
L00026	75-27-4	SW-846 8260A	7/06/95	0.00	UG/L	U	GRAB	592	7.50	145.00
L00029	75-27-4	SW-846 8260A	7/09/95	1.00	UG/L	U	GRAB	249	7.50	157.10
L00031	75-27-4	SW-846 8260A	7/12/95	0.00	UG/L	U	GRAB	256	7.49	156.00
L00034	75-27-4	SW-846 8260A	7/15/95	.90	UG/L	U	GRAB	262	7.59	150.30
L00036	75-27-4	SW-846 8260A	7/18/95	1.00	UG/L	U	GRAB	232	7.40	155.40
L00039	75-27-4	SW-846 8260A	7/21/95	1.00	UG/L	U	GRAB	482	7.25	155.50
L00041	75-27-4	SW-846 8260A	7/24/95	1.00	UG/L	U	GRAB	244	7.62	132.40
L00044	75-27-4	SW-846 8260A	7/27/95	1.00	UG/L	U	GRAB	360	7.65	104.50
L00046	75-27-4	SW-846 8260A	7/28/95	1.00	UG/L	U	GRAB	235	7.64	112.20
L00048	75-27-4	SW-846 8260A	8/01/95	.90	UG/L	U	GRAB	421	7.65	120.70
L00050	75-27-4	SW-846 8260A	8/04/95	0.00	UG/L	U	GRAB	312	7.73	148.50
L00053	75-27-4	SW-846 8260A	8/07/95	0.00	UG/L	U	GRAB	379	7.71	148.70
L00055	75-27-4	SW-846 8260A	8/10/95	0.00	UG/L	U	GRAB	374	7.71	143.67
L00058	75-27-4	SW-846 8260A	8/13/95	0.00	UG/L	U	GRAB	400	7.77	153.45
L00060	75-27-4	SW-846 8260A	8/16/95	0.00	UG/L	U	GRAB	423	7.78	129.90
L00066	75-27-4	SW-846 8260A	8/19/95	0.00	UG/L	U	GRAB	311	7.71	139.00
L00068	75-27-4	SW-846 8260A	8/22/95	0.00	UG/L	U	GRAB	565	7.66	129.80
L00071	75-27-4	SW-846 8260A	8/25/95	1.00	UG/L	U	GRAB	253	7.60	134.00
L00072	75-27-4	SW-846 8260A	8/28/95	1.00	UG/L	U	GRAB	393	7.63	137.00
L00075	75-27-4	SW-846 8260A	8/31/95	1.00	UG/L	U	GRAB	376	7.61	141.40
L00156	75-27-4	SW-846 8260A	9/03/95	.90	UG/L	U	GRAB	270	7.64	172.40
L00159	75-27-4	SW-846 8260A	9/05/95	1.00	UG/L	U	GRAB	334	7.59	101.80
L00161	75-27-4	SW-846 8260A	9/08/95	0.00	UG/L	U	GRAB	263	7.64	125.10
L00164	75-27-4	SW-846 8260A	9/11/95	0.00	UG/L	U	GRAB	443	7.87	142.90
L00166	75-27-4	SW-846 8260A	9/14/95	.60	UG/L	U	GRAB	339	7.69	128.00
L00169	75-27-4	SW-846 8260A	9/17/95	0.00	UG/L	U	GRAB	485	7.70	116.60

WHC-SD-LEF-EV-001, $\lambda_{\text{UV}} \text{ O}$

Sample No	Con ID	Method	Sample Date	Results Units	Lab qFr	Val qFr	Grab/ Comp	Flow	pH	Cond
BROMODICHLOROMETHANE										
L00171	75-27-4	SW-846 8260A	9/20/95	.50	UG/L	J	GRAB	456	7.64	110.70
L00173	75-27-4	SW-846 8260A	9/24/95	.60	UG/L	J	GRAB	306	7.63	132.00
L00176	75-27-4	SW-846 8260A	9/26/95	.60	UG/L	J	GRAB	529	7.60	113.00
L00178	75-27-4	SW-846 8260A	9/29/95	0.00	UG/L	J	GRAB	287	7.55	111.90
L00183	75-27-4	SW-846 8260A	9/12/95	0.00	UG/L	J	GRAB	445	7.94	121.20
L00186	75-27-4	SW-846 8260A	10/09/95	0.00	UG/L	J	GRAB	436	7.65	91.20
L00189	75-27-4	SW-846 8260A	10/16/95	0.00	UG/L	J	COMP	434	7.65	99.60
L00192	75-27-4	SW-846 8260A	10/23/95	0.00	UG/L	J	GRAB	454	7.39	106.20
L00195	75-27-4	SW-846 8260A	10/30/95	0.00	UG/L	J	GRAB	450	8.30	132.25
L00215	75-27-4	SW-846 8260A	11/07/95	0.00	UG/L	J	GRAB	321	7.49	1151.00
L00218	75-27-4	SW-846 8260A	11/14/95	0.00	UG/L	J	GRAB	271	7.54	1200.00
L00221	75-27-4	SW-846 8260A	11/21/95	0.00	UG/L	J	GRAB	341	7.46	135.40
L00224	75-27-4	SW-846 8260A	11/28/95	0.00	UG/L	J	GRAB	453	7.58	150.10
L00241	75-27-4	SW-846 8260A	12/03/95	0.00	UG/L	J	GRAB	378	7.56	148.80
L00244	75-27-4	SW-846 8260A	12/06/95	0.00	UG/L	J	GRAB	348	7.60	823.00
L00246	75-27-4	SW-846 8260A	12/09/95	0.00	UG/L	J	GRAB	313	7.41	122.00
L00248	75-27-4	SW-846 8260A	12/12/95	0.00	UG/L	J	GRAB	260	7.53	135.80
L00251	75-27-4	SW-846 8260A	12/15/95	0.00	UG/L	J	GRAB	404	7.60	142.70
L00253	75-27-4	SW-846 8260A	12/18/95	0.00	UG/L	J	GRAB	451	7.50	140.00
L00256	75-27-4	SW-846 8260A	12/21/95	0.00	UG/L	J	GRAB	408	7.36	112.00
L00258	75-27-4	SW-846 8260A	12/24/95	0.00	UG/L	J	GRAB	316	7.50	148.00
L00261	75-27-4	SW-846 8260A	12/27/95	0.00	UG/L	J	GRAB	480	7.37	112.90
L00263	75-27-4	SW-846 8260A	12/30/95	0.00	UG/L	J	GRAB	416	7.48	150.90
L00297	75-27-4	SW-846 8260A	1/01/96	0.00	UG/L	J	GRAB	559	7.45	150.00
L00299	75-27-4	SW-846 8260A	1/04/96	0.00	UG/L	J	GRAB	303	7.53	151.70
L00302	75-27-4	SW-846 8260A	1/07/96	0.00	UG/L	J	GRAB	353	7.44	145.00
L00306	75-27-4	SW-846 8260A	1/10/96	0.00	UG/L	J	GRAB	512	7.37	49.30
L00309	75-27-4	SW-846 8260A	1/13/96	0.00	UG/L	J	GRAB	296	7.49	142.20
L00311	75-27-4	SW-846 8260A	1/16/96	0.00	UG/L	J	GRAB	283	7.52	138.60
L00314	75-27-4	SW-846 8260A	1/19/96	0.00	UG/L	J	GRAB	305	7.46	142.70

WHC-SD-LEEF-EV-001, $\rho_{\text{H}_2}\text{O}$

Sample No	Con ID	Method	Sample Date	Results Units	Lab qfr	Grab/ Comp qfr	Flow	pH	Cond
BROMODICHLOROMETHANE									
L00316	75-27-4	SW-846 8260A	1/22/96	0.00	UG/L	GRAB	482	7.50	141.00
L00318	75-27-4	SW-846 8260A	1/25/96	0.00	UG/L	GRAB	393	7.43	143.00
L00323	75-27-4	SW-846 8260A	1/31/96	0.00	UG/L	GRAB	495	7.30	73.00
L00347	75-27-4	SW-846 8260A	2/03/96	0.00	UG/L	GRAB	492	7.53	340.00
L00349	75-27-4	SW-846 8260A	2/06/96	0.00	UG/L	GRAB	869	7.14	333.00
L00351	75-27-4	SW-846 8260A	2/09/96	0.00	UG/L	GRAB	288	7.64	152.50
L00354	75-27-4	SW-846 8260A	2/12/96	0.00	UG/L	GRAB	275	7.53	147.00
L00356	75-27-4	SW-846 8260A	2/15/96	0.00	UG/L	GRAB	275	7.16	246.10
L00359	75-27-4	SW-846 8260A	2/18/96	0.00	UG/L	GRAB	240	7.49	144.90
L00361	75-27-4	SW-846 8260A	2/21/96	0.00	UG/L	GRAB	310	7.41	151.30
L00364	75-27-4	SW-846 8260A	2/24/96	0.00	UG/L	GRAB	396	7.50	148.00
L00366	75-27-4	SW-846 8260A	2/27/96	0.00	UG/L	GRAB	341	7.20	137.00
L00368	75-27-4	SW-846 8260A	3/01/96	0.00	UG/L	GRAB	339	7.35	574.00
L00396	75-27-4	SW-846 8260A	3/09/96	0.00	UG/L	GRAB	303	7.45	224.59
L00401	75-27-4	SW-846 8260A	3/16/96	0.00	UG/L	GRAB	379	7.57	170.90
L00404	75-27-4	SW-846 8260A	3/24/96	0.00	UG/L	GRAB	348	7.70	144.00
L00407	75-27-4	SW-846 8260A	3/30/96	0.00	UG/L	GRAB	366	7.49	159.90
L00443	75-27-4	SW-846 8260A	4/07/96	0.00	UG/L	GRAB	290	7.05	268.00
L00446	75-27-4	SW-846 8260A	4/14/96	.90	UG/L	GRAB	297	7.19	156.10
L00449	75-27-4	SW-846 8260A	4/21/96	.50	UG/L	GRAB	572	7.60	158.00
L00452	75-27-4	SW-846 8260A	4/28/96	0.00	UG/L	GRAB	357	7.48	162.80
LTEOP00001	75-27-4	SW-846 8260A	5/04/95	0.00	UG/L	GRAB	124	7.88	143.00
LTEOP00002	75-27-4	SW-846 8260A	5/11/95	0.00	UG/L	GRAB	325	7.55	124.30
LTEOP00003	75-27-4	SW-846 8260A	5/15/95	0.00	UG/L	GRAB	334	7.65	122.00
LTEOP00004	75-27-4	SW-846 8260A	5/19/95	2.00	UG/L	GRAB	343	7.86	183.70
LTEOP00005	75-27-4	SW-846 8260A	5/08/95	0.00	UG/L	GRAB	135	7.78	148.00
LTEOP00006	75-27-4	SW-846 8260A	5/22/95	1.00	UG/L	GRAB	490	7.90	149.00
LTEOP00007	75-27-4	SW-846 8260A	5/25/95	1.00	UG/L	GRAB	341	7.92	152.66
LTEOP00008	75-27-4	SW-846 8260A	5/29/95	0.00	UG/L	GRAB	353	7.77	150.20

WHC-SD-LEF-EV-001, Rev D

Sample No	Con ID	Method	Sample Date Results Units				Lab qfr	Grab/ Comp	Flow	pH	Cond
			Date	Results	Units						
BROMOFORM											
L00010	75-25-2	SW-846 8260A	6/08/95	0.00	UG/L		GRAB	569	7.45	140.00	
L00012	75-25-2	SW-846 8260A	6/15/95	0.00	UG/L		GRAB	630	7.35	23.65	
L00014	75-25-2	SW-846 8260A	6/22/95	0.00	UG/L		GRAB	466	7.56	142.90	
L00016	75-25-2	SW-846 8260A	6/29/95	0.00	UG/L		GRAB	396	7.55	141.00	
L00024	75-25-2	SW-846 8260A	7/03/95	0.00	UG/L		GRAB	458	7.49	144.20	
L00026	75-25-2	SW-846 8260A	7/06/95	0.00	UG/L		GRAB	592	7.50	145.00	
L00029	75-25-2	SW-846 8260A	7/09/95	0.00	UG/L		GRAB	249	7.50	157.10	
L00031	75-25-2	SW-846 8260A	7/12/95	0.00	UG/L		GRAB	256	7.49	156.00	
L00034	75-25-2	SW-846 8260A	7/15/95	0.00	UG/L		GRAB	262	7.59	150.30	
L00036	75-25-2	SW-846 8260A	7/18/95	0.00	UG/L		GRAB	232	7.40	155.40	
L00039	75-25-2	SW-846 8260A	7/21/95	0.00	UG/L		GRAB	482	7.25	155.50	
L00041	75-25-2	SW-846 8260A	7/24/95	0.00	UG/L		GRAB	244	7.62	132.40	
L00044	75-25-2	SW-846 8260A	7/27/95	0.00	UG/L		GRAB	360	7.65	104.50	
L00046	75-25-2	SW-846 8260A	7/28/95	0.00	UG/L		GRAB	235	7.64	112.20	
L00048	75-25-2	SW-846 8260A	8/01/95	0.00	UG/L		GRAB	421	7.65	120.70	
L00050	75-25-2	SW-846 8260A	8/04/95	0.00	UG/L		GRAB	312	7.73	148.50	
L00053	75-25-2	SW-846 8260A	8/07/95	0.00	UG/L		GRAB	379	7.71	148.70	
L00055	75-25-2	SW-846 8260A	8/10/95	0.00	UG/L		GRAB	374	7.71	143.67	
L00058	75-25-2	SW-846 8260A	8/13/95	0.00	UG/L		GRAB	400	7.77	153.45	
L00060	75-25-2	SW-846 8260A	8/16/95	0.00	UG/L		GRAB	423	7.78	129.90	
L00062	75-25-2	SW-846 8260A	8/19/95	0.00	UG/L		GRAB	311	7.71	139.00	
L00068	75-25-2	SW-846 8260A	8/22/95	0.00	UG/L		GRAB	565	7.66	129.80	
L00071	75-25-2	SW-846 8260A	8/25/95	0.00	UG/L		GRAB	253	7.60	134.00	
L00072	75-25-2	SW-846 8260A	8/28/95	0.00	UG/L		GRAB	393	7.63	137.00	
L00075	75-25-2	SW-846 8260A	8/31/95	0.00	UG/L		GRAB	376	7.61	141.40	
L00156	75-25-2	SW-846 8260A	9/03/95	0.00	UG/L		GRAB	270	7.64	172.40	
L00159	75-25-2	SW-846 8260A	9/05/95	0.00	UG/L		GRAB	334	7.59	101.80	
L00161	75-25-2	SW-846 8260A	9/08/95	0.00	UG/L		GRAB	263	7.64	125.10	
L00164	75-25-2	SW-846 8260A	9/11/95	0.00	UG/L		GRAB	443	7.87	142.90	
L00166	75-25-2	SW-846 8260A	9/14/95	0.00	UG/L		GRAB	339	7.69	128.00	

WHC-SD-LEF-EV-001, $\alpha\omega D$

Sample No	Con ID	Method	Sample Date	Results Units	Lab q1fr	Val q1fr	Grab/ Comp	Flow	pH	Cond
BROMOFORM										
L00169	75-25-2	SW-846 8260A	9/17/95	0.00	UG/L		GRAB	7.70	116.60	
L00171	75-25-2	SW-846 8260A	9/20/95	0.00	UG/L		GRAB	456	7.64	110.70
L00173	75-25-2	SW-846 8260A	9/24/95	0.00	UG/L		GRAB	306	7.63	132.00
L00176	75-25-2	SW-846 8260A	9/26/95	0.00	UG/L		GRAB	529	7.60	113.00
L00178	75-25-2	SW-846 8260A	9/29/95	0.00	UG/L		GRAB	287	7.55	111.90
L00183	75-25-2	SW-846 8260A	10/12/95	0.00	UG/L		GRAB	445	7.94	121.20
L00186	75-25-2	SW-846 8260A	10/09/95	0.00	UG/L		GRAB	436	7.65	91.20
L00189	75-25-2	SW-846 8260A	10/16/95	0.00	UG/L		GRAB	434	7.65	99.60
L00192	75-25-2	SW-846 8260A	10/23/95	0.00	UG/L		GRAB	454	7.39	106.20
L00195	75-25-2	SW-846 8260A	10/30/95	0.00	UG/L		GRAB	450	8.30	132.25
L00215	75-25-2	SW-846 8260A	11/01/95	0.00	UG/L		GRAB	321	7.49	1151.00
L00218	75-25-2	SW-846 8260A	11/14/95	0.00	UG/L		GRAB	271	7.54	1200.00
L00221	75-25-2	SW-846 8260A	11/21/95	0.00	UG/L		GRAB	341	7.46	135.40
L00224	75-25-2	SW-846 8260A	11/28/95	0.00	UG/L		GRAB	453	7.58	150.10
L00241	75-25-2	SW-846 8260A	12/03/95	0.00	UG/L		GRAB	378	7.56	148.80
L00244	75-25-2	SW-846 8260A	12/06/95	0.00	UG/L		GRAB	348	7.60	823.00
L00246	75-25-2	SW-846 8260A	12/09/95	0.00	UG/L		GRAB	313	7.41	122.00
L00248	75-25-2	SW-846 8260A	12/12/95	0.00	UG/L		GRAB	260	7.53	135.80
L00251	75-25-2	SW-846 8260A	12/15/95	0.00	UG/L		GRAB	404	7.60	142.70
L00253	75-25-2	SW-846 8260A	12/18/95	0.00	UG/L		GRAB	451	7.50	140.00
L00256	75-25-2	SW-846 8260A	12/21/95	0.00	UG/L		GRAB	408	7.36	112.00
L00258	75-25-2	SW-846 8260A	12/24/95	0.00	UG/L		GRAB	316	7.50	148.00
L00261	75-25-2	SW-846 8260A	12/27/95	0.00	UG/L		GRAB	480	7.37	112.90
L00263	75-25-2	SW-846 8260A	12/30/95	0.00	UG/L		GRAB	416	7.48	150.90
L00297	75-25-2	SW-846 8260A	1/01/96	0.00	UG/L		GRAB	559	7.45	150.00
L00299	75-25-2	SW-846 8260A	1/04/96	0.00	UG/L		GRAB	303	7.53	151.70
L00302	75-25-2	SW-846 8260A	1/07/96	0.00	UG/L		GRAB	353	7.44	145.00
L00306	75-25-2	SW-846 8260A	1/10/96	0.00	UG/L		GRAB	512	7.37	49.30
L00309	75-25-2	SW-846 8260A	1/13/96	0.00	UG/L		GRAB	296	7.49	142.20
L00311	75-25-2	SW-846 8260A	1/16/96	0.00	UG/L		GRAB	283	7.52	138.60

WHC-SD-LEF-EV-001, Rev D

Sample No	Con ID	Method	Sample Date	Results Units	Lab q1fr	Val q1fr	Grab/ Comp	Flow	pH	Cond
BROMOFORM										
L00314	75-25-2	SW-846 8260A	1/19/96	0.00	UG/L		GRAB	305	7.46	142.70
L00316	75-25-2	SW-846 8260A	1/22/96	0.00	UG/L		GRAB	482	7.50	141.00
L00318	75-25-2	SW-846 8260A	1/25/96	0.00	UG/L		GRAB	393	7.43	143.00
L00323	75-25-2	SW-846 8260A	1/31/96	0.00	UG/L		GRAB	495	7.30	73.00
L00347	75-25-2	SW-846 8260A	2/03/96	0.00	UG/L		GRAB	492	7.53	340.00
L00349	75-25-2	SW-846 8260A	2/06/96	0.00	UG/L		GRAB	869	7.14	333.00
L00351	75-25-2	SW-846 8260A	2/09/96	0.00	UG/L		GRAB	288	7.64	152.50
L00354	75-25-2	SW-846 8260A	2/12/96	0.00	UG/L		GRAB	275	7.53	147.00
L00356	75-25-2	SW-846 8260A	2/15/96	0.00	UG/L		GRAB	275	7.16	246.10
L00359	75-25-2	SW-846 8260A	2/18/96	0.00	UG/L		GRAB	240	7.49	144.90
L00361	75-25-2	SW-846 8260A	2/21/96	0.00	UG/L		GRAB	310	7.41	151.30
L00364	75-25-2	SW-846 8260A	2/24/96	0.00	UG/L		GRAB	396	7.50	148.00
L00366	75-25-2	SW-846 8260A	2/27/96	0.00	UG/L		GRAB	341	7.20	137.00
L00368	75-25-2	SW-846 8260A	3/01/96	0.00	UG/L		GRAB	339	7.35	574.00
L00396	75-25-2	SW-846 8260A	3/09/96	0.00	UG/L		GRAB	303	7.45	224.59
L00401	75-25-2	SW-846 8260A	3/16/96	0.00	UG/L		GRAB	379	7.57	170.90
L00404	75-25-2	SW-846 8260A	3/24/96	0.00	UG/L		GRAB	348	7.70	144.00
L00407	75-25-2	SW-846 8260A	3/30/96	0.00	UG/L		GRAB	366	7.49	159.90
L00443	75-25-2	SW-846 8260A	4/07/96	0.00	UG/L		GRAB	290	7.05	268.00
L00446	75-25-2	SW-846 8260A	4/14/96	0.00	UG/L		GRAB	297	7.19	156.10
L00449	75-25-2	SW-846 8260A	4/21/96	0.00	UG/L		GRAB	572	7.60	158.00
L00452	75-25-2	SW-846 8260A	4/28/96	0.00	UG/L		GRAB	357	7.48	162.80
LTEOP00001	75-25-2	SW-846 8260A	5/04/95	0.00	UG/L		GRAB	124	7.88	143.00
LTEOP00002	75-25-2	SW-846 8260A	5/11/95	0.00	UG/L		GRAB	325	7.55	124.30
LTEOP00003	75-25-2	SW-846 8260A	5/15/95	0.00	UG/L		GRAB	334	7.65	122.00
LTEOP00004	75-25-2	SW-846 8260A	5/19/95	0.00	UG/L		GRAB	343	7.86	183.70
LTEOP00005	75-25-2	SW-846 8260A	5/08/95	0.00	UG/L		GRAB	135	7.78	148.00
LTEOP00006	75-25-2	SW-846 8260A	5/22/95	0.00	UG/L		GRAB	490	7.90	149.00
LTEOP00007	75-25-2	SW-846 8260A	5/25/95	0.00	UG/L		GRAB	341	7.92	152.66
LTEOP00008	75-25-2	SW-846 8260A	5/29/95	0.00	UG/L		GRAB	353	7.77	150.20

Sample No	Con ID	Method	Sample Date	Results Units	Lab qfr	Val qfr	Grab/ Comp	Flow	pH	Cond
BROMOFORM										
CADMUM										
L00010	7440-43-9	SW-846 7131A	6/08/95	.06	UG/L	J	COMP			
L00012	7440-43-9	SW-846 7131A	6/15/95	6.00	UG/L	U	COMP			
L00014	7440-43-9	SW-846 7131A	6/22/95	.04	UG/L	J	COMP			
L00016	7440-43-9	SW-846 7131A	6/29/95	.05	UG/L	U	COMP			
L00024	7440-43-9	SW-846 7131A	7/03/95	0.00	UG/L	J	GRAB	458	7.49	144.20
L00026	7440-43-9	SW-846 7131A	7/06/95	0.00	UG/L	U	GRAB	592	7.50	145.00
L00027	7440-43-9	SW-846 7131A	7/08/95	0.00	UG/L	U	COMP			
L00029	7440-43-9	SW-846 7131A	7/09/95	0.00	UG/L	U	GRAB	249	7.50	157.10
L00031	7440-43-9	SW-846 7131A	7/12/95	0.00	UG/L	U	GRAB	256	7.49	156.00
L00032	7440-43-9	SW-846 7131A	7/14/95	0.00	UG/L	U	COMP			
L00034	7440-43-9	SW-846 7131A	7/15/95	.60	UG/L	U	GRAB	262	7.59	150.30
L00036	7440-43-9	SW-846 7131A	7/18/95	0.00	UG/L	U	GRAB	232	7.40	155.40
L00037	7440-43-9	SW-846 7131A	7/21/95	0.00	UG/L	U	COMP			
L00039	7440-43-9	SW-846 7131A	7/21/95	0.00	UG/L	U	GRAB	482	7.25	155.50
L00041	7440-43-9	SW-846 7131A	7/24/95	0.00	UG/L	U	GRAB	244	7.62	132.40
L00042	7440-43-9	SW-846 7131A	7/27/95	0.00	UG/L	U	COMP			
L00044	7440-43-9	SW-846 7131A	7/27/95	0.00	UG/L	U	GRAB	360	7.65	104.50
L00046	7440-43-9	SW-846 7131A	7/28/95	0.00	UG/L	U	GRAB	235	7.64	112.20
L00048	7440-43-9	SW-846 7131A	8/01/95	0.00	UG/L	U	GRAB	421	7.65	120.70
L00050	7440-43-9	SW-846 7131A	8/04/95	0.00	UG/L	U	GRAB	312	7.73	148.50
L00051	7440-43-9	SW-846 7131A	8/05/95	0.00	UG/L	U	COMP			
L00053	7440-43-9	SW-846 7131A	8/07/95	0.00	UG/L	U	GRAB	379	7.71	148.70
L00055	7440-43-9	SW-846 7131A	8/10/95	0.00	UG/L	U	GRAB	374	7.71	143.67
L00056	7440-43-9	SW-846 7131A	8/11/95	0.00	UG/L	U	COMP			
L00058	7440-43-9	SW-846 7131A	8/13/95	0.00	UG/L	U	GRAB	400	7.77	153.45
L00060	7440-43-9	SW-846 7131A	8/16/95	0.00	UG/L	U	GRAB	423	7.78	129.90
L00064	7440-43-9	SW-846 7131A	8/19/95	0.00	UG/L	U	COMP			

WHC-SD-LEF-EV-001, λ_{LW} , 0

Sample No	Con ID	Method	Sample Date	Results Units	Lab q1fr	Val q1fr	Grab/ Comp	Flow	pH	Cond
CADMIUM										
L00066	7440-43-9	SW-846 7131A	8/19/95	0.00	UG/L		GRAB	311	7.71	139.00
L00068	7440-43-9	SW-846 7131A	8/22/95	0.00	UG/L		GRAB	565	7.66	129.80
L00069	7440-43-9	SW-846 7131A	8/26/95	0.00	UG/L		COMP			
L00071	7440-43-9	SW-846 7131A	8/25/95	0.00	UG/L		GRAB	253	7.60	134.00
L00072	7440-43-9	SW-846 7131A	8/28/95	0.00	UG/L		GRAB	393	7.63	137.00
L00075	7440-43-9	SW-846 7131A	8/31/95	0.00	UG/L		GRAB	376	7.61	141.40
L00156	7440-43-9	SW-846 7131A	9/03/95	0.00	UG/L		GRAB	270	7.64	172.40
L00157	7440-43-9	SW-846 7131A	9/03/95	0.00	UG/L		COMP			
L00159	7440-43-9	SW-846 7131A	9/05/95	0.00	UG/L		GRAB	334	7.59	101.80
L00161	7440-43-9	SW-846 7131A	9/08/95	0.00	UG/L		GRAB	263	7.64	125.10
L00162	7440-43-9	SW-846 7131A	9/11/95	0.00	UG/L		COMP			
L00164	7440-43-9	SW-846 7131A	9/11/95	0.00	UG/L		GRAB	443	7.87	142.90
L00166	7440-43-9	SW-846 7131A	9/14/95	0.00	UG/L		GRAB	339	7.69	128.00
L00167	7440-43-9	SW-846 7131A	9/17/95	0.00	UG/L		COMP			
L00169	7440-43-9	SW-846 7131A	9/17/95	0.00	UG/L		GRAB	485	7.70	116.60
L00171	7440-43-9	SW-846 7131A	9/20/95	0.00	UG/L		GRAB	456	7.64	110.70
L00173	7440-43-9	SW-846 7131A	9/24/95	0.00	UG/L		GRAB	306	7.63	132.00
L00174	7440-43-9	SW-846 7131A	9/24/95	0.00	UG/L		COMP			
L00176	7440-43-9	SW-846 7131A	9/26/95	0.00	UG/L		GRAB	529	7.60	113.00
L00178	7440-43-9	SW-846 7131A	9/29/95	0.00	UG/L		GRAB	287	7.55	111.90
L00179	7440-43-9	SW-846 7131A	10/01/95	0.00	UG/L		COMP			
L00183	7440-43-9	SW-846 7131A	9/12/95	0.00	UG/L		GRAB	445	7.94	121.20
L00184	7440-43-9	SW-846 7131A	9/11/95	0.00	UG/L		COMP			
L00185	7440-43-9	SW-846 7131A	10/09/95	0.00	UG/L		GRAB			
L00186	7440-43-9	SW-846 7131A	10/09/95	0.00	UG/L		COMP			
L00188	7440-43-9	SW-846 7131A	10/16/95	0.00	UG/L		GRAB			
L00189	7440-43-9	SW-846 7131A	10/16/95	0.00	UG/L		COMP			
L00191	7440-43-9	SW-846 7131A	10/23/95	0.00	UG/L		GRAB	434	7.65	99.60
L00192	7440-43-9	SW-846 7131A	10/23/95	0.00	UG/L		COMP			
L00194	7440-43-9	SW-846 7131A	10/30/95	0.00	UG/L		GRAB	454	7.39	106.20
							COMP			

Sample No	Con ID	Method	Sample Date	Results	Units	Lab qfr	Grab/ Comp	Flow	pH	Cond
CADMUM										
L00195	7440-43-9	SW-846	7131A	10/30/95	0.00	UG/L	GRAB	450	8.30	132.25
L00215	7440-43-9	SW-846	7131A	11/07/95	0.00	UG/L	GRAB	321	7.49	1151.00
L00217	7440-43-9	SW-846	7131A	11/07/95	0.00	UG/L	COMP			
L00218	7440-43-9	SW-846	7131A	11/14/95	0.00	UG/L	GRAB	271	7.54	1200.00
L00220	7440-43-9	SW-846	7131A	11/14/95	0.00	UG/L	COMP			
L00221	7440-43-9	SW-846	7131A	11/21/95	0.00	UG/L	GRAB	341	7.46	135.40
L00223	7440-43-9	SW-846	7131A	11/21/95	0.00	UG/L	COMP			
L00224	7440-43-9	SW-846	7131A	11/28/95	0.00	UG/L	GRAB	453	7.58	150.10
L00226	7440-43-9	SW-846	7131A	11/28/95	0.00	UG/L	COMP			
L00241	7440-43-9	SW-846	7131A	12/03/95	0.00	UG/L	GRAB	378	7.56	148.80
L00242	7440-43-9	SW-846	7131A	12/06/95	0.00	UG/L	COMP			
L00244	7440-43-9	SW-846	7131A	12/06/95	0.00	UG/L	GRAB	348	7.60	823.00
L00246	7440-43-9	SW-846	7131A	12/09/95	0.00	UG/L	GRAB	313	7.41	122.00
L00248	7440-43-9	SW-846	7131A	12/12/95	0.00	UG/L	GRAB	260	7.53	135.80
L00249	7440-43-9	SW-846	7131A	12/12/95	0.00	UG/L	COMP			
L00251	7440-43-9	SW-846	7131A	12/15/95	0.00	UG/L	GRAB	404	7.60	142.70
L00253	7440-43-9	SW-846	7131A	12/18/95	0.00	UG/L	GRAB	451	7.50	140.00
L00254	7440-43-9	SW-846	7131A	12/20/95	0.00	UG/L	COMP			
L00256	7440-43-9	SW-846	7131A	12/21/95	0.00	UG/L	GRAB	408	7.36	112.00
L00258	7440-43-9	SW-846	7131A	12/24/95	0.00	UG/L	GRAB	316	7.50	148.00
L00259	7440-43-9	SW-846	7131A	12/27/95	0.00	UG/L	COMP			
L00261	7440-43-9	SW-846	7131A	12/27/95	0.00	UG/L	GRAB	480	7.37	112.90
L00263	7440-43-9	SW-846	7131A	12/30/95	0.00	UG/L	GRAB	416	7.48	150.90
L00297	7440-43-9	SW-846	7131A	1/01/96	0.00	UG/L	GRAB	559	7.45	150.00
L00299	7440-43-9	SW-846	7131A	1/04/96	0.00	UG/L	GRAB	303	7.53	151.70
L00301	7440-43-9	SW-846	7131A	1/04/96	0.00	UG/L	COMP			
L00302	7440-43-9	SW-846	7131A	1/07/96	0.00	UG/L	GRAB	353	7.44	145.00
L00306	7440-43-9	SW-846	7131A	1/10/96	0.00	UG/L	GRAB	512	7.37	49.30
L00308	7440-43-9	SW-846	7131A	1/10/96	0.00	UG/L	COMP			
L00309	7440-43-9	SW-846	7131A	1/13/96	0.00	UG/L	GRAB	296	7.49	142.20

WHC-SD-LIEF-EV-001, Rev 0

Sample No	Con ID	Method	Sample Date Results Units			Lab q1fr	Val q1fr	Grab/ Comp	Flow	pH	Cond
			q1fr	Units	q1fr						
CADMIUM											
L00311	7440-43-9	SW-846 7131A	1/16/96	0.00	UG/L	GRAB	283	7.52	138.60		
L00313	7440-43-9	SW-846 7131A	1/18/96	0.00	UG/L	COMP					
L00314	7440-43-9	SW-846 7131A	1/19/96	0.00	UG/L	GRAB	305	7.46	142.70		
L00316	7440-43-9	SW-846 7131A	1/22/96	0.00	UG/L	GRAB	482	7.50	141.00		
L00318	7440-43-9	SW-846 7131A	1/25/96	0.00	UG/L	GRAB	393	7.43	143.00		
L00320	7440-43-9	SW-846 7131A	1/25/96	0.00	UG/L	COMP					
L00321	7440-43-9	SW-846 7131A	1/28/96	0.00	UG/L	GRAB	318	7.40	140.90		
L00323	7440-43-9	SW-846 7131A	1/31/96	0.00	UG/L	GRAB	495	7.30	73.00		
L00325	7440-43-9	SW-846 7131A	1/31/96	0.00	UG/L	COMP					
L00347	7440-43-9	SW-846 7131A	2/03/96	0.00	UG/L	GRAB	492	7.53	340.00		
L00349	7440-43-9	SW-846 7131A	2/06/96	0.00	UG/L	GRAB	869	7.14	333.00		
L00351	7440-43-9	SW-846 7131A	2/09/96	0.00	UG/L	GRAB	288	7.64	152.50		
L00353	7440-43-9	SW-846 7131A	2/09/96	0.00	UG/L	COMP					
L00354	7440-43-9	SW-846 7131A	2/12/96	0.00	UG/L	GRAB	275	7.53	147.00		
L00356	7440-43-9	SW-846 7131A	2/15/96	0.00	UG/L	COMP					
L00358	7440-43-9	SW-846 7131A	2/15/96	0.00	UG/L	GRAB	275	7.16	246.10		
L00359	7440-43-9	SW-846 7131A	2/18/96	0.00	UG/L	GRAB	240	7.49	144.90		
L00361	7440-43-9	SW-846 7131A	2/21/96	0.00	UG/L	GRAB	310	7.41	151.30		
L00363	7440-43-9	SW-846 7131A	2/23/96	0.00	UG/L	COMP					
L00364	7440-43-9	SW-846 7131A	2/24/96	0.00	UG/L	GRAB	396	7.50	148.00		
L00366	7440-43-9	SW-846 7131A	2/27/96	0.00	UG/L	GRAB	341	7.20	137.00		
L00368	7440-43-9	SW-846 7131A	3/01/96	0.00	UG/L	GRAB	339	7.35	574.00		
L00370	7440-43-9	SW-846 7131A	3/01/96	0.00	UG/L	COMP					
L00396	7440-43-9	SW-846 7131A	3/09/96	0.00	UG/L	GRAB	303	7.45	224.59		
L00400	7440-43-9	SW-846 7131A	3/09/96	0.00	UG/L	COMP					
L00401	7440-43-9	SW-846 7131A	3/16/96	0.00	UG/L	GRAB	379	7.57	170.90		
L00403	7440-43-9	SW-846 7131A	3/16/96	0.00	UG/L	COMP					
L00404	7440-43-9	SW-846 7131A	3/24/96	0.00	UG/L	GRAB	348	7.70	144.00		
L00406	7440-43-9	SW-846 7131A	3/24/96	0.00	UG/L	COMP					
L00407	7440-43-9	SW-846 7131A	3/30/96	0.00	UG/L	GRAB	366	7.49	159.90		

WHC-SD-LEF-EV-001, Rev D

Sample No	Con ID	Method	Sample Date	Results Units	Lab qfr	Val qfr	Grab/ Comp	Flow	pH	Cond
CADMIUM										
L00409	7440-43-9	SW-846 7131A	3/30/96	0.00	UG/L	U	COMP	290	7.05	268.00
L00443	7440-43-9	SW-846 7131A	4/07/96	0.00	UG/L	U	GRAB	290	7.05	268.00
L00445	7440-43-9	SW-846 7131A	4/07/96	0.00	UG/L	U	COMP	297	7.19	156.10
L00446	7440-43-9	SW-846 7131A	4/14/96	0.00	UG/L	U	GRAB	297	7.19	156.10
L00448	7440-43-9	SW-846 7131A	4/14/96	0.00	UG/L	U	COMP	297	7.19	156.10
L00449	7440-43-9	EPA-600 200.8	4/21/96	.50	UG/L	U	GRAB	572	7.60	158.00
L00451	7440-43-9	EPA-600 200.8	4/21/96	.80	UG/L	U	COMP	572	7.60	158.00
L00452	7440-43-9	EPA-600 200.8	4/28/96	.50	UG/L	U	GRAB	357	7.48	162.80
L00454	7440-43-9	EPA-600 200.8	4/28/96	.50	UG/L	U	COMP	357	7.48	162.80
LITEOP00001	7440-43-9	SW-846 7131A	5/04/95	.01	UG/L	J	COMP			
LITEOP00002	7440-43-9	SW-846 7131A	5/11/95	.03	UG/L	J	COMP			
LITEOP00003	7440-43-9	SW-846 7131A	5/15/95	.04	UG/L	J	COMP			
LITEOP00004	7440-43-9	SW-846 7131A	5/19/95	.04	UG/L	J	COMP			
LITEOP00005	7440-43-9	SW-846 7131A	5/08/95	0.00	UG/L	J	COMP			
LITEOP00006	7440-43-9	SW-846 7131A	5/22/95	.03	UG/L	J	COMP			
LITEOP00007	7440-43-9	SW-846 7131A	5/25/95	.03	UG/L	J	COMP			
LITEOP00008	7440-43-9	SW-846 7131A	5/29/95	.04	UG/L	J	COMP			
CARBON TETRACHLORIDE										
L00010	56-23-5	SW-846 8260A	6/08/95	0.00	UG/L	U	GRAB	569	7.45	140.00
L00012	56-23-5	SW-846 8260A	6/15/95	0.00	UG/L	U	GRAB	630	7.35	25.65
L00014	56-23-5	SW-846 8260A	6/22/95	0.00	UG/L	U	GRAB	466	7.56	142.90
L00016	56-23-5	SW-846 8260A	6/29/95	0.00	UG/L	U	GRAB	396	7.55	141.00
L00024	56-23-5	SW-846 8260A	7/03/95	0.00	UG/L	U	GRAB	458	7.49	144.20
L00026	56-23-5	SW-846 8260A	7/08/95	0.00	UG/L	U	GRAB	592	7.50	145.00
L00029	56-23-5	SW-846 8260A	7/09/95	0.00	UG/L	U	GRAB	249	7.50	157.10
L00031	56-23-5	SW-846 8260A	7/12/95	0.00	UG/L	U	GRAB	256	7.49	156.00
L00034	56-23-5	SW-846 8260A	7/15/95	0.00	UG/L	U	GRAB	262	7.59	150.30
L00036	56-23-5	SW-846 8260A	7/18/95	0.00	UG/L	U	GRAB	232	7.40	155.40

WHC-SD-LEF-EV-001, ρ_{eff} / ρ

Sample No	Con ID	Method	Sample Date	Results Units	Lab q1fr	Val q1fr	Grab/ Comp	Flow	pH	Cond
CARBON TETRACHLORIDE										
L00039	56-23-5	SW-846 8260A	7/21/95	0.00	UG/L	UG/L	GRAB	482	7.25	155.50
L00041	56-23-5	SW-846 8260A	7/24/95	0.00	UG/L	UG/L	GRAB	244	7.62	132.40
L00044	56-23-5	SW-846 8260A	7/27/95	0.00	UG/L	UG/L	GRAB	360	7.65	104.50
L00046	56-23-5	SW-846 8260A	7/28/95	0.00	UG/L	UG/L	GRAB	235	7.64	112.20
L00048	56-23-5	SW-846 8260A	8/01/95	0.00	UG/L	UG/L	GRAB	421	7.65	120.70
L00050	56-23-5	SW-846 8260A	8/04/95	0.00	UG/L	UG/L	GRAB	312	7.73	148.50
L00053	56-23-5	SW-846 8260A	8/07/95	0.00	UG/L	UG/L	GRAB	379	7.71	148.70
L00055	56-23-5	SW-846 8260A	8/10/95	0.00	UG/L	UG/L	GRAB	374	7.71	143.67
L00058	56-23-5	SW-846 8260A	8/13/95	0.00	UG/L	UG/L	GRAB	400	7.77	153.45
L00060	56-23-5	SW-846 8260A	8/16/95	0.00	UG/L	UG/L	GRAB	423	7.78	129.90
L00066	56-23-5	SW-846 8260A	8/19/95	0.00	UG/L	UG/L	GRAB	311	7.71	139.00
L00068	56-23-5	SW-846 8260A	8/22/95	0.00	UG/L	UG/L	GRAB	565	7.66	129.80
L00071	56-23-5	SW-846 8260A	8/25/95	0.00	UG/L	UG/L	GRAB	253	7.60	134.00
L00072	56-23-5	SW-846 8260A	8/28/95	0.00	UG/L	UG/L	GRAB	393	7.63	137.00
L00075	56-23-5	SW-846 8260A	8/31/95	0.00	UG/L	UG/L	GRAB	376	7.61	141.40
L00156	56-23-5	SW-846 8260A	9/03/95	0.00	UG/L	UG/L	GRAB	270	7.64	172.40
L00159	56-23-5	SW-846 8260A	9/05/95	0.00	UG/L	UG/L	GRAB	334	7.59	101.80
L00161	56-23-5	SW-846 8260A	9/08/95	0.00	UG/L	UG/L	GRAB	263	7.64	125.10
L00164	56-23-5	SW-846 8260A	9/11/95	0.00	UG/L	UG/L	GRAB	443	7.87	142.90
L00166	56-23-5	SW-846 8260A	9/14/95	0.00	UG/L	UG/L	GRAB	339	7.69	128.00
L00169	56-23-5	SW-846 8260A	9/17/95	0.00	UG/L	UG/L	GRAB	485	7.70	116.60
L00171	56-23-5	SW-846 8260A	9/20/95	0.00	UG/L	UG/L	GRAB	456	7.64	110.70
L00173	56-23-5	SW-846 8260A	9/24/95	0.00	UG/L	UG/L	GRAB	306	7.63	132.00
L00176	56-23-5	SW-846 8260A	9/26/95	0.00	UG/L	UG/L	GRAB	529	7.60	113.00
L00178	56-23-5	SW-846 8260A	9/29/95	0.00	UG/L	UG/L	GRAB	287	7.55	111.90
L00183	56-23-5	SW-846 8260A	9/12/95	0.00	UG/L	UG/L	GRAB	445	7.94	121.20
L00186	56-23-5	SW-846 8260A	10/09/95	0.00	UG/L	UG/L	GRAB	436	7.65	91.20
L00189	56-23-5	SW-846 8260A	10/16/95	0.00	UG/L	UG/L	GRAB	434	7.65	99.60
L00192	56-23-5	SW-846 8260A	10/23/95	0.00	UG/L	UG/L	GRAB	454	7.39	106.20
L00195	56-23-5	SW-846 8260A	10/30/95	0.00	UG/L	UG/L	GRAB	450	8.30	132.25

WHC-SD-LEF-EV-001, ρ_{soil}

Sample No	Con ID	Method	Sample	Date	Results	Units	Lab	Val	Grab/ Comp	Flow	pH	Cond		
CARBON TETRACHLORIDE						qfr								
U00215	56-23-5	SW-846 8260A	11/07/95	0.00	UG/L		GRAB	321	7.49	1151.00				
U00218	56-23-5	SW-846 8260A	11/14/95	0.00	UG/L		GRAB	271	7.54	1200.00				
U00221	56-23-5	SW-846 8260A	11/21/95	0.00	UG/L		GRAB	341	7.46	135.40				
U00224	56-23-5	SW-846 8260A	11/28/95	0.00	UG/L		GRAB	453	7.58	150.10				
U00241	56-23-5	SW-846 8260A	12/03/95	0.00	UG/L		GRAB	378	7.56	148.80				
U00244	56-23-5	SW-846 8260A	12/06/95	0.00	UG/L		GRAB	348	7.60	823.00				
U00246	56-23-5	SW-846 8260A	12/09/95	0.00	UG/L		GRAB	313	7.41	122.00				
U00248	56-23-5	SW-846 8260A	12/12/95	0.00	UG/L		GRAB	260	7.53	135.80				
U00251	56-23-5	SW-846 8260A	12/15/95	0.00	UG/L		GRAB	404	7.60	142.70				
U00253	56-23-5	SW-846 8260A	12/18/95	0.00	UG/L		GRAB	451	7.50	140.00				
U00256	56-23-5	SW-846 8260A	12/21/95	0.00	UG/L		GRAB	408	7.36	112.00				
U00258	56-23-5	SW-846 8260A	12/24/95	0.00	UG/L		GRAB	316	7.50	148.00				
U00261	56-23-5	SW-846 8260A	12/27/95	0.00	UG/L		GRAB	480	7.37	112.90				
U00263	56-23-5	SW-846 8260A	12/30/95	0.00	UG/L		GRAB	416	7.48	150.90				
U00297	56-23-5	SW-846 8260A	1/01/96	0.00	UG/L		GRAB	559	7.45	150.00				
U00299	56-23-5	SW-846 8260A	1/04/96	0.00	UG/L		GRAB	303	7.53	151.70				
U00302	56-23-5	SW-846 8260A	1/07/96	0.00	UG/L		GRAB	353	7.44	145.00				
U00306	56-23-5	SW-846 8260A	1/10/96	0.00	UG/L		GRAB	512	7.37	49.30				
U00309	56-23-5	SW-846 8260A	1/13/96	0.00	UG/L		GRAB	296	7.49	142.20				
U00311	56-23-5	SW-846 8260A	1/16/96	0.00	UG/L		GRAB	283	7.52	138.60				
U00314	56-23-5	SW-846 8260A	1/19/96	0.00	UG/L		GRAB	305	7.46	142.70				
U00316	56-23-5	SW-846 8260A	1/22/96	0.00	UG/L		GRAB	482	7.50	141.00				
U00318	56-23-5	SW-846 8260A	1/25/96	0.00	UG/L		GRAB	393	7.43	143.00				
U00323	56-23-5	SW-846 8260A	1/31/96	0.00	UG/L		GRAB	495	7.30	73.00				
U00347	56-23-5	SW-846 8260A	2/03/96	0.00	UG/L		GRAB	492	7.53	340.00				
U00349	56-23-5	SW-846 8260A	2/06/96	0.00	UG/L		GRAB	869	7.14	333.00				
U00351	56-23-5	SW-846 8260A	2/09/96	0.00	UG/L		GRAB	288	7.64	152.50				
U00354	56-23-5	SW-846 8260A	2/12/96	0.00	UG/L		GRAB	275	7.53	147.00				
U00356	56-23-5	SW-846 8260A	2/15/96	0.00	UG/L		GRAB	275	7.16	246.10				
U00359	56-23-5	SW-846 8260A	2/18/96	0.00	UG/L		GRAB	240	7.49	144.90				

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Sample No	Con ID	Method	Sample Date	Results Units	Lab q1fr	Val q1fr	Grab/ Comp	Flow pH	Cond
CARBON TETRACHLORIDE									
L00361	56-23-5	SW-846 8260A	2/21/96	0.00	UG/L		GRAB	310	7.41
L00364	56-23-5	SW-846 8260A	2/24/96	0.00	UG/L		GRAB	396	7.50
L00366	56-23-5	SW-846 8260A	2/27/96	0.00	UG/L		GRAB	341	7.20
L00368	56-23-5	SW-846 8260A	3/01/96	0.00	UG/L		GRAB	339	7.35
L00396	56-23-5	SW-846 8260A	3/09/96	0.00	UG/L		GRAB	303	7.45
L00401	56-23-5	SW-846 8260A	3/16/96	0.00	UG/L		GRAB	379	7.57
L00404	56-23-5	SW-846 8260A	3/24/96	0.00	UG/L		GRAB	348	7.70
L00407	56-23-5	SW-846 8260A	3/30/96	0.00	UG/L		GRAB	366	7.49
L00443	56-23-5	SW-846 8260A	4/07/96	0.00	UG/L		GRAB	290	7.05
L00446	56-23-5	SW-846 8260A	4/14/96	0.00	UG/L		GRAB	297	7.19
L00449	56-23-5	SW-846 8260A	4/21/96	0.00	UG/L		GRAB	572	7.60
L00452	56-23-5	SW-846 8260A	4/28/96	0.00	UG/L		GRAB	357	7.48
LTEOP00001	56-23-5	SW-846 8260A	5/04/95	0.00	UG/L		GRAB	124	7.88
LTEOP00002	56-23-5	SW-846 8260A	5/11/95	0.00	UG/L		GRAB	325	7.55
LTEOP00003	56-23-5	SW-846 8260A	5/15/95	0.00	UG/L		GRAB	334	7.65
LTEOP00004	56-23-5	SW-846 8260A	5/19/95	0.00	UG/L		GRAB	343	7.86
LTEOP00005	56-23-5	SW-846 8260A	5/08/95	0.00	UG/L		GRAB	135	7.78
LTEOP00006	56-23-5	SW-846 8260A	5/22/95	0.00	UG/L		GRAB	490	7.90
LTEOP00007	56-23-5	SW-846 8260A	5/25/95	0.00	UG/L		GRAB	341	7.92
LTEOP00008	56-23-5	SW-846 8260A	5/29/95	0.00	UG/L		GRAB	353	7.77
CERTUM/PRASEODYMIUM-144									
L00194	CE/PR-144	GAMMA SCAN	10/30/95	95.00	PCI/L	U	COMP	450	8.30
L00195	CE/PR-144	GAMMA SCAN	10/30/95	97.00	PCI/L	U	GRAB	321	7.49
L00215	CE/PR-144	GAMMA SCAN	11/07/95	95.00	PCI/L	U	COMP		1151.00
L00217	CE/PR-144	GAMMA SCAN	11/07/95	100.00	PCI/L	U	GRAB	271	7.54
L00218	CE/PR-144	GAMMA SCAN	11/14/95	59.00	PCI/L	U	COMP		1200.00
L00220	CE/PR-144	GAMMA SCAN	11/14/95	100.00	PCI/L	U	GRAB	341	7.46
L00221	CE/PR-144	GAMMA SCAN	11/21/95	91.00	PCI/L	U	GRAB		135.40

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Sample No	Con ID	Method	Sample Date	Results	Units	Lab qfr	Val qfr	Grab/ Comp	Flow	pH	Cond
CERIUM/PRASEODYMIUM-144											
L00223	CE/PR-144	GAMMA SCAN	11/21/95	100.00	PCU/L	U	COMP	GRAB	453	7.58	150.10
L00224	CE/PR-144	GAMMA SCAN	11/28/95	95.00	PCU/L	U	COMP	GRAB	378	7.56	148.80
L00226	CE/PR-144	GAMMA SCAN	11/28/95	96.00	PCU/L	U	COMP	GRAB	348	7.60	823.00
L00241	CE/PR-144	GAMMA SCAN	12/03/95	94.00	PCU/L	U	COMP	GRAB	313	7.41	122.00
L00242	CE/PR-144	GAMMA SCAN	12/06/95	110.00	PCU/L	U	COMP	GRAB	260	7.33	135.80
L00244	CE/PR-144	GAMMA SCAN	12/06/95	100.00	PCU/L	U	COMP	GRAB	408	7.36	112.00
L00246	CE/PR-144	GAMMA SCAN	12/09/95	96.00	PCU/L	U	COMP	GRAB	316	7.50	140.00
L00248	CE/PR-144	GAMMA SCAN	12/12/95	98.00	PCU/L	U	COMP	GRAB	404	7.60	142.70
L00249	CE/PR-144	GAMMA SCAN	12/12/95	95.00	PCU/L	U	COMP	GRAB	451	7.50	140.00
L00251	CE/PR-144	GAMMA SCAN	12/15/95	91.00	PCU/L	U	COMP	GRAB	408	7.36	112.00
L00253	CE/PR-144	GAMMA SCAN	12/18/95	94.00	PCU/L	U	COMP	GRAB	316	7.50	148.00
L00254	CE/PR-144	GAMMA SCAN	12/20/95	100.00	PCU/L	U	COMP	GRAB	303	7.53	151.70
L00256	CE/PR-144	GAMMA SCAN	12/21/95	120.00	PCU/L	U	COMP	GRAB	353	7.44	145.00
L00258	CE/PR-144	GAMMA SCAN	12/24/95	100.00	PCU/L	U	COMP	GRAB	416	7.48	150.90
L00259	CE/PR-144	GAMMA SCAN	12/27/95	100.00	PCU/L	U	COMP	GRAB	559	7.45	150.00
L00261	CE/PR-144	GAMMA SCAN	12/27/95	100.00	PCU/L	U	COMP	GRAB	296	7.49	142.20
L00263	CE/PR-144	GAMMA SCAN	12/30/95	92.00	PCU/L	U	COMP	GRAB	283	7.52	138.60
L00297	CE/PR-144	GAMMA SCAN	1/01/96	230.00	PCU/L	U	COMP	GRAB	305	7.46	142.70
L00299	CE/PR-144	GAMMA SCAN	1/04/96	100.00	PCU/L	U	COMP	GRAB	482	7.50	141.00
L00301	CE/PR-144	GAMMA SCAN	1/04/96	99.00	PCU/L	U	COMP	GRAB	393	7.43	143.00
L00302	CE/PR-144	GAMMA SCAN	1/07/96	93.00	PCU/L	U	COMP	GRAB	512	7.37	49.30
L00306	CE/PR-144	GAMMA SCAN	1/10/96	100.00	PCU/L	U	COMP	GRAB	296	7.49	142.20
L00308	CE/PR-144	GAMMA SCAN	1/10/96	100.00	PCU/L	U	COMP	GRAB	305	7.46	142.70
L00309	CE/PR-144	GAMMA SCAN	1/13/96	96.00	PCU/L	U	COMP	GRAB	482	7.50	141.00
L00311	CE/PR-144	GAMMA SCAN	1/16/96	94.00	PCU/L	U	COMP	GRAB	393	7.43	143.00
L00313	CE/PR-144	GAMMA SCAN	1/18/96	92.00	PCU/L	U	COMP	GRAB	283	7.52	138.60
L00314	CE/PR-144	GAMMA SCAN	1/19/96	98.00	PCU/L	U	COMP	GRAB	305	7.46	142.70
L00316	CE/PR-144	GAMMA SCAN	1/22/96	93.00	PCU/L	U	COMP	GRAB	482	7.50	141.00
L00318	CE/PR-144	GAMMA SCAN	1/25/96	94.00	PCU/L	U	COMP	GRAB	393	7.43	143.00
L00320	CE/PR-144	GAMMA SCAN	1/25/96	97.00	PCU/L	U	COMP	GRAB	283	7.52	138.60

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Sample No	Con ID	Method	Sample Date	Results Units	Lab qfr	Val qfr	Grab/ Comp	Flow	pH	Cond
CERTIUM/PRASEODYMIUM-144										
L00321	CE/PR-144	GAMMA SCAN	1/28/96	110.00	PCI/L	U	GRAB	318	7.40	140.90
L00323	CE/PR-144	GAMMA SCAN	1/31/96	110.00	PCI/L	U	GRAB	495	7.30	73.00
L00325	CE/PR-144	GAMMA SCAN	1/31/96	110.00	PCI/L	U	COMP			
L00347	CE/PR-144	GAMMA SCAN	2/03/96	110.00	PCI/L	U	GRAB	492	7.53	340.00
L00349	CE/PR-144	GAMMA SCAN	2/06/96	110.00	PCI/L	U	GRAB	869	7.14	333.00
L00351	CE/PR-144	GAMMA SCAN	2/09/96	110.00	PCI/L	U	GRAB	288	7.64	152.50
L00353	CE/PR-144	GAMMA SCAN	2/09/96	110.00	PCI/L	U	COMP			
L00354	CE/PR-144	GAMMA SCAN	2/12/96	110.00	PCI/L	U	GRAB	275	7.53	147.00
L00356	CE/PR-144	GAMMA SCAN	2/15/96	110.00	PCI/L	U	GRAB	275	7.16	246.10
L00358	CE/PR-144	GAMMA SCAN	2/18/96	110.00	PCI/L	U	COMP			
L00359	CE/PR-144	GAMMA SCAN	2/21/96	110.00	PCI/L	U	GRAB	240	7.49	144.90
L00361	CE/PR-144	GAMMA SCAN	2/23/96	110.00	PCI/L	U	GRAB	310	7.41	151.30
L00363	CE/PR-144	GAMMA SCAN	2/24/96	90.00	PCI/L	U	COMP			
L00364	CE/PR-144	GAMMA SCAN	2/27/96	100.00	PCI/L	U	GRAB	396	7.50	148.00
L00366	CE/PR-144	GAMMA SCAN	3/01/96	100.00	PCI/L	U	GRAB	341	7.20	137.00
L00368	CE/PR-144	GAMMA SCAN	3/01/96	110.00	PCI/L	U	GRAB	339	7.35	574.00
L00370	CE/PR-144	GAMMA SCAN	3/09/96	100.00	PCI/L	U	COMP			
L00396	CE/PR-144	GAMMA SCAN	3/09/96	100.00	PCI/L	U	GRAB	303	7.45	224.59
L00400	CE/PR-144	GAMMA SCAN	3/09/96	100.00	PCI/L	U	COMP			
L00401	CE/PR-144	GAMMA SCAN	3/16/96	100.00	PCI/L	U	GRAB	379	7.57	170.90
L00403	CE/PR-144	GAMMA SCAN	3/16/96	100.00	PCI/L	U	COMP			
L00404	CE/PR-144	GAMMA SCAN	3/24/96	100.00	PCI/L	U	GRAB	348	7.70	144.00
L00406	CE/PR-144	GAMMA SCAN	3/24/96	100.00	PCI/L	U	COMP			
L00407	CE/PR-144	GAMMA SCAN	3/30/96	100.00	PCI/L	U	GRAB	366	7.49	159.90
L00409	CE/PR-144	GAMMA SCAN	3/30/96	100.00	PCI/L	U	COMP			
L00443	CE/PR-144	GAMMA SCAN	4/07/96	100.00	PCI/L	U	GRAB	290	7.05	268.00
L00445	CE/PR-144	GAMMA SCAN	4/07/96	110.00	PCI/L	U	COMP			
L00446	CE/PR-144	GAMMA SCAN	4/14/96	110.00	PCI/L	U	GRAB	297	7.19	156.10
L00448	CE/PR-144	GAMMA SCAN	4/14/96	110.00	PCI/L	U	COMP			
L00449	CE/PR-144	GAMMA SCAN	4/21/96	100.00	PCI/L	U	GRAB	572	7.60	158.00

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Sample No	Con ID	Method	Sample Date	Results Units	Lab qfr	Grab/ Comp	Flow	pH	Cond
CERIUM/PRASEODYMIUM-144									
L00451	CE/PR-144	GAMMA SCAN	4/21/96	100.00	PC1/L	COMP	357	7.48	162.80
L00452	CE/PR-144	GAMMA SCAN	4/28/96	100.00	PC1/L	GRAB	321	7.49	1151.00
L00454	CE/PR-144	GAMMA SCAN	4/28/96	110.00	PC1/L	COMP	357	7.48	162.80
CERIUM-134									
L00194	13967-70-9	GAMMA SCAN	10/30/95	7.60	PC1/L	COMP	450	8.30	132.25
L00195	13967-70-9	GAMMA SCAN	10/30/95	6.80	PC1/L	GRAB	321	7.49	1151.00
L00215	13967-70-9	GAMMA SCAN	11/07/95	10.00	PC1/L	COMP	271	7.54	1200.00
L00217	13967-70-9	GAMMA SCAN	11/07/95	10.00	PC1/L	GRAB	341	7.46	135.40
L00218	13967-70-9	GAMMA SCAN	11/14/95	5.00	PC1/L	COMP	271	7.54	1200.00
L00220	13967-70-9	GAMMA SCAN	11/14/95	7.00	PC1/L	GRAB	341	7.46	135.40
L00221	13967-70-9	GAMMA SCAN	11/21/95	7.00	PC1/L	COMP	271	7.54	1200.00
L00223	13967-70-9	GAMMA SCAN	11/21/95	8.00	PC1/L	GRAB	453	7.58	150.10
L00224	13967-70-9	GAMMA SCAN	11/28/95	7.00	PC1/L	COMP	271	7.54	1200.00
L00226	13967-70-9	GAMMA SCAN	11/28/95	8.00	PC1/L	GRAB	378	7.56	148.80
L00241	13967-70-9	GAMMA SCAN	12/03/95	7.00	PC1/L	COMP	260	7.53	135.80
L00242	13967-70-9	GAMMA SCAN	12/06/95	8.80	PC1/L	GRAB	348	7.60	823.00
L00244	13967-70-9	GAMMA SCAN	12/06/95	7.60	PC1/L	COMP	313	7.41	122.00
L00246	13967-70-9	GAMMA SCAN	12/09/95	7.30	PC1/L	GRAB	313	7.41	122.00
L00248	13967-70-9	GAMMA SCAN	12/12/95	7.30	PC1/L	COMP	316	7.50	148.00
L00249	13967-70-9	GAMMA SCAN	12/12/95	7.50	PC1/L	GRAB	404	7.60	142.70
L00251	13967-70-9	GAMMA SCAN	12/15/95	7.30	PC1/L	COMP	316	7.50	148.00
L00253	13967-70-9	GAMMA SCAN	12/18/95	7.00	PC1/L	GRAB	416	7.48	150.90
L00254	13967-70-9	GAMMA SCAN	12/20/95	7.20	PC1/L	COMP	408	7.36	112.00
L00256	13967-70-9	GAMMA SCAN	12/21/95	9.20	PC1/L	GRAB	316	7.50	148.00
L00258	13967-70-9	GAMMA SCAN	12/24/95	7.40	PC1/L	COMP	316	7.50	148.00
L00259	13967-70-9	GAMMA SCAN	12/27/95	7.50	PC1/L	GRAB	480	7.37	112.90
L00261	13967-70-9	GAMMA SCAN	12/27/95	6.90	PC1/L	COMP	416	7.48	150.90
L00263	13967-70-9	GAMMA SCAN	12/30/95	7.00	PC1/L	GRAB	416	7.48	150.90

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Sample No	Con ID	Method	Sample Date	Results Units	Lab qfr	Val qfr	Grab/ Comp	Flow	pH	Cond
GESUM-134										
L00297	13967-70-9	GAMMA SCAN	1/01/96	10.00	PCI/L		GRAB	559	7.45	150.00
L00299	13967-70-9	GAMMA SCAN	1/04/96	7.10	PCI/L		GRAB	303	7.53	151.70
L00301	13967-70-9	GAMMA SCAN	1/04/96	7.80	PCI/L		COMP			
L00302	13967-70-9	GAMMA SCAN	1/07/96	7.20	PCI/L		GRAB	353	7.44	145.00
L00306	13967-70-9	GAMMA SCAN	1/10/96	8.00	PCI/L		GRAB	512	7.37	49.30
L00308	13967-70-9	GAMMA SCAN	1/10/96	7.90	PCI/L		COMP			
L00309	13967-70-9	GAMMA SCAN	1/13/96	7.50	PCI/L		GRAB	296	7.49	142.20
L00311	13967-70-9	GAMMA SCAN	1/16/96	7.60	PCI/L		GRAB	283	7.52	138.60
L00313	13967-70-9	GAMMA SCAN	1/18/96	7.20	PCI/L		COMP			
L00314	13967-70-9	GAMMA SCAN	1/19/96	7.90	PCI/L		GRAB	305	7.46	142.70
L00316	13967-70-9	GAMMA SCAN	1/22/96	7.20	PCI/L		GRAB	482	7.50	141.00
L00318	13967-70-9	GAMMA SCAN	1/25/96	7.00	PCI/L		GRAB	393	7.43	143.00
L00320	13967-70-9	GAMMA SCAN	1/25/96	6.80	PCI/L		COMP			
L00321	13967-70-9	GAMMA SCAN	1/28/96	7.00	PCI/L		GRAB	318	7.40	140.90
L00323	13967-70-9	GAMMA SCAN	1/31/96	7.00	PCI/L		GRAB	495	7.30	73.00
L00325	13967-70-9	GAMMA SCAN	1/31/96	7.00	PCI/L		COMP			
L00347	13967-70-9	GAMMA SCAN	2/03/96	7.00	PCI/L		GRAB	492	7.53	340.00
L00349	13967-70-9	GAMMA SCAN	2/06/96	7.00	PCI/L		GRAB	869	7.14	333.00
L00351	13967-70-9	GAMMA SCAN	2/09/96	7.00	PCI/L		GRAB	288	7.64	152.50
L00353	13967-70-9	GAMMA SCAN	2/09/96	7.00	PCI/L		COMP			
L00354	13967-70-9	GAMMA SCAN	2/12/96	7.00	PCI/L		GRAB	275	7.53	147.00
L00356	13967-70-9	GAMMA SCAN	2/15/96	7.00	PCI/L		GRAB	275	7.16	246.10
L00358	13967-70-9	GAMMA SCAN	2/15/96	7.00	PCI/L		COMP			
L00359	13967-70-9	GAMMA SCAN	2/18/96	7.00	PCI/L		GRAB	240	7.49	144.90
L00361	13967-70-9	GAMMA SCAN	2/21/96	7.00	PCI/L		GRAB	310	7.11	151.30
L00363	13967-70-9	GAMMA SCAN	2/23/96	7.00	PCI/L		COMP			
L00364	13967-70-9	GAMMA SCAN	2/24/96	7.00	PCI/L		GRAB	396	7.50	148.00
L00366	13967-70-9	GAMMA SCAN	2/27/96	7.00	PCI/L		GRAB	341	7.20	137.00
L00368	13967-70-9	GAMMA SCAN	3/01/96	7.00	PCI/L		GRAB	339	7.35	574.00
L00370	13967-70-9	GAMMA SCAN	3/01/96	7.50	PCI/L		COMP			

Sample No	Con ID	Method	Sample Date	Results Units	Lab qifr	Grab/ Comp	Flow	pH	Cond
CESTUM-134									
U00396	13967-70-9	GAMMA SCAN	3/09/96	7.00	PCI/L	U			
U00400	13967-70-9	GAMMA SCAN	3/09/96	7.00	PCI/L	U			
U00401	13967-70-9	GAMMA SCAN	3/16/96	7.00	PCI/L	U			
U00403	13967-70-9	GAMMA SCAN	3/16/96	7.00	PCI/L	U			
U00404	13967-70-9	GAMMA SCAN	3/24/96	7.00	PCI/L	U			
U00406	13967-70-9	GAMMA SCAN	3/24/96	7.00	PCI/L	U			
U00407	13967-70-9	GAMMA SCAN	3/30/96	7.00	PCI/L	U			
U00409	13967-70-9	GAMMA SCAN	3/30/96	7.00	PCI/L	U			
U00443	13967-70-9	GAMMA SCAN	4/07/96	7.00	PCI/L	U			
U00445	13967-70-9	GAMMA SCAN	4/07/96	7.00	PCI/L	U			
U00446	13967-70-9	GAMMA SCAN	4/14/96	7.00	PCI/L	U			
U00448	13967-70-9	GAMMA SCAN	4/14/96	7.00	PCI/L	U			
U00449	13967-70-9	GAMMA SCAN	4/21/96	7.50	PCI/L	U			
U00451	13967-70-9	GAMMA SCAN	4/21/96	7.00	PCI/L	U			
U00452	13967-70-9	GAMMA SCAN	4/28/96	7.00	PCI/L	U			
U00454	13967-70-9	GAMMA SCAN	4/28/96	7.00	PCI/L	U			
CESTUM-137									
U00164	10045-97-3	GAMMA SCAN	9/11/95	5.00	PCI/L	J			
U00166	10045-97-3	GAMMA SCAN	9/14/95	25.00	PCI/L				
U00167	10045-97-3	GAMMA SCAN	9/17/95	24.30	PCI/L				
U00169	10045-97-3	GAMMA SCAN	9/17/95	18.00	PCI/L				
U00171	10045-97-3	GAMMA SCAN	9/20/95	25.00	PCI/L				
U00173	10045-97-3	GAMMA SCAN	9/24/95	5.00	PCI/L	U			
U00174	10045-97-3	GAMMA SCAN	9/24/95	5.00	PCI/L	U			
U00176	10045-97-3	GAMMA SCAN	9/26/95	18.00	PCI/L				
U00178	10045-97-3	GAMMA SCAN	9/29/95	15.60	PCI/L				
U00179	10045-97-3	GAMMA SCAN	10/01/95	14.00	PCI/L				
U00184	10045-97-3	GAMMA SCAN	9/17/95	16.80	PCI/L				

Sample No	Con ID	Method	Sample Date	Results Units	Lab qifr	Val qifr	Grab/ Comp	Flow	pH	Cond
CESIUM-137										
U00185	10045-97-3	GAMMA SCAN	10/09/95	15.00	PCI/L		COMP	436	7.65	91.20
U00186	10045-97-3	GAMMA SCAN	10/09/95	18.00	PCI/L		GRAB	450	8.30	132.25
U00191	10045-97-3	GAMMA SCAN	10/23/95	10.00	PCI/L		COMP	454	7.39	106.20
U00192	10045-97-3	GAMMA SCAN	10/23/95	10.00	PCI/L		GRAB	321	7.49	1151.00
U00194	10045-97-3	GAMMA SCAN	10/30/95	7.50	PCI/L		COMP	271	7.54	1200.00
U00195	10045-97-3	GAMMA SCAN	10/30/95	6.90	PCI/L		GRAB	341	7.46	135.40
U00215	10045-97-3	GAMMA SCAN	11/07/95	10.00	PCI/L		COMP	453	7.58	150.10
U00217	10045-97-3	GAMMA SCAN	11/07/95	10.00	PCI/L		GRAB	271	7.60	135.80
U00218	10045-97-3	GAMMA SCAN	11/14/95	5.00	PCI/L		COMP	316	7.50	112.00
U00220	10045-97-3	GAMMA SCAN	11/14/95	7.00	PCI/L		GRAB	348	7.60	823.00
U00221	10045-97-3	GAMMA SCAN	11/21/95	8.00	PCI/L		COMP	313	7.41	122.00
U00223	10045-97-3	GAMMA SCAN	11/21/95	7.00	PCI/L		GRAB	260	7.53	135.80
U00224	10045-97-3	GAMMA SCAN	11/28/95	8.00	PCI/L		COMP	378	7.56	148.80
U00226	10045-97-3	GAMMA SCAN	11/28/95	7.00	PCI/L		GRAB	404	7.60	142.70
U00241	10045-97-3	GAMMA SCAN	12/03/95	7.00	PCI/L		COMP	451	7.50	140.00
U00242	10045-97-3	GAMMA SCAN	12/06/95	8.50	PCI/L		GRAB	348	7.60	112.00
U00244	10045-97-3	GAMMA SCAN	12/06/95	7.80	PCI/L		COMP	316	7.50	148.00
U00246	10045-97-3	GAMMA SCAN	12/09/95	8.00	PCI/L		GRAB	104	7.60	112.00
U00248	10045-97-3	GAMMA SCAN	12/12/95	7.40	PCI/L		COMP	316	7.53	135.80
U00249	10045-97-3	GAMMA SCAN	12/12/95	7.40	PCI/L		GRAB	316	7.50	148.00
U00251	10045-97-3	GAMMA SCAN	12/15/95	7.70	PCI/L		COMP	480	7.37	112.90
U00253	10045-97-3	GAMMA SCAN	12/18/95	7.00	PCI/L		GRAB	416	7.48	150.90
U00254	10045-97-3	GAMMA SCAN	12/20/95	7.40	PCI/L		COMP	559	7.45	150.00
U00255	10045-97-3	GAMMA SCAN	12/21/95	9.30	PCI/L		GRAB	303	7.53	151.70
U00258	10045-97-3	GAMMA SCAN	12/24/95	7.60	PCI/L		COMP			
U00259	10045-97-3	GAMMA SCAN	12/27/95	7.60	PCI/L		GRAB			
U00261	10045-97-3	GAMMA SCAN	12/27/95	7.20	PCI/L		COMP			
U00263	10045-97-3	GAMMA SCAN	12/30/95	7.30	PCI/L		GRAB			
U00297	10045-97-3	GAMMA SCAN	1/01/96	7.70	PCI/L		COMP			
U00299	10045-97-3	GAMMA SCAN	1/04/96	7.60	PCI/L		GRAB			

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Sample No	Con ID	Method	Sample Date	Results Units	Lab qfr	Val qfr	Grab/ Comp	Flow	pH	Cond
CESTUM-137										
00301	10045-97-3	GAMMA SCAN	1/04/96	7.70	PCI/L	U	COMP	353	7.44	145.00
00302	10045-97-3	GAMMA SCAN	1/07/96	7.20	PCI/L	U	GRAB	512	7.37	49.30
00306	10045-97-3	GAMMA SCAN	1/10/96	8.00	PCI/L	U	COMP			
00308	10045-97-3	GAMMA SCAN	1/10/96	8.10	PCI/L	U	GRAB			
00309	10045-97-3	GAMMA SCAN	1/13/96	7.80	PCI/L	U	COMP	296	7.49	142.20
00311	10045-97-3	GAMMA SCAN	1/16/96	6.70	PCI/L	U	GRAB	283	7.32	138.60
00313	10045-97-3	GAMMA SCAN	1/18/96	7.20	PCI/L	U	COMP			
00314	10045-97-3	GAMMA SCAN	1/19/96	8.00	PCI/L	U	GRAB	305	7.46	142.70
00316	10045-97-3	GAMMA SCAN	1/22/96	7.30	PCI/L	U	GRAB	482	7.50	141.00
00318	10045-97-3	GAMMA SCAN	1/25/96	7.20	PCI/L	U	GRAB	393	7.43	143.00
00320	10045-97-3	GAMMA SCAN	1/25/96	7.40	PCI/L	U	COMP			
00321	10045-97-3	GAMMA SCAN	1/28/96	7.50	PCI/L	U	GRAB	318	7.40	140.90
00323	10045-97-3	GAMMA SCAN	1/31/96	7.50	PCI/L	U	GRAB	495	7.30	73.00
00325	10045-97-3	GAMMA SCAN	1/31/96	7.50	PCI/L	U	COMP			
00347	10045-97-3	GAMMA SCAN	2/03/96	7.50	PCI/L	U	GRAB	492	7.53	340.00
00349	10045-97-3	GAMMA SCAN	2/06/96	7.50	PCI/L	U	GRAB	869	7.14	333.00
00351	10045-97-3	GAMMA SCAN	2/09/96	7.50	PCI/L	U	GRAB	288	7.64	152.50
00353	10045-97-3	GAMMA SCAN	2/09/96	7.50	PCI/L	U	COMP			
00354	10045-97-3	GAMMA SCAN	2/12/96	7.50	PCI/L	U	GRAB	275	7.53	147.00
00356	10045-97-3	GAMMA SCAN	2/15/96	7.50	PCI/L	U	GRAB	275	7.16	246.10
00358	10045-97-3	GAMMA SCAN	2/15/96	7.50	PCI/L	U	COMP			
00359	10045-97-3	GAMMA SCAN	2/18/96	7.50	PCI/L	U	GRAB	240	7.49	144.90
00361	10045-97-3	GAMMA SCAN	2/21/96	7.00	PCI/L	U	GRAB	310	7.41	151.30
00363	10045-97-3	GAMMA SCAN	2/23/96	7.50	PCI/L	U	COMP			
00364	10045-97-3	GAMMA SCAN	2/24/96	7.00	PCI/L	U	GRAB	396	7.50	148.00
00366	10045-97-3	GAMMA SCAN	2/27/96	7.50	PCI/L	U	GRAB	341	7.20	137.00
00368	10045-97-3	GAMMA SCAN	3/01/96	8.00	PCI/L	U	GRAB	339	7.35	574.00
00370	10045-97-3	GAMMA SCAN	3/01/96	8.50	PCI/L	U	COMP			
00396	10045-97-3	GAMMA SCAN	3/09/96	7.50	PCI/L	U	GRAB	303	7.45	224.59
00400	10045-97-3	GAMMA SCAN	3/09/96	7.50	PCI/L	U	COMP			

Sample No	Con ID	Method	Sample Date	Results Units	Lab qfr	Val qfr	Grab/ Comp	Flow	pH	Cond
CESTUM-137										
L00401	10045-97-3	GAMMA SCAN	3/16/96	8.50	PC1/L	U	GRAB COMP	379	7.57	170.90
L00403	10045-97-3	GAMMA SCAN	3/16/96	7.50	PC1/L	U	GRAB COMP	348	7.70	144.00
L00404	10045-97-3	GAMMA SCAN	3/24/96	7.50	PC1/L	U	GRAB COMP	366	7.49	159.90
L00406	10045-97-3	GAMMA SCAN	3/24/96	7.50	PC1/L	U	GRAB COMP	290	7.05	268.00
L00407	10045-97-3	GAMMA SCAN	3/30/96	7.50	PC1/L	U	GRAB COMP	297	7.19	156.10
L00409	10045-97-3	GAMMA SCAN	3/30/96	7.50	PC1/L	U	GRAB COMP	572	7.60	158.00
L00443	10045-97-3	GAMMA SCAN	4/07/96	7.50	PC1/L	U	GRAB COMP	357	7.48	162.80
L00445	10045-97-3	GAMMA SCAN	4/07/96	7.00	PC1/L	U	GRAB COMP	J		
L00446	10045-97-3	GAMMA SCAN	4/14/96	7.00	PC1/L	U	GRAB COMP	569	7.45	140.00
L00448	10045-97-3	GAMMA SCAN	4/14/96	7.00	PC1/L	U	GRAB COMP	458	7.49	144.20
L00449	10045-97-3	GAMMA SCAN	4/21/96	8.00	PC1/L	U	GRAB COMP	592	7.50	145.00
L00451	10045-97-3	GAMMA SCAN	4/21/96	7.50	PC1/L	U	GRAB COMP	249	7.50	157.10
L00452	10045-97-3	GAMMA SCAN	4/28/96	7.50	PC1/L	U	GRAB COMP	256	7.49	156.00
L00454	10045-97-3	GAMMA SCAN	4/28/96	7.50	PC1/L	U	GRAB COMP	262	7.59	150.30
CHLORIDE										
L00010	16887-00-6	EPA-600	300.0	6/08/95	1.60	MG/L	GRAB	569	7.45	140.00
L00024	16887-00-6	EPA-600	300.0	7/03/95	1.99	MG/L	GRAB	458	7.49	144.20
L00026	16887-00-6	EPA-600	300.0	7/06/95	2.17	MG/L	GRAB	592	7.50	145.00
L00027	16887-00-6	EPA-600	300.0	7/06/95	0.00	MG/L	COMP			
L00029	16887-00-6	EPA-600	300.0	7/09/95	2.76	MG/L	GRAB			
L00031	16887-00-6	EPA-600	300.0	7/12/95	1.26	MG/L	GRAB			
L00032	16887-00-6	EPA-600	300.0	7/14/95	2.13	MG/L	COMP			
L00034	16887-00-6	EPA-600	300.0	7/15/95	2.40	MG/L	GRAB			
L00036	16887-00-6	EPA-600	300.0	7/18/95	3.27	MG/L	GRAB			
L00037	16887-00-6	EPA-600	300.0	7/21/95	3.01	MG/L	COMP			
L00039	16887-00-6	EPA-600	300.0	7/21/95	2.58	MG/L	GRAB			
L00041	16887-00-6	EPA-600	300.0	7/24/95	1.87	MG/L	GRAB			
L00042	16887-00-6	EPA-600	300.0	7/27/95	3.12	MG/L	COMP			

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Sample No	Con ID	Method	Sample Date	Results Units	Lab qfr	Val qfr	Grab/ Comp	Flow	pH	Cond
CHLORIDE										
L00044	16887-00-6	EPA-600	300.0	7/27/95	2.54	MG/L	GRAB	360	7.65	104.50
L00046	16887-00-6	EPA-600	300.0	7/28/95	3.87	MG/L	GRAB	235	7.64	112.20
L00048	16887-00-6	EPA-600	300.0	8/01/95	2.59	MG/L	GRAB	421	7.65	120.70
L00050	16887-00-6	EPA-600	300.0	8/04/95	1.98	MG/L	GRAB	312	7.73	148.50
L00051	16887-00-6	EPA-600	300.0	8/05/95	2.15	MG/L	COMP			
L00053	16887-00-6	EPA-600	300.0	8/07/95	2.48	MG/L	GRAB	379	7.71	148.70
L00055	16887-00-6	EPA-600	300.0	8/10/95	2.02	MG/L	GRAB	374	7.71	143.67
L00056	16887-00-6	EPA-600	300.0	8/11/95	17.19	MG/L	COMP			
L00058	16887-00-6	EPA-600	300.0	8/13/95	2.30	MG/L	GRAB	400	7.77	153.45
L00060	16887-00-6	EPA-600	300.0	8/16/95	1.80	MG/L	GRAB	423	7.78	129.90
L00064	16887-00-6	EPA-600	300.0	8/19/95	1.93	MG/L	COMP			
L00066	16887-00-6	EPA-600	300.0	8/19/95	6.05	MG/L	GRAB	311	7.71	139.00
L00068	16887-00-6	EPA-600	300.0	8/22/95	2.02	MG/L	GRAB	565	7.66	129.80
L00069	16887-00-6	EPA-600	300.0	8/25/95	2.84	MG/L	COMP			
L00071	16887-00-6	EPA-600	300.0	8/25/95	1.81	MG/L	GRAB	253	7.60	134.00
L00072	16887-00-6	EPA-600	300.0	8/28/95	2.42	MG/L	GRAB	393	7.63	137.00
L00075	16887-00-6	EPA-600	300.0	8/31/95	2.04	MG/L	GRAB	376	7.61	141.40
L00156	16887-00-6	EPA-600	300.0	9/03/95	7.86	MG/L	GRAB	270	7.64	172.40
L00157	16887-00-6	EPA-600	300.0	9/03/95	7.86	MG/L	COMP			
L00159	16887-00-6	EPA-600	300.0	9/05/95	1.60	MG/L	GRAB	334	7.59	101.80
L00161	16887-00-6	EPA-600	300.0	9/08/95	20.09	MG/L	GRAB	263	7.64	125.10
L00162	16887-00-6	EPA-600	300.0	9/11/95	3.05	MG/L	COMP			
L00164	16887-00-6	EPA-600	300.0	9/11/95	1.78	MG/L	GRAB	443	7.87	142.90
L00166	16887-00-6	EPA-600	300.0	9/14/95	2.38	MG/L	GRAB	339	7.69	128.00
L00167	16887-00-6	EPA-600	300.0	9/17/95	2.49	MG/L	COMP			
L00169	16887-00-6	EPA-600	300.0	9/17/95	1.11	MG/L	GRAB	485	7.70	116.60
L00171	16887-00-6	EPA-600	300.0	9/20/95	1.99	MG/L	GRAB	456	7.64	110.70
L00173	16887-00-6	EPA-600	300.0	9/24/95	6.80	MG/L	GRAB	306	7.63	132.00
L00174	16887-00-6	EPA-600	300.0	9/24/95	3.95	MG/L	COMP			
L00176	16887-00-6	EPA-600	300.0	9/26/95	1.76	MG/L	GRAB	529	7.60	113.00

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Sample No	Con ID	Method	Sample Date	Results Units	Lab qfr	Val qfr	Grab/ Comp	Flow	pH	Cond
CHLORIDE										
16887-00-6	EPA-600	300.0	9/29/95	67.50	MG/L		GRAB	287	7.55	111.90
16887-00-6	EPA-600	300.0	10/01/95	13.50	MG/L		COMP			
16887-00-6	EPA-600	300.0	9/12/95	2.18	MG/L		GRAB	445	7.94	121.20
16887-00-6	EPA-600	300.0	10/09/95	2.12	MG/L		COMP			
16887-00-6	EPA-600	300.0	10/09/95	3.07	MG/L		GRAB	436	7.65	91.20
16887-00-6	EPA-600	300.0	10/16/95	4.31	MG/L		COMP			
16887-00-6	EPA-600	300.0	10/16/95	2.32	MG/L		GRAB	434	7.65	99.60
16887-00-6	EPA-600	300.0	10/23/95	48.50	MG/L		COMP			
16887-00-6	EPA-600	300.0	10/23/95	6.50	MG/L		GRAB	454	7.39	106.20
16887-00-6	EPA-600	300.0	10/23/95	76.20	MG/L		COMP			
16887-00-6	EPA-600	300.0	10/30/95	24.70	MG/L		GRAB	450	8.30	132.25
16887-00-6	EPA-600	300.0	11/07/95	1.99	MG/L		GRAB	321	7.49	1151.00
16887-00-6	EPA-600	300.0	11/07/95	1.95	MG/L		COMP			
16887-00-6	EPA-600	300.0	11/14/95	4.12	MG/L		GRAB	271	7.54	1200.00
16887-00-6	EPA-600	300.0	11/14/95	2.54	MG/L		COMP			
16887-00-6	EPA-600	300.0	11/21/95	1.50	MG/L		GRAB	341	7.46	135.40
16887-00-6	EPA-600	300.0	11/21/95	1.93	MG/L		COMP			
16887-00-6	EPA-600	300.0	11/28/95	1.79	MG/L		GRAB	453	7.58	150.10
16887-00-6	EPA-600	300.0	11/28/95	1.62	MG/L		COMP			
16887-00-6	EPA-600	300.0	12/03/95	2.02	MG/L		GRAB	378	7.56	148.80
16887-00-6	EPA-600	300.0	12/06/95	2.20	MG/L		COMP			
16887-00-6	EPA-600	300.0	12/06/95	1.97	MG/L		GRAB	348	7.60	823.00
16887-00-6	EPA-600	300.0	12/09/95	1.60	MG/L		GRAB	313	7.41	122.00
16887-00-6	EPA-600	300.0	12/12/95	6.53	MG/L		GRAB	260	7.53	135.80
16887-00-6	EPA-600	300.0	12/12/95	12.34	MG/L		COMP			
16887-00-6	EPA-600	300.0	12/15/95	1.57	MG/L		GRAB	404	7.60	142.70
16887-00-6	EPA-600	300.0	12/18/95	1.85	MG/L		GRAB	451	7.50	140.00
16887-00-6	EPA-600	300.0	12/20/95	1.98	MG/L		COMP			
16887-00-6	EPA-600	300.0	12/21/95	2.06	MG/L		GRAB	408	7.36	112.00
16887-00-6	EPA-600	300.0	12/24/95	2.03	MG/L		GRAB	316	7.50	148.00

WHC-SD-LEFF-EV-001, Rev D

Sample No	Con ID	Method	Sample Date	Results	Units	Lab qfr	Val qfr	Grab/ Comp	Flow	pH	Cond
CHLORIDE											
L00259	16887-00-6	EPA-600	300.0	12/27/95	2.05	MG/L		COMP	480	7.37	112.90
L00261	16887-00-6	EPA-600	300.0	12/27/95	1.86	MG/L		GRAB	416	7.48	150.90
L00263	16887-00-6	EPA-600	300.0	12/30/95	2.12	MG/L		GRAB	559	7.45	150.00
L00297	16887-00-6	EPA-600	300.0	1/01/96	1.82	MG/L		GRAB	303	7.53	151.70
L00299	16887-00-6	EPA-600	300.0	1/04/96	2.47	MG/L		GRAB	353	7.44	145.00
L00301	16887-00-6	EPA-600	300.0	1/04/96	2.20	MG/L		GRAB	512	7.37	49.30
L00302	16887-00-6	EPA-600	300.0	1/07/96	2.25	MG/L	J	COMP			
L00306	16887-00-6	EPA-600	300.0	1/10/96	1.92	MG/L		GRAB			
L00308	16887-00-6	EPA-600	300.0	1/10/96	2.19	MG/L		COMP			
L00309	16887-00-6	EPA-600	300.0	1/13/96	1.84	MG/L		GRAB	296	7.49	142.20
L00311	16887-00-6	EPA-600	300.0	1/16/96	1.89	MG/L		GRAB	283	7.52	138.60
L00313	16887-00-6	EPA-600	300.0	1/18/96	2.16	MG/L		COMP			
L00314	16887-00-6	EPA-600	300.0	1/19/96	1.94	MG/L		GRAB	305	7.46	142.70
L00316	16887-00-6	EPA-600	300.0	1/22/96	1.95	MG/L		GRAB	482	7.50	141.00
L00318	16887-00-6	EPA-600	300.0	1/25/96	1.73	MG/L		GRAB	393	7.43	143.00
L00320	16887-00-6	EPA-600	300.0	1/25/96	2.02	MG/L		COMP			
L00321	16887-00-6	EPA-600	300.0	1/28/96	1.69	MG/L		GRAB	318	7.40	140.90
L00323	16887-00-6	EPA-600	300.0	1/31/96	1.74	MG/L		GRAB	495	7.30	73.00
L00325	16887-00-6	EPA-600	300.0	1/31/96	85.20	MG/L		COMP			
L00347	16887-00-6	EPA-600	300.0	2/03/96	38.50	MG/L		GRAB	492	7.53	340.00
L00349	16887-00-6	EPA-600	300.0	2/06/96	118.80	MG/L		GRAB	869	7.14	333.00
L00351	16887-00-6	EPA-600	300.0	2/09/96	2.43	MG/L		GRAB	288	7.64	152.50
L00353	16887-00-6	EPA-600	300.0	2/09/96	3.18	MG/L		COMP			
L00354	16887-00-6	EPA-600	300.0	2/12/96	2.12	MG/L		GRAB	275	7.53	147.00
L00356	16887-00-6	EPA-600	300.0	2/15/96	1.71	MG/L		GRAB	275	7.16	246.10
L00358	16887-00-6	EPA-600	300.0	2/15/96	5.63	MG/L		COMP			
L00359	16887-00-6	EPA-600	300.0	2/18/96	1.72	MG/L		GRAB	240	7.49	144.90
L00361	16887-00-6	EPA-600	300.0	2/21/96	1.54	MG/L		GRAB	310	7.41	151.30
L00363	16887-00-6	EPA-600	300.0	2/23/96	1.93	MG/L		COMP			
L00364	16887-00-6	EPA-600	300.0	2/24/96	2.21	MG/L		GRAB	396	7.50	148.00

WHC-SD-LEF-EV-001, μ J/D

Sample No	Con ID	Method	Sample Date	Results Units	Lab qfr	Val qfr	Grab/ Comp	Flow	pH	Cond
CHLORIDE										
L00366	16887-00-6	EPA-600	300.0	2/27/96	1.79	MG/L	GRAB	341	7.20	137.00
L00368	16887-00-6	EPA-600	300.0	3/01/96	87.70	MG/L	GRAB	339	7.35	574.00
L00370	16887-00-6	EPA-600	300.0	3/01/96	2.05	MG/L	COMP			
L00396	16887-00-6	EPA-600	300.0	3/09/96	6.25	MG/L	GRAB	303	7.45	224.59
L00400	16887-00-6	EPA-600	300.0	3/09/96	13.83	MG/L	COMP			
L00401	16887-00-6	EPA-600	300.0	3/16/96	11.82	MG/L	GRAB	379	7.57	170.90
L00403	16887-00-6	EPA-600	300.0	3/16/96	14.33	MG/L	COMP			
L00404	16887-00-6	EPA-600	300.0	3/24/96	2.49	MG/L	GRAB	348	7.70	144.00
L00406	16887-00-6	EPA-600	300.0	3/24/96	3.41	MG/L	COMP			
L00407	16887-00-6	EPA-600	300.0	3/30/96	4.13	MG/L	GRAB	366	7.49	159.90
L00409	16887-00-6	EPA-600	300.0	3/30/96	6.60	MG/L	COMP			
L00443	16887-00-6	EPA-600	300.0	4/07/96	3.10	MG/L	GRAB	290	7.05	268.00
L00445	16887-00-6	EPA-600	300.0	4/07/96	3.99	MG/L	COMP			
L00446	16887-00-6	EPA-600	300.0	4/14/96	2.39	MG/L	GRAB	297	7.19	156.10
L00448	16887-00-6	EPA-600	300.0	4/14/96	2.64	MG/L	COMP			
L00449	16887-00-6	EPA-600	300.0	4/21/96	2.50	MG/L	GRAB	572	7.60	158.00
L00451	16887-00-6	EPA-600	300.0	4/21/96	2.67	MG/L	COMP			
L00452	16887-00-6	EPA-600	300.0	4/28/96	1.98	MG/L	GRAB	357	7.48	162.80
L00454	16887-00-6	EPA-600	300.0	4/28/96	4.45	MG/L	COMP			
LTEOP00004	16887-00-6	EPA-600	300.0	5/19/95	1.96	MG/L	COMP			
LTEOP00007	16887-00-6	EPA-600	300.0	5/25/95	2.80	MG/L	COMP			
CHLOROFORM										
L00010	67-66-3	SW-846	8260A	6/08/95	20.00	UG/L	GRAB	569	7.45	140.00
L00012	67-66-3	SW-846	8260A	6/15/95	14.00	UG/L	GRAB	630	7.35	25.65
L00014	67-66-3	SW-846	8260A	6/22/95	12.00	UG/L	GRAB	466	7.56	142.90
L00016	67-66-3	SW-846	8260A	6/29/95	8.00	UG/L	GRAB	396	7.55	141.00
L00024	67-66-3	SW-846	8260A	7/03/95	12.00	UG/L	GRAB	458	7.49	144.20
L00026	67-66-3	SW-846	8260A	7/06/95	14.00	UG/L	GRAB	592	7.50	145.00

Sample No	Con ID	Method	Sample Date	Results	Units	Lab qfr	Val qfr	Grab/ Comp	Flow	pH	Cond
CHLOROFORM											
L00029	67-66-3	SW-846	8260A	7/09/95	15.00	UG/L				7.50	157.10
L00031	67-66-3	SW-846	8260A	7/12/95	15.00	UG/L				7.49	156.00
L00034	67-66-3	SW-846	8260A	7/15/95	17.00	UG/L				7.59	150.30
L00036	67-66-3	SW-846	8260A	7/18/95	14.00	UG/L				7.40	155.40
L00039	67-66-3	SW-846	8260A	7/21/95	14.00	UG/L				7.25	155.50
L00041	67-66-3	SW-846	8260A	7/24/95	15.00	UG/L				7.62	132.40
L00044	67-66-3	SW-846	8260A	7/27/95	9.00	UG/L				7.65	104.50
L00046	67-66-3	SW-846	8260A	7/28/95	15.00	UG/L				7.64	112.20
L00048	67-66-3	SW-846	8260A	8/01/95	15.00	UG/L				7.65	120.70
L00050	67-66-3	SW-846	8260A	8/04/95	7.00	UG/L				7.73	148.50
L00053	67-66-3	SW-846	8260A	8/07/95	10.00	UG/L				7.71	148.70
L00055	67-66-3	SW-846	8260A	8/10/95	8.00	UG/L				7.71	143.67
L00058	67-66-3	SW-846	8260A	8/13/95	14.00	UG/L				7.77	153.45
L00060	67-66-3	SW-846	8260A	8/16/95	10.00	UG/L				7.78	129.90
L00066	67-66-3	SW-846	8260A	8/19/95	11.00	UG/L				7.71	139.00
L00068	67-66-3	SW-846	8260A	8/22/95	6.00	UG/L				7.66	129.80
L00071	67-66-3	SW-846	8260A	8/25/95	8.00	UG/L				7.60	134.00
L00072	67-66-3	SW-846	8260A	8/28/95	8.00	UG/L				7.63	137.00
L00075	67-66-3	SW-846	8260A	8/31/95	9.00	UG/L				7.61	141.40
L00156	67-66-3	SW-846	8260A	9/03/95	10.00	UG/L				7.64	172.40
L00159	67-66-3	SW-846	8260A	9/05/95	12.00	UG/L				7.59	101.80
L00161	67-66-3	SW-846	8260A	9/08/95	9.00	UG/L				7.64	125.10
L00164	67-66-3	SW-846	8260A	9/11/95	8.00	UG/L				7.87	142.90
L00166	67-66-3	SW-846	8260A	9/14/95	9.00	UG/L				7.69	128.00
L00169	67-66-3	SW-846	8260A	9/17/95	7.00	UG/L				7.70	116.60
L00171	67-66-3	SW-846	8260A	9/20/95	8.00	UG/L				7.64	110.70
L00173	67-66-3	SW-846	8260A	9/24/95	10.00	UG/L				7.63	132.00
L00176	67-66-3	SW-846	8260A	9/26/95	7.00	UG/L				7.60	113.00
L00178	67-66-3	SW-846	8260A	9/29/95	9.00	UG/L				7.55	111.90
L00183	67-66-3	SW-846	8260A	9/12/95	6.00	UG/L				7.94	121.20

Sample No	Con ID	Method	Sample Date	Results Units	Lab qifr	Val qifr	Grab/ Comp	Flow	pH	Cond
CHLOROFORM										
L00186	67-66-3	SW-846 8260A	10/09/95	6.00	UG/L					
L00189	67-66-3	SW-846 8260A	10/16/95	10.00	UG/L					
L00192	67-66-3	SW-846 8260A	10/23/95	10.00	UG/L					
L00195	67-66-3	SW-846 8260A	10/30/95	7.00	UG/L					
L00215	67-66-3	SW-846 8260A	11/07/95	7.00	UG/L					
L00218	67-66-3	SW-846 8260A	11/14/95	8.00	UG/L					
L00221	67-66-3	SW-846 8260A	11/21/95	6.00	UG/L					
L00224	67-66-3	SW-846 8260A	11/28/95	6.00	UG/L					
L00241	67-66-3	SW-846 8260A	12/03/95	7.00	UG/L					
L00244	67-66-3	SW-846 8260A	12/06/95	7.00	UG/L					
L00246	67-66-3	SW-846 8260A	12/09/95	7.00	UG/L					
L00248	67-66-3	SW-846 8260A	12/12/95	6.00	UG/L					
L00251	67-66-3	SW-846 8260A	12/15/95	5.00	UG/L					
L00253	67-66-3	SW-846 8260A	12/18/95	3.00	UG/L					
L00256	67-66-3	SW-846 8260A	12/21/95	6.00	UG/L					
L00258	67-66-3	SW-846 8260A	12/24/95	7.00	UG/L					
L00261	67-66-3	SW-846 8260A	12/27/95	4.00	UG/L	J				
L00263	67-66-3	SW-846 8260A	12/30/95	4.00	UG/L	J				
L00297	67-66-3	SW-846 8260A	1/01/96	6.00	UG/L					
L00299	67-66-3	SW-846 8260A	1/04/96	4.00	UG/L	J				
L00302	67-66-3	SW-846 8260A	1/07/96	4.00	UG/L	J				
L00306	67-66-3	SW-846 8260A	1/10/96	5.00	UG/L					
L00309	67-66-3	SW-846 8260A	1/13/96	5.00	UG/L					
L00311	67-66-3	SW-846 8260A	1/16/96	2.00	UG/L	J				
L00314	67-66-3	SW-846 8260A	1/19/96	4.00	UG/L	J				
L00316	67-66-3	SW-846 8260A	1/22/96	5.00	UG/L					
L00318	67-66-3	SW-846 8260A	1/25/96	4.00	UG/L	J				
L00323	67-66-3	SW-846 8260A	1/31/96	3.00	UG/L	J				
L00347	67-66-3	SW-846 8260A	2/03/96	3.00	UG/L	J				
L00349	67-66-3	SW-846 8260A	2/06/96	2.00	UG/L					

WHC-SD-LIEF-EV-001, Rev 0

Sample No	Con ID	Method	Sample Date	Results	Units	Lab Val	Grab/ Comp	Flow	pH	Cond
CHLOROFORM										
L00351	67-66-3	SW-846 8260A	2/09/96	6.00	UG/L		GRAB	288	7.64	152.50
L00354	67-66-3	SW-846 8260A	2/12/96	4.00	UG/L	J	GRAB	275	7.53	147.00
L00356	67-66-3	SW-846 8260A	2/15/96	3.00	UG/L	J	GRAB	275	7.16	246.10
L00359	67-66-3	SW-846 8260A	2/18/96	5.00	UG/L		GRAB	240	7.19	144.30
L00361	67-66-3	SW-846 8260A	2/21/96	6.00	UG/L		GRAB	310	7.41	151.30
L00364	67-66-3	SW-846 8260A	2/24/96	6.00	UG/L		GRAB	396	7.50	148.00
L00366	67-66-3	SW-846 8260A	2/27/96	5.00	UG/L		GRAB	341	7.20	137.00
L00368	67-66-3	SW-846 8260A	3/01/96	8.00	UG/L		GRAB	339	7.35	574.00
L00396	67-66-3	SW-846 8260A	3/09/96	12.00	UG/L		GRAB	303	7.45	224.59
L00401	67-66-3	SW-846 8260A	3/16/96	8.00	UG/L		GRAB	379	7.57	170.90
L00404	67-66-3	SW-846 8260A	3/24/96	6.00	UG/L		GRAB	348	7.70	144.00
L00407	67-66-3	SW-846 8260A	3/30/96	8.00	UG/L	J	GRAB	366	7.49	159.90
L00443	67-66-3	SW-846 8260A	4/07/96	3.00	UG/L	J	GRAB	290	7.05	268.00
L00446	67-66-3	SW-846 8260A	4/14/96	10.00	UG/L		GRAB	297	7.19	156.10
L00449	67-66-3	SW-846 8260A	4/21/96	8.00	UG/L		GRAB	572	7.60	158.00
L00452	67-66-3	SW-846 8260A	4/28/96	9.00	UG/L		GRAB	357	7.48	162.80
LTEOP00001	67-66-3	SW-846 8260A	5/04/95	0.00	UG/L		GRAB	124	7.88	143.00
LTEOP00002	67-66-3	SW-846 8260A	5/11/95	7.00	UG/L		GRAB	325	7.55	124.30
LTEOP00003	67-66-3	SW-846 8260A	5/15/95	10.00	UG/L		GRAB	334	7.65	122.00
LTEOP00004	67-66-3	SW-846 8260A	5/19/95	14.00	UG/L		GRAB	343	7.86	183.70
LTEOP00005	67-66-3	SW-846 8260A	5/08/95	0.00	UG/L		GRAB	135	7.78	148.00
LTEOP00006	67-66-3	SW-846 8260A	5/22/95	18.00	UG/L		GRAB	490	7.90	149.00
LTEOP00007	67-66-3	SW-846 8260A	5/25/95	13.00	UG/L		GRAB	341	7.92	152.66
LTEOP00008	67-66-3	SW-846 8260A	5/29/95	8.00	UG/L		GRAB	353	7.77	150.20
CHROMIUM										
L00010	7440-47-3	SW-846 7191	6/08/95	.83	UG/L		U	J		COMP
L00012	7440-47-3	SW-846 7191	6/15/95	0.00	UG/L		U			COMP
L00014	7440-47-3	SW-846 7191	6/22/95	0.00	UG/L		U			COMP

WHC-SD-LFF-EV-001, $\mu\text{m} / \text{O}$

Sample No	Con ID	Method	Sample	Date	Results	Units	Lab qfr	Val qfr	Grab/ Comp	Flow	pH	Cond
CHROMIUM												
L00016	7440-47-3	SW-846 7191	6/29/95	0.00	UG/L		COMP	458	7.49	144.20		
L00024	7440-47-3	SW-846 7191	7/03/95	0.00	UG/L		GRAB	592	7.50	145.00		
L00026	7440-47-3	SW-846 7191	7/06/95	0.00	UG/L		COMP	249	7.50	157.10		
L00027	7440-47-3	SW-846 7191	7/06/95	0.00	UG/L		GRAB	256	7.49	156.00		
L00029	7440-47-3	SW-846 7191	7/09/95	0.00	UG/L		COMP	262	7.59	150.30		
L00031	7440-47-3	SW-846 7191	7/12/95	0.00	UG/L		GRAB	232	7.40	155.40		
L00032	7440-47-3	SW-846 7191	7/14/95	0.00	UG/L		COMP	360	7.65	104.50		
L00034	7440-47-3	SW-846 7191	7/15/95	1.40	UG/L		GRAB	235	7.64	112.20		
L00036	7440-47-3	SW-846 7191	7/18/95	0.00	UG/L		COMP	421	7.65	120.70		
L00037	7440-47-3	SW-846 7191	7/21/95	0.00	UG/L		GRAB	312	7.73	148.50		
L00039	7440-47-3	SW-846 7191	7/21/95	0.00	UG/L		COMP	423	7.78	129.90		
L00041	7440-47-3	SW-846 7191	7/24/95	0.00	UG/L		GRAB	311	7.71	148.70		
L00042	7440-47-3	SW-846 7191	7/27/95	0.00	UG/L		COMP	379	7.71	139.00		
L00044	7440-47-3	SW-846 7191	7/27/95	0.00	UG/L		GRAB	374	7.71	143.67		
L00046	7440-47-3	SW-846 7191	7/28/95	0.00	UG/L		COMP	400	7.77	153.45		
L00048	7440-47-3	SW-846 7191	8/01/95	0.00	UG/L		GRAB	423	7.78	129.80		
L00050	7440-47-3	SW-846 7191	8/04/95	0.00	UG/L		COMP	311	7.71	139.00		
L00051	7440-47-3	SW-846 7191	8/05/95	0.00	UG/L		GRAB	565	7.66	129.80		
L00053	7440-47-3	SW-846 7191	8/07/95	0.00	UG/L		COMP	379	7.71	148.70		
L00055	7440-47-3	SW-846 7191	8/10/95	0.00	UG/L		GRAB	374	7.71	143.67		
L00056	7440-47-3	SW-846 7191	8/11/95	0.00	UG/L		COMP	400	7.77	153.45		
L00058	7440-47-3	SW-846 7191	8/13/95	0.00	UG/L		GRAB	423	7.78	129.80		
L00060	7440-47-3	SW-846 7191	8/16/95	0.00	UG/L		COMP	311	7.71	139.00		
L00064	7440-47-3	SW-846 7191	8/19/95	0.00	UG/L		GRAB	565	7.66	129.80		
L00066	7440-47-3	SW-846 7191	8/19/95	0.00	UG/L		COMP	379	7.71	148.70		
L00068	7440-47-3	SW-846 7191	8/22/95	0.00	UG/L		GRAB	374	7.71	143.67		
L00069	7440-47-3	SW-846 7191	8/26/95	0.00	UG/L		COMP	400	7.77	153.45		
L00071	7440-47-3	SW-846 7191	8/25/95	0.00	UG/L		GRAB	423	7.78	129.80		
L00072	7440-47-3	SW-846 7191	8/28/95	0.00	UG/L		COMP	311	7.71	139.00		
L00075	7440-47-3	SW-846 7191	8/31/95	0.00	UG/L		GRAB	565	7.66	129.80		

Sample No	Con ID	Method	Sample Date	Results	Units	Lab qfr	Val qfr	Grab/ Comp	Flow	pH	Cond
CHROMIUM											
L00156	7440-47-3	SW-846 7191	9/03/95	0.00	UG/L	U	GRAB	270	7.64	172.40	
L00157	7440-47-3	SW-846 7191	9/03/95	1.70	UG/L	J	COMP				
L00159	7440-47-3	SW-846 7191	9/05/95	0.00	UG/L	J	GRAB	334	7.59	101.80	
L00161	7440-47-3	SW-846 7191	9/08/95	0.00	UG/L	J	GRAB	263	7.64	125.10	
L00162	7440-47-3	SW-846 7191	9/11/95	0.00	UG/L	J	COMP				
L00164	7440-47-3	SW-846 7191	9/11/95	0.00	UG/L	J	GRAB	443	7.87	142.90	
L00166	7440-47-3	SW-846 7191	9/14/95	0.00	UG/L	J	GRAB	339	7.69	128.00	
L00167	7440-47-3	SW-846 7191	9/17/95	0.00	UG/L	J	COMP				
L00169	7440-47-3	SW-846 7191	9/17/95	0.00	UG/L	J	GRAB	485	7.70	116.60	
L00171	7440-47-3	SW-846 7191	9/20/95	0.00	UG/L	J	GRAB	456	7.64	110.70	
L00173	7440-47-3	SW-846 7191	9/24/95	0.00	UG/L	J	GRAB	306	7.63	132.00	
L00174	7440-47-3	SW-846 7191	9/24/95	0.00	UG/L	J	COMP				
L00176	7440-47-3	SW-846 7191	9/26/95	0.00	UG/L	J	GRAB	529	7.60	113.00	
L00178	7440-47-3	SW-846 7191	9/29/95	0.00	UG/L	J	GRAB	287	7.55	111.90	
L00179	7440-47-3	SW-846 7191	10/01/95	0.00	UG/L	J	COMP				
L00183	7440-47-3	SW-846 7191	9/12/95	0.00	UG/L	J	GRAB	445	7.94	121.20	
L00184	7440-47-3	SW-846 7191	9/17/95	0.00	UG/L	J	COMP				
L00185	7440-47-3	SW-846 7191	10/09/95	0.00	UG/L	J	COMP				
L00186	7440-47-3	SW-846 7191	10/09/95	0.00	UG/L	J	GRAB	436	7.65	91.20	
L00188	7440-47-3	SW-846 7191	10/16/95	0.00	UG/L	J	COMP				
L00189	7440-47-3	SW-846 7191	10/16/95	0.00	UG/L	J	GRAB	434	7.65	99.60	
L00191	7440-47-3	SW-846 7191	10/23/95	0.00	UG/L	J	COMP				
L00192	7440-47-3	SW-846 7191	10/23/95	0.00	UG/L	J	GRAB	454	7.39	106.20	
L00194	7440-47-3	SW-846 7191	10/30/95	0.00	UG/L	J	COMP				
L00195	7440-47-3	SW-846 7191	10/30/95	0.00	UG/L	J	GRAB	450	8.30	132.25	
L00215	7440-47-3	SW-846 7191	11/07/95	0.00	UG/L	J	GRAB	321	7.49	1151.00	
L00217	7440-47-3	SW-846 7191	11/07/95	0.00	UG/L	J	COMP				
L00218	7440-47-3	SW-846 7191	11/14/95	0.00	UG/L	J	GRAB	271	7.54	1200.00	
L00220	7440-47-3	SW-846 7191	11/14/95	0.00	UG/L	J	COMP				
L00221	7440-47-3	SW-846 7191	11/21/95	0.00	UG/L	J	GRAB	341	7.46	135.40	

WHC-SD-LEFF-EV-001, $\ell_{\omega D}$

Sample No	Con ID	Method	Sample Date	Results Units	Lab q1fr	Grab/ Comp	Flow	pH	Cond
CHROMIUM									
U00223	7440-47-3	SW-846 7191	11/21/95	0.00	UG/L	COMP			
U00224	7440-47-3	SW-846 7191	11/28/95	0.00	UG/L	GRAB	453	7.58	150.10
U00226	7440-47-3	SW-846 7191	11/28/95	0.00	UG/L	COMP			
U00241	7440-47-3	SW-846 7191	12/03/95	0.00	UG/L	GRAB	378	7.56	148.80
U00242	7440-47-3	SW-846 7191	12/06/95	0.00	UG/L	COMP			
U00244	7440-47-3	SW-846 7191	12/06/95	0.00	UG/L	GRAB	348	7.60	823.00
U00246	7440-47-3	SW-846 7191	12/09/95	0.00	UG/L	GRAB	313	7.41	122.00
U00248	7440-47-3	SW-846 7191	12/12/95	0.00	UG/L	GRAB	260	7.53	135.80
U00249	7440-47-3	SW-846 7191	12/12/95	0.00	UG/L	COMP			
U00251	7440-47-3	SW-846 7191	12/15/95	0.00	UG/L	GRAB	404	7.60	142.70
U00253	7440-47-3	SW-846 7191	12/18/95	0.00	UG/L	GRAB	451	7.50	140.00
U00254	7440-47-3	SW-846 7191	12/20/95	0.00	UG/L	COMP			
U00256	7440-47-3	SW-846 7191	12/21/95	0.00	UG/L	GRAB	408	7.36	112.00
U00258	7440-47-3	SW-846 7191	12/24/95	0.00	UG/L	GRAB	316	7.50	148.00
U00259	7440-47-3	SW-846 7191	12/27/95	0.00	UG/L	COMP			
U00261	7440-47-3	SW-846 7191	12/27/95	0.00	UG/L	GRAB	480	7.37	112.90
U00263	7440-47-3	SW-846 7191	12/30/95	0.00	UG/L	GRAB	416	7.48	150.90
U00297	7440-47-3	SW-846 7191	1/01/96	0.00	UG/L	GRAB	559	7.45	150.00
U00299	7440-47-3	SW-846 7191	1/04/96	0.00	UG/L	GRAB	303	7.53	151.70
U00301	7440-47-3	SW-846 7191	1/04/96	0.00	UG/L	COMP			
U00302	7440-47-3	SW-846 7191	1/07/96	3.20	UG/L	GRAB	353	7.44	145.00
U00306	7440-47-3	SW-846 7191	1/10/96	0.00	UG/L	GRAB	512	7.37	49.30
U00308	7440-47-3	SW-846 7191	1/10/96	0.00	UG/L	COMP			
U00309	7440-47-3	SW-846 7191	1/13/96	0.00	UG/L	GRAB	296	7.49	142.20
U00311	7440-47-3	SW-846 7191	1/16/96	0.00	UG/L	GRAB	283	7.52	138.60
U00313	7440-47-3	SW-846 7191	1/18/96	0.00	UG/L	COMP			
U00314	7440-47-3	SW-846 7191	1/19/96	15.00	UG/L	GRAB	305	7.46	142.70
U00316	7440-47-3	SW-846 7191	1/22/96	2.00	UG/L	GRAB	482	7.50	141.00
U00318	7440-47-3	SW-846 7191	1/25/96	0.00	UG/L	GRAB	393	7.43	143.00
U00320	7440-47-3	SW-846 7191	1/25/96	0.00	UG/L	COMP			

WHC-SD-LEFF-EV-001, 2 ω /D

Sample No	Con ID	Method	Sample Date	Results	Units	Lab qfr	Val qfr	Grab/ Comp	Flow	pH	Cond
CHROMIUM											
U00321	7440-47-3	SW-846 7191	1/28/96	0.00	UG/L	GRAB	318	7.40	140.90		
U00323	7440-47-3	SW-846 7191	1/31/96	0.00	UG/L	GRAB	495	7.30	73.00		
U00325	7440-47-3	SW-846 7191	1/31/96	0.00	UG/L	COMP	492	7.53	340.00		
U00347	7440-47-3	SW-846 7191	2/03/96	0.00	UG/L	GRAB	869	7.14	333.00		
U00349	7440-47-3	SW-846 7191	2/03/96	3.90	UG/L	GRAB	288	7.64	152.50		
U00351	7440-47-3	SW-846 7191	2/09/96	0.00	UG/L	COMP	275	7.53	147.00		
U00353	7440-47-3	SW-846 7191	2/09/96	0.00	UG/L	GRAB	275	7.16	246.10		
U00354	7440-47-3	SW-846 7191	2/12/96	0.00	UG/L	GRAB	396	7.50	148.00		
U00356	7440-47-3	SW-846 7191	2/15/96	0.00	UG/L	GRAB	341	7.20	137.00		
U00358	7440-47-3	SW-846 7191	2/15/96	0.00	UG/L	GRAB	339	7.35	574.00		
U00359	7440-47-3	SW-846 7191	2/18/96	2.20	UG/L	COMP	310	7.41	151.30		
U00361	7440-47-3	SW-846 7191	2/21/96	0.00	UG/L	GRAB	303	7.45	224.59		
U00363	7440-47-3	SW-846 7191	2/23/96	0.00	UG/L	COMP	366	7.49	159.90		
U00364	7440-47-3	SW-846 7191	2/24/96	0.00	UG/L	GRAB	379	7.57	170.90		
U00366	7440-47-3	SW-846 7191	2/27/96	0.00	UG/L	COMP	348	7.70	144.00		
U00368	7440-47-3	SW-846 7191	3/01/96	0.00	UG/L	GRAB	290	7.05	268.00		
U00370	7440-47-3	SW-846 7191	3/01/96	0.00	UG/L	COMP	297	7.19	156.10		
U00376	7440-47-3	SW-846 7191	3/09/96	0.00	UG/L	GRAB	572	7.60	158.00		
U00400	7440-47-3	SW-846 7191	3/09/96	0.00	UG/L	COMP					
U00401	7440-47-3	SW-846 7191	3/16/96	0.00	UG/L	GRAB					
U00403	7440-47-3	SW-846 7191	3/16/96	0.00	UG/L	COMP					
U00404	7440-47-3	SW-846 7191	3/24/96	5.50	UG/L	GRAB					
U00406	7440-47-3	SW-846 7191	3/24/96	0.00	UG/L	COMP					
U00407	7440-47-3	SW-846 7191	3/30/96	2.60	UG/L	GRAB					
U00409	7440-47-3	SW-846 7191	3/30/96	2.50	UG/L	COMP					
U00443	7440-47-3	SW-846 7191	4/07/96	0.00	UG/L	GRAB					
U00445	7440-47-3	SW-846 7191	4/07/96	0.00	UG/L	COMP					
U00446	7440-47-3	SW-846 7191	4/14/96	0.00	UG/L	GRAB					
U00448	7440-47-3	SW-846 7191	4/14/96	0.00	UG/L	COMP					
U00449	7440-47-3	SW-846 7191	4/21/96	2.20	UG/L	GRAB					

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Sample No	Con ID	Method	Sample	Date	Results	Units	Lab qfr	Grab/ Comp	Flow	pH	Cond
CHROMIUM											
L00451	7440-47-3	SW-846 7191	4/21/96	0.00	UG/L	U	COMP				
L00452	7440-47-3	SW-846 7191	4/28/96	0.00	UG/L	U	GRAB	357	7.48	162.80	
L00454	7440-47-3	SW-846 7191	4/28/96	0.00	UG/L	U	COMP				
LTEOP00001	7440-47-3	SW-846 7191	5/04/95	0.00	UG/L	U	COMP				
LTEOP00002	7440-47-3	SW-846 7191	5/11/95	.30	UG/L	J	COMP				
LTEOP00003	7440-47-3	SW-846 7191	5/15/95	.30	UG/L	J	COMP				
LTEOP00004	7440-47-3	SW-846 7191	5/19/95	.32	UG/L	J	COMP				
LTEOP00005	7440-47-3	SW-846 7191	5/08/95	.60	UG/L	J	COMP				
LTEOP00006	7440-47-3	SW-846 7191	5/22/95	.99	UG/L	J	COMP				
LTEOP00007	7440-47-3	SW-846 7191	5/25/95	0.00	UG/L	J	COMP				
LTEOP00008	7440-47-3	SW-846 7191	5/29/95	.40	UG/L	J	COMP				
COBALT-60											
L00167	10198-40-0	GAMMA SCAN	9/17/95	5.00	PC/L	U	COMP				
L00169	10198-40-0	GAMMA SCAN	9/17/95	0.00	PC/L	U	GRAB	485	7.70	116.60	
L00171	10198-40-0	GAMMA SCAN	9/20/95	5.00	PC/L	U	GRAB	456	7.64	110.70	
L00173	10198-40-0	GAMMA SCAN	9/24/95	5.00	PC/L	U	GRAB	306	7.63	132.00	
L00174	10198-40-0	GAMMA SCAN	9/24/95	5.00	PC/L	U	COMP				
L00176	10198-40-0	GAMMA SCAN	9/26/95	5.00	PC/L	U	GRAB	529	7.60	113.00	
L00178	10198-40-0	GAMMA SCAN	9/29/95	5.00	PC/L	U	GRAB	287	7.55	111.90	
L00179	10198-40-0	GAMMA SCAN	10/01/95	3.99	PC/L	U	COMP				
L00184	10198-40-0	GAMMA SCAN	9/17/95	5.00	PC/L	U	COMP				
L00185	10198-40-0	GAMMA SCAN	10/09/95	5.00	PC/L	U	COMP				
L00186	10198-40-0	GAMMA SCAN	10/09/95	5.00	PC/L	U	GRAB	436	7.65	91.20	
L00191	10198-40-0	GAMMA SCAN	10/23/95	10.00	PC/L	U	COMP				
L00192	10198-40-0	GAMMA SCAN	10/23/95	10.00	PC/L	U	GRAB	454	7.39	106.20	
L00194	10198-40-0	GAMMA SCAN	10/30/95	7.20	PC/L	U	COMP				
L00195	10198-40-0	GAMMA SCAN	10/30/95	7.90	PC/L	U	GRAB	450	8.30	132.25	
L00215	10198-40-0	GAMMA SCAN	11/07/95	10.00	PC/L	U	GRAB	321	7.49	1151.00	

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Sample No	Con ID	Method	Sample Date	Results Units	Lab qfr	Val qfr	Grab/ Comp	Flow	pH	Cond
COBALT-60										
00217	10198-40-0	GAMMA SCAN	11/07/95	10.00	PCI/L	U	COMP			
00218	10198-40-0	GAMMA SCAN	11/14/95	5.00	PCI/L	U	GRAB	271	7.54	1200.00
00220	10198-40-0	GAMMA SCAN	11/14/95	7.00	PCI/L	U	COMP			
00221	10198-40-0	GAMMA SCAN	11/21/95	7.00	PCI/L	U	GRAB	341	7.46	135.40
00223	10198-40-0	GAMMA SCAN	11/21/95	7.00	PCI/L	U	COMP			
00224	10198-40-0	GAMMA SCAN	11/28/95	7.00	PCI/L	U	GRAB	453	7.58	150.10
00226	10198-40-0	GAMMA SCAN	11/28/95	7.00	PCI/L	U	COMP			
00241	10198-40-0	GAMMA SCAN	12/03/95	7.00	PCI/L	U	GRAB	378	7.56	148.80
00242	10198-40-0	GAMMA SCAN	12/06/95	7.70	PCI/L	U	COMP			
00244	10198-40-0	GAMMA SCAN	12/06/95	7.40	PCI/L	U	GRAB	348	7.60	823.00
00246	10198-40-0	GAMMA SCAN	12/09/95	7.10	PCI/L	U	GRAB	313	7.41	122.00
00248	10198-40-0	GAMMA SCAN	12/12/95	6.60	PCI/L	U	GRAB	260	7.53	135.80
00249	10198-40-0	GAMMA SCAN	12/12/95	7.10	PCI/L	U	COMP			
00251	10198-40-0	GAMMA SCAN	12/15/95	6.70	PCI/L	U	GRAB	404	7.60	142.70
00253	10198-40-0	GAMMA SCAN	12/18/95	7.00	PCI/L	U	GRAB	451	7.50	140.00
00254	10198-40-0	GAMMA SCAN	12/20/95	6.70	PCI/L	U	COMP			
00256	10198-40-0	GAMMA SCAN	12/21/95	8.60	PCI/L	U	GRAB	408	7.36	112.00
00258	10198-40-0	GAMMA SCAN	12/24/95	6.60	PCI/L	U	GRAB	316	7.50	148.00
00259	10198-40-0	GAMMA SCAN	12/27/95	7.30	PCI/L	U	COMP			
00261	10198-40-0	GAMMA SCAN	12/27/95	7.30	PCI/L	U	GRAB	480	7.37	112.90
00263	10198-40-0	GAMMA SCAN	12/30/95	7.20	PCI/L	U	GRAB	416	7.48	150.90
00297	10198-40-0	GAMMA SCAN	1/01/96	8.40	PCI/L	U	GRAB	559	7.45	150.00
00299	10198-40-0	GAMMA SCAN	1/04/96	6.50	PCI/L	U	GRAB	303	7.53	151.70
00301	10198-40-0	GAMMA SCAN	1/04/96	7.00	PCI/L	U	COMP			
00302	10198-40-0	GAMMA SCAN	1/07/96	6.30	PCI/L	U	GRAB	353	7.44	145.00
00306	10198-40-0	GAMMA SCAN	1/10/96	7.60	PCI/L	U	GRAB	512	7.37	49.30
00308	10198-40-0	GAMMA SCAN	1/10/96	7.50	PCI/L	U	COMP			
00309	10198-40-0	GAMMA SCAN	1/13/96	8.10	PCI/L	U	GRAB	296	7.49	142.20
00311	10198-40-0	GAMMA SCAN	1/16/96	5.40	PCI/L	U	GRAB	283	7.52	138.60
00313	10198-40-0	GAMMA SCAN	1/18/96	6.90	PCI/L	U	COMP			

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Sample No	Con ID	Method	Sample Date	Results Units	Lab qifr	Grab/ Comp qifr	Flow pH	Cond
COBALT-60								
L00314	10198-40-0	GAMMA SCAN	1/19/96	7.40	PCI/L U	GRAB	305	7.46
L00316	10198-40-0	GAMMA SCAN	1/22/96	7.00	PCI/L U	GRAB	482	7.50
L00318	10198-40-0	GAMMA SCAN	1/25/96	6.60	PCI/L U	GRAB	393	7.43
L00320	10198-40-0	GAMMA SCAN	1/25/96	6.40	PCI/L U	COMP	143.00	143.00
L00321	10198-40-0	GAMMA SCAN	1/28/96	7.00	PCI/L U	GRAB	318	7.40
L00323	10198-40-0	GAMMA SCAN	1/31/96	7.00	PCI/L U	GRAB	495	7.30
L00325	10198-40-0	GAMMA SCAN	1/31/96	7.00	PCI/L U	COMP	73.00	73.00
L00347	10198-40-0	GAMMA SCAN	2/03/96	7.00	PCI/L U	GRAB	492	7.53
L00349	10198-40-0	GAMMA SCAN	2/06/96	7.00	PCI/L U	GRAB	869	7.14
L00351	10198-40-0	GAMMA SCAN	2/09/96	7.00	PCI/L U	GRAB	288	7.64
L00353	10198-40-0	GAMMA SCAN	2/09/96	7.00	PCI/L U	COMP	152.50	152.50
L00354	10198-40-0	GAMMA SCAN	2/12/96	7.00	PCI/L U	GRAB	275	7.53
L00356	10198-40-0	GAMMA SCAN	2/15/96	7.00	PCI/L U	GRAB	275	7.16
L00358	10198-40-0	GAMMA SCAN	2/15/96	7.00	PCI/L U	COMP	246.10	246.10
L00359	10198-40-0	GAMMA SCAN	2/18/96	7.00	PCI/L U	GRAB	240	7.49
L00361	10198-40-0	GAMMA SCAN	2/21/96	7.00	PCI/L U	GRAB	310	7.41
L00363	10198-40-0	GAMMA SCAN	2/23/96	7.00	PCI/L U	COMP	151.30	151.30
L00364	10198-40-0	GAMMA SCAN	2/24/96	7.00	PCI/L U	GRAB	396	7.50
L00366	10198-40-0	GAMMA SCAN	2/27/96	7.50	PCI/L U	GRAB	341	7.20
L00368	10198-40-0	GAMMA SCAN	3/01/96	7.00	PCI/L U	GRAB	339	7.35
L00370	10198-40-0	GAMMA SCAN	3/01/96	7.00	PCI/L U	COMP	574.00	574.00
L00396	10198-40-0	GAMMA SCAN	3/09/96	7.00	PCI/L U	GRAB	303	7.45
L00400	10198-40-0	GAMMA SCAN	3/09/96	7.00	PCI/L U	COMP	224.59	224.59
L00401	10198-40-0	GAMMA SCAN	3/16/96	7.00	PCI/L U	GRAB	379	7.57
L00403	10198-40-0	GAMMA SCAN	3/16/96	7.00	PCI/L U	COMP	170.90	170.90
L00404	10198-40-0	GAMMA SCAN	3/24/96	7.00	PCI/L U	GRAB	348	7.70
L00406	10198-40-0	GAMMA SCAN	3/24/96	7.00	PCI/L U	COMP	144.00	144.00
L00407	10198-40-0	GAMMA SCAN	3/30/96	7.00	PCI/L U	GRAB	366	7.49
L00409	10198-40-0	GAMMA SCAN	3/30/96	7.00	PCI/L U	COMP	159.90	159.90
L00443	10198-40-0	GAMMA SCAN	4/07/96	7.00	PCI/L U	GRAB	290	7.05
								268.00

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Sample No	Con ID	Method	Sample Date	Results Units	Lab qfr	Val qfr	Grab Comp	Flow	pH	Cond
COBALT-60										
L00445	10198-40-0	GAMMA SCAN	4/07/96	7.00	PC1/L	U	COMP	297	7.19	156.10
L00446	10198-40-0	GAMMA SCAN	4/14/96	7.00	PC1/L	U	GRAB	297	7.19	156.10
L00448	10198-40-0	GAMMA SCAN	4/14/96	7.00	PC1/L	U	COMP	572	7.60	158.00
L00449	10198-40-0	GAMMA SCAN	4/21/96	7.00	PC1/L	U	GRAB	357	7.48	162.80
L00451	10198-40-0	GAMMA SCAN	4/21/96	7.00	PC1/L	U	COMP	572	7.60	158.00
L00452	10198-40-0	GAMMA SCAN	4/28/96	7.00	PC1/L	U	GRAB	357	7.48	162.80
L00454	10198-40-0	GAMMA SCAN	4/28/96	7.00	PC1/L	U	COMP			
CONDUCTIVITY										
L00443	CONDUCT	EPA-600 120.1	4/07/96	259.60	UNHOS		GRAB	290	7.05	268.00
L00445	CONDUCT	EPA-600 120.1	4/07/96	239.10	UNHOS		COMP	297	7.19	156.10
L00446	CONDUCT	EPA-600 120.1	4/14/96	155.60	UNHOS		GRAB	297	7.19	156.10
L00448	CONDUCT	EPA-600 120.1	4/14/96	157.00	UNHOS		COMP	572	7.60	158.00
L00449	CONDUCT	EPA-600 120.1	4/21/96	166.20	UNHOS		GRAB	357	7.48	162.80
L00451	CONDUCT	EPA-600 120.1	4/21/96	153.40	UNHOS		COMP	572	7.60	158.00
L00452	CONDUCT	EPA-600 120.1	4/28/96	162.00	UNHOS		GRAB	357	7.48	162.80
L00454	CONDUCT	EPA-600 120.1	4/28/96	169.10	UNHOS		COMP			
COPPER										
L00010	7440-50-8	SW-846 6010A	6/08/95	15.00	UG/L		COMP			
L00156	7440-50-8	SW-846 6010A	9/03/95	9.00	UG/L		GRAB	270	7.64	172.40
L00157	7440-50-8	SW-846 6010A	9/03/95	5.00	UG/L	U	COMP			
CYANIDE										
L00010	57-12-5	EPA-600 335.3	6/08/95	.77	UG/L	U	J	GRAB	569	7.45
L00012	57-12-5	EPA-600 335.3	6/15/95	2.08	UG/L	U	J	GRAB	630	7.35
L00014	57-12-5	EPA-600 335.3	6/22/95	2.15	UG/L	U	J	GRAB	466	7.56
										142.90

WHC-SD-LEF-EV-001, $\ell \cup \vartheta$

Sample No	Con ID	Method	Sample	Date	Results	Units	Lab	Val	Grab/	Cond
							qfr	qfr	Comp	Flow
Cyanide										
L00016	57-12-5	EPA-600	335.3	6/29/95	.81	UG/L	J	GRAB	396	7.55
L00024	57-12-5	EPA-600	335.3	7/03/95	.31	UG/L	U	GRAB	458	7.49
L00029	57-12-5	EPA-600	335.3	7/09/95	.33	UG/L	U	GRAB	249	7.50
L00034	57-12-5	EPA-600	335.3	7/15/95	.44	UG/L	U	GRAB	262	7.59
L00044	57-12-5	EPA-600	335.3	7/27/95	0.00	UG/L	U	GRAB	360	7.65
L00048	57-12-5	EPA-600	335.3	8/01/95	0.00	UG/L	U	GRAB	421	7.65
L00053	57-12-5	EPA-600	335.3	8/07/95	.48	UG/L	U	GRAB	379	7.71
L00058	57-12-5	EPA-600	335.3	8/13/95	.39	UG/L	U	GRAB	400	7.77
L00068	57-12-5	EPA-600	335.3	8/22/95	.97	UG/L	U	GRAB	565	7.66
L00072	57-12-5	EPA-600	335.3	8/28/95	.73	UG/L	J	GRAB	393	7.63
L00159	57-12-5	EPA-600	335.3	9/05/95	4.39	UG/L	J	GRAB	334	7.59
L00164	57-12-5	EPA-600	335.3	9/11/95	.65	UG/L	UJ	GRAB	443	7.87
L00169	57-12-5	EPA-600	335.3	9/17/95	.30	UG/L	UJ	GRAB	485	7.70
L00176	57-12-5	EPA-600	335.3	9/26/95	.44	UG/L	U	GRAB	529	7.60
L00186	57-12-5	EPA-600	335.3	10/09/95	0.00	UG/L	U	GRAB	436	7.65
L00189	57-12-5	EPA-600	335.3	10/16/95	0.00	UG/L	U	GRAB	434	7.65
L00192	57-12-5	EPA-600	335.3	10/23/95	.33	UG/L	U	GRAB	454	7.39
L00195	57-12-5	EPA-600	335.3	10/30/95	0.00	UG/L	U	GRAB	450	8.30
L00215	57-12-5	EPA-600	335.3	11/07/95	10.50	UG/L	U	GRAB	321	7.49
L00218	57-12-5	EPA-600	335.3	11/14/95	0.00	UG/L	U	GRAB	271	7.54
L00221	57-12-5	EPA-600	335.3	11/21/95	6.90	UG/L	U	GRAB	341	7.46
L00224	57-12-5	EPA-600	335.3	11/28/95	.39	UG/L	U	GRAB	453	7.58
L00241	57-12-5	EPA-600	335.3	12/03/95	.39	UG/L	U	GRAB	378	7.56
L00248	57-12-5	EPA-600	335.3	12/12/95	1.00	UG/L	U	GRAB	260	7.53
L00253	57-12-5	EPA-600	335.3	12/18/95	0.00	UG/L	U	GRAB	451	7.50
L00258	57-12-5	EPA-600	335.3	12/24/95	.37	UG/L	U	GRAB	316	7.50
L00297	57-12-5	EPA-600	335.3	1/01/96	0.00	UG/L	U	GRAB	559	7.45
L00302	57-12-5	EPA-600	335.3	1/07/96	3.54	UG/L	U	GRAB	359	7.44
L00311	57-12-5	EPA-600	335.3	1/16/96	4.98	UG/L	U	GRAB	283	7.52
L00316	57-12-5	EPA-600	335.3	1/22/96	0.00	UG/L	U	GRAB	482	7.50

WHC-SD-LEEF-EV-001, Rev 0

Sample No	Con ID	Method	Sample	Date	Results	Units	Lab	Val	Grab/ qfr	Comp	Flow	pH	Cond
CYANIDE													
L00321	57-12-5	EPA-600	335.3	1/28/96	0.00	UG/L	GRAB	318	7.40	140.90			
L00347	57-12-5	EPA-600	335.3	2/03/96	0.00	UG/L	GRAB	492	7.53	340.00			
L00349	57-12-5	EPA-600	335.3	2/06/96	0.00	UG/L	GRAB	869	7.14	333.00			
L00354	57-12-5	EPA-600	335.3	2/12/96	0.00	UG/L	GRAB	275	7.53	147.00			
L00361	57-12-5	EPA-600	335.3	2/21/96	2.10	UG/L	GRAB	310	7.41	151.30			
L00366	57-12-5	EPA-600	335.3	2/27/96	2.00	UG/L	GRAB	341	7.20	137.00			
L00396	57-12-5	EPA-600	335.3	3/09/96	0.00	UG/L	GRAB	303	7.45	224.59			
L00401	57-12-5	EPA-600	335.3	3/16/96	.49	UG/L	GRAB	379	7.57	170.90			
L00404	57-12-5	EPA-600	335.3	3/24/96	0.00	UG/L	GRAB	348	7.10	144.00			
L00407	57-12-5	EPA-600	335.3	3/30/96	0.00	UG/L	GRAB	366	7.49	159.90			
L00443	57-12-5	EPA-600	335.3	4/07/96	1.00	UG/L	GRAB	290	7.05	268.00			
L00446	57-12-5	EPA-600	335.3	4/14/96	0.00	UG/L	GRAB	297	7.19	156.10			
L00449	57-12-5	EPA-600	335.3	4/21/96	1.56	UG/L	GRAB	572	7.60	158.00			
L00452	57-12-5	EPA-600	335.3	4/28/96	.21	UG/L	GRAB	357	7.48	162.80			
LTEOP00001	57-12-5	EPA-600	335.3	5/04/95	1.10	UG/L	J	GRAB	124	7.88	143.00		
LTEOP00002	57-12-5	EPA-600	335.3	5/11/95	3.00	UG/L	J	GRAB	325	7.55	124.30		
LTEOP00003	57-12-5	EPA-600	335.3	5/15/95	.20	UG/L	J	GRAB	334	7.65	122.00		
LTEOP00004	57-12-5	EPA-600	335.3	5/19/95	2.12	UG/L	J	GRAB	343	7.86	183.70		
LTEOP00005	57-12-5	EPA-600	335.3	5/08/95	.70	UG/L	J	GRAB	135	7.78	148.00		
LTEOP00006	57-12-5	EPA-600	335.3	5/22/95	1.00	UG/L	J	GRAB	490	7.90	149.00		
LTEOP00007	57-12-5	EPA-600	335.3	5/25/95	.02	UG/L	J	GRAB	341	7.92	152.66		
LTEOP00008	57-12-5	EPA-600	335.3	5/29/95	.90	UG/L	J	GRAB	353	7.77	150.20		
DBROMOCHLOROMETHANE													
L00010	124-48-1	SW-846	8260A	6/08/95	0.00	UG/L	U	GRAB	569	7.45	140.00		
L00012	124-48-1	SW-846	8260A	6/15/95	0.00	UG/L	U	GRAB	630	7.35	25.65		
L00014	124-48-1	SW-846	8260A	6/22/95	0.00	UG/L	U	GRAB	466	7.56	142.90		
L00016	124-48-1	SW-846	8260A	6/29/95	0.00	UG/L	U	GRAB	396	7.55	141.00		
L00024	124-48-1	SW-846	8260A	7/03/95	0.00	UG/L	U	GRAB	458	7.49	144.20		

WHC-SD-LEF-EV-001, $\rho_{\text{d}} \text{ D}$

Sample No	Con ID	Method	Sample Date	Results	Units	Lab q1fr	Val q1fr	Grab/ Comp	Flow pH	Cond
DIBROMOCHLOROMETHANE										
L00026	124-48-1	SW-846	8260A	7/06/95	0.00	UG/L		GRAB	592	7.50
L00029	124-48-1	SW-846	8260A	7/09/95	0.00	UG/L		GRAB	249	7.50
L00031	124-48-1	SW-846	8260A	7/12/95	0.00	UG/L		GRAB	256	7.49
L00034	124-48-1	SW-846	8260A	7/15/95	0.00	UG/L		GRAB	262	7.59
L00036	124-48-1	SW-846	8260A	7/18/95	0.00	UG/L		GRAB	232	7.40
L00039	124-48-1	SW-846	8260A	7/21/95	0.00	UG/L		GRAB	482	7.25
L00041	124-48-1	SW-846	8260A	7/24/95	0.00	UG/L		GRAB	244	7.62
L00044	124-48-1	SW-846	8260A	7/27/95	0.00	UG/L		GRAB	360	7.65
L00046	124-48-1	SW-846	8260A	7/28/95	0.00	UG/L		GRAB	235	7.64
L00048	124-48-1	SW-846	8260A	8/01/95	0.00	UG/L		GRAB	421	7.65
L00050	124-48-1	SW-846	8260A	8/04/95	0.00	UG/L		GRAB	312	7.73
L00053	124-48-1	SW-846	8260A	8/07/95	0.00	UG/L		GRAB	379	7.71
L00055	124-48-1	SW-846	8260A	8/10/95	0.00	UG/L		GRAB	374	7.71
L00058	124-48-1	SW-846	8260A	8/13/95	0.00	UG/L		GRAB	400	7.77
L00060	124-48-1	SW-846	8260A	8/16/95	0.00	UG/L		GRAB	423	7.78
L00066	124-48-1	SW-846	8260A	8/19/95	0.00	UG/L		GRAB	311	7.71
L00068	124-48-1	SW-846	8260A	8/22/95	0.00	UG/L		GRAB	565	7.66
L00071	124-48-1	SW-846	8260A	8/25/95	0.00	UG/L		GRAB	253	7.60
L00072	124-48-1	SW-846	8260A	8/28/95	0.00	UG/L		GRAB	393	7.63
L00075	124-48-1	SW-846	8260A	8/31/95	0.00	UG/L		GRAB	376	7.61
L00156	124-48-1	SW-846	8260A	9/03/95	0.00	UG/L		GRAB	270	7.64
L00159	124-48-1	SW-846	8260A	9/05/95	0.00	UG/L		GRAB	334	7.59
L00161	124-48-1	SW-846	8260A	9/08/95	0.00	UG/L		GRAB	263	7.64
L00164	124-48-1	SW-846	8260A	9/11/95	0.00	UG/L		GRAB	443	7.87
L00166	124-48-1	SW-846	8260A	9/14/95	0.00	UG/L		GRAB	339	7.69
L00169	124-48-1	SW-846	8260A	9/17/95	0.00	UG/L		GRAB	485	7.70
L00171	124-48-1	SW-846	8260A	9/20/95	0.00	UG/L		GRAB	456	7.64
L00173	124-48-1	SW-846	8260A	9/24/95	0.00	UG/L		GRAB	306	7.63
L00176	124-48-1	SW-846	8260A	9/26/95	0.00	UG/L		GRAB	529	7.60
L00178	124-48-1	SW-846	8260A	9/29/95	0.00	UG/L		GRAB	287	7.55

WHC-SD-LEF-EV-001, $\alpha_{2\mu} \mathcal{D}$

Sample No	Con ID	Method	Sample Date	Results	Units	Lab qfr	Val qfr	Grab/ Comp	Flow	pH	Cond
DIBROMOCHLOROMETHANE											
L00183	124-48-1	SW-846	8260A	9/12/95	0.00	UG/L		GRAB	445	7.94	121.20
L00186	124-48-1	SW-846	8260A	10/09/95	0.00	UG/L		GRAB	436	7.65	91.20
L00189	124-48-1	SW-846	8260A	10/16/95	0.00	UG/L		GRAB	434	7.65	99.60
L00192	124-48-1	SW-846	8260A	10/23/95	0.00	UG/L		GRAB	454	7.39	106.20
L00195	124-48-1	SW-846	8260A	10/30/95	0.00	UG/L		GRAB	450	8.30	132.25
L00215	124-48-1	SW-846	8260A	11/07/95	0.00	UG/L		GRAB	321	7.49	1151.00
L00218	124-48-1	SW-846	8260A	11/14/95	0.00	UG/L		GRAB	271	7.54	1200.00
L00221	124-48-1	SW-846	8260A	11/21/95	0.00	UG/L		GRAB	341	7.46	135.40
L00224	124-48-1	SW-846	8260A	11/28/95	0.00	UG/L		GRAB	453	7.58	150.10
L00241	124-48-1	SW-846	8260A	12/03/95	0.00	UG/L		GRAB	378	7.56	148.80
L00244	124-48-1	SW-846	8260A	12/06/95	0.00	UG/L		GRAB	348	7.60	823.00
L00246	124-48-1	SW-846	8260A	12/09/95	0.00	UG/L		GRAB	313	7.41	122.00
L00248	124-48-1	SW-846	8260A	12/12/95	0.00	UG/L		GRAB	260	7.53	135.80
L00251	124-48-1	SW-846	8260A	12/15/95	0.00	UG/L		GRAB	404	7.60	142.70
L00253	124-48-1	SW-846	8260A	12/18/95	0.00	UG/L		GRAB	451	7.50	140.00
L00256	124-48-1	SW-846	8260A	12/21/95	0.00	UG/L		GRAB	408	7.36	112.00
L00258	124-48-1	SW-846	8260A	12/24/95	0.00	UG/L		GRAB	316	7.50	148.00
L00261	124-48-1	SW-846	8260A	12/27/95	0.00	UG/L		GRAB	480	7.37	112.90
L00263	124-48-1	SW-846	8260A	12/30/95	0.00	UG/L		GRAB	416	7.48	150.90
L00297	124-48-1	SW-846	8260A	1/01/96	0.00	UG/L		GRAB	559	7.45	150.00
L00299	124-48-1	SW-846	8260A	1/04/96	0.00	UG/L		GRAB	303	7.53	151.70
L00302	124-48-1	SW-846	8260A	1/07/96	0.00	UG/L		GRAB	353	7.44	145.00
L00306	124-48-1	SW-846	8260A	1/10/96	0.00	UG/L		GRAB	512	7.37	49.30
L00309	124-48-1	SW-846	8260A	1/13/96	0.00	UG/L		GRAB	296	7.49	142.20
L00311	124-48-1	SW-846	8260A	1/16/96	0.00	UG/L		GRAB	283	7.52	138.60
L00314	124-48-1	SW-846	8260A	1/19/96	0.00	UG/L		GRAB	305	7.46	142.70
L00316	124-48-1	SW-846	8260A	1/22/96	0.00	UG/L		GRAB	482	7.50	141.00
L00318	124-48-1	SW-846	8260A	1/25/96	0.00	UG/L		GRAB	393	7.43	143.00
L00323	124-48-1	SW-846	8260A	1/31/96	0.00	UG/L		GRAB	495	7.30	73.00
L00347	124-48-1	SW-846	8260A	2/03/96	0.00	UG/L		GRAB	492	7.53	340.00

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WHC-SD-LEF-EV-001, Rev 0

Sample No	Con ID	Method	Sample Date	Results Units	Lab qLfr	Val qLfr	Grab/ Comp	Flow	pH	Cond
DIBROMOCHLOROMETHANE										
L00349	124-48-1	SW-846 8260A	2/06/96	0.00	UG/L		GRAB	869	7.14	333.00
L00351	124-48-1	SW-846 8260A	2/09/96	0.00	UG/L		GRAB	288	7.64	152.50
L00354	124-48-1	SW-846 8260A	2/12/96	0.00	UG/L		GRAB	275	7.53	147.00
L00356	124-48-1	SW-846 8260A	2/15/96	0.00	UG/L		GRAB	275	7.16	246.10
L00359	124-48-1	SW-846 8260A	2/18/96	0.00	UG/L		GRAB	240	7.49	144.30
L00361	124-48-1	SW-846 8260A	2/21/96	0.00	UG/L		GRAB	310	7.41	151.30
L00364	124-48-1	SW-846 8260A	2/24/96	0.00	UG/L		GRAB	396	7.50	148.00
L00366	124-48-1	SW-846 8260A	2/27/96	0.00	UG/L		GRAB	341	7.20	137.00
L00368	124-48-1	SW-846 8260A	3/01/96	0.00	UG/L		GRAB	339	7.35	574.00
L00396	124-48-1	SW-846 8260A	3/09/96	0.00	UG/L		GRAB	303	7.45	224.59
L00401	124-48-1	SW-846 8260A	3/16/96	0.00	UG/L		GRAB	379	7.57	170.90
L00404	124-48-1	SW-846 8260A	3/24/96	0.00	UG/L		GRAB	348	7.70	144.00
L00407	124-48-1	SW-846 8260A	3/30/96	0.00	UG/L		GRAB	366	7.49	159.90
L00443	124-48-1	SW-846 8260A	4/07/96	0.00	UG/L		GRAB	290	7.05	268.00
L00446	124-48-1	SW-846 8260A	4/14/96	0.00	UG/L		GRAB	297	7.19	156.10
L00449	124-48-1	SW-846 8260A	4/21/96	0.00	UG/L		GRAB	572	7.60	158.00
L00452	124-48-1	SW-846 8260A	4/28/96	0.00	UG/L		GRAB	357	7.48	162.80
LTEOP00001	124-48-1	SW-846 8260A	5/04/95	0.00	UG/L		GRAB	124	7.88	143.00
LTEOP00002	124-48-1	SW-846 8260A	5/11/95	0.00	UG/L		GRAB	325	7.55	124.30
LTEOP00003	124-48-1	SW-846 8260A	5/15/95	0.00	UG/L		GRAB	334	7.65	122.00
LTEOP00004	124-48-1	SW-846 8260A	5/19/95	0.00	UG/L		GRAB	343	7.86	183.70
LTEOP00005	124-48-1	SW-846 8260A	5/08/95	0.00	UG/L		GRAB	135	7.78	148.00
LTEOP00006	124-48-1	SW-846 8260A	5/22/95	0.00	UG/L		GRAB	490	7.90	149.00
LTEOP00007	124-48-1	SW-846 8260A	5/25/95	0.00	UG/L		GRAB	341	7.92	152.66
LTEOP00008	124-48-1	SW-846 8260A	5/29/95	0.00	UG/L		GRAB	353	7.77	150.20
EUROPIUM-152										
L00194	14683-23-9	GAMMA SCAN	10/30/95	16.00	PC1/L	U	COMP GRAB	450	8.30	132.25
L00195	14683-23-9	GAMMA SCAN	10/30/95	16.00	PC1/L	U				

Sample No	Con ID	Method	Sample Date	Results Units	Lab qifr	Val qifr	Grab/ Comp	Fflow	pH	Cond
EUROPIUM-152										
L00215	14683-23-9	GAMMA SCAN	11/07/95	20.00	PCI/L	U	GRAB	321	7.49	1151.00
L00217	14683-23-9	GAMMA SCAN	11/07/95	20.00	PCI/L	U	COMP			
L00218	14683-23-9	GAMMA SCAN	11/14/95	10.00	PCI/L	U	GRAB	271	7.54	1200.00
L00220	14683-23-9	GAMMA SCAN	11/14/95	17.00	PCI/L	U	COMP			
L00221	14683-23-9	GAMMA SCAN	11/21/95	17.00	PCI/L	U	GRAB	341	7.46	135.40
L00223	14683-23-9	GAMMA SCAN	11/21/95	18.00	PCI/L	U	COMP			
L00224	14683-23-9	GAMMA SCAN	11/28/95	17.00	PCI/L	U	GRAB	453	7.58	150.10
L00226	14683-23-9	GAMMA SCAN	11/28/95	18.00	PCI/L	U	COMP			
L00241	14683-23-9	GAMMA SCAN	12/03/95	17.00	PCI/L	U	GRAB	378	7.56	148.80
L00242	14683-23-9	GAMMA SCAN	12/06/95	19.00	PCI/L	U	COMP			
L00244	14683-23-9	GAMMA SCAN	12/06/95	18.00	PCI/L	U	GRAB	348	7.60	823.00
L00246	14683-23-9	GAMMA SCAN	12/09/95	18.00	PCI/L	U	GRAB	313	7.41	122.00
L00248	14683-23-9	GAMMA SCAN	12/12/95	18.00	PCI/L	U	GRAB	260	7.53	135.80
L00249	14683-23-9	GAMMA SCAN	12/12/95	16.00	PCI/L	U	COMP			
L00251	14683-23-9	GAMMA SCAN	12/15/95	17.00	PCI/L	U	GRAB	404	7.60	142.70
L00253	14683-23-9	GAMMA SCAN	12/18/95	17.00	PCI/L	U	GRAB	451	7.50	140.00
L00254	14683-23-9	GAMMA SCAN	12/20/95	18.00	PCI/L	U	COMP			
L00256	14683-23-9	GAMMA SCAN	12/21/95	23.00	PCI/L	U	GRAB	408	7.36	112.00
L00258	14683-23-9	GAMMA SCAN	12/24/95	18.00	PCI/L	U	GRAB	316	7.50	148.00
L00259	14683-23-9	GAMMA SCAN	12/27/95	18.00	PCI/L	U	COMP			
L00261	14683-23-9	GAMMA SCAN	12/27/95	18.00	PCI/L	U	GRAB	480	7.37	112.90
L00263	14683-23-9	GAMMA SCAN	12/30/95	17.00	PCI/L	U	GRAB	416	7.48	150.90
L00297	14683-23-9	GAMMA SCAN	1/01/96	18.00	PCI/L	U	GRAB	559	7.45	150.00
L00299	14683-23-9	GAMMA SCAN	1/04/96	17.00	PCI/L	U	GRAB	303	7.53	151.70
L00301	14683-23-9	GAMMA SCAN	1/04/96	17.00	PCI/L	U	COMP			
L00302	14683-23-9	GAMMA SCAN	1/07/96	16.00	PCI/L	U	GRAB	353	7.44	145.00
L00306	14683-23-9	GAMMA SCAN	1/10/96	18.00	PCI/L	U	GRAB	512	7.37	49.30
L00308	14683-23-9	GAMMA SCAN	1/10/96	18.00	PCI/L	U	COMP			
L00309	14683-23-9	GAMMA SCAN	1/13/96	18.00	PCI/L	U	GRAB	296	7.49	142.20
L00311	14683-23-9	GAMMA SCAN	1/16/96	16.00	PCI/L	U	GRAB	283	7.52	138.60

WHC-SD-LEEF-EV-001, $\beta\mu$ 0

Sample No	Con ID	Method	Sample Date	Results	Units	Lab qifr	Grab/ Comp	Val qifr	Grab/ Comp	Flow	pH	Cond
EUROPIUM-152												
U00313	14683-23-9	GAMMA SCAN	1/18/96	17.00	PCI/L	U	COMP	305	7.46	142.70		
U00314	14683-23-9	GAMMA SCAN	1/19/96	17.00	PCI/L	U	GRAB	482	7.50	141.00		
U00316	14683-23-9	GAMMA SCAN	1/22/96	18.00	PCI/L	U	GRAB	393	7.43	143.00		
U00318	14683-23-9	GAMMA SCAN	1/25/96	17.00	PCI/L	U	COMP					
U00320	14683-23-9	GAMMA SCAN	1/25/96	17.00	PCI/L	U	GRAB	318	7.40	140.90		
U00321	14683-23-9	GAMMA SCAN	1/28/96	20.00	PCI/L	U	GRAB	495	7.30	73.00		
U00323	14683-23-9	GAMMA SCAN	1/31/96	20.00	PCI/L	U	COMP					
U00325	14683-23-9	GAMMA SCAN	1/31/96	20.00	PCI/L	U	GRAB	492	7.53	340.00		
U00347	14683-23-9	GAMMA SCAN	2/03/96	20.00	PCI/L	U	GRAB	869	7.14	333.00		
U00349	14683-23-9	GAMMA SCAN	2/06/96	20.00	PCI/L	U	GRAB	288	7.64	152.50		
U00351	14683-23-9	GAMMA SCAN	2/09/96	20.00	PCI/L	U	COMP					
U00353	14683-23-9	GAMMA SCAN	2/09/96	20.00	PCI/L	U	GRAB	275	7.53	147.00		
U00354	14683-23-9	GAMMA SCAN	2/12/96	20.00	PCI/L	U	GRAB	275	7.16	246.10		
U00356	14683-23-9	GAMMA SCAN	2/15/96	20.00	PCI/L	U	GRAB					
U00358	14683-23-9	GAMMA SCAN	2/15/96	20.00	PCI/L	U	COMP					
U00359	14683-23-9	GAMMA SCAN	2/18/96	20.00	PCI/L	U	GRAB	240	7.49	144.90		
U00361	14683-23-9	GAMMA SCAN	2/21/96	20.00	PCI/L	U	GRAB	310	7.41	151.30		
U00363	14683-23-9	GAMMA SCAN	2/23/96	20.00	PCI/L	U	COMP					
U00364	14683-23-9	GAMMA SCAN	2/24/96	20.00	PCI/L	U	GRAB	396	7.50	148.00		
U00366	14683-23-9	GAMMA SCAN	2/27/96	20.00	PCI/L	U	GRAB	341	7.20	137.00		
U00368	14683-23-9	GAMMA SCAN	3/01/96	20.00	PCI/L	U	GRAB	339	7.35	574.00		
U00370	14683-23-9	GAMMA SCAN	3/01/96	20.00	PCI/L	U	COMP					
U00396	14683-23-9	GAMMA SCAN	3/09/96	20.00	PCI/L	U	GRAB	303	7.45	224.59		
U00400	14683-23-9	GAMMA SCAN	3/09/96	20.00	PCI/L	U	COMP					
U00401	14683-23-9	GAMMA SCAN	3/16/96	20.00	PCI/L	U	GRAB	379	7.57	170.90		
U00403	14683-23-9	GAMMA SCAN	3/16/96	20.00	PCI/L	U	COMP					
U00404	14683-23-9	GAMMA SCAN	3/24/96	20.00	PCI/L	U	GRAB	348	7.70	144.00		
U00406	14683-23-9	GAMMA SCAN	3/24/96	20.00	PCI/L	U	COMP					
U00407	14683-23-9	GAMMA SCAN	3/30/96	20.00	PCI/L	U	GRAB	366	7.49	159.90		
U00409	14683-23-9	GAMMA SCAN	3/30/96	20.00	PCI/L	U	COMP					

WHC-SD-LEF-EV-001, ρ_{eff}

Sample No	Con ID	Method	Sample	Date	Results	Units	Lab qfr	Val qfr	Grab/ Comp	Flow	pH	Cond
EUROPIUM-152												
L00443	14683-23-9	GAMMA SCAN	4/07/96	20.00	PCI/L	U	GRAB	290	7.05	268.00		
L00445	14683-23-9	GAMMA SCAN	4/07/96	20.00	PCI/L	U	COMP					
L00446	14683-23-9	GAMMA SCAN	4/14/96	20.00	PCI/L	U	GRAB	297	7.19	156.10		
L00448	14683-23-9	GAMMA SCAN	4/14/96	20.00	PCI/L	U	COMP					
L00449	14683-23-9	GAMMA SCAN	4/21/96	20.00	PCI/L	U	GRAB	572	7.60	158.00		
L00451	14683-23-9	GAMMA SCAN	4/21/96	20.00	PCI/L	U	COMP					
L00452	14683-23-9	GAMMA SCAN	4/28/96	20.00	PCI/L	U	GRAB	357	7.48	162.80		
L00454	14683-23-9	GAMMA SCAN	4/28/96	20.00	PCI/L	U	COMP					
EUROPIUM-154												
L00194	15585-10-1	GAMMA SCAN	10/30/95	21.00	PCI/L	U	COMP					
L00195	15585-10-1	GAMMA SCAN	10/30/95	19.00	PCI/L	U	GRAB	450	8.30	132.25		
L00215	15585-10-1	GAMMA SCAN	11/07/95	20.00	PCI/L	U	GRAB	321	7.49	1151.00		
L00217	15585-10-1	GAMMA SCAN	11/07/95	20.00	PCI/L	U	COMP					
L00218	15585-10-1	GAMMA SCAN	11/14/95	12.00	PCI/L	U	GRAB	271	7.54	1200.00		
L00220	15585-10-1	GAMMA SCAN	11/14/95	19.00	PCI/L	U	COMP					
L00221	15585-10-1	GAMMA SCAN	11/21/95	18.00	PCI/L	U	GRAB	341	7.46	135.40		
L00223	15585-10-1	GAMMA SCAN	11/21/95	21.00	PCI/L	U	COMP					
L00224	15585-10-1	GAMMA SCAN	11/28/95	20.00	PCI/L	U	GRAB	453	7.58	150.10		
L00226	15585-10-1	GAMMA SCAN	11/28/95	20.00	PCI/L	U	COMP					
L00241	15585-10-1	GAMMA SCAN	12/03/95	20.00	PCI/L	U	GRAB	378	7.56	148.80		
L00242	15585-10-1	GAMMA SCAN	12/06/95	18.00	PCI/L	U	COMP					
L00244	15585-10-1	GAMMA SCAN	12/06/95	22.00	PCI/L	U	GRAB	348	7.60	823.00		
L00246	15585-10-1	GAMMA SCAN	12/09/95	18.00	PCI/L	U	GRAB	313	7.41	122.00		
L00248	15585-10-1	GAMMA SCAN	12/12/95	18.00	PCI/L	U	GRAB	260	7.53	135.80		
L00249	15585-10-1	GAMMA SCAN	12/12/95	17.00	PCI/L	U	COMP					
L00251	15585-10-1	GAMMA SCAN	12/15/95	18.00	PCI/L	U	GRAB	404	7.60	142.70		
L00253	15585-10-1	GAMMA SCAN	12/18/95	19.00	PCI/L	U	GRAB	451	7.50	140.00		
L00254	15585-10-1	GAMMA SCAN	12/20/95	20.00	PCI/L	U	COMP					

WHC-SD-LFF-EV-001, $\lambda\mu\text{O}$

Sample No	Con ID	Method	Sample Date	Results Units	Lab qifr	Val qifr	Grab/ Comp	Flow	pH	Cond
EUROPIUM-154										
L00256	15585-10-1	GAMMA SCAN	12/21/95	24.00	PC1/L	Y	GRAB	408	7.36	112.00
L00258	15585-10-1	GAMMA SCAN	12/24/95	19.00	PC1/L	Y	GRAB	316	7.50	148.00
L00259	15585-10-1	GAMMA SCAN	12/27/95	20.00	PC1/L	Y	COMP			
L00261	15585-10-1	GAMMA SCAN	12/27/95	19.00	PC1/L	Y	GRAB	480	7.37	112.90
L00263	15585-10-1	GAMMA SCAN	12/30/95	19.00	PC1/L	Y	GRAB	416	7.48	150.90
L00297	15585-10-1	GAMMA SCAN	1/01/96	20.00	PC1/L	Y	GRAB	559	7.45	150.00
L00299	15585-10-1	GAMMA SCAN	1/04/96	21.00	PC1/L	Y	GRAB	303	7.53	151.70
L00301	15585-10-1	GAMMA SCAN	1/04/96	19.00	PC1/L	Y	COMP			
L00302	15585-10-1	GAMMA SCAN	1/07/96	17.00	PC1/L	Y	GRAB	353	7.44	145.00
L00306	15585-10-1	GAMMA SCAN	1/10/96	20.00	PC1/L	Y	GRAB	512	7.37	49.30
L00308	15585-10-1	GAMMA SCAN	1/10/96	19.00	PC1/L	Y	COMP			
L00309	15585-10-1	GAMMA SCAN	1/13/96	18.00	PC1/L	Y	GRAB	296	7.49	142.20
L00311	15585-10-1	GAMMA SCAN	1/16/96	18.00	PC1/L	Y	GRAB	283	7.52	138.60
L00313	15585-10-1	GAMMA SCAN	1/18/96	17.00	PC1/L	Y	COMP			
L00314	15585-10-1	GAMMA SCAN	1/19/96	22.00	PC1/L	Y	GRAB	305	7.46	142.70
L00316	15585-10-1	GAMMA SCAN	1/22/96	18.00	PC1/L	Y	GRAB	482	7.50	141.00
L00318	15585-10-1	GAMMA SCAN	1/25/96	18.00	PC1/L	Y	GRAB	393	7.43	143.00
L00320	15585-10-1	GAMMA SCAN	1/25/96	16.00	PC1/L	Y	COMP			
L00321	15585-10-1	GAMMA SCAN	1/28/96	20.00	PC1/L	Y	GRAB	318	7.40	140.90
L00323	15585-10-1	GAMMA SCAN	1/31/96	20.00	PC1/L	Y	GRAB	495	7.30	73.00
L00325	15585-10-1	GAMMA SCAN	1/31/96	20.00	PC1/L	Y	COMP			
L00347	15585-10-1	GAMMA SCAN	2/03/96	20.00	PC1/L	Y	GRAB	492	7.53	340.00
L00349	15585-10-1	GAMMA SCAN	2/06/96	20.00	PC1/L	Y	GRAB	869	7.14	333.00
L00351	15585-10-1	GAMMA SCAN	2/09/96	20.00	PC1/L	Y	GRAB	288	7.64	152.50
L00353	15585-10-1	GAMMA SCAN	2/09/96	20.00	PC1/L	Y	COMP			
L00354	15585-10-1	GAMMA SCAN	2/12/96	20.00	PC1/L	Y	GRAB	275	7.53	147.00
L00356	15585-10-1	GAMMA SCAN	2/15/96	20.00	PC1/L	Y	GRAB	275	7.16	246.10
L00358	15585-10-1	GAMMA SCAN	2/15/96	20.00	PC1/L	Y	COMP			
L00359	15585-10-1	GAMMA SCAN	2/18/96	20.00	PC1/L	Y	GRAB	240	7.49	144.90
L00361	15585-10-1	GAMMA SCAN	2/21/96	20.00	PC1/L	Y	GRAB	310	7.41	151.30

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Sample No	Con ID	Method	Sample Date	Results Units	Lab qfr	Val qfr	Grab/ Comp	Flow	pH	Cond
EUROPIUM-154										
00363	15585-10-1	GAMMA SCAN	2/23/96	20.00	PC1/L U		COMP			
00364	15585-10-1	GAMMA SCAN	2/24/96	20.00	PC1/L U		GRAB	396	7.50	148.00
00366	15585-10-1	GAMMA SCAN	2/27/96	20.00	PC1/L U		GRAB	341	7.20	137.00
00368	15585-10-1	GAMMA SCAN	3/01/96	20.00	PC1/L U		GRAB	339	7.35	574.00
00370	15585-10-1	GAMMA SCAN	3/01/96	20.00	PC1/L U		COMP			
00396	15585-10-1	GAMMA SCAN	3/09/96	20.00	PC1/L U		GRAB	303	7.45	224.59
00400	15585-10-1	GAMMA SCAN	3/09/96	20.00	PC1/L U		COMP			
00401	15585-10-1	GAMMA SCAN	3/16/96	20.00	PC1/L U		GRAB	379	7.57	170.90
00403	15585-10-1	GAMMA SCAN	3/16/96	20.00	PC1/L U		COMP			
00404	15585-10-1	GAMMA SCAN	3/24/96	20.00	PC1/L U		GRAB	348	7.70	144.00
00406	15585-10-1	GAMMA SCAN	4/14/96	20.00	PC1/L U		COMP			
00407	15585-10-1	GAMMA SCAN	3/30/96	20.00	PC1/L U		GRAB	366	7.49	159.90
00409	15585-10-1	GAMMA SCAN	3/30/96	20.00	PC1/L U		COMP			
00443	15585-10-1	GAMMA SCAN	4/07/96	20.00	PC1/L U		GRAB	290	7.05	268.00
00445	15585-10-1	GAMMA SCAN	4/07/96	20.00	PC1/L U		COMP			
00446	15585-10-1	GAMMA SCAN	4/14/96	20.00	PC1/L U		GRAB	297	7.19	156.10
00448	15585-10-1	GAMMA SCAN	4/14/96	20.00	PC1/L U		COMP			
00449	15585-10-1	GAMMA SCAN	4/21/96	20.00	PC1/L U		GRAB	572	7.60	158.00
00451	15585-10-1	GAMMA SCAN	4/21/96	20.00	PC1/L U		COMP			
00452	15585-10-1	GAMMA SCAN	4/28/96	20.00	PC1/L U		GRAB	357	7.48	162.80
00454	15585-10-1	GAMMA SCAN	4/28/96	20.00	PC1/L U		COMP			
EUROPIUM-155										
00194	14391-16-3	GAMMA SCAN	10/30/95	22.00	PC1/L U		COMP			
00195	14391-16-3	GAMMA SCAN	10/30/95	24.00	PC1/L U		GRAB	450	8.30	132.25
00215	14391-16-3	GAMMA SCAN	11/07/95	25.00	PC1/L U		GRAB	321	7.49	1151.00
00217	14391-16-3	GAMMA SCAN	11/07/95	22.00	PC1/L U		COMP			
00218	14391-16-3	GAMMA SCAN	11/14/95	14.00	PC1/L U		GRAB	271	7.54	1200.00
00220	14391-16-3	GAMMA SCAN	11/14/95	23.00	PC1/L U		COMP			

WHC-SD-LEF-EV-001, $\beta\mu\mu$ 0

Sample No	Con ID	Method	Sample Date	Results	Units	Lab qfr	Val qfr	Grab/ Comp	Flow	pH	Cond
EUROPEUM-155											
L00221	14391-16-3	GAMMA SCAN	11/21/95	20.00	PCI/L	U	U	GRAB	341	7.46	135.40
L00223	14391-16-3	GAMMA SCAN	11/21/95	24.00	PCI/L	U	U	COMP			
L00224	14391-16-3	GAMMA SCAN	11/28/95	23.00	PCI/L	U	U	GRAB	453	7.58	150.10
L00225	14391-16-3	GAMMA SCAN	11/28/95	23.00	PCI/L	U	U	COMP			
L00241	14391-16-3	GAMMA SCAN	12/03/95	22.00	PCI/L	U	U	GRAB	378	7.56	148.80
L00242	14391-16-3	GAMMA SCAN	12/06/95	25.00	PCI/L	U	U	COMP			
L00244	14391-16-3	GAMMA SCAN	12/06/95	24.00	PCI/L	U	U	GRAB	348	7.60	823.00
L00246	14391-16-3	GAMMA SCAN	12/09/95	22.00	PCI/L	U	U	GRAB	313	7.41	122.00
L00248	14391-16-3	GAMMA SCAN	12/12/95	23.00	PCI/L	U	U	GRAB	260	7.53	135.80
L00249	14391-16-3	GAMMA SCAN	12/12/95	22.00	PCI/L	U	U	COMP			
L00251	14391-16-3	GAMMA SCAN	12/15/95	21.00	PCI/L	U	U	GRAB	404	7.60	142.70
L00253	14391-16-3	GAMMA SCAN	12/18/95	23.00	PCI/L	U	U	GRAB	451	7.50	140.00
L00254	14391-16-3	GAMMA SCAN	12/20/95	24.00	PCI/L	U	U	COMP			
L00256	14391-16-3	GAMMA SCAN	12/21/95	29.00	PCI/L	U	U	GRAB	408	7.36	112.00
L00258	14391-16-3	GAMMA SCAN	12/24/95	22.00	PCI/L	U	U	GRAB	316	7.50	148.00
L00259	14391-16-3	GAMMA SCAN	12/27/95	23.00	PCI/L	U	U	COMP			
L00261	14391-16-3	GAMMA SCAN	12/27/95	22.00	PCI/L	U	U	GRAB	480	7.37	112.90
L00263	14391-16-3	GAMMA SCAN	12/30/95	23.00	PCI/L	U	U	GRAB	416	7.48	150.90
L00297	14391-16-3	GAMMA SCAN	1/01/96	24.00	PCI/L	U	U	GRAB	559	7.45	150.00
L00299	14391-16-3	GAMMA SCAN	1/04/96	23.00	PCI/L	U	U	GRAB	303	7.53	151.70
L00301	14391-16-3	GAMMA SCAN	1/04/96	21.00	PCI/L	U	U	COMP			
L00302	14391-16-3	GAMMA SCAN	1/07/96	22.00	PCI/L	U	U	GRAB	353	7.44	145.00
L00306	14391-16-3	GAMMA SCAN	1/10/96	24.00	PCI/L	U	U	GRAB	512	7.37	49.30
L00308	14391-16-3	GAMMA SCAN	1/10/96	23.00	PCI/L	U	U	COMP			
L00309	14391-16-3	GAMMA SCAN	1/13/96	24.00	PCI/L	U	U	GRAB	296	7.49	142.20
L00311	14391-16-3	GAMMA SCAN	1/16/96	22.00	PCI/L	U	U	GRAB	283	7.52	138.60
L00313	14391-16-3	GAMMA SCAN	1/18/96	23.00	PCI/L	U	U	COMP			
L00314	14391-16-3	GAMMA SCAN	1/19/96	24.00	PCI/L	U	U	GRAB	305	7.46	142.70
L00316	14391-16-3	GAMMA SCAN	1/22/96	22.00	PCI/L	U	U	GRAB	482	7.50	141.00
L00318	14391-16-3	GAMMA SCAN	1/25/96	22.00	PCI/L	U	U	GRAB	393	7.43	143.00

WHC-SD-LEFF-EV-001, Rev D

Sample No	Con ID	Method	Sample Date	Results Units	Lab q1fr	Val q1fr	Grab/ Comp	Flow	pH	Cond
EUROPIUM-155										
L00320	14391-16-3	GAMMA SCAN	1/25/96	22.00	PCI/L		COMP			
L00321	14391-16-3	GAMMA SCAN	1/28/96	28.00	PCI/L	U	GRAB	318	7.40	140.90
L00323	14391-16-3	GAMMA SCAN	1/31/96	28.00	PCI/L	U	GRAB	495	7.30	73.00
L00325	14391-16-3	GAMMA SCAN	1/31/96	28.00	PCI/L	U	COMP			
L00347	14391-16-3	GAMMA SCAN	2/03/96	28.00	PCI/L	U	GRAB	492	7.53	340.00
L00349	14391-16-3	GAMMA SCAN	2/05/96	28.00	PCI/L	U	GRAB	869	7.14	333.00
L00351	14391-16-3	GAMMA SCAN	2/09/96	28.00	PCI/L	U	GRAB	288	7.64	152.50
L00353	14391-16-3	GAMMA SCAN	2/09/96	28.00	PCI/L	U	COMP			
L00354	14391-16-3	GAMMA SCAN	2/12/96	28.00	PCI/L	U	GRAB	275	7.53	147.00
L00356	14391-16-3	GAMMA SCAN	2/15/96	28.00	PCI/L	U	GRAB	275	7.16	246.10
L00358	14391-16-3	GAMMA SCAN	2/15/96	28.00	PCI/L	U	COMP			
L00359	14391-16-3	GAMMA SCAN	2/18/96	28.00	PCI/L	U	GRAB	240	7.49	144.90
L00361	14391-16-3	GAMMA SCAN	2/21/96	22.00	PCI/L	U	GRAB	310	7.41	151.30
L00363	14391-16-3	GAMMA SCAN	2/23/96	28.00	PCI/L	U	COMP			
L00364	14391-16-3	GAMMA SCAN	2/24/96	25.00	PCI/L	U	GRAB	396	7.50	148.00
L00366	14391-16-3	GAMMA SCAN	2/27/96	25.00	PCI/L	U	GRAB	341	7.20	137.00
L00368	14391-16-3	GAMMA SCAN	3/01/96	25.00	PCI/L	U	GRAB	339	7.35	574.00
L00370	14391-16-3	GAMMA SCAN	3/01/96	25.00	PCI/L	U	COMP			
L00396	14391-16-3	GAMMA SCAN	3/09/96	22.00	PCI/L	U	GRAB	303	7.45	224.59
L00400	14391-16-3	GAMMA SCAN	3/09/96	28.00	PCI/L	U	COMP			
L00401	14391-16-3	GAMMA SCAN	3/16/96	28.00	PCI/L	U	GRAB	379	7.57	170.90
L00403	14391-16-3	GAMMA SCAN	3/16/96	22.00	PCI/L	U	COMP			
L00404	14391-16-3	GAMMA SCAN	3/24/96	22.00	PCI/L	U	GRAB	348	7.70	144.00
L00406	14391-16-3	GAMMA SCAN	3/24/96	22.00	PCI/L	U	COMP			
L00407	14391-16-3	GAMMA SCAN	3/30/96	22.00	PCI/L	U	GRAB	366	7.49	159.90
L00409	14391-16-3	GAMMA SCAN	3/30/96	22.00	PCI/L	U	COMP			
L00443	14391-16-3	GAMMA SCAN	4/07/96	22.00	PCI/L	U	GRAB	290	7.05	268.00
L00445	14391-16-3	GAMMA SCAN	4/07/96	23.00	PCI/L	U	COMP			
L00446	14391-16-3	GAMMA SCAN	4/14/96	28.00	PCI/L	U	GRAB	297	7.19	156.10
L00448	14391-16-3	GAMMA SCAN	4/14/96	28.00	PCI/L	U	COMP			

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Sample No	Con ID	Method	Sample Date	Results Units	Lab q1fr	Val q1fr	Grab/ Comp	Flow	pH	Cond
EUROPIUM-155										
L00449	14391-16-3	GAMMA SCAN	4/21/96	28.00	PC1/L	U	GRAB	572	7.60	158.00
L00451	14391-16-3	GAMMA SCAN	4/21/96	24.00	PC1/L	U	COMP			
L00452	14391-16-3	GAMMA SCAN	4/28/96	22.00	PC1/L	U	GRAB	357	7.48	162.80
L00454	14391-16-3	GAMMA SCAN	4/28/96	22.00	PC1/L	U	COMP			
FLUORIDE										
LTEOP00004	16984-48-8	EPA-600	300.0	5/19/95	.18	MG/L	GRAB	343	7.86	183.70
LTEOP00007	16984-48-8	EPA-600	300.0	5/25/95	.15	MG/L	GRAB	341	7.92	152.66
GROSS ALPHA										
L00010	12587-46-1	GROSS-ALPHA	(DGPC	6/08/95	.15	PC1/L	GRAB	569	7.45	140.00
L00044	12587-46-1	GROSS-ALPHA	(DGPC	7/27/95	.34	PC1/L	GRAB	360	7.65	104.50
L00071	12587-46-1	GROSS-ALPHA	(DGPC	8/25/95	.38	PC1/L	GRAB	253	7.60	134.00
L00164	12587-46-1	GROSS-ALPHA	(DGPC	9/11/95	.50	PC1/L	GRAB	443	7.87	142.90
L00166	12587-46-1	GROSS-ALPHA	(DGPC	9/14/95	2.36	PC1/L	GRAB	339	7.69	128.00
L00167	12587-46-1	GROSS-ALPHA	(DGPC	9/17/95	1.27	PC1/L	COMP			
L00169	12587-46-1	GROSS-ALPHA	(DGPC	9/17/95	.77	PC1/L	GRAB	485	7.70	116.60
L00171	12587-46-1	GROSS-ALPHA	(DGPC	9/20/95	1.04	PC1/L	GRAB	456	7.64	110.70
L00173	12587-46-1	GROSS-ALPHA	(DGPC	9/24/95	1.86	PC1/L	GRAB	306	7.63	132.00
L00174	12587-46-1	GROSS-ALPHA	(DGPC	9/24/95	.48	PC1/L	COMP			
L00176	12587-46-1	GROSS-ALPHA	(DGPC	9/26/95	.98	PC1/L	GRAB	529	7.60	113.00
L00178	12587-46-1	GROSS-ALPHA	(DGPC	9/29/95	1.03	PC1/L	GRAB	287	7.55	111.90
L00179	12587-46-1	GROSS-ALPHA	(DGPC	10/01/95	2.90	PC1/L	COMP			
L00184	12587-46-1	GROSS-ALPHA	(DGPC	9/17/95	.86	PC1/L	COMP			
L00185	12587-46-1	GROSS-ALPHA	(DGPC	10/09/95	.68	PC1/L	COMP			
L00186	12587-46-1	GROSS-ALPHA	(DGPC	10/09/95	1.20	PC1/L	GRAB	436	7.65	91.20
L00189	12587-46-1	GROSS-ALPHA	(DGPC	10/16/95	1.68	PC1/L	GRAB	434	7.65	99.60
L00191	12587-46-1	GROSS-ALPHA	(DGPC	10/23/95	.41	PC1/L	COMP			

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Sample No	Con ID	Method	Sample Date	Results Units	Lab q1fr	Val q1fr	Grab/ Comp	Flow	pH	Cond
GROSS ALPHA										
00192	12587-46-1	GROSS-ALPHA (DGPC	10/23/95	.59	PCI/L		GRAB	454	7.39	106.20
00194	12587-46-1	GROSS-ALPHA (DGPC	10/30/95	.48	PCI/L		COMP			
00195	12587-46-1	GROSS-ALPHA (DGPC	10/30/95	.39	PCI/L		GRAB	450	8.30	132.25
00215	12587-46-1	GROSS-ALPHA (DGPC	11/07/95	.31	PCI/L		GRAB	321	7.49	1151.00
00217	12587-46-1	GROSS-ALPHA (DGPC	11/07/95	.42	PCI/L		COMP			
00218	12587-46-1	GROSS-ALPHA (DGPC	11/14/95	.58	PCI/L		GRAB	271	7.54	1200.00
00220	12587-46-1	GROSS-ALPHA (DGPC	11/14/95	.15	PCI/L		COMP			
00221	12587-46-1	GROSS-ALPHA (DGPC	11/21/95	.27	PCI/L		GRAB	341	7.46	135.40
00223	12587-46-1	GROSS-ALPHA (DGPC	11/21/95	.32	PCI/L		COMP			
00224	12587-46-1	GROSS-ALPHA (DGPC	11/28/95	.28	PCI/L	U	GRAB	453	7.58	150.10
00226	12587-46-1	GROSS-ALPHA (DGPC	11/28/95	.26	PCI/L	U	COMP			
00241	12587-46-1	GROSS-ALPHA (DGPC	12/03/95	.40	PCI/L		GRAB	378	7.56	148.80
00242	12587-46-1	GROSS-ALPHA (DGPC	12/06/95	.21	PCI/L		COMP			
00244	12587-46-1	GROSS-ALPHA (DGPC	12/06/95	.58	PCI/L		GRAB	348	7.60	823.00
00246	12587-46-1	GROSS-ALPHA (DGPC	12/09/95	1.20	PCI/L		GRAB	313	7.41	122.00
00248	12587-46-1	GROSS-ALPHA (DGPC	12/12/95	.96	PCI/L		GRAB	260	7.53	135.80
00249	12587-46-1	GROSS-ALPHA (DGPC	12/12/95	1.10	PCI/L		COMP			
00251	12587-46-1	GROSS-ALPHA (DGPC	12/15/95	.50	PCI/L		GRAB	404	7.60	142.70
00253	12587-46-1	GROSS-ALPHA (DGPC	12/18/95	.20	PCI/L		GRAB	451	7.50	140.00
00254	12587-46-1	GROSS-ALPHA (DGPC	12/20/95	.35	PCI/L		COMP			
00256	12587-46-1	GROSS-ALPHA (DGPC	12/21/95	.40	PCI/L		GRAB	408	7.36	112.00
00258	12587-46-1	GROSS-ALPHA (DGPC	12/24/95	.36	PCI/L		GRAB	316	7.50	148.00
00259	12587-46-1	GROSS-ALPHA (DGPC	12/27/95	.58	PCI/L		COMP			
00261	12587-46-1	GROSS-ALPHA (DGPC	12/27/95	.23	PCI/L		GRAB	480	7.37	112.90
00263	12587-46-1	GROSS-ALPHA (DGPC	12/30/95	.53	PCI/L		GRAB	416	7.48	150.90
00297	12587-46-1	GROSS-ALPHA (DGPC	1/01/96	.66	PCI/L		GRAB	559	7.45	150.00
00299	12587-46-1	GROSS-ALPHA (DGPC	1/04/96	.20	PCI/L		GRAB	303	7.53	151.70
00301	12587-46-1	GROSS-ALPHA (DGPC	1/04/96	.56	PCI/L		COMP			
00302	12587-46-1	GROSS-ALPHA (DGPC	1/07/96	.29	PCI/L	J	GRAB	353	7.44	145.00
00306	12587-46-1	GROSS-ALPHA (DGPC	1/10/96	.23	PCI/L		GRAB	512	7.37	49.30

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Sample No	Con ID	Method	Sample Date	Results Units	Lab q1fr	Val q1fr	Grab/ Comp	Flow	pH	Cond
GROSS ALPHA										
L00308	12587-46-1	GROSS-ALPHA (DGPC	1/10/96	.23	PC1/L	U	COMP	296	7.49	142.20
L00309	12587-46-1	GROSS-ALPHA (DGPC	1/13/96	.27	PC1/L	U	GRAB	283	7.52	138.60
L00311	12587-46-1	GROSS-ALPHA (DGPC	1/16/96	.27	PC1/L	U	COMP	296	7.49	142.20
L00313	12587-46-1	GROSS-ALPHA (DGPC	1/18/96	.45	PC1/L	U	COMP	296	7.49	142.20
L00314	12587-46-1	GROSS-ALPHA (DGPC	1/19/96	.70	PC1/L	U	GRAB	305	7.46	142.70
L00316	12587-46-1	GROSS-ALPHA (DGPC	1/22/96	.45	PC1/L	U	GRAB	482	7.50	141.00
L00318	12587-46-1	GROSS-ALPHA (DGPC	1/25/96	.44	PC1/L	U	GRAB	393	7.43	143.00
L00320	12587-46-1	GROSS-ALPHA (DGPC	1/25/96	.25	PC1/L	U	COMP	296	7.49	142.20
L00321	12587-46-1	GROSS-ALPHA (DGPC	1/28/96	.29	PC1/L	U	GRAB	318	7.40	140.90
L00323	12587-46-1	GROSS-ALPHA (DGPC	1/31/96	.29	PC1/L	U	GRAB	495	7.30	73.00
L00325	12587-46-1	GROSS-ALPHA (DGPC	1/31/96	.77	PC1/L	U	COMP	296	7.49	142.20
L00347	12587-46-1	GROSS-ALPHA (DGPC	2/03/96	.26	PC1/L	U	GRAB	492	7.53	340.00
L00349	12587-46-1	GROSS-ALPHA (DGPC	2/06/96	.77	PC1/L	U	GRAB	869	7.14	333.00
L00351	12587-46-1	GROSS-ALPHA (DGPC	2/09/96	.83	PC1/L	U	GRAB	288	7.64	152.50
L00353	12587-46-1	GROSS-ALPHA (DGPC	2/09/96	2.80	PC1/L	U	COMP	275	7.53	147.00
L00354	12587-46-1	GROSS-ALPHA (DGPC	2/12/96	.50	PC1/L	U	GRAB	275	7.16	246.10
L00356	12587-46-1	GROSS-ALPHA (DGPC	2/15/96	.34	PC1/L	U	COMP	275	7.53	147.00
L00358	12587-46-1	GROSS-ALPHA (DGPC	2/15/96	.26	PC1/L	U	GRAB	341	7.20	137.00
L00359	12587-46-1	GROSS-ALPHA (DGPC	2/18/96	.54	PC1/L	U	GRAB	240	7.49	144.90
L00361	12587-46-1	GROSS-ALPHA (DGPC	2/21/96	.41	PC1/L	U	GRAB	310	7.41	151.30
L00363	12587-46-1	GROSS-ALPHA (DGPC	2/23/96	.47	PC1/L	U	COMP	296	7.50	148.00
L00364	12587-46-1	GROSS-ALPHA (DGPC	2/24/96	.54	PC1/L	U	GRAB	396	7.50	148.00
L00366	12587-46-1	GROSS-ALPHA (DGPC	2/27/96	.56	PC1/L	U	GRAB	339	7.35	574.00
L00368	12587-46-1	GROSS-ALPHA (DGPC	3/01/96	1.70	PC1/L	U	GRAB	341	7.20	137.00
L00370	12587-46-1	GROSS-ALPHA (DGPC	3/01/96	.40	PC1/L	U	COMP	240	7.49	144.90
L00396	12587-46-1	GROSS-ALPHA (DGPC	3/09/96	1.10	PC1/L	U	GRAB	303	7.45	224.59
L00400	12587-46-1	GROSS-ALPHA (DGPC	3/09/96	.94	PC1/L	U	COMP	296	7.50	148.00
L00401	12587-46-1	GROSS-ALPHA (DGPC	3/16/96	.83	PC1/L	U	GRAB	379	7.57	170.90
L00403	12587-46-1	GROSS-ALPHA (DGPC	3/16/96	.70	PC1/L	U	COMP	348	7.70	144.00
L00404	12587-46-1	GROSS-ALPHA (DGPC	3/24/96	.90	PC1/L	U	GRAB	348	7.70	144.00

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Sample No	Con ID	Method	Sample Date	Results Units	Lab q1fr	Grab/ Comp	Flow	pH	Cond
GROSS ALPHA									
L00406	12587-46-1	GROSS-ALPHA (DGPC)	3/24/96	.94	PC1/L	COMP			
L00407	12587-46-1	GROSS-ALPHA (DGPC)	3/30/96	1.20	PC1/L	GRAB	366	7.49	159.90
L00409	12587-46-1	GROSS-ALPHA (DGPC)	3/30/96	1.40	PC1/L	COMP			
L00443	12587-46-1	GROSS-ALPHA (DGPC)	4/07/96	1.40	PC1/L	GRAB	290	7.05	268.00
L00445	12587-46-1	GROSS-ALPHA (DGPC)	4/07/96	1.50	PC1/L	COMP			
L00446	12587-46-1	GROSS-ALPHA (DGPC)	4/14/96	.68	PC1/L	GRAB	297	7.19	156.10
L00448	12587-46-1	GROSS-ALPHA (DGPC)	4/14/96	.36	PC1/L	COMP			
L00449	12587-46-1	GROSS-ALPHA (DGPC)	4/21/96	1.20	PC1/L	GRAB	572	7.60	158.00
L00451	12587-46-1	GROSS-ALPHA (DGPC)	4/21/96	1.20	PC1/L	COMP			
L00452	12587-46-1	GROSS-ALPHA (DGPC)	4/28/96	.83	PC1/L	GRAB	357	7.48	162.80
L00454	12587-46-1	GROSS-ALPHA (DGPC)	4/28/96	.78	PC1/L	COMP			
LTEOP00004	12587-46-1	GROSS-ALPHA (DGPC)	5/19/95	.30	PC1/L	COMP			
LTEOP00007	12587-46-1	GROSS-ALPHA (DGPC)	5/25/95	.48	PC1/L	COMP			
GROSS BETA									
L00010	12587-47-2	GROSS-BETA (DPC)	6/08/95	.35	PC1/L	COMP			
L00044	12587-47-2	GROSS-BETA (DPC)	7/27/95	2.29	PC1/L	GRAB	360	7.65	104.50
L00071	12587-47-2	GROSS-BETA (DPC)	8/25/95	.50	PC1/L	GRAB	253	7.60	134.00
L00164	12587-47-2	GROSS-BETA (DPC)	9/11/95	.47	PC1/L	GRAB	443	7.87	142.90
L00166	12587-47-2	GROSS-BETA (DPC)	9/14/95	64.30	PC1/L	GRAB	339	7.69	128.00
L00167	12587-47-2	GROSS-BETA (DPC)	9/17/95	55.20	PC1/L	COMP			
L00169	12587-47-2	GROSS-BETA (DPC)	9/17/95	42.50	PC1/L	GRAB	485	7.70	116.60
L00171	12587-47-2	GROSS-BETA (DPC)	9/20/95	77.80	PC1/L	GRAB	456	7.64	110.70
L00173	12587-47-2	GROSS-BETA (DPC)	9/24/95	5.01	PC1/L	GRAB	306	7.63	132.00
L00174	12587-47-2	GROSS-BETA (DPC)	9/24/95	6.05	PC1/L	COMP			
L00176	12587-47-2	GROSS-BETA (DPC)	9/26/95	62.40	PC1/L	GRAB	529	7.60	113.00
L00178	12587-47-2	GROSS-BETA (DPC)	9/29/95	47.30	PC1/L	GRAB	287	7.55	111.90
L00179	12587-47-2	GROSS-BETA (DPC)	10/01/95	60.30	PC1/L	COMP			
L00184	12587-47-2	GROSS-BETA (DPC)	9/17/95	55.20	PC1/L	COMP			

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Sample No	Con ID	Method	Sample Date	Results Units	Lab q1fr	Val q1fr	Grab/ Comp	Flow	pH	Cond
GROSS BETA										
L00185	12587-47-2	GROSS-BETA (DPC)	10/09/95	42.00	PCI/L		COMP			
L00186	12587-47-2	GROSS-BETA (DPC)	10/09/95	.56	PCI/L		GRAB	436	7.65	91.20
L00189	12587-47-2	GROSS-BETA (DPC)	10/16/95	.30	PCI/L		GRAB	434	7.65	99.60
L00191	12587-47-2	GROSS-BETA (DPC)	10/23/95	.70	PCI/L		COMP			
L00192	12587-47-2	GROSS-BETA (DPC)	10/23/95	.92	PCI/L		GRAB	454	7.39	106.20
L00194	12587-47-2	GROSS-BETA (DPC)	10/30/95	.51	PCI/L		COMP			
L00195	12587-47-2	GROSS-BETA (DPC)	10/30/95	1.10	PCI/L		GRAB	450	8.30	132.25
L00215	12587-47-2	GROSS-BETA (DPC)	11/07/95	.69	PCI/L		GRAB	321	7.49	1151.00
L00217	12587-47-2	GROSS-BETA (DPC)	11/07/95	.32	PCI/L		COMP			
L00218	12587-47-2	GROSS-BETA (DPC)	11/14/95	.72	PCI/L		GRAB	271	7.54	1200.00
L00220	12587-47-2	GROSS-BETA (DPC)	11/14/95	.52	PCI/L		COMP			
L00221	12587-47-2	GROSS-BETA (DPC)	11/21/95	.94	PCI/L		GRAB	341	7.46	135.40
L00223	12587-47-2	GROSS-BETA (DPC)	11/21/95	1.40	PCI/L		COMP			
L00224	12587-47-2	GROSS-BETA (DPC)	11/28/95	.50	PCI/L		GRAB	453	7.58	150.10
L00226	12587-47-2	GROSS-BETA (DPC)	11/28/95	.45	PCI/L		COMP			
L00241	12587-47-2	GROSS-BETA (DPC)	12/03/95	1.10	PCI/L		GRAB	378	7.56	148.80
L00242	12587-47-2	GROSS-BETA (DPC)	12/06/95	.76	PCI/L		COMP			
L00244	12587-47-2	GROSS-BETA (DPC)	12/06/95	.88	PCI/L		GRAB	348	7.60	823.00
L00246	12587-47-2	GROSS-BETA (DPC)	12/09/95	2.10	PCI/L		GRAB	313	7.41	122.00
L00248	12587-47-2	GROSS-BETA (DPC)	12/12/95	1.00	PCI/L		GRAB	260	7.53	135.80
L00249	12587-47-2	GROSS-BETA (DPC)	12/12/95	1.50	PCI/L		COMP			
L00251	12587-47-2	GROSS-BETA (DPC)	12/15/95	.87	PCI/L		GRAB	404	7.60	142.70
L00253	12587-47-2	GROSS-BETA (DPC)	12/18/95	.51	PCI/L		GRAB	451	7.50	140.00
L00254	12587-47-2	GROSS-BETA (DPC)	12/20/95	.60	PCI/L		COMP			
L00256	12587-47-2	GROSS-BETA (DPC)	12/21/95	.64	PCI/L		GRAB	408	7.36	112.00
L00258	12587-47-2	GROSS-BETA (DPC)	12/24/95	.66	PCI/L		GRAB	316	7.50	148.00
L00259	12587-47-2	GROSS-BETA (DPC)	12/27/95	.58	PCI/L		COMP			
L00261	12587-47-2	GROSS-BETA (DPC)	12/27/95	1.20	PCI/L		GRAB	480	7.37	112.90
L00263	12587-47-2	GROSS-BETA (DPC)	12/30/95	.85	PCI/L		GRAB	416	7.48	150.90
L00297	12587-47-2	GROSS-BETA (DPC)	1/01/96	.70	PCI/L		GRAB	559	7.45	150.00

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Sample No	Con ID	Method	Sample Date	Results Units	Lab q1fr	Val q1fr	Grab/ Comp	Flow pH	Cond
GROSS BETA									
L00299	12587-47-2	GROSS-BETA (DPC)	1/04/96	.37	PCI/L		GRAB	303	7.53
L00301	12587-47-2	GROSS-BETA (DPC)	1/04/96	.57	PCI/L		COMP		151.70
L00302	12587-47-2	GROSS-BETA (DPC)	1/07/96	.38	PCI/L	J	GRAB	353	7.44
L00306	12587-47-2	GROSS-BETA (DPC)	1/10/96	.44	PCI/L		GRAB	512	7.37
L00308	12587-47-2	GROSS-BETA (DPC)	1/10/96	.34	PCI/L		COMP		
L00309	12587-47-2	GROSS-BETA (DPC)	1/13/96	.56	PCI/L		GRAB	296	7.49
L00311	12587-47-2	GROSS-BETA (DPC)	1/16/96	.44	PCI/L		GRAB	283	7.52
L00313	12587-47-2	GROSS-BETA (DPC)	1/18/96	.72	PCI/L		COMP		138.60
L00314	12587-47-2	GROSS-BETA (DPC)	1/19/96	.73	PCI/L		GRAB	305	7.46
L00316	12587-47-2	GROSS-BETA (DPC)	1/22/96	.46	PCI/L	U	GRAB	482	7.50
L00318	12587-47-2	GROSS-BETA (DPC)	1/25/96	.46	PCI/L		GRAB	393	7.43
L00320	12587-47-2	GROSS-BETA (DPC)	1/25/96	.34	PCI/L		COMP		143.00
L00321	12587-47-2	GROSS-BETA (DPC)	1/28/96	.52	PCI/L		GRAB	318	7.40
L00323	12587-47-2	GROSS-BETA (DPC)	1/31/96	.48	PCI/L		GRAB	495	7.30
L00325	12587-47-2	GROSS-BETA (DPC)	1/31/96	.82	PCI/L		COMP		73.00
L00347	12587-47-2	GROSS-BETA (DPC)	2/03/96	.59	PCI/L		GRAB	492	7.53
L00349	12587-47-2	GROSS-BETA (DPC)	2/06/96	1.20	PCI/L		GRAB	869	7.14
L00351	12587-47-2	GROSS-BETA (DPC)	2/09/96	.90	PCI/L		GRAB	288	7.64
L00353	12587-47-2	GROSS-BETA (DPC)	2/09/96	3.40	PCI/L		COMP		152.50
L00354	12587-47-2	GROSS-BETA (DPC)	2/12/96	2.10	PCI/L		GRAB	275	7.53
L00356	12587-47-2	GROSS-BETA (DPC)	2/15/96	1.90	PCI/L		GRAB	275	7.16
L00358	12587-47-2	GROSS-BETA (DPC)	2/15/96	1.80	PCI/L		COMP		246.10
L00359	12587-47-2	GROSS-BETA (DPC)	2/18/96	1.20	PCI/L		GRAB	240	7.49
L00361	12587-47-2	GROSS-BETA (DPC)	2/21/96	2.90	PCI/L		GRAB	310	7.41
L00363	12587-47-2	GROSS-BETA (DPC)	2/23/96	.93	PCI/L		COMP		151.30
L00364	12587-47-2	GROSS-BETA (DPC)	2/24/96	.63	PCI/L		GRAB	396	7.50
L00366	12587-47-2	GROSS-BETA (DPC)	2/27/96	.88	PCI/L		GRAB	341	7.20
L00368	12587-47-2	GROSS-BETA (DPC)	3/01/96	1.80	PCI/L		GRAB	339	7.35
L00370	12587-47-2	GROSS-BETA (DPC)	3/01/96	.49	PCI/L		COMP		574.00
L00396	12587-47-2	GROSS-BETA (DPC)	3/09/96	2.60	PCI/L		GRAB	303	7.45
									224.59

WHC-SD-LEF-EV-001, $\mathcal{L}\omega\mathcal{O}$

Sample No	Con ID	Method	Sample Date	Results Units	Lab qfr	Val qfr	Grab/ Comp	Flow	pH	Cond
GROSS BETA										
L00400	12587-47-2	GROSS-BETA (DPC)	3/09/96	2.50	PC1/L		COMP			
L00401	12587-47-2	GROSS-BETA (DPC)	3/16/96	.82	PC1/L	U	GRAB	379	7.57	170.90
L00403	12587-47-2	GROSS-BETA (DPC)	3/16/96	.84	PC1/L	U	COMP			
L00404	12587-47-2	GROSS-BETA (DPC)	3/24/96	1.90	PC1/L		GRAB	348	7.70	144.00
L00406	12587-47-2	GROSS-BETA (DPC)	3/24/96	1.10	PC1/L		COMP			
L00407	12587-47-2	GROSS-BETA (DPC)	3/30/96	2.10	PC1/L		GRAB	366	7.49	159.90
L00409	12587-47-2	GROSS-BETA (DPC)	3/30/96	1.60	PC1/L		COMP			
L00443	12587-47-2	GROSS-BETA (DPC)	4/07/96	1.40	PC1/L		GRAB	290	7.05	268.00
L00445	12587-47-2	GROSS-BETA (DPC)	4/07/96	1.30	PC1/L		COMP			
L00446	12587-47-2	GROSS-BETA (DPC)	4/14/96	2.00	PC1/L		GRAB	297	7.19	156.10
L00448	12587-47-2	GROSS-BETA (DPC)	4/14/96	1.40	PC1/L		COMP			
L00449	12587-47-2	GROSS-BETA (DPC)	4/21/96	1.40	PC1/L		GRAB	572	7.60	158.00
L00451	12587-47-2	GROSS-BETA (DPC)	4/21/96	1.70	PC1/L		COMP			
L00452	12587-47-2	GROSS-BETA (DPC)	4/28/96	.94	PC1/L		GRAB	357	7.48	162.80
L00454	12587-47-2	GROSS-BETA (DPC)	4/28/96	1.30	PC1/L		COMP			
LTEOP00004	12587-47-2	GROSS-BETA (DPC)	5/19/95	.46	PC1/L		COMP			
LTEOP00007	12587-47-2	GROSS-BETA (DPC)	5/25/95	.47	PC1/L		COMP			
IRON										
L00010	7439-89-6	SW-846 6010A	6/08/95	90.00	UG/L		COMP			
L00024	7439-89-6	SW-846 6010A	7/03/95	48.00	UG/L		GRAB	458	7.49	144.20
L00026	7439-89-6	SW-846 6010A	7/06/95	101.00	UG/L		GRAB	592	7.50	145.00
L00027	7439-89-6	SW-846 6010A	7/06/95	118.00	UG/L		COMP			
L00029	7439-89-6	SW-846 6010A	7/09/95	76.00	UG/L		GRAB	249	7.50	157.10
L00031	7439-89-6	SW-846 6010A	7/12/95	71.00	UG/L		GRAB	256	7.49	156.00
L00032	7439-89-6	SW-846 6010A	7/14/95	41.00	UG/L		COMP			
L00034	7439-89-6	SW-846 6010A	7/15/95	51.00	UG/L		GRAB	262	7.59	150.30
L00036	7439-89-6	SW-846 6010A	7/18/95	206.00	UG/L		GRAB	232	7.40	155.40
L00037	7439-89-6	SW-846 6010A	7/21/95	123.00	UG/L		COMP			

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Sample No	Con ID	Method	Sample Date			Results	Units	Lab qfr	Val qfr	Grab/ Comp	Flow	pH	Cond
IRON													
U00039	7439-89-6	SW-846	6010A	7/21/95	113.00	UG/L				GRAB	482	7.25	155.50
U00041	7439-89-6	SW-846	6010A	7/24/95	61.00	UG/L				GRAB	244	7.62	132.40
U00042	7439-89-6	SW-846	6010A	7/27/95	41.00	UG/L				COMP			
U00044	7439-89-6	SW-846	6010A	7/27/95	73.00	UG/L				GRAB	360	7.65	104.50
U00046	7439-89-6	SW-846	6010A	7/28/95	37.00	UG/L				GRAB	235	7.64	112.20
U00048	7439-89-6	SW-846	6010A	8/01/95	32.00	UG/L				GRAB	421	7.65	120.70
U00050	7439-89-6	SW-846	6010A	8/04/95	34.00	UG/L				GRAB	312	7.73	148.50
U00051	7439-89-6	SW-846	6010A	8/05/95	46.00	UG/L				COMP			
U00053	7439-89-6	SW-846	6010A	8/07/95	124.00	UG/L				GRAB	379	7.71	148.70
U00055	7439-89-6	SW-846	6010A	8/10/95	30.00	UG/L				GRAB	374	7.71	143.67
U00056	7439-89-6	SW-846	6010A	8/11/95	26.00	UG/L				COMP			
U00058	7439-89-6	SW-846	6010A	8/13/95	27.00	UG/L				GRAB	400	7.77	153.45
U00060	7439-89-6	SW-846	6010A	8/16/95	60.00	UG/L				GRAB	423	7.78	129.90
U00064	7439-89-6	SW-846	6010A	8/19/95	49.00	UG/L				COMP			
U00066	7439-89-6	SW-846	6010A	8/19/95	72.00	UG/L				GRAB	311	7.71	139.00
U00068	7439-89-6	SW-846	6010A	8/22/95	89.00	UG/L				GRAB	565	7.66	129.80
U00069	7439-89-6	SW-846	6010A	8/26/95	47.00	UG/L				COMP			
U00071	7439-89-6	SW-846	6010A	8/25/95	44.00	UG/L				GRAB	253	7.60	134.00
U00072	7439-89-6	SW-846	6010A	8/28/95	88.00	UG/L				GRAB	393	7.63	137.00
U00075	7439-89-6	SW-846	6010A	8/31/95	109.00	UG/L				GRAB	376	7.61	141.40
U00156	7439-89-6	SW-846	6010A	9/03/95	97.00	UG/L				GRAB	270	7.64	172.40
U00157	7439-89-6	SW-846	6010A	9/03/95	9.00	UG/L				COMP			
U00159	7439-89-6	SW-846	6010A	9/05/95	220.00	UG/L				GRAB	334	7.59	101.80
U00161	7439-89-6	SW-846	6010A	9/08/95	47.00	UG/L				GRAB	263	7.64	125.10
U00162	7439-89-6	SW-846	6010A	9/11/95	33.00	UG/L				COMP			
U00164	7439-89-6	SW-846	6010A	9/11/95	35.00	UG/L				GRAB	443	7.87	142.90
U00166	7439-89-6	SW-846	6010A	9/14/95	30.00	UG/L				GRAB	339	7.69	128.00
U00167	7439-89-6	SW-846	6010A	9/17/95	27.00	UG/L				COMP			
U00169	7439-89-6	SW-846	6010A	9/17/95	36.00	UG/L				GRAB	485	7.70	116.60
U00171	7439-89-6	SW-846	6010A	9/20/95	19.00	UG/L				GRAB	456	7.64	110.70

WHC-SD-LEF-EV-001, $\lambda\nu\text{O}$

Sample No	Con ID	Method	Sample Date	Results Units	Lab q1fr	Val q1fr	Grab/ Comp	Flow	pH	Cond
TRON										
L00173	7439-89-6	SW-846 6010A	9/24/95	443.00	UG/L		GRAB	306	7.63	132.00
L00174	7439-89-6	SW-846 6010A	9/24/95	35.00	UG/L		COMP			
L00176	7439-89-6	SW-846 6010A	9/26/95	26.00	UG/L		GRAB	529	7.60	113.00
L00178	7439-89-6	SW-846 6010A	9/29/95	78.00	UG/L		GRAB	287	7.55	111.90
L00179	7439-89-6	SW-846 6010A	10/01/95	30.00	UG/L		COMP			
L00183	7439-89-6	SW-846 6010A	9/12/95	33.00	UG/L		GRAB	445	7.94	121.20
L00184	7439-89-6	SW-846 6010A	9/17/95	24.00	UG/L		COMP			
L00185	7439-89-6	SW-846 6010A	10/09/95	43.00	UG/L		COMP			
L00186	7439-89-6	SW-846 6010A	10/09/95	107.00	UG/L		GRAB	436	7.65	91.20
L00188	7439-89-6	SW-846 6010A	10/16/95	58.00	UG/L	B	COMP			
L00189	7439-89-6	SW-846 6010A	10/16/95	51.00	UG/L	B	GRAB	434	7.65	99.60
L00191	7439-89-6	SW-846 6010A	10/23/95	32.00	UG/L		COMP			
L00192	7439-89-6	SW-846 6010A	10/23/95	53.00	UG/L		GRAB	454	7.39	106.20
L00194	7439-89-6	SW-846 6010A	10/30/95	316.00	UG/L		COMP			
L00195	7439-89-6	SW-846 6010A	10/30/95	165.00	UG/L		GRAB	450	8.30	132.25
L00215	7439-89-6	SW-846 6010A	11/07/95	46.00	UG/L		GRAB	321	7.49	1151.00
L00217	7439-89-6	SW-846 6010A	11/07/95	39.00	UG/L		COMP			
L00218	7439-89-6	SW-846 6010A	11/14/95	39.00	UG/L		GRAB	271	7.54	1200.00
L00220	7439-89-6	SW-846 6010A	11/14/95	32.00	UG/L		COMP			
L00221	7439-89-6	SW-846 6010A	11/21/95	130.00	UG/L		GRAB	341	7.46	135.40
L00223	7439-89-6	SW-846 6010A	11/21/95	34.00	UG/L		COMP			
L00224	7439-89-6	SW-846 6010A	11/28/95	33.00	UG/L		GRAB	453	7.58	150.10
L00226	7439-89-6	SW-846 6010A	11/28/95	30.00	UG/L		COMP			
L00241	7439-89-6	SW-846 6010A	12/03/95	39.00	UG/L		GRAB	378	7.56	148.80
L00242	7439-89-6	SW-846 6010A	12/06/95	86.00	UG/L		COMP			
L00244	7439-89-6	SW-846 6010A	12/06/95	82.00	UG/L		GRAB	348	7.60	823.00
L00246	7439-89-6	SW-846 6010A	12/09/95	190.00	UG/L		GRAB	313	7.41	122.00
L00248	7439-89-6	SW-846 6010A	12/12/95	125.00	UG/L	B	GRAB	260	7.53	135.80
L00249	7439-89-6	SW-846 6010A	12/12/95	180.00	UG/L	B	COMP			
L00251	7439-89-6	SW-846 6010A	12/15/95	105.00	UG/L		GRAB	404	7.60	142.70

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Sample No	Con ID	Method	Sample Date	Results Units	Lab qfr	Val qfr	Grab/ Comp	Flow	pH	Cond
IRON										
L00253	7439-89-6	SW-846 6010A	12/18/95	67.00	UG/L	GRAB 451	7.50	140.00		
L00254	7439-89-6	SW-846 6010A	12/20/95	110.00	UG/L	COMP				
L00256	7439-89-6	SW-846 6010A	12/21/95	192.00	UG/L	GRAB	408	7.36	112.00	
L00258	7439-89-6	SW-846 6010A	12/24/95	69.00	UG/L	GRAB	316	7.50	148.00	
L00259	7439-89-6	SW-846 6010A	12/27/95	51.00	UG/L	COMP				
L00261	7439-89-6	SW-846 6010A	12/27/95	47.00	UG/L	GRAB	480	7.37	112.90	
L00263	7439-89-6	SW-846 6010A	12/30/95	67.00	UG/L	GRAB	416	7.48	150.90	
L00297	7439-89-6	SW-846 6010A	1/01/96	56.00	UG/L	GRAB	559	7.45	150.00	
L00299	7439-89-6	SW-846 6010A	1/04/96	59.00	UG/L	GRAB	303	7.53	151.70	
L00301	7439-89-6	SW-846 6010A	1/04/96	62.00	UG/L	COMP				
L00302	7439-89-6	SW-846 6010A	1/07/96	114.00	UG/L	GRAB	353	7.44	145.00	
L00306	7439-89-6	SW-846 6010A	1/10/96	289.00	UG/L	GRAB	512	7.37	49.30	
L00308	7439-89-6	SW-846 6010A	1/10/96	63.00	UG/L	COMP				
L00309	7439-89-6	SW-846 6010A	1/13/96	56.00	UG/L	GRAB	296	7.49	142.20	
L00311	7439-89-6	SW-846 6010A	1/16/96	98.00	UG/L	GRAB	283	7.52	138.60	
L00313	7439-89-6	SW-846 6010A	1/18/96	101.00	UG/L	COMP				
L00314	7439-89-6	SW-846 6010A	1/19/96	74.00	UG/L	GRAB	305	7.46	142.70	
L00316	7439-89-6	SW-846 6010A	1/22/96	97.00	UG/L	GRAB	482	7.50	141.00	
L00318	7439-89-6	SW-846 6010A	1/25/96	60.00	UG/L	GRAB	393	7.43	143.00	
L00320	7439-89-6	SW-846 6010A	1/25/96	79.00	UG/L	COMP				
L00321	7439-89-6	SW-846 6010A	1/28/96	58.00	UG/L	GRAB	318	7.40	140.90	
L00323	7439-89-6	SW-846 6010A	1/31/96	69.00	UG/L	GRAB	495	7.30	73.00	
L00325	7439-89-6	SW-846 6010A	1/31/96	91.00	UG/L	COMP				
L00347	7439-89-6	SW-846 6010A	2/03/96	58.00	UG/L	GRAB	492	7.53	340.00	
L00349	7439-89-6	SW-846 6010A	2/06/96	104.00	UG/L	GRAB	869	7.14	333.00	
L00351	7439-89-6	SW-846 6010A	2/09/96	69.00	UG/L	GRAB	288	7.64	152.50	
L00353	7439-89-6	SW-846 6010A	2/09/96	183.00	UG/L	COMP				
L00354	7439-89-6	SW-846 6010A	2/12/96	76.00	UG/L	GRAB	275	7.53	147.00	
L00356	7439-89-6	SW-846 6010A	2/15/96	80.00	UG/L	GRAB	275	7.16	246.10	
L00358	7439-89-6	SW-846 6010A	2/15/96	89.00	UG/L	COMP				

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Sample No	Con ID	Method	Sample Date	Results	Units	Lab qfr	Val qfr	Grab/ Comp	Flow	pH	Cond
IRON											
L00359	7439-89-6	SW-846 6010A	2/18/96	103.00	UG/L			GRAB	240	7.49	144.90
L00361	7439-89-6	SW-846 6010A	2/21/96	89.00	UG/L			GRAB	310	7.41	151.30
L00363	7439-89-6	SW-846 6010A	2/23/96	81.00	UG/L			COMP			
L00364	7439-89-6	SW-846 6010A	2/24/96	66.00	UG/L			GRAB	395	7.50	148.00
L00365	7439-89-6	SW-846 6010A	2/27/96	118.00	UG/L			GRAB	341	7.20	137.00
L00368	7439-89-6	SW-846 6010A	3/01/96	81.00	UG/L			GRAB	339	7.35	574.00
L00370	7439-89-6	SW-846 6010A	3/01/96	63.00	UG/L			COMP			
L00395	7439-89-6	SW-846 6010A	3/09/96	191.00	UG/L			GRAB	303	7.45	224.59
L00400	7439-89-6	SW-846 6010A	3/09/96	203.00	UG/L			COMP			
L00401	7439-89-6	SW-846 6010A	3/16/96	169.00	UG/L			GRAB	379	7.57	170.90
L00403	7439-89-6	SW-846 6010A	3/16/96	173.00	UG/L			COMP			
L00404	7439-89-6	SW-846 6010A	3/24/96	103.00	UG/L			GRAB	348	7.70	144.00
L00406	7439-89-6	SW-846 6010A	3/24/96	159.00	UG/L			COMP			
L00407	7439-89-6	SW-846 6010A	3/30/96	108.00	UG/L			GRAB	366	7.49	159.90
L00409	7439-89-6	SW-846 6010A	3/30/96	184.00	UG/L			COMP			
L00443	7439-89-6	SW-846 6010A	4/07/96	1820.00	UG/L			GRAB	290	7.05	268.00
L00445	7439-89-6	SW-846 6010A	4/07/96	3100.00	UG/L			COMP			
L00446	7439-89-6	SW-846 6010A	4/14/96	94.00	UG/L			GRAB	297	7.19	156.10
L00448	7439-89-6	SW-846 6010A	4/14/96	76.00	UG/L			COMP			
L00449	7439-89-6	SW-846 6010A	4/21/96	140.00	UG/L			GRAB	572	7.60	158.00
L00451	7439-89-6	SW-846 6010A	4/21/96	321.00	UG/L			COMP			
L00452	7439-89-6	SW-846 6010A	4/28/96	89.00	UG/L			GRAB	357	7.48	162.80
L00454	7439-89-6	SW-846 6010A	4/28/96	68.00	UG/L			COMP			
LTEOP00004	7439-89-6	SW-846 6010A	5/19/95	68.00	UG/L			COMP			
LTEOP00007	7439-89-6	SW-846 6010A	5/25/95	89.00	UG/L			COMP			
LEAD											
L00010	7439-92-1	SW-846 7421	6/08/95	.18	UG/L		J	COMP			
L00012	7439-92-1	SW-846 7421	6/15/95	.56	UG/L		J	COMP			

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Sample No	Con ID	Method	Sample	Date	Results	Units	Lab	V _{al}	Grab/ Comp	Flow	pH	Cond
LEAD								qfr	Comp			
L00014	7439-92-1	SW-846	7421	6/22/95	.20	UG/L	J	COMP				
L00016	7439-92-1	SW-846	7421	6/29/95	.31	UG/L	J	COMP				
L00024	7439-92-1	SW-846	7421	7/03/95	0.00	UG/L	J	GRAB	458	7.49	144.20	
L00026	7439-92-1	SW-846	7421	7/06/95	0.00	UG/L	J	GRAB	592	7.50	145.00	
L00027	7439-92-1	SW-846	7421	7/06/95	0.00	UG/L	J	COMP				
L00029	7439-92-1	SW-846	7421	7/09/95	0.00	UG/L	J	GRAB	249	7.50	157.10	
L00031	7439-92-1	SW-846	7421	7/12/95	0.00	UG/L	J	GRAB	256	7.49	156.00	
L00032	7439-92-1	SW-846	7421	7/14/95	0.00	UG/L	J	COMP				
L00034	7439-92-1	SW-846	7421	7/15/95	0.00	UG/L	J	GRAB	262	7.59	150.30	
L00036	7439-92-1	SW-846	7421	7/18/95	0.00	UG/L	J	GRAB	232	7.40	155.40	
L00037	7439-92-1	SW-846	7421	7/21/95	0.00	UG/L	J	COMP				
L00039	7439-92-1	SW-846	7421	7/21/95	0.00	UG/L	J	GRAB	482	7.25	155.50	
L00041	7439-92-1	SW-846	7421	7/24/95	0.00	UG/L	J	GRAB	244	7.62	132.40	
L00042	7439-92-1	SW-846	7421	7/27/95	0.00	UG/L	J	COMP				
L00044	7439-92-1	SW-846	7421	7/27/95	0.00	UG/L	J	GRAB	360	7.65	104.50	
L00046	7439-92-1	SW-846	7421	7/28/95	0.00	UG/L	J	GRAB	235	7.64	112.20	
L00048	7439-92-1	SW-846	7421	8/01/95	0.00	UG/L	J	GRAB	421	7.65	120.70	
L00050	7439-92-1	SW-846	7421	8/04/95	0.00	UG/L	J	GRAB	312	7.73	148.50	
L00051	7439-92-1	SW-846	7421	8/05/95	0.00	UG/L	J	COMP				
L00053	7439-92-1	SW-846	7421	8/07/95	1.50	UG/L	J	GRAB	379	7.71	148.70	
L00055	7439-92-1	SW-846	7421	8/10/95	0.00	UG/L	J	GRAB	374	7.71	143.67	
L00056	7439-92-1	SW-846	7421	8/11/95	1.70	UG/L	J	COMP				
L00058	7439-92-1	SW-846	7421	8/13/95	3.00	UG/L	J	GRAB	400	7.77	153.45	
L00060	7439-92-1	SW-846	7421	8/16/95	1.30	UG/L	J	GRAB	423	7.78	129.90	
L00064	7439-92-1	SW-846	7421	8/19/95	3.60	UG/L	J	COMP				
L00066	7439-92-1	SW-846	7421	8/19/95	3.60	UG/L	J	GRAB	311	7.71	139.00	
L00068	7439-92-1	SW-846	7421	8/22/95	2.50	UG/L	J	GRAB	565	7.66	129.80	
L00069	7439-92-1	SW-846	7421	8/26/95	0.00	UG/L	J	COMP				
L00071	7439-92-1	SW-846	7421	8/25/95	2.40	UG/L	J	GRAB	253	7.60	131.00	
L00072	7439-92-1	SW-846	7421	8/28/95	1.70	UG/L	J	GRAB	393	7.63	137.00	

WHC-SD-LFF-EV-001, Rev D

Sample No	Con ID	Method	Sample Date	Results	Units	Lab qfr	Val qfr	Grab/ Comp	Flow	pH	Cond
L00075	7439-92-1	SW-846 7421	8/31/95	0.00	UG/L			GRAB	376	7.61	141.40
L00156	7439-92-1	SW-846 7421	9/03/95	0.00	UG/L			GRAB	270	7.64	172.40
L00157	7439-92-1	SW-846 7421	9/03/95	0.00	UG/L			COMP			
L00159	7439-92-1	SW-846 7421	9/05/95	0.00	UG/L			GRAB	334	7.59	101.80
L00161	7439-92-1	SW-846 7421	9/08/95	0.00	UG/L			GRAB	263	7.64	125.10
L00162	7439-92-1	SW-846 7421	9/11/95	0.00	UG/L			COMP			
L00164	7439-92-1	SW-846 7421	9/11/95	3.80	UG/L			GRAB	443	7.87	142.90
L00166	7439-92-1	SW-846 7421	9/14/95	0.00	UG/L			GRAB	339	7.69	128.00
L00167	7439-92-1	SW-846 7421	9/17/95	0.00	UG/L			COMP			
L00169	7439-92-1	SW-846 7421	9/17/95	0.00	UG/L			GRAB	485	7.70	116.60
L00171	7439-92-1	SW-846 7421	9/20/95	0.00	UG/L			GRAB	456	7.64	110.70
L00173	7439-92-1	SW-846 7421	9/24/95	0.00	UG/L			GRAB	306	7.63	132.00
L00174	7439-92-1	SW-846 7421	9/24/95	0.00	UG/L			COMP			
L00176	7439-92-1	SW-846 7421	9/26/95	0.00	UG/L			GRAB	529	7.60	113.00
L00178	7439-92-1	SW-846 7421	9/29/95	0.00	UG/L			GRAB	287	7.55	111.90
L00179	7439-92-1	SW-846 7421	10/01/95	0.00	UG/L			COMP			
L00183	7439-92-1	SW-846 7421	9/12/95	0.00	UG/L			GRAB	445	7.94	121.20
L00184	7439-92-1	SW-846 7421	9/17/95	2.40	UG/L			COMP			
L00185	7439-92-1	SW-846 7421	10/09/95	0.00	UG/L			COMP			
L00186	7439-92-1	SW-846 7421	10/09/95	0.00	UG/L			GRAB	436	7.65	91.20
L00188	7439-92-1	SW-846 7421	10/16/95	0.00	UG/L			COMP			
L00189	7439-92-1	SW-846 7421	10/16/95	0.00	UG/L			GRAB	434	7.65	99.60
L00191	7439-92-1	SW-846 7421	10/23/95	0.00	UG/L			COMP			
L00192	7439-92-1	SW-846 7421	10/23/95	0.00	UG/L			GRAB	454	7.39	106.20
L00194	7439-92-1	SW-846 7421	10/30/95	1.00	UG/L			COMP			
L00195	7439-92-1	SW-846 7421	10/30/95	0.00	UG/L			GRAB	450	8.30	132.25
L00215	7439-92-1	SW-846 7421	11/07/95	0.00	UG/L			GRAB	321	7.49	1151.00
L00217	7439-92-1	SW-846 7421	11/07/95	0.00	UG/L			COMP			
L00218	7439-92-1	SW-846 7421	11/14/95	0.00	UG/L			GRAB	271	7.54	1200.00
L00220	7439-92-1	SW-846 7421	11/14/95	0.00	UG/L			COMP			

WHC-SD-LEF-EV-001, Rev D

Sample No	Con ID	Method	Sample Date	Results Units	Lab qfr	Grab/ Comp	Flow	pH	Cond
L00221	7439-92-1	SW-846 7421	11/21/95	0.00	UG/L	GRAB	341	7.46	135.40
L00223	7439-92-1	SW-846 7421	11/21/95	0.00	UG/L	COMP			
L00224	7439-92-1	SW-846 7421	11/28/95	0.00	UG/L	GRAB	453	7.58	150.10
L00226	7439-92-1	SW-846 7421	11/28/95	0.00	UG/L	COMP			
L00241	7439-92-1	SW-846 7421	12/03/95	0.00	UG/L	GRAB	378	7.56	148.80
L00242	7439-92-1	SW-846 7421	12/06/95	0.00	UG/L	COMP			
L00244	7439-92-1	SW-846 7421	12/06/95	0.00	UG/L	GRAB	348	7.60	823.00
L00246	7439-92-1	SW-846 7421	12/09/95	1.60	UG/L	GRAB	313	7.41	122.00
L00248	7439-92-1	SW-846 7421	12/12/95	0.00	UG/L	GRAB	260	7.53	135.80
L00249	7439-92-1	SW-846 7421	12/12/95	0.00	UG/L	COMP			
L00251	7439-92-1	SW-846 7421	12/15/95	0.00	UG/L	GRAB	404	7.60	142.70
L00253	7439-92-1	SW-846 7421	12/18/95	0.00	UG/L	GRAB	451	7.50	140.00
L00254	7439-92-1	SW-846 7421	12/20/95	0.00	UG/L	COMP			
L00256	7439-92-1	SW-846 7421	12/21/95	0.00	UG/L	GRAB	408	7.36	112.00
L00258	7439-92-1	SW-846 7421	12/24/95	0.00	UG/L	GRAB	316	7.50	148.00
L00259	7439-92-1	SW-846 7421	12/27/95	0.00	UG/L	COMP			
L00261	7439-92-1	SW-846 7421	12/27/95	0.00	UG/L	GRAB	480	7.37	112.90
L00263	7439-92-1	SW-846 7421	12/30/95	0.00	UG/L	GRAB	416	7.48	150.90
L00297	7439-92-1	SW-846 7421	1/01/96	0.00	UG/L	GRAB	559	7.45	150.00
L00299	7439-92-1	SW-846 7421	1/04/96	0.00	UG/L	GRAB	303	7.53	151.70
L00301	7439-92-1	SW-846 7421	1/04/96	0.00	UG/L	COMP			
L00302	7439-92-1	SW-846 7421	1/07/96	0.00	UG/L	GRAB	353	7.44	145.00
L00306	7439-92-1	SW-846 7421	1/10/96	0.00	UG/L	GRAB	512	7.37	49.30
L00308	7439-92-1	SW-846 7421	1/13/96	0.00	UG/L	COMP			
L00309	7439-92-1	SW-846 7421	1/16/96	0.00	UG/L	GRAB	296	7.49	142.20
L00311	7439-92-1	SW-846 7421	1/16/96	0.00	UG/L	GRAB	283	7.52	138.60
L00313	7439-92-1	SW-846 7421	1/18/96	0.00	UG/L	COMP			
L00314	7439-92-1	SW-846 7421	1/19/96	0.00	UG/L	GRAB	305	7.46	142.70
L00316	7439-92-1	SW-846 7421	1/22/96	0.00	UG/L	GRAB	482	7.50	141.00
L00318	7439-92-1	SW-846 7421	1/25/96	0.00	UG/L	GRAB	393	7.43	143.00

WHC-SD-LEFF-EV-001, $\mathcal{E}_w \mathcal{O}$

Sample No	Con ID	Method	Sample Date	Results Units	Lab q1fr	Val q1fr	Grab/ Comp	Flow	pH	Cond
<u>LEAD</u>										
L00320	7439-92-1	SW-846 7421	1/25/96	0.00	UG/L		COMP			
L00321	7439-92-1	SW-846 7421	1/28/96	0.00	UG/L		GRAB	318	7.40	140.90
L00323	7439-92-1	SW-846 7421	1/31/96	0.00	UG/L		GRAB	495	7.30	73.00
L00325	7439-92-1	SW-846 7421	1/31/96	0.00	UG/L		COMP			
L00347	7439-92-1	SW-846 7421	2/03/96	0.00	UG/L		GRAB	492	7.53	340.00
L00349	7439-92-1	SW-846 7421	2/06/96	0.00	UG/L		GRAB	869	7.14	333.00
L00351	7439-92-1	SW-846 7421	2/09/96	0.00	UG/L		GRAB	288	7.64	152.50
L00353	7439-92-1	SW-846 7421	2/09/96	0.00	UG/L		COMP			
L00354	7439-92-1	SW-846 7421	2/12/96	0.00	UG/L		GRAB	275	7.53	147.00
L00356	7439-92-1	SW-846 7421	2/15/96	0.00	UG/L		GRAB	275	7.16	246.10
L00358	7439-92-1	SW-846 7421	2/15/96	0.00	UG/L		COMP			
L00359	7439-92-1	SW-846 7421	2/18/96	0.00	UG/L		GRAB	240	7.49	144.90
L00361	7439-92-1	SW-846 7421	2/21/96	0.00	UG/L		GRAB	310	7.41	151.30
L00363	7439-92-1	SW-846 7421	2/23/96	0.00	UG/L		COMP			
L00364	7439-92-1	SW-846 7421	2/24/96	0.00	UG/L		GRAB	396	7.50	148.00
L00366	7439-92-1	SW-846 7421	2/27/96	0.00	UG/L		GRAB	341	7.20	137.00
L00368	7439-92-1	SW-846 7421	3/01/96	0.00	UG/L		GRAB	339	7.35	574.00
L00370	7439-92-1	SW-846 7421	3/01/96	0.00	UG/L		COMP			
L00396	7439-92-1	SW-846 7421	3/09/96	0.00	UG/L		GRAB	303	7.45	224.59
L00400	7439-92-1	SW-846 7421	3/09/96	1.00	UG/L		COMP			
L00401	7439-92-1	SW-846 7421	3/16/96	0.00	UG/L		GRAB	379	7.57	170.90
L00403	7439-92-1	SW-846 7421	3/16/96	0.00	UG/L		COMP			
L00404	7439-92-1	SW-846 7421	3/24/96	0.00	UG/L		GRAB	348	7.70	144.00
L00406	7439-92-1	SW-846 7421	3/24/96	0.00	UG/L		COMP			
L00407	7439-92-1	SW-846 7421	3/30/96	0.00	UG/L		GRAB	366	7.49	159.90
L00409	7439-92-1	SW-846 7421	3/30/96	0.00	UG/L		COMP			
L00443	7439-92-1	SW-846 7421	4/07/96	0.00	UG/L		GRAB	290	7.05	268.00
L00445	7439-92-1	SW-846 7421	4/07/96	0.80	UG/L		COMP			
L00446	7439-92-1	SW-846 7421	4/14/96	0.00	UG/L		GRAB	297	7.19	156.10
L00448	7439-92-1	SW-846 7421	4/14/96	0.00	UG/L		COMP			

WHC-SD-LEF-EV-001, Rev D

Sample No	Con ID	Method	Sample Date Results Units			Lab qfr	Grab/ Comp	Flow	pH	Cond
			Date	Results	Units					
LEAD										
L00449	7439-92-1	EPA-600	200.8	4/21/96	1.00	UG/L	GRAB	572	7.60	158.00
L00451	7439-92-1	EPA-600	200.8	4/21/96	1.10	UG/L	COMP			
L00452	7439-92-1	EPA-600	200.8	4/28/96	1.00	UG/L	GRAB	357	7.48	162.80
L00454	7439-92-1	EPA-600	200.8	4/28/96	1.00	UG/L	COMP			
LTEOP00001	7439-92-1	SW-846	7421	5/04/95	.20	UG/L	J	COMP		
LTEOP00002	7439-92-1	SW-846	7421	5/11/95	.20	UG/L	J	COMP		
LTEOP00003	7439-92-1	SW-846	7421	5/15/95	1.50	UG/L	J	COMP		
LTEOP00004	7439-92-1	SW-846	7421	5/19/95	.84	UG/L	J	COMP		
LTEOP00005	7439-92-1	SW-846	7421	5/08/95	.09	UG/L	J	COMP		
LTEOP00006	7439-92-1	SW-846	7421	5/22/95	.14	UG/L	J	COMP		
LTEOP00007	7439-92-1	SW-846	7421	5/25/95	.12	UG/L	J	COMP		
LTEOP00008	7439-92-1	SW-846	7421	5/29/95	.30	UG/L	J	COMP		
MANGANESE										
L00010	7439-96-5	SW-846	6010A	6/08/95	7.00	UG/L	COMP	458	7.49	144.20
L00024	7439-96-5	SW-846	6010A	7/03/95	4.00	UG/L	GRAB	592	7.50	145.00
L00026	7439-96-5	SW-846	6010A	7/06/95	12.00	UG/L	COMP			
L00027	7439-96-5	SW-846	6010A	7/06/95	4.00	UG/L	GRAB			
L00029	7439-96-5	SW-846	6010A	7/09/95	8.00	UG/L	GRAB	249	7.50	157.10
L00031	7439-96-5	SW-846	6010A	7/12/95	7.00	UG/L	GRAB	256	7.49	156.00
L00032	7439-96-5	SW-846	6010A	7/14/95	4.00	UG/L	COMP			
L00034	7439-96-5	SW-846	6010A	7/15/95	4.00	UG/L	GRAB	262	7.59	150.30
L00036	7439-96-5	SW-846	6010A	7/18/95	15.00	UG/L	GRAB	232	7.40	155.40
L00037	7439-96-5	SW-846	6010A	7/21/95	13.00	UG/L	COMP			
L00039	7439-96-5	SW-846	6010A	7/21/95	13.00	UG/L	GRAB	482	7.25	155.50
L00041	7439-96-5	SW-846	6010A	7/24/95	5.00	UG/L	GRAB	244	7.62	132.40
L00042	7439-96-5	SW-846	6010A	7/27/95	4.00	UG/L	COMP			
L00044	7439-96-5	SW-846	6010A	7/27/95	6.00	UG/L	GRAB	360	7.65	104.50
L00046	7439-96-5	SW-846	6010A	7/28/95	4.00	UG/L	GRAB	235	7.64	112.20

WHC-SD-LFF-EV-001, $\lambda\text{w } \delta$

Sample No	Con ID	Method	Sample Date	Results Units	Lab qfr	Val qfr	Grab/ Comp	Flow	pH	Cond
MANGANESE										
L00048	7439-96-5	SW-846	6010A	8/01/95	4.00	UG/L	GRAB	421	7.65	120.70
L00050	7439-96-5	SW-846	6010A	8/04/95	4.00	UG/L	GRAB	312	7.73	148.50
L00051	7439-96-5	SW-846	6010A	8/05/95	4.00	UG/L	COMP			
L00053	7439-96-5	SW-846	6010A	8/07/95	12.00	UG/L	GRAB	379	7.71	148.70
L00055	7439-96-5	SW-846	6010A	8/10/95	4.00	UG/L	GRAB	374	7.71	143.67
L00056	7439-96-5	SW-846	6010A	8/11/95	4.00	UG/L	COMP			
L00058	7439-96-5	SW-846	6010A	8/13/95	4.00	UG/L	GRAB	400	7.77	153.45
L00060	7439-96-5	SW-846	6010A	8/16/95	6.00	UG/L	GRAB	423	7.78	129.90
L00064	7439-96-5	SW-846	6010A	8/19/95	5.00	UG/L	COMP			
L00066	7439-96-5	SW-846	6010A	8/19/95	5.00	UG/L	GRAB	311	7.71	139.00
L00068	7439-96-5	SW-846	6010A	8/22/95	5.00	UG/L	GRAB	565	7.66	129.80
L00069	7439-96-5	SW-846	6010A	8/26/95	4.00	UG/L	COMP			
L00071	7439-96-5	SW-846	6010A	8/25/95	4.00	UG/L	GRAB	253	7.60	134.00
L00072	7439-96-5	SW-846	6010A	8/28/95	4.00	UG/L	GRAB	393	7.63	137.00
L00156	7439-96-5	SW-846	6010A	8/31/95	8.00	UG/L	GRAB	376	7.61	141.40
L00157	7439-96-5	SW-846	6010A	9/03/95	6.00	UG/L	GRAB	270	7.64	172.40
L00159	7439-96-5	SW-846	6010A	9/03/95	4.00	UG/L	COMP			
L00161	7439-96-5	SW-846	6010A	9/05/95	17.00	UG/L	GRAB	334	7.59	101.80
L00162	7439-96-5	SW-846	6010A	9/08/95	5.00	UG/L	GRAB	263	7.64	125.10
L00164	7439-96-5	SW-846	6010A	9/11/95	4.00	UG/L	COMP			
L00166	7439-96-5	SW-846	6010A	9/11/95	4.00	UG/L	GRAB	443	7.87	142.90
L00167	7439-96-5	SW-846	6010A	9/14/95	4.00	UG/L	GRAB	339	7.69	128.00
L00169	7439-96-5	SW-846	6010A	9/17/95	4.00	UG/L	COMP			
L00171	7439-96-5	SW-846	6010A	9/20/95	4.00	UG/L	GRAB	485	7.70	116.60
L00173	7439-96-5	SW-846	6010A	9/24/95	25.00	UG/L	GRAB	456	7.64	110.70
L00174	7439-96-5	SW-846	6010A	9/24/95	4.00	UG/L	COMP	306	7.63	132.00
L00176	7439-96-5	SW-846	6010A	9/26/95	4.00	UG/L	GRAB	529	7.60	113.00
L00178	7439-96-5	SW-846	6010A	9/29/95	4.00	UG/L	GRAB	287	7.55	111.90
L00179	7439-96-5	SW-846	6010A	10/01/95	4.00	UG/L	COMP			

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Sample No	Con ID	Method	Sample Date	Results Units	Lab qfr	Val qfr	Grab/ Comp	Flow	pH	Cond
MANGANESE										
L00183	7439-96-5	SW-846	6010A	9/12/95	4.00	UG/L	GRAB	445	7.94	121.20
L00184	7439-96-5	SW-846	6010A	9/17/95	4.00	UG/L	COMP			
L00185	7439-96-5	SW-846	6010A	10/09/95	6.00	UG/L	GRAB	436	7.65	91.20
L00186	7439-96-5	SW-846	6010A	10/09/95	5.00	UG/L	COMP			
L00188	7439-96-5	SW-846	6010A	10/16/95	4.00	UG/L	GRAB	434	7.65	99.60
L00189	7439-96-5	SW-846	6010A	10/16/95	4.00	UG/L	COMP			
L00191	7439-96-5	SW-846	6010A	10/23/95	4.00	UG/L	GRAB	454	7.39	106.20
L00192	7439-96-5	SW-846	6010A	10/23/95	4.00	UG/L	COMP			
L00194	7439-96-5	SW-846	6010A	10/30/95	13.00	UG/L	GRAB	450	8.30	132.25
L00195	7439-96-5	SW-846	6010A	10/30/95	7.00	UG/L	GRAB	321	7.49	1151.00
L00215	7439-96-5	SW-846	6010A	11/07/95	4.00	UG/L	COMP			
L00217	7439-96-5	SW-846	6010A	11/07/95	4.00	UG/L	GRAB	271	7.54	1200.00
L00218	7439-96-5	SW-846	6010A	11/14/95	4.00	UG/L	COMP			
L00220	7439-96-5	SW-846	6010A	11/14/95	4.00	UG/L	GRAB	341	7.46	135.40
L00221	7439-96-5	SW-846	6010A	11/21/95	12.00	UG/L	COMP			
L00223	7439-96-5	SW-846	6010A	11/21/95	4.00	UG/L	GRAB	453	7.58	150.10
L00224	7439-96-5	SW-846	6010A	11/28/95	4.00	UG/L	COMP			
L00226	7439-96-5	SW-846	6010A	11/28/95	4.00	UG/L	GRAB	378	7.56	148.80
L00241	7439-96-5	SW-846	6010A	12/03/95	4.00	UG/L	COMP			
L00242	7439-96-5	SW-846	6010A	12/06/95	6.00	UG/L	GRAB	348	7.60	823.00
L00244	7439-96-5	SW-846	6010A	12/06/95	4.00	UG/L	GRAB	313	7.41	122.00
L00246	7439-96-5	SW-846	6010A	12/09/95	8.00	UG/L	COMP			
L00248	7439-96-5	SW-846	6010A	12/12/95	5.00	UG/L	GRAB	260	7.53	135.80
L00249	7439-96-5	SW-846	6010A	12/12/95	12.00	UG/L	COMP			
L00251	7439-96-5	SW-846	6010A	12/15/95	5.00	UG/L	GRAB	404	7.60	142.70
L00253	7439-96-5	SW-846	6010A	12/18/95	4.00	UG/L	GRAB	451	7.50	140.00
L00254	7439-96-5	SW-846	6010A	12/20/95	5.00	UG/L	COMP			
L00256	7439-96-5	SW-846	6010A	12/21/95	6.00	UG/L	GRAB	408	7.36	112.00
L00258	7439-96-5	SW-846	6010A	12/24/95	4.00	UG/L	GRAB	316	7.50	148.00
L00259	7439-96-5	SW-846	6010A	12/27/95	4.00	UG/L	COMP			

WHC-SD-LFF-EV-001, ω , δ

Sample No	Con ID	Method	Sample Date	Results Units	Lab q1fr	Val q1fr	Grab/ Comp	Flow	pH	Cond
MANGANESE										
L00261	7439-96-5	SW-846 6010A	12/27/95	4.00	UG/L	U	GRAB	480	7.37	112.90
L00263	7439-96-5	SW-846 6010A	12/30/95	4.00	UG/L	U	GRAB	416	7.48	150.90
L00297	7439-96-5	SW-846 6010A	1/01/96	4.00	UG/L	U	GRAB	559	7.45	150.00
L00299	7439-96-5	SW-846 6010A	1/04/96	4.00	UG/L	U	GRAB	303	7.53	151.70
L00301	7439-96-5	SW-846 6010A	1/04/96	4.00	UG/L	U	COMP			
L00302	7439-96-5	SW-846 6010A	1/07/96	5.00	UG/L	U	GRAB	353	7.44	145.00
L00306	7439-96-5	SW-846 6010A	1/10/96	11.00	UG/L	U	GRAB	512	7.37	49.30
L00308	7439-96-5	SW-846 6010A	1/10/96	4.00	UG/L	U	COMP			
L00309	7439-96-5	SW-846 6010A	1/13/96	4.00	UG/L	U	GRAB	296	7.49	142.20
L00311	7439-96-5	SW-846 6010A	1/16/96	4.00	UG/L	U	GRAB	283	7.52	138.60
L00313	7439-96-5	SW-846 6010A	1/18/96	6.00	UG/L	U	COMP			
L00314	7439-96-5	SW-846 6010A	1/19/96	5.00	UG/L	U	GRAB	305	7.46	142.70
L00316	7439-96-5	SW-846 6010A	1/22/96	5.00	UG/L	U	GRAB	482	7.50	141.00
L00318	7439-96-5	SW-846 6010A	1/25/96	4.00	UG/L	U	GRAB	393	7.43	143.00
L00320	7439-96-5	SW-846 6010A	1/25/96	5.00	UG/L	U	COMP			
L00321	7439-96-5	SW-846 6010A	1/28/96	4.00	UG/L	U	GRAB	318	7.40	140.90
L00323	7439-96-5	SW-846 6010A	1/31/96	4.00	UG/L	U	GRAB	495	7.30	73.00
L00325	7439-96-5	SW-846 6010A	1/31/96	13.00	UG/L	U	COMP			
L00347	7439-96-5	SW-846 6010A	2/03/96	4.00	UG/L	U	GRAB	492	7.53	340.00
L00349	7439-96-5	SW-846 6010A	2/06/96	5.00	UG/L	U	GRAB	869	7.14	333.00
L00351	7439-96-5	SW-846 6010A	2/09/96	4.00	UG/L	U	GRAB	288	7.64	152.50
L00353	7439-96-5	SW-846 6010A	2/09/96	6.00	UG/L	U	COMP			
L00354	7439-96-5	SW-846 6010A	2/12/96	4.00	UG/L	U	GRAB	275	7.53	147.00
L00356	7439-96-5	SW-846 6010A	2/15/96	4.00	UG/L	U	GRAB	275	7.16	246.10
L00358	7439-96-5	SW-846 6010A	2/15/96	4.00	UG/L	U	COMP			
L00359	7439-96-5	SW-846 6010A	2/18/96	4.00	UG/L	U	GRAB	240	7.49	144.90
L00361	7439-96-5	SW-846 6010A	2/21/96	5.00	UG/L	U	GRAB	310	7.41	151.30
L00363	7439-96-5	SW-846 6010A	2/23/96	4.00	UG/L	U	COMP			
L00364	7439-96-5	SW-846 6010A	2/24/96	4.00	UG/L	U	GRAB	396	7.50	148.00
L00366	7439-96-5	SW-846 6010A	2/27/96	5.00	UG/L	U	GRAB	341	7.20	137.00

WHC-SD-LEF-EV-001, RevD

Sample No	Con ID	Method	Sample Date	Results Units	Lab q1fr	Val q1fr	Grab/ Comp	Flow	pH	Cond
MANGANESE										
L00368	7439-96-5	SW-846	6010A	3/01/96	4.00	UG/L	GRAB	339	7.35	574.00
L00370	7439-96-5	SW-846	6010A	3/01/96	4.00	UG/L	COMP			
L00396	7439-96-5	SW-846	6010A	3/09/96	5.00	UG/L	GRAB	303	7.45	224.59
L00400	7439-96-5	SW-846	6010A	3/09/96	6.00	UG/L	COMP			
L00401	7439-96-5	SW-846	6010A	3/16/96	5.00	UG/L	GRAB	379	7.57	170.90
L00403	7439-96-5	SW-846	6010A	3/16/96	5.00	UG/L	COMP			
L00404	7439-96-5	SW-846	6010A	3/24/96	4.00	UG/L	GRAB	348	7.70	144.00
L00406	7439-96-5	SW-846	6010A	3/24/96	4.00	UG/L	COMP			
L00407	7439-96-5	SW-846	6010A	3/30/96	4.00	UG/L	GRAB	366	7.49	159.90
L00409	7439-96-5	SW-846	6010A	3/30/96	4.00	UG/L	COMP			
L00443	7439-96-5	SW-846	6010A	4/07/96	4.00	UG/L	GRAB	290	7.05	268.00
L00445	7439-96-5	SW-846	6010A	4/07/96	38.00	UG/L	COMP			
L00446	7439-96-5	SW-846	6010A	4/14/96	4.00	UG/L	GRAB	297	7.19	156.10
L00448	7439-96-5	SW-846	6010A	4/14/96	4.00	UG/L	COMP			
L00449	7439-96-5	SW-846	6010A	4/21/96	6.00	UG/L	GRAB	572	7.60	158.00
L00451	7439-96-5	SW-846	6010A	4/21/96	9.00	UG/L	COMP			
L00452	7439-96-5	SW-846	6010A	4/28/96	5.00	UG/L	GRAB	357	7.48	162.80
L00454	7439-96-5	SW-846	6010A	4/28/96	5.00	UG/L	COMP			
LTEOP00004	7439-96-5	SW-846	6010A	5/19/95	5.00	UG/L	COMP			
LTEOP00007	7439-96-5	SW-846	6010A	5/25/95	6.00	UG/L	COMP			
MERCURY										
L00010	7439-97-6	EPA-600	245.1	6/08/95	0.00	UG/L	GRAB	569	7.45	140.00
L00012	7439-97-6	EPA-600	245.1	6/15/95	-.02	UG/L	GRAB	630	7.35	25.65
L00014	7439-97-6	EPA-600	245.1	6/22/95	.17	UG/L	J			
L00016	7439-97-6	EPA-600	245.1	6/29/95	0.00	UG/L	GRAB	466	7.56	142.90
L00024	7439-97-6	EPA-600	245.1	7/03/95	.20	UG/L	GRAB	396	7.55	141.00
L00026	7439-97-6	EPA-600	245.1	7/06/95	.20	UG/L	GRAB	458	7.49	144.20
L00027	7439-97-6	EPA-600	245.1	7/06/95	.20	UG/L	GRAB	592	7.50	145.00

WHC-SD-LEF-EV-001, Rev 0

Sample No	Con ID	Method	Sample Date	Results Units	Lab qfr	Val qfr	Grab/ Comp	Flow	pH	Cond
MERCURY										
L00029	7439-97-6	EPA-600 245.1	7/09/95	.20	UG/L	GRAB 249	7.50	157.10		
L00031	7439-97-6	EPA-600 245.1	7/12/95	.20	UG/L	GRAB 256	7.49	156.00		
L00032	7439-97-6	EPA-600 245.1	7/14/95	.20	UG/L	COMP				
L00034	7439-97-6	EPA-600 245.1	7/15/95	.20	UG/L	GRAB	262	7.59	150.30	
L00036	7439-97-6	EPA-600 245.1	7/18/95	.53	UG/L	GRAB	232	7.40	155.40	
L00037	7439-97-6	EPA-600 245.1	7/21/95	.20	UG/L	COMP				
L00039	7439-97-6	EPA-600 245.1	7/21/95	.20	UG/L	GRAB	482	7.25	155.50	
L00041	7439-97-6	EPA-600 245.1	7/24/95	.20	UG/L	GRAB	244	7.62	132.40	
L00042	7439-97-6	EPA-600 245.1	7/27/95	.20	UG/L	COMP				
L00044	7439-97-6	EPA-600 245.1	7/27/95	.20	UG/L	GRAB	360	7.65	104.50	
L00046	7439-97-6	EPA-600 245.1	7/28/95	.45	UG/L	GRAB	235	7.64	112.20	
L00048	7439-97-6	EPA-600 245.1	8/01/95	.20	UG/L	GRAB	421	7.65	120.70	
L00050	7439-97-6	EPA-600 245.1	8/04/95	.20	UG/L	GRAB	312	7.73	148.50	
L00051	7439-97-6	EPA-600 245.1	8/05/95	.20	UG/L	COMP				
L00053	7439-97-6	EPA-600 245.1	8/07/95	.20	UG/L	GRAB	379	7.71	148.70	
L00055	7439-97-6	EPA-600 245.1	8/10/95	.20	UG/L	GRAB	374	7.71	143.67	
L00056	7439-97-6	EPA-600 245.1	8/11/95	.07	UG/L	COMP				
L00058	7439-97-6	EPA-600 245.1	8/13/95	.15	UG/L	GRAB	400	7.77	153.45	
L00060	7439-97-6	EPA-600 245.1	8/16/95	.07	UG/L	GRAB	423	7.78	129.90	
L00064	7439-97-6	EPA-600 245.1	8/19/95	0.00	UG/L	COMP				
L00066	7439-97-6	EPA-600 245.1	8/19/95	.04	UG/L	GRAB	311	7.71	139.00	
L00068	7439-97-6	EPA-600 245.1	8/22/95	.10	UG/L	GRAB	565	7.66	129.80	
L00069	7439-97-6	EPA-600 245.1	8/26/95	.01	UG/L	COMP				
L00071	7439-97-6	EPA-600 245.1	8/25/95	0.00	UG/L	GRAB	253	7.60	134.00	
L00072	7439-97-6	EPA-600 245.1	8/28/95	.02	UG/L	GRAB	393	7.63	137.00	
L00075	7439-97-6	EPA-600 245.1	8/31/95	.01	UG/L	GRAB	376	7.61	141.40	
L00156	7439-97-6	EPA-600 245.1	9/03/95	.01	UG/L	GRAB	270	7.64	172.40	
L00157	7439-97-6	EPA-600 245.1	9/03/95	0.00	UG/L	COMP				
L00159	7439-97-6	EPA-600 245.1	9/05/95	0.00	UG/L	GRAB	334	7.59	101.80	
L00161	7439-97-6	EPA-600 245.1	9/08/95	.13	UG/L	GRAB	263	7.64	125.10	

WHC-SD-LEF-EV-001, Rev D

Sample No	Con ID	Method	Sample Date	Results Units	Lab qfr	Val qfr	Grab/ Comp	Flow	pH	Cond
MERCURY										
L00162	7439-97-6	EPA-600	245.1	9/11/95	0.00	UG/L	COMP			
L00164	7439-97-6	EPA-600	245.1	9/11/95	0.00	UG/L	GRAB	443	7.87	142.90
L00166	7439-97-6	EPA-600	245.1	9/14/95	.20	UG/L	GRAB	339	7.69	128.00
L00167	7439-97-6	EPA-600	245.1	9/17/95	.20	UG/L	COMP			
L00169	7439-97-6	EPA-600	245.1	9/17/95	0.00	UG/L	UJ	GRAB	485	7.70
L00171	7439-97-6	EPA-600	245.1	9/20/95	.20	UG/L	UJ	GRAB	456	7.64
L00173	7439-97-6	EPA-600	245.1	9/24/95	.28	UG/L	UJ	GRAB	306	7.63
L00174	7439-97-6	EPA-600	245.1	9/24/95	.20	UG/L	UJ	COMP		
L00176	7439-97-6	EPA-600	245.1	9/26/95	.14	UG/L	UJ	GRAB	529	7.60
L00178	7439-97-6	EPA-600	245.1	9/29/95	.11	UG/L	UJ	GRAB	287	7.55
L00179	7439-97-6	EPA-600	245.1	10/01/95	.02	UG/L	UJ	COMP		
L00183	7439-97-6	EPA-600	245.1	9/12/95	0.00	UG/L	UJ	GRAB	445	7.94
L00184	7439-97-6	EPA-600	245.1	9/17/95	.20	UG/L	UJ	COMP		
L00185	7439-97-6	EPA-600	245.1	10/09/95	.21	UG/L	UJ	COMP		
L00186	7439-97-6	EPA-600	245.1	10/09/95	.21	UG/L	UJ	GRAB	436	7.65
L00188	7439-97-6	EPA-600	245.1	10/16/95	.33	UG/L	UJ	COMP		
L00189	7439-97-6	EPA-600	245.1	10/16/95	.23	UG/L	UJ	GRAB	434	7.65
L00191	7439-97-6	EPA-600	245.1	10/23/95	.05	UG/L	UJ	COMP		
L00192	7439-97-6	EPA-600	245.1	10/23/95	.02	UG/L	UJ	GRAB	454	7.39
L00194	7439-97-6	EPA-600	245.1	10/30/95	.09	UG/L	UJ	COMP		
L00195	7439-97-6	EPA-600	245.1	10/30/95	.61	UG/L	UJ	GRAB	450	8.30
L00215	7439-97-6	EPA-600	245.1	11/07/95	.08	UG/L	UJ	GRAB	321	7.49
L00217	7439-97-6	EPA-600	245.1	11/07/95	.10	UG/L	UJ	COMP		
L00218	7439-97-6	EPA-600	245.1	11/14/95	0.00	UG/L	UJ	GRAB	271	7.54
L00220	7439-97-6	EPA-600	245.1	11/14/95	.09	UG/L	UJ	COMP		
L00221	7439-97-6	EPA-600	245.1	11/21/95	.21	UG/L	UJ	GRAB	341	7.46
L00223	7439-97-6	EPA-600	245.1	11/21/95	.39	UG/L	UJ	COMP		
L00224	7439-97-6	EPA-600	245.1	11/28/95	1.16	UG/L	UJ	GRAB	453	7.58
L00226	7439-97-6	EPA-600	245.1	11/28/95	1.92	UG/L	UJ	COMP		
L00241	7439-97-6	EPA-600	245.1	12/03/95	.32	UG/L	UJ	GRAB	378	7.56
										148.80

WHC-SD-LEF-EV-001, $\mathcal{L}_{Zr}/\mathcal{O}$

Sample No	Con ID	Method	Sample Date	Results Units	Lab qfr	Val qfr	Grab/ Comp	Flow	pH	Cond
MERCURY										
L00242	7439-97-6	EPA-600 245.1	12/06/95	1.51	UG/L		COMP			
L00244	7439-97-6	EPA-600 245.1	12/06/95	1.47	UG/L		GRAB	348	7.60	823.00
L00246	7439-97-6	EPA-600 245.1	12/09/95	.76	UG/L		GRAB	313	7.41	122.00
L00248	7439-97-6	EPA-600 245.1	12/12/95	.39	UG/L		GRAB	260	7.53	135.80
L00249	7439-97-6	EPA-600 245.1	12/12/95	2.07	UG/L		COMP			
L00251	7439-97-6	EPA-600 245.1	12/15/95	.10	UG/L		GRAB	404	7.60	142.70
L00253	7439-97-6	EPA-600 245.1	12/18/95	.46	UG/L		GRAB	451	7.50	140.00
L00254	7439-97-6	EPA-600 245.1	12/20/95	.03	UG/L		COMP			
L00256	7439-97-6	EPA-600 245.1	12/21/95	.09	UG/L		GRAB	408	7.36	112.00
L00258	7439-97-6	EPA-600 245.1	12/24/95	.06	UG/L		GRAB	316	7.50	148.00
L00259	7439-97-6	EPA-600 245.1	12/27/95	1.27	UG/L		COMP			
L00261	7439-97-6	EPA-600 245.1	12/27/95	.12	UG/L		GRAB	480	7.37	112.90
L00263	7439-97-6	EPA-600 245.1	12/30/95	.02	UG/L		GRAB	416	7.48	150.90
L00297	7439-97-6	EPA-600 245.1	1/01/96	0.00	UG/L		GRAB	559	7.45	150.00
L00299	7439-97-6	EPA-600 245.1	1/04/96	0.00	UG/L		GRAB	303	7.53	151.70
L00301	7439-97-6	EPA-600 245.1	1/04/96	0.00	UG/L		COMP			
L00302	7439-97-6	EPA-600 245.1	1/07/96	.11	UG/L		GRAB	353	7.44	145.00
L00306	7439-97-6	EPA-600 245.1	1/10/96	.26	UG/L		GRAB	512	7.37	49.30
L00308	7439-97-6	EPA-600 245.1	1/10/96	.16	UG/L		COMP			
L00309	7439-97-6	EPA-600 245.1	1/13/96	.13	UG/L		GRAB	296	7.49	142.20
L00311	7439-97-6	EPA-600 245.1	1/16/96	.21	UG/L		GRAB	283	7.52	138.60
L00313	7439-97-6	EPA-600 245.1	1/18/96	.05	UG/L		COMP			
L00314	7439-97-6	EPA-600 245.1	1/19/96	.06	UG/L		GRAB	305	7.46	142.70
L00316	7439-97-6	EPA-600 245.1	1/22/96	.10	UG/L		GRAB	482	7.50	141.00
L00318	7439-97-6	EPA-600 245.1	1/25/96	0.00	UG/L		GRAB	393	7.43	143.00
L00320	7439-97-6	EPA-600 245.1	1/25/96	0.00	UG/L		COMP			
L00321	7439-97-6	EPA-600 245.1	1/28/96	0.00	UG/L		GRAB	318	7.40	140.90
L00323	7439-97-6	EPA-600 245.1	1/31/96	.19	UG/L		GRAB	495	7.30	73.00
L00325	7439-97-6	EPA-600 245.1	1/31/96	.15	UG/L		COMP			
L00347	7439-97-6	EPA-600 245.1	2/03/96	.12	UG/L		GRAB	492	7.53	340.00

WHC-SD-LFF-EV-001, Rev D

Sample No	Con ID	Method	Sample Date	Results Units	Lab qfr	Val qfr	Grab/ Comp	Flow	pH	Cond
MERCURY										
L00349	7439-97-6	EPA-600 245.1	2/06/96	.50	UG/L		GRAB	869	7.14	333.00
L00351	7439-97-6	EPA-600 245.1	2/09/96	.50	UG/L		GRAB	288	7.64	152.50
L00353	7439-97-6	EPA-600 245.1	2/09/96	.50	UG/L		COMP			
L00354	7439-97-6	EPA-600 245.1	2/12/96	.50	UG/L		GRAB	275	7.53	147.00
L00356	7439-97-6	EPA-600 245.1	2/15/96	.50	UG/L		GRAB	275	7.16	246.10
L00358	7439-97-6	EPA-600 245.1	2/15/96	.50	UG/L		COMP			
L00359	7439-97-6	EPA-600 245.1	2/18/96	.50	UG/L		GRAB	240	7.49	144.90
L00361	7439-97-6	EPA-600 245.1	2/21/96	.50	UG/L		GRAB	310	7.41	151.30
L00363	7439-97-6	EPA-600 245.1	2/23/96	.50	UG/L		COMP			
L00364	7439-97-6	EPA-600 245.1	2/24/96	.50	UG/L		GRAB	396	7.50	148.00
L00366	7439-97-6	EPA-600 245.1	2/27/96	.50	UG/L		GRAB	341	7.20	137.00
L00368	7439-97-6	EPA-600 245.1	3/01/96	.50	UG/L		GRAB	339	7.35	574.00
L00370	7439-97-6	EPA-600 245.1	3/01/96	.50	UG/L		COMP			
L00396	7439-97-6	EPA-600 245.1	3/09/96	.50	UG/L		GRAB	303	7.45	224.59
L00400	7439-97-6	EPA-600 245.1	3/09/96	.50	UG/L		COMP			
L00401	7439-97-6	EPA-600 245.1	3/16/96	0.00	UG/L		GRAB	379	7.57	170.90
L00403	7439-97-6	EPA-600 245.1	3/16/96	0.00	UG/L		COMP			
L00404	7439-97-6	EPA-600 245.1	3/24/96	0.00	UG/L		GRAB	348	7.70	144.00
L00406	7439-97-6	EPA-600 245.1	3/24/96	0.00	UG/L		COMP			
L00407	7439-97-6	EPA-600 200.8	3/30/96	.40	UG/L		GRAB	366	7.49	159.90
L00409	7439-97-6	EPA-600 200.8	3/30/96	.40	UG/L		COMP			
L00443	7439-97-6	EPA-600 200.8	4/07/96	.40	UG/L		GRAB	290	7.05	268.00
L00445	7439-97-6	EPA-600 200.8	4/07/96	.40	UG/L		COMP			
L00446	7439-97-6	EPA-600 200.8	4/14/96	.20	UG/L		GRAB	297	7.19	156.10
L00448	7439-97-6	EPA-600 200.8	4/14/96	.20	UG/L		COMP			
L00449	7439-97-6	EPA-600 200.8	4/21/96	.20	UG/L		GRAB	572	7.60	158.00
L00451	7439-97-6	EPA-600 200.8	4/21/96	.20	UG/L		COMP			
L00452	7439-97-6	EPA-600 200.8	4/28/96	.20	UG/L		GRAB	357	7.48	162.80
L00454	7439-97-6	EPA-600 200.8	4/28/96	.20	UG/L		COMP			
LTEOP00001	7439-97-6	EPA-600 245.1	5/04/95	.04	UG/L	J	GRAB	124	7.88	143.00

WHC-SD-LEFF-EV-001, $\Delta\omega = 0$

Sample No	Con ID	Method	Sample Date	Results Units	Lab qfr	Val qfr	Grab Comp	Flow	pH	Cond
MERCURY										
LTEOP00002	7439-97-6	EPA-600	245.1	5/11/95	0.00	UG/L	U			
LTEOP00003	7439-97-6	EPA-600	245.1	5/15/95	.06	UG/L	U			
LTEOP00004	7439-97-6	EPA-600	245.1	5/19/95	.03	UG/L	U			
LTEOP00005	7439-97-6	EPA-600	245.1	5/08/95	.03	UG/L	U			
LTEOP00006	7439-97-6	EPA-600	245.1	5/22/95	.12	UG/L	U			
LTEOP00007	7439-97-6	EPA-600	245.1	5/25/95	.10	UG/L	U			
LTEOP00008	7439-97-6	EPA-600	245.1	5/29/95	.02	UG/L	U			
METHYLENE CHLORIDE										
L00010	75-09-2	SW-846	8260A	6/08/95	0.00	UG/L	U			
L00012	75-09-2	SW-846	8260A	6/15/95	0.00	UG/L	U			
L00014	75-09-2	SW-846	8260A	6/22/95	0.00	UG/L	U			
L00016	75-09-2	SW-846	8260A	6/29/95	0.00	UG/L	U			
L00024	75-09-2	SW-846	8260A	7/03/95	0.00	UG/L	U			
L00026	75-09-2	SW-846	8260A	7/06/95	0.00	UG/L	U			
L00029	75-09-2	SW-846	8260A	7/09/95	0.00	UG/L	U			
L00031	75-09-2	SW-846	8260A	7/12/95	0.00	UG/L	U			
L00034	75-09-2	SW-846	8260A	7/15/95	0.00	UG/L	U			
L00036	75-09-2	SW-846	8260A	7/18/95	0.00	UG/L	U			
L00039	75-09-2	SW-846	8260A	7/21/95	0.00	UG/L	U			
L00041	75-09-2	SW-846	8260A	7/24/95	0.00	UG/L	U			
L00044	75-09-2	SW-846	8260A	7/27/95	0.00	UG/L	U			
L00046	75-09-2	SW-846	8260A	7/28/95	0.00	UG/L	U			
L00048	75-09-2	SW-846	8260A	8/01/95	0.00	UG/L	U			
L00050	75-09-2	SW-846	8260A	8/04/95	0.00	UG/L	U			
L00053	75-09-2	SW-846	8260A	8/07/95	0.00	UG/L	U			
L00055	75-09-2	SW-846	8260A	8/10/95	0.00	UG/L	U			
L00058	75-09-2	SW-846	8260A	8/13/95	0.00	UG/L	U			
L00060	75-09-2	SW-846	8260A	8/16/95	0.00	UG/L	U			

WHC-SD-LFF-EV-001, $\rho_{\text{H}_2\text{O}}$

Sample No	Con ID	Method	Sample	Date	Results	Units	Lab qfr	Grab/ Comp	Val qfr	Flow	pH	Cond
METHYLENE CHLORIDE												
L00066	75-09-2	SW-846	8260A	8/19/95	0.00	UG/L		GRAB	311	7.71	139.00	
L00068	75-09-2	SW-846	8260A	8/22/95	0.00	UG/L		GRAB	565	7.66	129.80	
L00071	75-09-2	SW-846	8260A	8/25/95	0.00	UG/L		GRAB	253	7.60	134.00	
L00072	75-09-2	SW-846	8260A	8/28/95	0.00	UG/L		GRAB	393	7.63	137.00	
L00075	75-09-2	SW-846	8260A	8/31/95	0.00	UG/L		GRAB	376	7.61	141.40	
L00156	75-09-2	SW-846	8260A	9/03/95	0.00	UG/L		GRAB	270	7.64	172.40	
L00159	75-09-2	SW-846	8260A	9/05/95	0.00	UG/L		GRAB	334	7.59	101.80	
L00161	75-09-2	SW-846	8260A	9/08/95	0.00	UG/L		GRAB	263	7.64	125.10	
L00164	75-09-2	SW-846	8260A	9/11/95	0.00	UG/L		GRAB	443	7.87	142.90	
L00166	75-09-2	SW-846	8260A	9/14/95	0.00	UG/L		GRAB	339	7.69	128.00	
L00169	75-09-2	SW-846	8260A	9/17/95	0.00	UG/L		GRAB	485	7.70	116.60	
L00171	75-09-2	SW-846	8260A	9/20/95	0.00	UG/L		GRAB	456	7.64	110.70	
L00173	75-09-2	SW-846	8260A	9/24/95	0.00	UG/L		GRAB	306	7.63	132.00	
L00176	75-09-2	SW-846	8260A	9/26/95	0.00	UG/L		GRAB	529	7.60	113.00	
L00178	75-09-2	SW-846	8260A	9/29/95	0.00	UG/L		GRAB	287	7.55	111.90	
L00183	75-09-2	SW-846	8260A	9/12/95	0.00	UG/L		GRAB	445	7.94	121.20	
L00186	75-09-2	SW-846	8260A	10/09/95	0.00	UG/L		GRAB	436	7.65	91.20	
L00189	75-09-2	SW-846	8260A	10/16/95	0.00	UG/L		GRAB	434	7.65	99.60	
L00192	75-09-2	SW-846	8260A	10/23/95	0.00	UG/L		GRAB	454	7.39	106.20	
L00195	75-09-2	SW-846	8260A	10/30/95	0.00	UG/L		GRAB	450	8.30	132.25	
L00215	75-09-2	SW-846	8260A	11/07/95	0.00	UG/L		GRAB	321	7.49	1151.00	
L00218	75-09-2	SW-846	8260A	11/14/95	0.00	UG/L		GRAB	271	7.54	1200.00	
L00221	75-09-2	SW-846	8260A	11/21/95	0.00	UG/L		GRAB	341	7.46	135.40	
L00224	75-09-2	SW-846	8260A	11/28/95	0.00	UG/L		GRAB	453	7.58	150.10	
L00241	75-09-2	SW-846	8260A	12/03/95	0.00	UG/L		GRAB	378	7.56	148.80	
L00244	75-09-2	SW-846	8260A	12/06/95	0.00	UG/L		GRAB	348	7.60	823.00	
L00246	75-09-2	SW-846	8260A	12/09/95	0.00	UG/L		GRAB	313	7.41	122.00	
L00248	75-09-2	SW-846	8260A	12/12/95	0.00	UG/L		GRAB	260	7.53	135.80	
L00251	75-09-2	SW-846	8260A	12/15/95	0.00	UG/L		GRAB	404	7.60	142.70	
L00253	75-09-2	SW-846	8260A	12/18/95	0.00	UG/L		GRAB	451	7.50	140.00	

Sample No	Con ID	Method	Sample Date	Results Units	Lab qfr	Val qfr	Grab/ Comp	Flow	pH	Cond
METHYLENE CHLORIDE										
L00256	75-09-2	SW-846 8260A	12/21/95	0.00	UG/L		GRAB	408	7.36	112.00
L00258	75-09-2	SW-846 8260A	12/24/95	0.00	UG/L		GRAB	316	7.50	148.00
L00261	75-09-2	SW-846 8260A	12/27/95	0.00	UG/L		GRAB	480	7.37	112.90
L00263	75-09-2	SW-846 8260A	12/30/95	0.00	UG/L		GRAB	416	7.48	150.90
L00297	75-09-2	SW-846 8260A	1/01/96	0.00	UG/L		GRAB	559	7.45	150.00
L00299	75-09-2	SW-846 8260A	1/04/96	0.00	UG/L		GRAB	303	7.53	151.70
L00302	75-09-2	SW-846 8260A	1/07/96	0.00	UG/L		GRAB	303	7.44	145.00
L00306	75-09-2	SW-846 8260A	1/10/96	0.00	UG/L		GRAB	512	7.37	49.30
L00309	75-09-2	SW-846 8260A	1/13/96	0.00	UG/L		GRAB	296	7.49	142.20
L00311	75-09-2	SW-846 8260A	1/16/96	0.00	UG/L		GRAB	283	7.52	138.60
L00314	75-09-2	SW-846 8260A	1/19/96	0.00	UG/L		GRAB	305	7.46	142.70
L00316	75-09-2	SW-846 8260A	1/22/96	0.00	UG/L		GRAB	482	7.50	141.00
L00318	75-09-2	SW-846 8260A	1/25/96	0.00	UG/L		GRAB	393	7.43	143.00
L00323	75-09-2	SW-846 8260A	1/31/96	0.00	UG/L		GRAB	495	7.30	73.00
L00347	75-09-2	SW-846 8260A	2/03/96	0.00	UG/L		GRAB	492	7.53	340.00
L00349	75-09-2	SW-846 8260A	2/06/96	0.00	UG/L		GRAB	869	7.14	333.00
L00351	75-09-2	SW-846 8260A	2/09/96	0.00	UG/L		GRAB	288	7.64	152.50
L00354	75-09-2	SW-846 8260A	2/12/96	0.00	UG/L		GRAB	275	7.53	147.00
L00356	75-09-2	SW-846 8260A	2/15/96	0.00	UG/L		GRAB	275	7.16	246.10
L00359	75-09-2	SW-846 8260A	2/18/96	0.00	UG/L		GRAB	240	7.49	144.90
L00361	75-09-2	SW-846 8260A	2/21/96	0.00	UG/L		GRAB	310	7.41	151.30
L00364	75-09-2	SW-846 8260A	2/24/96	0.00	UG/L		GRAB	396	7.50	148.00
L00366	75-09-2	SW-846 8260A	2/27/96	0.00	UG/L		GRAB	341	7.20	137.00
L00368	75-09-2	SW-846 8260A	3/01/96	0.00	UG/L		GRAB	339	7.35	574.00
L00396	75-09-2	SW-846 8260A	3/09/96	0.00	UG/L		GRAB	303	7.45	224.59
L00401	75-09-2	SW-846 8260A	3/16/96	0.00	UG/L		GRAB	379	7.57	170.90
L00404	75-09-2	SW-846 8260A	3/24/96	0.00	UG/L		GRAB	348	7.70	144.00
L00407	75-09-2	SW-846 8260A	3/30/96	0.00	UG/L		GRAB	366	7.49	159.90
L00443	75-09-2	SW-846 8260A	4/07/96	0.00	UG/L		GRAB	290	7.05	268.00
L00446	75-09-2	SW-846 8260A	4/14/96	0.00	UG/L		GRAB	297	7.19	156.10

WHC-SD-LFF-EV-001, Revision D

Sample No	Con ID	Method	Sample Date	Results	Units	Lab Val	qfr	Grab/ Comp	Flow	pH	Cond
METHYLENE CHLORIDE											
L000449	75-09-2	SW-846 8260A	4/21/96	0.00	UG/L			GRAB	572	7.60	158.00
L000452	75-09-2	SW-846 8260A	4/28/96	0.00	UG/L			GRAB	357	7.48	162.80
LTEOP000001	75-09-2	SW-846 8260A	5/04/95	0.00	UG/L			GRAB	124	7.88	143.00
LTEOP000002	75-09-2	SW-846 8260A	5/11/95	0.00	UG/L			GRAB	325	7.55	124.30
LTEOP000003	75-09-2	SW-846 8260A	5/15/95	0.00	UG/L			GRAB	334	7.65	122.00
LTEOP000004	75-09-2	SW-846 8260A	5/19/95	0.00	UG/L			GRAB	343	7.86	183.70
LTEOP000005	75-09-2	SW-846 8260A	5/08/95	0.00	UG/L			GRAB	135	7.78	148.00
LTEOP000006	75-09-2	SW-846 8260A	5/22/95	0.00	UG/L			GRAB	490	7.90	149.00
LTEOP000007	75-09-2	SW-846 8260A	5/25/95	0.00	UG/L			GRAB	341	7.92	152.66
LTEOP000008	75-09-2	SW-846 8260A	5/29/95	0.00	UG/L			GRAB	353	7.77	150.20
NITRATE (AS N)											
L000010	14/97-55-8	EPA-600 300.0	6/08/95	.16	MG/L		J	GRAB	569	7.45	140.00
L000024	14/97-55-8	EPA-600 300.0	7/03/95	.07	MG/L			GRAB	458	7.49	144.20
L000026	14/97-55-8	EPA-600 300.0	7/06/95	.09	MG/L			GRAB	592	7.50	145.00
L000027	14/97-55-8	EPA-600 300.0	7/06/95	0.00	MG/L			COMP			
L000029	14/97-55-8	EPA-600 300.0	7/09/95	.08	MG/L			GRAB	249	7.50	157.10
L000031	14/97-55-8	EPA-600 300.0	7/12/95	.01	MG/L			GRAB	256	7.49	156.00
L000032	14/97-55-8	EPA-600 300.0	7/14/95	.37	MG/L			COMP			
L000034	14/97-55-8	EPA-600 300.0	7/15/95	.02	MG/L			GRAB	262	7.59	150.30
L000036	14/97-55-8	EPA-600 300.0	7/18/95	.04	MG/L	J		GRAB	232	7.40	155.40
L000037	14/97-55-8	EPA-600 300.0	7/21/95	.05	MG/L			COMP			
L000039	14/97-55-8	EPA-600 300.0	7/21/95	.07	MG/L			GRAB	482	7.25	155.50
L000041	14/97-55-8	EPA-600 300.0	7/24/95	.02	MG/L	J		GRAB	244	7.62	137.40
L000042	14/97-55-8	EPA-600 300.0	7/27/95	.04	MG/L	J		COMP			
L000044	14/97-55-8	EPA-600 300.0	7/27/95	.05	MG/L			GRAB	360	7.65	104.50
L000046	14/97-55-8	EPA-600 300.0	7/28/95	.09	MG/L			GRAB	235	7.64	112.20
L000048	14/97-55-8	EPA-600 300.0	8/01/95	.04	MG/L	J		GRAB	421	7.65	120.70
L000050	14/97-55-8	EPA-600 300.0	8/04/95	.06	MG/L			GRAB	312	7.73	148.50

WHC-SD-LEF-EV-001, $\text{E}_\text{LW} \theta$

Sample No	Con ID	Method	Sample Date	Results Units	Lab qfr	Grab/ Comp qfr	Flow pH	Cond
NITRATE (AS N)								
L00051	14797-55-8	EPA-600	300.0	8/05/95	.06	MG/L		
L00053	14797-55-8	EPA-600	300.0	8/07/95	.07	MG/L		
L00055	14797-55-8	EPA-600	300.0	8/10/95	.06	MG/L		
L00056	14797-55-8	EPA-600	300.0	8/11/95	0.00	MG/L		
L00058	14797-55-8	EPA-600	300.0	8/13/95	.06	MG/L		
L00060	14797-55-8	EPA-600	300.0	8/16/95	.05	MG/L		
L00064	14797-55-8	EPA-600	300.0	8/19/95	.11	MG/L		
L00066	14797-55-8	EPA-600	300.0	8/19/95	.05	MG/L		
L00068	14797-55-8	EPA-600	300.0	8/22/95	0.00	MG/L		
L00069	14797-55-8	EPA-600	300.0	8/26/95	.06	MG/L		
L00071	14797-55-8	EPA-600	300.0	8/25/95	.05	MG/L	J	
L00072	14797-55-8	EPA-600	300.0	8/28/95	.09	MG/L		
L00075	14797-55-8	EPA-600	300.0	8/31/95	0.00	MG/L	U	
L00156	14797-55-8	EPA-600	300.0	9/03/95	0.00	MG/L		
L00157	14797-55-8	EPA-600	300.0	9/03/95	.08	MG/L		
L00159	14797-55-8	EPA-600	300.0	9/05/95	.07	MG/L		
L00161	14797-55-8	EPA-600	300.0	9/08/95	.12	MG/L		
L00162	14797-55-8	EPA-600	300.0	9/11/95	.05	MG/L		
L00164	14797-55-8	EPA-600	300.0	9/11/95	.08	MG/L		
L00166	14797-55-8	EPA-600	300.0	9/14/95	.09	MG/L		
L00167	14797-55-8	EPA-600	300.0	9/17/95	.12	MG/L		
L00169	14797-55-8	EPA-600	300.0	9/17/95	.05	MG/L		
L00171	14797-55-8	EPA-600	300.0	9/20/95	.09	MG/L		
L00173	14797-55-8	EPA-600	300.0	9/24/95	.07	MG/L		
L00174	14797-55-8	EPA-600	300.0	9/24/95	.10	MG/L		
L00176	14797-55-8	EPA-600	300.0	9/26/95	.09	MG/L		
L00178	14797-55-8	EPA-600	300.0	9/29/95	.19	MG/L		
L00179	14797-55-8	EPA-600	300.0	10/01/95	.10	MG/L		
L00183	14797-55-8	EPA-600	300.0	9/12/95	.10	MG/L		
L00185	14797-55-8	EPA-600	300.0	10/09/95	.11	MG/L		

WHC-SD-LEF-EV-001, Rev D

Sample No	Con ID	Method	Sample Date	Results Units	Lab q1fr	Val q1fr	Grab/ Comp	Flow pH	Cond
NITRATE (AS N)									
L00186	14797-55-8	EPA-600	300.0	10/09/95	.12	MG/L	GRAB	436	7.65
L00188	14797-55-8	EPA-600	300.0	10/16/95	.10	MG/L	COMP		
L00189	14797-55-8	EPA-600	300.0	10/16/95	.11	MG/L	GRAB	434	7.65
L00191	14797-55-8	EPA-600	300.0	10/23/95	.08	MG/L	COMP		
L00192	14797-55-8	EPA-600	300.0	10/23/95	.11	MG/L	GRAB	454	7.39
L00194	14797-55-8	EPA-600	300.0	10/30/95	.10	MG/L	COMP		
L00195	14797-55-8	EPA-600	300.0	10/30/95	.10	MG/L	GRAB	450	8.30
L00215	14797-55-8	EPA-600	300.0	11/07/95	.10	MG/L	GRAB	321	7.49
L00217	14797-55-8	EPA-600	300.0	11/07/95	.12	MG/L	COMP		
L00218	14797-55-8	EPA-600	300.0	11/14/95	.14	MG/L	GRAB	271	7.54
L00220	14797-55-8	EPA-600	300.0	11/14/95	.13	MG/L	COMP		
L00221	14797-55-8	EPA-600	300.0	11/21/95	.10	MG/L	GRAB	341	7.46
L00223	14797-55-8	EPA-600	300.0	11/21/95	.11	MG/L	COMP		
L00224	14797-55-8	EPA-600	300.0	11/28/95	.11	MG/L	GRAB	453	7.58
L00226	14797-55-8	EPA-600	300.0	11/28/95	.13	MG/L	COMP		
L00241	14797-55-8	EPA-600	300.0	12/03/95	.12	MG/L	GRAB	378	7.56
L00242	14797-55-8	EPA-600	300.0	12/06/95	.15	MG/L	COMP		
L00244	14797-55-8	EPA-600	300.0	12/06/95	.11	MG/L	GRAB	348	7.60
L00246	14797-55-8	EPA-600	300.0	12/09/95	.13	MG/L	GRAB	313	7.41
L00248	14797-55-8	EPA-600	300.0	12/12/95	.15	MG/L	GRAB	260	122.00
L00249	14797-55-8	EPA-600	300.0	12/12/95	.22	MG/L	COMP		
L00251	14797-55-8	EPA-600	300.0	12/15/95	.19	MG/L	GRAB	404	7.60
L00253	14797-55-8	EPA-600	300.0	12/18/95	.19	MG/L	GRAB	451	7.50
L00254	14797-55-8	EPA-600	300.0	12/20/95	.17	MG/L	COMP		
L00256	14797-55-8	EPA-600	300.0	12/21/95	.15	MG/L	GRAB	408	7.36
L00258	14797-55-8	EPA-600	300.0	12/24/95	.16	MG/L	GRAB	316	7.50
L00259	14797-55-8	EPA-600	300.0	12/27/95	.19	MG/L	COMP		
L00261	14797-55-8	EPA-600	300.0	12/27/95	.23	MG/L	GRAB	480	7.37
L00263	14797-55-8	EPA-600	300.0	12/30/95	.18	MG/L	GRAB	416	7.48
L00297	14797-55-8	EPA-600	300.0	1/01/96	.17	MG/L	GRAB	559	7.45

WHC-SD-LEF-EV-001, $\delta\omega/\delta$

Sample No	Con ID	Method	Sample Date	Results Units	Lab qfr	Val qfr	Grab Comp	Flow	pH	Cond
NITRATE (AS N)										
L00299	14797-55-8	EPA-600	300.0	1/04/96	.21	MG/L	GRAB	303	7.53	151.70
L00301	14797-55-8	EPA-600	300.0	1/04/96	.21	MG/L	COMP			
L00302	14797-55-8	EPA-600	300.0	1/07/96	.15	MG/L	GRAB	353	7.44	145.00
L00306	14797-55-8	EPA-600	300.0	1/10/96	.12	MG/L	GRAB	512	7.37	49.30
L00308	14797-55-8	EPA-600	300.0	1/10/96	.14	MG/L	COMP			
L00309	14797-55-8	EPA-600	300.0	1/13/96	.10	MG/L	GRAB	296	7.49	142.20
L00311	14797-55-8	EPA-600	300.0	1/16/96	.14	MG/L	GRAB	283	7.52	138.60
L00313	14797-55-8	EPA-600	300.0	1/18/96	.13	MG/L	COMP			
L00314	14797-55-8	EPA-600	300.0	1/19/96	.14	MG/L	GRAB	305	7.46	142.70
L00316	14797-55-8	EPA-600	300.0	1/22/96	.11	MG/L	GRAB	482	7.50	141.00
L00318	14797-55-8	EPA-600	300.0	1/25/96	.14	MG/L	GRAB	393	7.43	143.00
L00320	14797-55-8	EPA-600	300.0	1/25/96	.19	MG/L	COMP			
L00321	14797-55-8	EPA-600	300.0	1/28/96	.14	MG/L	GRAB	318	7.40	140.90
L00323	14797-55-8	EPA-600	300.0	1/31/96	.12	MG/L	GRAB	495	7.30	73.00
L00325	14797-55-8	EPA-600	300.0	1/31/96	.10	MG/L	COMP			
L00347	14797-55-8	EPA-600	300.0	2/03/96	.18	MG/L	GRAB	492	7.53	340.00
L00349	14797-55-8	EPA-600	300.0	2/06/96	.60	MG/L	GRAB	869	7.14	333.00
L00351	14797-55-8	EPA-600	300.0	2/09/96	.15	MG/L	GRAB	288	7.64	152.50
L00353	14797-55-8	EPA-600	300.0	2/09/96	.17	MG/L	COMP			
L00354	14797-55-8	EPA-600	300.0	2/12/96	.17	MG/L	GRAB	275	7.53	147.00
L00356	14797-55-8	EPA-600	300.0	2/15/96	.19	MG/L	GRAB	275	7.16	246.10
L00358	14797-55-8	EPA-600	300.0	2/15/96	.20	MG/L	COMP			
L00359	14797-55-8	EPA-600	300.0	2/18/96	.15	MG/L	GRAB	240	7.49	144.90
L00361	14797-55-8	EPA-600	300.0	2/21/96	.16	MG/L	GRAB	310	7.41	151.30
L00363	14797-55-8	EPA-600	300.0	2/23/96	.15	MG/L	COMP			
L00364	14797-55-8	EPA-600	300.0	2/24/96	.25	MG/L	GRAB	396	7.50	148.00
L00366	14797-55-8	EPA-600	300.0	2/27/96	.16	MG/L	GRAB	341	7.20	137.00
L00368	14797-55-8	EPA-600	300.0	3/01/96	.14	MG/L	GRAB	339	7.35	574.00
L00370	14797-55-8	EPA-600	300.0	3/01/96	.17	MG/L	COMP			
L00396	14797-55-8	EPA-600	300.0	3/09/96	.20	MG/L	GRAB	303	7.45	224.59

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Sample No	Con ID	Method	Sample Date	Results Units	Lab qfr	Val qfr	Grab/ Comp	Flow	pH	Cond
NITRATE (AS N)										
L00400	14797-55-8	EPA-600	300.0	3/09/96	.24	MG/L	COMP			
L00401	14797-55-8	EPA-600	300.0	3/16/96	.19	MG/L	GRAB	379	7.57	170.90
L00403	14797-55-8	EPA-600	300.0	3/16/96	.21	MG/L	COMP			
L00404	14797-55-8	EPA-600	300.0	3/24/96	.14	MG/L	GRAB	348	7.70	144.00
L00406	14797-55-8	EPA-600	300.0	3/24/96	.16	MG/L	COMP			
L00407	14797-55-8	EPA-600	300.0	3/30/96	.13	MG/L	GRAB	366	7.49	159.90
L00409	14797-55-8	EPA-600	300.0	3/30/96	.14	MG/L	COMP			
L00443	14797-55-8	EPA-600	300.0	4/07/96	.13	MG/L	GRAB	290	7.05	268.00
L00445	14797-55-8	EPA-600	300.0	4/07/96	.11	MG/L	COMP			
L00446	14797-55-8	EPA-600	300.0	4/14/96	.16	MG/L	GRAB	297	7.19	156.10
L00448	14797-55-8	EPA-600	300.0	4/14/96	.15	MG/L	COMP			
L00449	14797-55-8	EPA-600	300.0	4/21/96	.30	MG/L	GRAB	572	7.60	158.00
L00451	14797-55-8	EPA-600	300.0	4/21/96	.31	MG/L	COMP			
L00452	14797-55-8	EPA-600	300.0	4/28/96	.09	MG/L	GRAB	357	7.48	162.80
L00454	14797-55-8	EPA-600	300.0	4/28/96	.13	MG/L	COMP			
LTEOP00004	14797-55-8	EPA-600	300.0	5/19/95	.94	MG/L	GRAB	343	7.86	183.70
LTEOP00007	14797-55-8	EPA-600	300.0	5/25/95	.09	MG/L	GRAB	341	7.92	152.66
NITRITE (AS N)										
L00024	14797-65-0	EPA-600	300.0	7/03/95	0.00	MG/L	U			
L00026	14797-65-0	EPA-600	300.0	7/06/95	0.00	MG/L	U			
L00029	14797-65-0	EPA-600	300.0	7/09/95	0.00	MG/L	U			
LTEOP00004	14797-65-0	EPA-600	300.0	5/19/95	0.00	MG/L	U			
LTEOP00007	14797-65-0	EPA-600	300.0	5/25/95	0.00	MG/L	U			
OIL & GREASE										
L00010	OIL/GREASE	SW-846	9070	6/08/95	1.00	MG/L	U	J	GRAB	569
L00027	OIL/GREASE	SW-846	9070	7/06/95	12.00	MG/L	COMP			140.00

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Sample No	Con ID	Method	Sample Date	Results Units	Lab qfr	Val qfr	Grab/ Comp	Flow	pH	Cond
OIL & GREASE										
L00032	OIL/GREASE	SW-846 9070	7/14/95	5.00 MG/L	COMP					
L00034	OIL/GREASE	SW-846 9070	7/15/95	5.00 MG/L	GRAB	262	7.59			150.30
L00037	OIL/GREASE	SW-846 9070	7/21/95	5.00 MG/L	COMP					
L00042	OIL/GREASE	SW-846 9070	7/27/95	5.00 MG/L	COMP					
L00044	OIL/GREASE	SW-846 9070	7/27/95	5.00 MG/L	GRAB	360	7.65			104.50
L00051	OIL/GREASE	SW-846 9070	8/05/95	5.00 MG/L	COMP					
L00056	OIL/GREASE	SW-846 9070	8/11/95	10.50 MG/L	COMP					
L00064	OIL/GREASE	SW-846 9070	8/19/95	5.00 MG/L	COMP					
L00069	OIL/GREASE	SW-846 9070	8/26/95	7.00 MG/L	J	COMP				
L00071	OIL/GREASE	SW-846 9070	8/25/95	16.00 MG/L	GRAB	253	7.60			134.00
L00157	OIL/GREASE	SW-846 9070	9/03/95	12.00 MG/L	J	COMP				
L00162	OIL/GREASE	SW-846 9070	9/11/95	5.00 MG/L	COMP					
L00167	OIL/GREASE	SW-846 9070	9/17/95	5.00 MG/L	COMP					
L00174	OIL/GREASE	SW-846 9070	9/24/95	16.60 MG/L	COMP					
L00178	OIL/GREASE	SW-846 9070	9/29/95	14.00 MG/L	GRAB	287	7.55			111.90
L00179	OIL/GREASE	SW-846 9070	10/01/95	8.93 MG/L	COMP					
L00184	OIL/GREASE	SW-846 9070	9/17/95	8.89 MG/L	COMP					
L00189	OIL/GREASE	SW-846 9070	10/16/95	5.00 MG/L	GRAB	434	7.65			99.60
L00218	OIL/GREASE	SW-846 9070	11/14/95	5.00 MG/L	GRAB	271	7.54			1200.00
L00242	OIL/GREASE	SW-846 9070	12/06/95	8.80 MG/L	COMP					
L00244	OIL/GREASE	SW-846 9070	12/06/95	5.00 MG/L	GRAB	348	7.60			823.00
L00248	OIL/GREASE	SW-846 9070	12/12/95	5.00 MG/L	GRAB	260	7.53			135.80
L00249	OIL/GREASE	SW-846 9070	12/12/95	6.80 MG/L	COMP					
L00254	OIL/GREASE	SW-846 9070	12/20/95	5.00 MG/L	COMP					
L00259	OIL/GREASE	SW-846 9070	12/27/95	5.00 MG/L	COMP					
L00261	OIL/GREASE	SW-846 9070	12/27/95	7.00 MG/L	GRAB	480	7.37			112.90
L00299	OIL/GREASE	SW-846 9070	1/04/96	5.00 MG/L	GRAB	303	7.53			151.70
L00301	OIL/GREASE	SW-846 9070	1/04/96	5.00 MG/L	COMP					
L00306	OIL/GREASE	SW-846 9070	1/10/96	5.00 MG/L	GRAB	512	7.37			49.30
L00308	OIL/GREASE	SW-846 9070	1/10/96	5.00 MG/L	COMP					

Sample No	Con ID	Method	Sample Date	Results Units	Lab qfr	Val qfr	Grab/ Comp	Flow	pH	Cond
OIL & GREASE										
L00313		OIL/GREASE	SW-846 9070	1/18/96	5.00	MG/L	COMP	393	7.43	143.00
L00318		OIL/GREASE	SW-846 9070	1/25/96	5.00	MG/L	GRAB			
L00320		OIL/GREASE	SW-846 9070	1/25/96	5.00	MG/L	COMP			
L00323		OIL/GREASE	SW-846 9070	1/31/96	5.00	MG/L	GRAB	495	7.30	73.00
L00325		OIL/GREASE	SW-846 9070	1/31/96	5.00	MG/L	COMP			
L00351		OIL/GREASE	SW-846 9070	2/09/96	5.00	MG/L	GRAB	288	7.64	152.50
L00353		OIL/GREASE	SW-846 9070	2/09/96	5.00	MG/L	COMP			
L00356		OIL/GREASE	SW-846 9070	2/15/96	6.60	MG/L	GRAB	275	7.16	246.10
L00358		OIL/GREASE	SW-846 9070	2/15/96	5.00	MG/L	COMP			
L00363		OIL/GREASE	SW-846 9070	2/23/96	5.00	MG/L	COMP			
L00368		OIL/GREASE	SW-846 9070	3/01/96	5.00	MG/L	GRAB	339	7.35	574.00
L00370		OIL/GREASE	SW-846 9070	3/01/96	5.00	MG/L	COMP			
L00396		OIL/GREASE	SW-846 9070	3/09/96	5.00	MG/L	GRAB	303	7.45	224.59
L00400		OIL/GREASE	SW-846 9070	3/09/96	5.00	MG/L	COMP			
L00401		OIL/GREASE	SW-846 9070	3/16/96	5.00	MG/L	GRAB	379	7.57	170.90
L00403		OIL/GREASE	SW-846 9070	3/16/96	5.00	MG/L	COMP			
L00404		OIL/GREASE	SW-846 9070	3/24/96	5.00	MG/L	GRAB	348	7.70	144.00
L00406		OIL/GREASE	SW-846 9070	3/24/96	5.00	MG/L	COMP			
L00407		OIL/GREASE	SW-846 9070	3/30/96	5.00	MG/L	GRAB	366	7.49	159.90
L00409		OIL/GREASE	SW-846 9070	3/30/96	5.00	MG/L	COMP			
L00443		OIL/GREASE	SW-846 9070	4/07/96	5.00	MG/L	GRAB	290	7.05	268.00
L00445		OIL/GREASE	SW-846 9070	4/07/96	5.00	MG/L	COMP			
L00446		OIL/GREASE	SW-846 9070	4/14/96	5.00	MG/L	GRAB	297	7.19	156.10
L00448		OIL/GREASE	SW-846 9070	4/14/96	5.00	MG/L	COMP			
L00449		OIL/GREASE	SW-846 9070	4/21/96	5.00	MG/L	GRAB	572	7.60	158.00
L00451		OIL/GREASE	SW-846 9070	4/21/96	5.00	MG/L	COMP			
L00452		OIL/GREASE	SW-846 9070	4/28/96	5.00	MG/L	GRAB	357	7.48	162.80
L00454		OIL/GREASE	SW-846 9070	4/28/96	5.00	MG/L	COMP			
LTEOP00004		OIL/GREASE	SW-846 9070	5/19/95	1.00	MG/L	J	GRAB	343	7.86
LTEOP00007		OIL/GREASE	SW-846 9070	5/25/95	7.00	MG/L	GRAB	341	7.92	152.66

Sample No	Con ID	Method	Sample Date	Results Units	Lab qfr	Val qfr	Grab/ Comp	Flow	pH	Cond
OIL & GREASE										
L00010	108-95-2	SW-846 8270B	6/08/95	0.00	UG/L					
L00012	108-95-2	SW-846 8270B	6/15/95	0.00	UG/L					
L00014	108-95-2	SW-846 8270B	6/22/95	0.00	UG/L					
L00016	108-95-2	SW-846 8270B	6/29/95	0.00	UG/L					
L00024	108-95-2	SW-846 8270B	7/03/95	0.00	UG/L					
L00026	108-95-2	SW-846 8270B	7/06/95	0.00	UG/L					
L00027	108-95-2	SW-846 8270B	7/06/95	0.00	UG/L					
L00029	108-95-2	SW-846 8270B	7/09/95	0.00	UG/L					
L00031	108-95-2	SW-846 8270B	7/12/95	0.00	UG/L					
L00032	108-95-2	SW-846 8270B	7/14/95	0.00	UG/L					
L00034	108-95-2	SW-846 8270B	7/15/95	0.00	UG/L					
L00036	108-95-2	SW-846 8270B	7/18/95	0.00	UG/L					
L00037	108-95-2	SW-846 8270B	7/21/95	0.00	UG/L					
L00039	108-95-2	SW-846 8270B	7/21/95	0.00	UG/L					
L00041	108-95-2	SW-846 8270B	7/24/95	0.00	UG/L					
L00042	108-95-2	SW-846 8270B	7/27/95	0.00	UG/L					
L00044	108-95-2	SW-846 8270B	7/27/95	0.00	UG/L					
L00046	108-95-2	SW-846 8270B	7/28/95	0.00	UG/L					
L00048	108-95-2	SW-846 8270B	8/01/95	0.00	UG/L					
L00050	108-95-2	SW-846 8270B	8/04/95	0.00	UG/L					
L00051	108-95-2	SW-846 8270B	8/05/95	0.00	UG/L					
L00053	108-95-2	SW-846 8270B	8/07/95	0.00	UG/L					
L00055	108-95-2	SW-846 8270B	8/10/95	0.00	UG/L					
L00056	108-95-2	SW-846 8270B	8/11/95	0.00	UG/L					
L00058	108-95-2	SW-846 8270B	8/13/95	0.00	UG/L					
L00060	108-95-2	SW-846 8270B	8/16/95	0.00	UG/L					
L00064	108-95-2	SW-846 8270B	8/19/95	0.00	UG/L					

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Sample No	Con ID	Method	Sample	Date	Results	Units	Lab q1fr	Grab/ Comp q1fr	Val q1fr	Flow	pH	Cond
PHENOL												
L00066	108-95-2	SW-846	8270B	8/19/95	0.00	UG/L	GRAB	311	7.71	139.00		
L00068	108-95-2	SW-846	8270B	8/22/95	0.00	UG/L	GRAB	565	7.56	129.80		
L00069	108-95-2	SW-846	8270B	8/26/95	0.00	UG/L	COMP					
L00071	108-95-2	SW-846	8270B	8/25/95	0.00	UG/L	GRAB	253	7.60	134.00		
L00072	108-95-2	SW-846	8270B	8/28/95	0.00	UG/L	GRAB	393	7.63	137.00		
L00075	108-95-2	SW-846	8270B	8/31/95	0.00	UG/L	GRAB	376	7.61	141.40		
L00156	108-95-2	SW-846	8270B	9/03/95	0.00	UG/L	GRAB	270	7.64	172.40		
L00157	108-95-2	SW-846	8270B	9/03/95	0.00	UG/L	COMP					
L00159	108-95-2	SW-846	8270B	9/05/95	0.00	UG/L	GRAB	334	7.59	101.80		
L00161	108-95-2	SW-846	8270B	9/08/95	0.00	UG/L	GRAB	263	7.64	125.10		
L00162	108-95-2	SW-846	8270B	9/11/95	0.00	UG/L	COMP					
L00164	108-95-2	SW-846	8270B	9/11/95	0.00	UG/L	GRAB	443	7.87	142.90		
L00166	108-95-2	SW-846	8270B	9/14/95	0.00	UG/L	GRAB	339	7.59	128.00		
L00167	108-95-2	SW-846	8270B	9/17/95	0.00	UG/L	COMP					
L00169	108-95-2	SW-846	8270B	9/17/95	0.00	UG/L	GRAB	485	7.70	116.60		
L00171	108-95-2	SW-846	8270B	9/20/95	0.00	UG/L	GRAB	456	7.64	110.70		
L00173	108-95-2	SW-846	8270B	9/24/95	0.00	UG/L	GRAB	306	7.63	132.00		
L00174	108-95-2	SW-846	8270B	9/24/95	0.00	UG/L	COMP					
L00176	108-95-2	SW-846	8270B	9/26/95	0.00	UG/L	GRAB	529	7.60	113.00		
L00178	108-95-2	SW-846	8270B	9/29/95	0.00	UG/L	GRAB	287	7.55	111.90		
L00179	108-95-2	SW-846	8270B	10/01/95	0.00	UG/L	COMP					
L00183	108-95-2	SW-846	8270B	9/12/95	0.00	UG/L	GRAB	445	7.94	121.20		
L00185	108-95-2	SW-846	8270B	10/09/95	0.00	UG/L	COMP					
L00186	108-95-2	SW-846	8270B	10/09/95	0.00	UG/L	GRAB	436	7.65	91.20		
L00188	108-95-2	SW-846	8270B	10/16/95	2.00	UG/L	COMP					
L00189	108-95-2	SW-846	8270B	10/16/95	0.00	UG/L	GRAB	434	7.65	99.60		
L00191	108-95-2	SW-846	8270B	10/23/95	0.00	UG/L	COMP					
L00192	108-95-2	SW-846	8270B	10/23/95	0.00	UG/L	GRAB	454	7.39	106.20		
L00194	108-95-2	SW-846	8270B	10/30/95	0.00	UG/L	COMP					
L00195	108-95-2	SW-846	8270B	10/30/95	0.00	UG/L	GRAB	450	8.30	132.25		

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Sample No	Con ID	Method	Sample	Date	Results	Units	Lab	Val	Grab/ Comp	Flow	pH	Cond
PHENOL												
L00215	108-95-2	SW-846	8270B	11/07/95	0.00	UG/L	GRAB	321	7.49	1151.00		
L00217	108-95-2	SW-846	8270B	11/07/95	0.00	UG/L	COMP					
L00218	108-95-2	SW-846	8270B	11/14/95	0.00	UG/L	GRAB	271	7.54	1200.00		
L00220	108-95-2	SW-846	8270B	11/14/95	0.00	UG/L	COMP					
L00221	108-95-2	SW-846	8270B	11/21/95	0.00	UG/L	GRAB	341	7.46	135.40		
L00223	108-95-2	SW-846	8270B	11/21/95	0.00	UG/L	COMP					
L00224	108-95-2	SW-846	8270B	11/28/95	0.00	UG/L	GRAB	453	7.58	150.10		
L00226	108-95-2	SW-846	8270B	11/28/95	0.00	UG/L	COMP					
L00241	108-95-2	SW-846	8270B	12/03/95	0.00	UG/L	GRAB	378	7.56	148.80		
L00242	108-95-2	SW-846	8270B	12/06/95	0.00	UG/L	COMP					
L00244	108-95-2	SW-846	8270B	12/06/95	0.00	UG/L	GRAB	348	7.60	823.00		
L00246	108-95-2	SW-846	8270B	12/09/95	0.00	UG/L	GRAB	313	7.41	122.00		
L00248	108-95-2	SW-846	8270B	12/12/95	0.00	UG/L	GRAB	260	7.53	135.80		
L00249	108-95-2	SW-846	8270B	12/12/95	0.00	UG/L	COMP					
L00251	108-95-2	SW-846	8270B	12/15/95	0.00	UG/L	GRAB	404	7.60	142.70		
L00253	108-95-2	SW-846	8270B	12/18/95	0.00	UG/L	GRAB	451	7.50	140.00		
L00254	108-95-2	SW-846	8270B	12/20/95	0.00	UG/L	COMP					
L00256	108-95-2	SW-846	8270B	12/21/95	0.00	UG/L	GRAB	408	7.36	112.00		
L00258	108-95-2	SW-846	8270B	12/24/95	0.00	UG/L	GRAB	316	7.50	148.00		
L00259	108-95-2	SW-846	8270B	12/27/95	0.00	UG/L	COMP					
L00261	108-95-2	SW-846	8270B	12/27/95	0.00	UG/L	GRAB	480	7.37	112.90		
L00263	108-95-2	SW-846	8270B	12/30/95	0.00	UG/L	GRAB	416	7.48	150.90		
L00297	108-95-2	SW-846	8270B	1/01/96	0.00	UG/L	GRAB	559	7.45	150.00		
L00299	108-95-2	SW-846	8270B	1/04/96	0.00	UG/L	GRAB	303	7.53	151.70		
L00301	108-95-2	SW-846	8270B	1/04/96	0.00	UG/L	COMP					
L00302	108-95-2	SW-846	8270B	1/07/96	0.00	UG/L	GRAB	353	7.44	145.00		
L00306	108-95-2	SW-846	8270B	1/10/96	0.00	UG/L	GRAB	512	7.37	49.30		
L00308	108-95-2	SW-846	8270B	1/10/96	0.00	UG/L	COMP					
L00309	108-95-2	SW-846	8270B	1/13/96	0.00	UG/L	GRAB	296	7.49	142.20		
L00311	108-95-2	SW-846	8270B	1/16/96	0.00	UG/L	GRAB	283	7.52	136.60		

Sample No	Con ID	Method	Sample Date	Results Units	Lab qifr	Grab/ Comp qifr	Flow	pH	Cond
PHENOL									
L00313	108-95-2	SW-846	8270B	1/18/96	0.00	UG/L			
L00314	108-95-2	SW-846	8270B	1/19/96	0.00	UG/L			
L00316	108-95-2	SW-846	8270B	1/22/96	0.00	UG/L			
L00318	108-95-2	SW-846	8270B	1/25/96	0.00	UG/L			
L00320	108-95-2	SW-846	8270B	1/25/96	0.00	UG/L			
L00321	108-95-2	SW-846	8270B	1/28/96	0.00	UG/L			
L00323	108-95-2	SW-846	8270B	1/31/96	0.00	UG/L			
L00325	108-95-2	SW-846	8270B	1/31/96	0.00	UG/L			
L00347	108-95-2	SW-846	8270B	2/03/96	0.00	UG/L			
L00349	108-95-2	SW-846	8270B	2/05/96	0.00	UG/L			
L00351	108-95-2	SW-846	8270B	2/09/96	0.00	UG/L			
L00353	108-95-2	SW-846	8270B	2/09/96	0.00	UG/L			
L00354	108-95-2	SW-846	8270B	2/12/96	0.00	UG/L			
L00356	108-95-2	SW-846	8270B	2/15/96	0.00	UG/L			
L00358	108-95-2	SW-846	8270B	2/15/96	0.00	UG/L			
L00359	108-95-2	SW-846	8270B	2/18/96	0.00	UG/L			
L00361	108-95-2	SW-846	8270B	2/21/96	0.00	UG/L			
L00363	108-95-2	SW-846	8270B	2/23/96	0.00	UG/L			
L00364	108-95-2	SW-846	8270B	2/24/96	0.00	UG/L			
L00366	108-95-2	SW-846	8270B	2/27/96	0.00	UG/L			
L00368	108-95-2	SW-846	8270B	3/01/96	0.00	UG/L			
L00370	108-95-2	SW-846	8270B	3/01/96	0.00	UG/L			
L00396	108-95-2	SW-846	8270B	3/09/96	0.00	UG/L			
L00400	108-95-2	SW-846	8270B	3/09/96	0.00	UG/L			
L00401	108-95-2	SW-846	8270B	3/16/96	0.00	UG/L			
L00403	108-95-2	SW-846	8270B	3/16/96	0.00	UG/L			
L00404	108-95-2	SW-846	8270B	3/24/96	0.00	UG/L			
L00406	108-95-2	SW-846	8270B	3/24/96	0.00	UG/L			
L00407	108-95-2	SW-846	8270B	3/30/96	0.00	UG/L			
L00409	108-95-2	SW-846	8270B	3/30/96	0.00	UG/L			

WHC-SD-LFF-EV-001, $\lambda_{\text{UV-D}}$

Sample No	Con ID	Method	Sample Date	Results Units	Lab qfr	Val qfr	Grab/ Comp	Flow	pH	Cond
PHENOL										
L00443	108-95-2	SW-846 8270B	4/07/96	0.00	UG/L		GRAB	290	7.05	268.00
L00445	108-95-2	SW-846 8270B	4/07/96	0.00	UG/L		COMP			
L00446	108-95-2	SW-846 8270B	4/14/96	0.00	UG/L		GRAB	297	7.19	156.10
L00448	108-95-2	SW-846 8270B	4/14/96	0.00	UG/L		COMP			
L00449	108-95-2	SW-846 8270B	4/21/96	0.00	UG/L		GRAB	572	7.60	158.00
L00451	108-95-2	SW-846 8270B	4/21/96	0.00	UG/L		COMP			
L00452	108-95-2	SW-846 8270B	4/28/96	0.00	UG/L		GRAB	357	7.48	162.80
L00454	108-95-2	SW-846 8270B	4/28/96	0.00	UG/L		COMP			
LTEOP00001	108-95-2	SW-846 8270B	5/04/95	0.00	UG/L		COMP			
LTEOP00002	108-95-2	SW-846 8270B	5/11/95	1.00	UG/L		COMP			
LTEOP00003	108-95-2	SW-846 8270B	5/15/95	3.00	UG/L		COMP			
LTEOP00004	108-95-2	SW-846 8270B	5/19/95	0.00	UG/L		COMP			
LTEOP00005	108-95-2	SW-846 8270B	5/08/95	0.00	UG/L		COMP			
LTEOP00006	108-95-2	SW-846 8270B	5/22/95	1.00	UG/L		COMP			
LTEOP00007	108-95-2	SW-846 8270B	5/25/95	0.00	UG/L		COMP			
LTEOP00008	108-95-2	SW-846 8270B	5/29/95	0.00	UG/L		COMP			
PHOSPHATE										
L00183	14265-44-2	EPA-600 300.0	9/12/95	0.00	MG/L		GRAB	445	7.94	121.20
LTEOP00004	14265-44-2	EPA-600 300.0	5/19/95	0.00	MG/L		GRAB	343	7.86	183.70
LTEOP00007	14265-44-2	EPA-600 300.0	5/25/95	0.00	MG/L		GRAB	341	7.92	152.66
RADIUM 226 AND 228										
L00010	7440-14-4	TOTAL RADIUM (AEA	6/08/95	4.08	PCU/L	J	GRAB	569	7.45	140.00
L00044	7440-14-4	TOTAL RADIUM (AEA	7/27/95	2.00	PCU/L	U	GRAB	360	7.65	104.50
L00071	7440-14-4	TOTAL RADIUM (AEA	8/25/95	5.00	PCU/L	U	GRAB	253	7.60	134.00
L00178	7440-14-4	TOTAL RADIUM (AEA	9/29/95	1.80	PCU/L	U	GRAB	287	7.55	111.90
L00189	7440-14-4	TOTAL RADIUM (AEA	10/16/95	.06	PCU/L	U	GRAB	434	7.65	99.60

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Sample No	Con ID	Method	Sample	Date	Results	Units	Lab	Val	Grab/ Comp	Flow	pH	Cond		
RADIUM 226 AND 228														
L00218	7440-14-4	TOTAL RADIUM	(AEA)	11/14/95	2.10	PCU/L	U	GRAB	271	7.54	1200.00			
L00244	7440-14-4	TOTAL RADIUM	(AEA)	12/06/95	2.80	PCU/L	U	GRAB	348	7.60	823.00			
L00299	7440-14-4	TOTAL RADIUM	(AEA)	1/04/96	2.50	PCU/L	U	GRAB	303	7.53	151.70			
L00351	7440-14-4	TOTAL RADIUM	(AEA)	2/09/96	2.10	PCU/L	U	GRAB	288	7.64	152.50			
L00396	7440-14-4	TOTAL RADIUM	(AEA)	2/09/96	1.80	PCU/L	U	GRAB	303	7.45	224.59			
L00443	7440-14-4	TOTAL RADIUM	(AEA)	4/07/96	2.40	PCU/L	U	GRAB	290	7.05	268.00			
LTEOP00004	7440-14-4	TOTAL RADIUM	(AEA)	5/19/95	3.61	PCU/L	J	GRAB	343	7.86	183.70			
LTEOP00007	7440-14-4	TOTAL RADIUM	(AEA)	5/25/95	3.48	PCU/L	J	GRAB	341	7.92	152.66			
RADIUM-226														
L00010	13982-63-3	RADIUM-226	(AEA)	6/08/95	.03	PCU/L	J	GRAB	569	7.45	140.00			
L00044	13982-63-3	RADIUM-226	(AEA)	7/27/95	.10	PCU/L	U	GRAB	360	7.65	104.50			
L00071	13982-63-3	RADIUM-226	(AEA)	8/25/95	1.00	PCU/L	U	GRAB	253	7.60	134.00			
L00178	13982-63-3	RADIUM-226	(AEA)	9/29/95	.06	PCU/L	U	GRAB	287	7.55	111.90			
L00189	13982-63-3	RADIUM-226	(AEA)	10/16/95	.02	PCU/L	U	GRAB	434	7.65	99.60			
L00218	13982-63-3	RADIUM-226	(AEA)	11/14/95	0.00	PCU/L	U	GRAB	271	7.54	1200.00			
L00244	13982-63-3	RADIUM-226	(AEA)	12/06/95	.08	PCU/L	U	GRAB	348	7.60	823.00			
L00299	13982-63-3	RADIUM-226	(AEA)	1/04/96	.08	PCU/L	U	GRAB	303	7.53	151.70			
L00351	13982-63-3	RADIUM-226	(AEA)	2/09/96	.06	PCU/L	U	GRAB	288	7.64	152.50			
L00396	13982-63-3	RADIUM-226	(AEA)	3/09/96	.06	PCU/L	U	GRAB	303	7.45	224.59			
L00443	13982-63-3	RADIUM-226	(AEA)	4/07/96	.06	PCU/L	U	GRAB	290	7.05	268.00			
LTEOP00004	13982-63-3	RADIUM-226	(AEA)	5/19/95	.06	PCU/L	J	GRAB	343	7.86	183.70			
LTEOP00007	13982-63-3	RADIUM-226	(AEA)	5/25/95	.01	PCU/L	J	GRAB	341	7.92	152.66			
RUTHENIUM-106														
L00167	13967-48-1	GAMMA	SCAN	9/17/95	90.00	PCU/L	U	COMP						
L00169	13967-48-1	GAMMA	SCAN	9/17/95	0.00	PCU/L	U	GRAB	485	7.70	116.60			
L00171	13967-48-1	GAMMA	SCAN	9/20/95	90.00	PCU/L	U	GRAB	456	7.64	110.70			

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Sample No	Con ID	Method	Sample Date	Results Units	Lab qifr	Grab/ Comp	Flow	pH	Cond
RUTHENIUM-106									
U00173	13967-48-1	GAMMA SCAN	9/24/95	90.00	PC1/L	GRAB	306	7.63	132.00
U00174	13967-48-1	GAMMA SCAN	9/24/95	90.00	PC1/L	COMP			
U00176	13967-48-1	GAMMA SCAN	9/26/95	90.00	PC1/L	GRAB	529	7.60	113.00
U00178	13967-48-1	GAMMA SCAN	9/29/95	90.00	PC1/L	GRAB	287	7.55	111.90
U00179	13967-48-1	GAMMA SCAN	10/01/95	39.80	PC1/L	COMP			
U00184	13967-48-1	GAMMA SCAN	9/17/95	90.00	PC1/L	COMP			
U00185	13967-48-1	GAMMA SCAN	10/09/95	90.00	PC1/L	COMP			
U00186	13967-48-1	GAMMA SCAN	10/09/95	90.00	PC1/L	GRAB	436	7.65	91.20
U00191	13967-48-1	GAMMA SCAN	10/23/95	43.20	PC1/L	COMP			
U00192	13967-48-1	GAMMA SCAN	10/23/95	90.00	PC1/L	GRAB	454	7.39	106.20
U00194	13967-48-1	GAMMA SCAN	10/30/95	67.00	PC1/L	COMP			
U00195	13967-48-1	GAMMA SCAN	10/30/95	66.00	PC1/L	GRAB	450	8.30	132.25
U00215	13967-48-1	GAMMA SCAN	11/07/95	66.00	PC1/L	GRAB	321	7.49	1151.00
U00217	13967-48-1	GAMMA SCAN	11/07/95	67.00	PC1/L	COMP			
U00218	13967-48-1	GAMMA SCAN	11/14/95	42.00	PC1/L	GRAB	271	7.54	1200.00
U00220	13967-48-1	GAMMA SCAN	11/14/95	72.00	PC1/L	COMP			
U00221	13967-48-1	GAMMA SCAN	11/21/95	67.00	PC1/L	GRAB	341	7.46	135.40
U00223	13967-48-1	GAMMA SCAN	11/21/95	66.00	PC1/L	COMP			
U00224	13967-48-1	GAMMA SCAN	11/28/95	66.00	PC1/L	GRAB	453	7.58	150.10
U00226	13967-48-1	GAMMA SCAN	11/28/95	65.00	PC1/L	COMP			
U00241	13967-48-1	GAMMA SCAN	12/03/95	68.00	PC1/L	GRAB	378	7.56	148.80
U00242	13967-48-1	GAMMA SCAN	12/06/95	71.00	PC1/L	COMP			
U00244	13967-48-1	GAMMA SCAN	12/06/95	70.00	PC1/L	GRAB	348	7.60	823.00
U00246	13967-48-1	GAMMA SCAN	12/09/95	70.00	PC1/L	GRAB	313	7.41	122.00
U00248	13967-48-1	GAMMA SCAN	12/12/95	63.00	PC1/L	GRAB	260	7.53	135.80
U00249	13967-48-1	GAMMA SCAN	12/12/95	70.00	PC1/L	COMP			
U00251	13967-48-1	GAMMA SCAN	12/15/95	63.00	PC1/L	GRAB	404	7.60	142.70
U00253	13967-48-1	GAMMA SCAN	12/18/95	64.00	PC1/L	GRAB	451	7.50	140.00
U00254	13967-48-1	GAMMA SCAN	12/20/95	68.00	PC1/L	COMP			
U00256	13967-48-1	GAMMA SCAN	12/21/95	77.00	PC1/L	GRAB	408	7.36	112.00

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Sample No	Con ID	Method	Sample Date	Results Units	Lab qfr	Val qfr	Grab/ Comp	Flow	pH	Cond
RUTHENIUM-106										
L00258	13967-48-1	GAMMA SCAN	12/24/95	68.00	PC1/1	U	GRAB	316	7.50	148.00
L00259	13967-48-1	GAMMA SCAN	12/27/95	68.00	PC1/1	U	COMP			
L00261	13967-48-1	GAMMA SCAN	12/27/95	66.00	PC1/1	U	GRAB	480	7.37	112.90
L00263	13967-48-1	GAMMA SCAN	12/30/95	68.00	PC1/1	U	GRAB	416	7.48	150.90
L00297	13967-48-1	GAMMA SCAN	1/01/96	130.00	PC1/1	U	GRAB	559	7.45	150.00
L00299	13967-48-1	GAMMA SCAN	1/04/96	65.00	PC1/1	U	GRAB	303	7.53	151.70
L00301	13967-48-1	GAMMA SCAN	1/04/96	67.00	PC1/1	U	COMP			
L00302	13967-48-1	GAMMA SCAN	1/07/96	63.00	PC1/1	U	GRAB	353	7.44	145.00
L00306	13967-48-1	GAMMA SCAN	1/10/96	69.00	PC1/1	U	GRAB	512	7.37	49.30
L00308	13967-48-1	GAMMA SCAN	1/10/96	68.00	PC1/1	U	COMP			
L00309	13967-48-1	GAMMA SCAN	1/13/96	68.00	PC1/1	U	GRAB	296	7.49	142.20
L00311	13967-48-1	GAMMA SCAN	1/16/96	71.00	PC1/1	U	GRAB	283	7.52	138.60
L00313	13967-48-1	GAMMA SCAN	1/18/96	67.00	PC1/1	U	COMP			
L00314	13967-48-1	GAMMA SCAN	1/19/96	64.00	PC1/1	U	GRAB	305	7.46	142.70
L00316	13967-48-1	GAMMA SCAN	1/22/96	69.00	PC1/1	U	GRAB	482	7.50	141.00
L00318	13967-48-1	GAMMA SCAN	1/25/96	66.00	PC1/1	U	GRAB	393	7.43	143.00
L00320	13967-48-1	GAMMA SCAN	1/25/96	68.00	PC1/1	U	COMP			
L00321	13967-48-1	GAMMA SCAN	1/28/96	70.00	PC1/1	U	GRAB	318	7.40	140.90
L00323	13967-48-1	GAMMA SCAN	1/31/96	70.00	PC1/1	U	GRAB	495	7.30	73.00
L00325	13967-48-1	GAMMA SCAN	1/31/96	70.00	PC1/1	U	COMP			
L00347	13967-48-1	GAMMA SCAN	2/03/96	70.00	PC1/1	U	GRAB	492	7.53	340.00
L00349	13967-48-1	GAMMA SCAN	2/06/96	70.00	PC1/1	U	GRAB	869	7.14	333.00
L00351	13967-48-1	GAMMA SCAN	2/09/96	70.00	PC1/1	U	GRAB	288	7.64	152.50
L00353	13967-48-1	GAMMA SCAN	2/09/96	70.00	PC1/1	U	COMP			
L00354	13967-48-1	GAMMA SCAN	2/12/96	70.00	PC1/1	U	GRAB	275	7.53	147.00
L00356	13967-48-1	GAMMA SCAN	2/15/96	70.00	PC1/1	U	GRAB	275	7.16	246.10
L00358	13967-48-1	GAMMA SCAN	2/18/96	70.00	PC1/1	U	COMP			
L00359	13967-48-1	GAMMA SCAN	2/21/96	70.00	PC1/1	U	GRAB	240	7.49	144.90
L00361	13967-48-1	GAMMA SCAN	2/23/96	70.00	PC1/1	U	GRAB	310	7.41	151.30
L00363	13967-48-1	GAMMA SCAN			COMP					

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Sample No	Con ID	Method	Sample Date	Results Units	Lab qfr	Grab/ Comp	Flow	pH	Cond
RUTHENIUM-106									
L00364	13967-48-1	GAMMA SCAN	2/24/96	.70	PCU/L	GRAB	.396	7.50	148.00
L00366	13967-48-1	GAMMA SCAN	2/27/96	.70	PCU/L	GRAB	.341	7.20	137.00
L00368	13967-48-1	GAMMA SCAN	3/01/96	.70	PCU/L	GRAB	.339	7.35	574.00
L00370	13967-48-1	GAMMA SCAN	3/01/96	.70	PCU/L	COMP			
L00396	13967-48-1	GAMMA SCAN	3/01/96	.70	PCU/L	GRAB	.303	7.45	224.59
L00400	13967-48-1	GAMMA SCAN	3/09/96	.70	PCU/L	COMP			
L00401	13967-48-1	GAMMA SCAN	3/16/96	.70	PCU/L	GRAB	.379	7.57	170.90
L00403	13967-48-1	GAMMA SCAN	3/16/96	.70	PCU/L	COMP			
L00404	13967-48-1	GAMMA SCAN	3/24/96	.70	PCU/L	GRAB	.348	7.70	144.00
L00406	13967-48-1	GAMMA SCAN	3/24/96	.70	PCU/L	COMP			
L00407	13967-48-1	GAMMA SCAN	3/30/96	.70	PCU/L	GRAB	.366	7.49	159.90
L00409	13967-48-1	GAMMA SCAN	3/30/96	.70	PCU/L	COMP			
L00443	13967-48-1	GAMMA SCAN	4/07/96	.70	PCU/L	GRAB	.290	7.05	268.00
L00445	13967-48-1	GAMMA SCAN	4/07/96	.70	PCU/L	COMP			
L00446	13967-48-1	GAMMA SCAN	4/14/96	.70	PCU/L	GRAB	.297	7.19	156.10
L00448	13967-48-1	GAMMA SCAN	4/14/96	.70	PCU/L	COMP			
L00449	13967-48-1	GAMMA SCAN	4/21/96	.70	PCU/L	GRAB	.572	7.60	158.00
L00451	13967-48-1	GAMMA SCAN	4/21/96	.70	PCU/L	COMP			
L00452	13967-48-1	GAMMA SCAN	4/28/96	.70	PCU/L	GRAB	.357	7.48	162.80
L00454	13967-48-1	GAMMA SCAN	4/28/96	.70	PCU/L	COMP			
SELENIUM									
L00010	7782-49-2	SW-846 7740	6/08/95	.20	UG/L	U	J	COMP	
STRONTIUM-90									
L00164	10098-97-2	STRONTIUM-90	9/11/95	4.70	PCI/L	GRAB	443	7.87	142.90
L00166	10098-97-2	STRONTIUM-90	9/14/95	10.30	PCI/L	GRAB	339	7.69	128.00
L00167	10098-97-2	STRONTIUM-90	9/17/95	5.41	PCI/L	COMP			

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Sample No	Con ID	Method	Sample Date	Results Units	Lab qfr	Grab/ Comp	Flow	pH	Cond
STRONTIUM-90									
001169	10098-97-2	STRONTIUM-90	9/17/95	8.40	PCU/L	GRAB	485	7.70	116.60
001171	10098-97-2	STRONTIUM-90	9/20/95	12.50	PCU/L	GRAB	456	7.64	110.70
001173	10098-97-2	STRONTIUM-90	9/24/95	.37	PCU/L	GRAB	306	7.63	132.00
001174	10098-97-2	STRONTIUM-90	9/24/95	.37	PCU/L	COMP			
001176	10098-97-2	STRONTIUM-90	16.00	PCU/L	GRAB	529	7.60	113.00	
001178	10098-97-2	STRONTIUM-90	9/29/95	13.00	PCU/L	GRAB	287	7.55	111.90
001179	10098-97-2	STRONTIUM-90	10/01/95	15.00	PCU/L	COMP			
001184	10098-97-2	STRONTIUM-90	9/17/95	9.62	PCU/L	COMP			
001185	10098-97-2	STRONTIUM-90	10/09/95	9.90	PCU/L	COMP			
001186	10098-97-2	STRONTIUM-90	10/09/95	17.00	PCU/L	GRAB	436	7.65	91.20
001191	10098-97-2	STRONTIUM-90	10/23/95	.36	PCU/L	COMP			
001192	10098-97-2	STRONTIUM-90	10/23/95	.42	PCU/L	GRAB	454	7.39	106.20
001194	10098-97-2	STRONTIUM-90	10/30/95	.19	PCU/L	COMP			
001195	10098-97-2	STRONTIUM-90	10/30/95	.18	PCU/L	GRAB	450	8.30	132.25
002115	10098-97-2	STRONTIUM-90	11/07/95	-1.20	PCU/L	GRAB	321	7.49	1151.00
002117	10098-97-2	STRONTIUM-90	11/07/95	-1.40	PCU/L	COMP			
002118	10098-97-2	STRONTIUM-90	11/14/95	-.50	PCU/L	GRAB	271	7.54	1200.00
002220	10098-97-2	STRONTIUM-90	11/14/95	-1.40	PCU/L	COMP			
002221	10098-97-2	STRONTIUM-90	11/21/95	.46	PCU/L	GRAB	341	7.46	135.40
002223	10098-97-2	STRONTIUM-90	11/21/95	.34	PCU/L	COMP			
002224	10098-97-2	STRONTIUM-90	11/28/95	.48	PCU/L	GRAB	453	7.58	150.10
002226	10098-97-2	STRONTIUM-90	11/28/95	.49	PCU/L	COMP			
002241	10098-97-2	STRONTIUM-90	12/03/95	.45	PCU/L	GRAB	378	7.56	148.80
002422	10098-97-2	STRONTIUM-90	12/06/95	.52	PCU/L	COMP			
002444	10098-97-2	STRONTIUM-90	12/06/95	.47	PCU/L	GRAB	348	7.60	823.00
002446	10098-97-2	STRONTIUM-90	12/09/95	.23	PCU/L	GRAB	313	7.41	122.00
002448	10098-97-2	STRONTIUM-90	12/12/95	3.90	PCU/L	GRAB	260	7.53	135.80
002449	10098-97-2	STRONTIUM-90	12/12/95	3.70	PCU/L	COMP			
002521	10098-97-2	STRONTIUM-90	12/15/95	4.20	PCU/L	GRAB	404	7.60	142.70
002523	10098-97-2	STRONTIUM-90	12/18/95	.56	PCU/L	GRAB	451	7.50	140.00

Sample No	Con ID	Method	Sample Date	Results Units	Lab qfr	Grab/ Comp qfr	Flow	pH	Cond
STRONTIUM-90									
00054	10098-97-2	STRONTIUM-90	12/20/95	.78	PC1/L				
00056	10098-97-2	STRONTIUM-90	12/21/95	1.10	PC1/L				
00058	10098-97-2	STRONTIUM-90	12/24/95	.54	PC1/L	U			
00059	10098-97-2	STRONTIUM-90	12/27/95	2.45	PC1/L				
00061	10098-97-2	STRONTIUM-90	12/27/95	.49	PC1/L	U			
00063	10098-97-2	STRONTIUM-90	12/30/95	.47	PC1/L	U			
00067	10098-97-2	STRONTIUM-90	1/01/96	.53	PC1/L	U			
00069	10098-97-2	STRONTIUM-90	1/04/96	.67	PC1/L	U			
00071	10098-97-2	STRONTIUM-90	1/04/96	.56	PC1/L	U			
00092	10098-97-2	STRONTIUM-90	1/07/96	7.70	PC1/L				
000306	10098-97-2	STRONTIUM-90	1/10/96	1.60	PC1/L				
000308	10098-97-2	STRONTIUM-90	1/10/96	.83	PC1/L				
000309	10098-97-2	STRONTIUM-90	1/13/96	.48	PC1/L	U			
000311	10098-97-2	STRONTIUM-90	1/16/96	.50	PC1/L	U			
000313	10098-97-2	STRONTIUM-90	1/18/96	.46	PC1/L				
000314	10098-97-2	STRONTIUM-90	1/19/96	.49	PC1/L	U			
000316	10098-97-2	STRONTIUM-90	1/22/96	.47	PC1/L	U			
000318	10098-97-2	STRONTIUM-90	1/25/96	2.20	PC1/L	U			
000320	10098-97-2	STRONTIUM-90	1/25/96	.62	PC1/L	U			
000321	10098-97-2	STRONTIUM-90	1/28/96	.54	PC1/L	U			
000323	10098-97-2	STRONTIUM-90	1/31/96	.36	PC1/L	U			
000325	10098-97-2	STRONTIUM-90	1/31/96	.27	PC1/L	U			
000347	10098-97-2	STRONTIUM-90	2/03/96	.53	PC1/L	U			
000349	10098-97-2	STRONTIUM-90	2/06/96	.53	PC1/L	U			
000351	10098-97-2	STRONTIUM-90	2/09/96	.66	PC1/L	U			
000353	10098-97-2	STRONTIUM-90	2/09/96	1.80	PC1/L				
000354	10098-97-2	STRONTIUM-90	2/12/96	1.30	PC1/L				
000356	10098-97-2	STRONTIUM-90	2/15/96	1.50	PC1/L				
000358	10098-97-2	STRONTIUM-90	2/15/96	.46	PC1/L	U			
000359	10098-97-2	STRONTIUM-90	2/18/96	1.60	PC1/L				

WHC-SD-LEF-EV-001, ρ_{soil}

Sample No	Con ID	Method	Sample Date	Results Units	Lab qfr	Val qfr	Grab/ Comp	Flow	pH	Cond
STRONTIUM-90										
L00361	10098-97-2	STRONTIUM-90	2/21/96	3.50	PC1/L		GRAB	310	7.41	151.30
L00363	10098-97-2	STRONTIUM-90	2/23/96	2.30	PC1/L		COMP			
L00364	10098-97-2	STRONTIUM-90	2/24/96	.51	PC1/L	U	GRAB	396	7.50	148.00
L00366	10098-97-2	STRONTIUM-90	2/27/96	.82	PC1/L		GRAB	341	7.20	137.00
L00368	10098-97-2	STRONTIUM-90	3/01/96	.45	PC1/L	U	GRAB	339	7.35	574.00
L00370	10098-97-2	STRONTIUM-90	3/01/96	.43	PC1/L	U	COMP			
L00396	10098-97-2	STRONTIUM-90	3/09/96	.52	PC1/L		GRAB	303	7.45	224.59
L00400	10098-97-2	STRONTIUM-90	3/09/96	3.10	PC1/L		COMP			
L00401	10098-97-2	STRONTIUM-90	3/16/96	.77	PC1/L	U	GRAB	379	7.57	170.90
L00403	10098-97-2	STRONTIUM-90	3/16/96	.51	PC1/L	U	COMP			
L00404	10098-97-2	STRONTIUM-90	3/24/96	.51	PC1/L		GRAB	348	7.70	144.00
L00406	10098-97-2	STRONTIUM-90	3/24/96	.53	PC1/L	U	COMP			
L00407	10098-97-2	STRONTIUM-90	3/30/96	.57	PC1/L	U	GRAB	366	7.49	159.90
L00409	10098-97-2	STRONTIUM-90	3/30/96	2.00	PC1/L		COMP			
L00443	10098-97-2	STRONTIUM-90	4/07/96	.85	PC1/L	U	GRAB	290	7.05	268.00
L00445	10098-97-2	STRONTIUM-90	4/07/96	.62	PC1/L		COMP			
L00449	10098-97-2	STRONTIUM-90	4/21/96	.49	PC1/L		GRAB	572	7.60	158.00
L00451	10098-97-2	STRONTIUM-90	4/21/96	.92	PC1/L		COMP			
L00452	10098-97-2	STRONTIUM-90	4/28/96	.47	PC1/L	U	GRAB	357	7.48	162.80
L00454	10098-97-2	STRONTIUM-90	4/28/96	0.00	PC1/L	U	COMP			
SULFATE										
L00010	14808-79-8	EPA-600	300.0	6/08/95	6.40	MG/L	J	COMP	458	7.49
L00024	14808-79-8	EPA-600	300.0	7/03/95	10.50	MG/L		GRAB	592	7.50
L00026	14808-79-8	EPA-600	300.0	7/06/95	10.70	MG/L		COMP		145.00
L00027	14808-79-8	EPA-600	300.0	7/06/95	.75	MG/L		GRAB		
L00029	14808-79-8	EPA-600	300.0	7/09/95	11.60	MG/L		COMP	249	7.50
L00031	14808-79-8	EPA-600	300.0	7/12/95	12.00	MG/L		GRAB	256	7.49
L00032	14808-79-8	EPA-600	300.0	7/14/95	10.20	MG/L		COMP		156.00

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Sample No	Con ID	Method	Sample Date	Results Units	Lab qfr	Val qfr	Grab/ Comp	Flow	pH	Cond
SULFATE										
U00034	14808-79-8	EPA-600	300.0	7/15/95	8.90	MG/L	GRAB	262	7.59	150.30
U00036	14808-79-8	EPA-600	300.0	7/18/95	14.00	MG/L	GRAB	232	7.40	155.40
U00037	14808-79-8	EPA-600	300.0	7/21/95	13.00	MG/L	COMP			
U00039	14808-79-8	EPA-600	300.0	7/21/95	13.00	MG/L	GRAB	482	7.25	155.50
U00041	14808-79-8	EPA-600	300.0	7/24/95	7.90	MG/L	GRAB	244	7.62	132.40
U00042	14808-79-8	EPA-600	300.0	7/27/95	13.00	MG/L	COMP			
U00044	14808-79-8	EPA-600	300.0	7/27/95	14.00	MG/L	GRAB	360	7.65	104.50
U00046	14808-79-8	EPA-600	300.0	7/28/95	15.50	MG/L	J	GRAB	235	7.64
U00048	14808-79-8	EPA-600	300.0	8/01/95	13.00	MG/L	GRAB	421	7.65	112.20
U00050	14808-79-8	EPA-600	300.0	8/04/95	10.92	MG/L	GRAB	312	7.73	120.70
U00051	14808-79-8	EPA-600	300.0	8/05/95	10.57	MG/L	COMP			
U00053	14808-79-8	EPA-600	300.0	8/07/95	11.40	MG/L	GRAB	379	7.71	148.70
U00055	14808-79-8	EPA-600	300.0	8/10/95	10.22	MG/L	GRAB	374	7.71	143.67
U00056	14808-79-8	EPA-600	300.0	8/11/95	10.86	MG/L	COMP			
U00058	14808-79-8	EPA-600	300.0	8/13/95	11.60	MG/L	GRAB	400	7.77	153.45
U00060	14808-79-8	EPA-600	300.0	8/16/95	9.60	MG/L	GRAB	423	7.78	129.90
U00064	14808-79-8	EPA-600	300.0	8/19/95	10.50	MG/L	COMP			
U00066	14808-79-8	EPA-600	300.0	8/19/95	8.95	MG/L	GRAB	311	7.71	139.00
U00068	14808-79-8	EPA-600	300.0	8/22/95	10.40	MG/L	GRAB	565	7.66	129.80
U00069	14808-79-8	EPA-600	300.0	8/26/95	11.70	MG/L	COMP			
U00071	14808-79-8	EPA-600	300.0	8/25/95	9.80	MG/L	GRAB	253	7.60	134.00
U00072	14808-79-8	EPA-600	300.0	8/28/95	10.30	MG/L	GRAB	393	7.63	137.00
U00075	14808-79-8	EPA-600	300.0	8/31/95	8.96	MG/L	COMP	376	7.61	141.40
U00156	14808-79-8	EPA-600	300.0	9/03/95	11.71	MG/L	GRAB	270	7.64	172.40
U00157	14808-79-8	EPA-600	300.0	9/03/95	12.79	MG/L	COMP			
U00159	14808-79-8	EPA-600	300.0	9/05/95	10.40	MG/L	GRAB	334	7.59	101.80
U00161	14808-79-8	EPA-600	300.0	9/08/95	14.70	MG/L	GRAB	263	7.64	125.10
U00162	14808-79-8	EPA-600	300.0	9/11/95	12.50	MG/L	COMP			
U00164	14808-79-8	EPA-600	300.0	9/11/95	12.00	MG/L	GRAB	443	7.87	142.90
U00166	14808-79-8	EPA-600	300.0	9/14/95	11.60	MG/L	GRAB	339	7.69	128.00

WHC-SD-LEF-EV-001, ρ_{eff} , D

Sample No	Con ID	Method	Sample Date	Results Units	Lab qfr	Val qfr	Grab/ Comp	Flow	pH	Cond
SULFATE										
L00167	14808-79-8	EPA-600	300.0	9/17/95	13.03	MG/L	COMP	7.70	116.50	
L00169	14808-79-8	EPA-600	300.0	9/17/95	6.20	MG/L	GRAB	485	7.64	110.70
L00171	14808-79-8	EPA-600	300.0	9/20/95	12.00	MG/L	GRAB	456	10.40	132.00
L00173	14808-79-8	EPA-600	300.0	9/24/95	17.20	MG/L	GRAB	306	7.63	
L00174	14808-79-8	EPA-600	300.0	9/24/95	12.90	MG/L	COMP			
L00176	14808-79-8	EPA-600	300.0	9/26/95	11.40	MG/L	GRAB	529	7.60	113.00
L00178	14808-79-8	EPA-600	300.0	9/29/95	14.20	MG/L	GRAB	287	7.55	111.90
L00179	14808-79-8	EPA-600	300.0	10/01/95	11.70	MG/L	COMP			
L00183	14808-79-8	EPA-600	300.0	9/12/95	11.10	MG/L	GRAB	445	7.94	121.20
L00185	14808-79-8	EPA-600	300.0	10/09/95	10.90	MG/L	COMP			
L00186	14808-79-8	EPA-600	300.0	10/09/95	12.90	MG/L	GRAB	436	7.65	91.20
L00188	14808-79-8	EPA-600	300.0	10/16/95	10.90	MG/L	COMP			
L00189	14808-79-8	EPA-600	300.0	10/16/95	13.50	MG/L	GRAB	434	7.65	99.60
L00191	14808-79-8	EPA-600	300.0	10/23/95	10.00	MG/L	COMP			
L00192	14808-79-8	EPA-600	300.0	10/23/95	13.00	MG/L	GRAB	454	7.39	106.20
L00194	14808-79-8	EPA-600	300.0	10/30/95	14.70	MG/L	COMP			
L00195	14808-79-8	EPA-600	300.0	10/30/95	12.90	MG/L	GRAB	450	8.30	132.25
L00215	14808-79-8	EPA-600	300.0	11/07/95	11.90	MG/L	GRAB	321	7.49	1151.00
L00217	14808-79-8	EPA-600	300.0	11/07/95	11.20	MG/L	COMP			
L00218	14808-79-8	EPA-600	300.0	11/14/95	11.20	MG/L	GRAB	271	7.54	1200.00
L00220	14808-79-8	EPA-600	300.0	11/14/95	11.70	MG/L	COMP			
L00221	14808-79-8	EPA-600	300.0	11/21/95	10.30	MG/L	GRAB	341	7.46	135.40
L00223	14808-79-8	EPA-600	300.0	11/21/95	11.41	MG/L	COMP			
L00224	14808-79-8	EPA-600	300.0	11/28/95	12.20	MG/L	GRAB	453	7.58	150.10
L00226	14808-79-8	EPA-600	300.0	11/28/95	10.90	MG/L	COMP			
L00241	14808-79-8	EPA-600	300.0	12/03/95	11.90	MG/L	GRAB	378	7.56	148.80
L00242	14808-79-8	EPA-600	300.0	12/06/95	10.40	MG/L	COMP			
L00244	14808-79-8	EPA-600	300.0	12/06/95	10.70	MG/L	GRAB	348	7.60	823.00
L00246	14808-79-8	EPA-600	300.0	12/09/95	10.67	MG/L	GRAB	313	7.41	122.00
L00248	14808-79-8	EPA-600	300.0	12/12/95	11.50	MG/L	GRAB	260	7.53	135.80

WHC-SD-LFF-EV-001, ρ_{eff} , 0

Sample No	Con ID	Method	Sample Date	Results Units	Lab qfr	Grab/ Comp qfr	Flow pH	Cond
SULFATE								
U00249	14808-79-8	EPA-600	300.0	12/12/95	7.05	MG/L		
U00251	14808-79-8	EPA-600	300.0	12/15/95	12.22	MG/L	GRAB	404
U00253	14808-79-8	EPA-600	300.0	12/18/95	11.50	MG/L	GRAB	451
U00254	14808-79-8	EPA-600	300.0	12/20/95	12.00	MG/L	COMP	
U00256	14808-79-8	EPA-600	300.0	12/21/95	13.40	MG/L	GRAB	408
U00258	14808-79-8	EPA-600	300.0	12/24/95	12.80	MG/L	GRAB	316
U00259	14808-79-8	EPA-600	300.0	12/27/95	11.50	MG/L	COMP	
U00261	14808-79-8	EPA-600	300.0	12/27/95	11.90	MG/L	GRAB	480
U00263	14808-79-8	EPA-600	300.0	12/30/95	12.18	MG/L	GRAB	416
U00297	14808-79-8	EPA-600	300.0	1/01/96	11.30	MG/L	GRAB	559
U00299	14808-79-8	EPA-600	300.0	1/04/96	12.30	MG/L	GRAB	303
U00301	14808-79-8	EPA-600	300.0	1/04/96	12.70	MG/L	COMP	
U00302	14808-79-8	EPA-600	300.0	1/07/96	11.20	MG/L	GRAB	353
U00306	14808-79-8	EPA-600	300.0	1/10/96	11.80	MG/L	GRAB	512
U00308	14808-79-8	EPA-600	300.0	1/10/96	12.10	MG/L	COMP	
U00309	14808-79-8	EPA-600	300.0	1/13/96	11.10	MG/L	GRAB	296
U00311	14808-79-8	EPA-600	300.0	1/16/96	10.80	MG/L	GRAB	283
U00313	14808-79-8	EPA-600	300.0	1/18/96	12.10	MG/L	COMP	
U00314	14808-79-8	EPA-600	300.0	1/19/96	12.10	MG/L	GRAB	305
U00316	14808-79-8	EPA-600	300.0	1/22/96	12.10	MG/L	GRAB	482
U00318	14808-79-8	EPA-600	300.0	1/25/96	10.50	MG/L	GRAB	393
U00320	14808-79-8	EPA-600	300.0	1/25/96	10.80	MG/L	COMP	
U00321	14808-79-8	EPA-600	300.0	1/28/96	10.70	MG/L	GRAB	318
U00323	14808-79-8	EPA-600	300.0	1/31/96	10.50	MG/L	GRAB	495
U00325	14808-79-8	EPA-600	300.0	1/31/96	12.50	MG/L	COMP	
U00347	14808-79-8	EPA-600	300.0	2/03/96	11.30	MG/L	GRAB	492
U00349	14808-79-8	EPA-600	300.0	2/06/96	8.16	MG/L	GRAB	869
U00351	14808-79-8	EPA-600	300.0	2/09/96	11.26	MG/L	GRAB	288
U00353	14808-79-8	EPA-600	300.0	2/09/96	9.99	MG/L	COMP	
U00354	14808-79-8	EPA-600	300.0	2/12/96	9.04	MG/L	GRAB	275
								147.00

WHC-SD-LFF-EV-001, Rev 0

Sample No	Con ID	Method	Sample Date	Results Units	Lab qfr	Grab/ Comp	Flow	pH	Cond
SULFATE									
L00356	14808-79-8	EPA-600	300.0	2/15/96	9.44	MG/L	GRAB	275	7.16
L00358	14808-79-8	EPA-600	300.0	2/15/96	9.73	MG/L	COMP		246.10
L00359	14808-79-8	EPA-600	300.0	2/18/96	9.65	MG/L	GRAB	240	7.49
L00361	14808-79-8	EPA-600	300.0	2/21/96	9.35	MG/L	GRAB	310	7.41
L00363	14808-79-8	EPA-600	300.0	2/23/96	10.89	MG/L	COMP		
L00364	14808-79-8	EPA-600	300.0	2/24/96	9.88	MG/L	GRAB	396	7.50
L00366	14808-79-8	EPA-600	300.0	2/27/96	10.90	MG/L	GRAB	341	7.20
L00368	14808-79-8	EPA-600	300.0	3/01/96	9.84	MG/L	GRAB	339	7.35
L00370	14808-79-8	EPA-600	300.0	3/01/96	10.40	MG/L	COMP		574.00
L00396	14808-79-8	EPA-600	300.0	3/09/96	11.00	MG/L	GRAB	303	7.45
L00400	14808-79-8	EPA-600	300.0	3/09/96	9.70	MG/L	COMP		224.59
L00401	14808-79-8	EPA-600	300.0	3/16/96	10.90	MG/L	GRAB	379	7.57
L00403	14808-79-8	EPA-600	300.0	3/16/96	12.70	MG/L	COMP		170.90
L00404	14808-79-8	EPA-600	300.0	3/24/96	11.60	MG/L	GRAB	348	7.70
L00406	14808-79-8	EPA-600	300.0	3/24/96	11.80	MG/L	COMP		144.00
L00407	14808-79-8	EPA-600	300.0	3/30/96	10.00	MG/L	GRAB	366	7.49
L00409	14808-79-8	EPA-600	300.0	3/30/96	12.00	MG/L	COMP		159.90
L00443	14808-79-8	EPA-600	300.0	4/07/96	62.60	MG/L	GRAB	290	7.05
L00445	14808-79-8	EPA-600	300.0	4/07/96	54.60	MG/L	COMP		268.00
L00446	14808-79-8	EPA-600	300.0	4/14/96	32.11	MG/L	GRAB	297	7.19
L00448	14808-79-8	EPA-600	300.0	4/14/96	11.60	MG/L	COMP		156.10
L00449	14808-79-8	EPA-600	300.0	4/21/96	12.30	MG/L	GRAB	572	7.60
L00451	14808-79-8	EPA-600	300.0	4/21/96	12.40	MG/L	COMP		158.00
L00452	14808-79-8	EPA-600	300.0	4/28/96	10.10	MG/L	GRAB	357	7.48
L00454	14808-79-8	EPA-600	300.0	4/28/96	11.60	MG/L	COMP		162.80
LTEOP00004	14808-79-8	EPA-600	300.0	5/19/95	9.01	MG/L	COMP		
LTEOP00007	14808-79-8	EPA-600	300.0	5/25/95	13.40	MG/L	COMP		

WHC-SD-LEEF-EV-001, $\lambda\omega\theta$

Sample No	Con ID	Method	Sample Date	Results Units	Lab qifr	Grab/ Comp	Flow	pH	Cond
THALLIUM									
L_00010	7440-28-0	SW-846 7211	6/08/95	0.00 U6/L	U	GRAB	569	7.45	140.00
TIN-113									
L_00167	13966-06-8	GAMMA SCAN	9/17/95	5.00 PC1/L	U	COMP			
L_00169	13966-06-8	GAMMA SCAN	9/17/95	0.00 PC1/L	U	GRAB	485	7.70	116.60
L_00171	13966-06-8	GAMMA SCAN	9/20/95	5.00 PC1/L	U	GRAB	456	7.64	110.70
L_00173	13966-06-8	GAMMA SCAN	9/24/95	5.00 PC1/L	U	GRAB	306	7.63	132.00
L_00174	13966-06-8	GAMMA SCAN	9/24/95	5.00 PC1/L	U	COMP			
L_00176	13966-06-8	GAMMA SCAN	9/26/95	5.00 PC1/L	U	GRAB	529	7.60	113.00
L_00178	13966-06-8	GAMMA SCAN	9/29/95	5.00 PC1/L	U	GRAB	287	7.55	111.90
L_00179	13966-06-8	GAMMA SCAN	10/01/95	5.53 PC1/L	U	COMP			
L_00184	13966-06-8	GAMMA SCAN	9/17/95	5.00 PC1/L	U	COMP			
L_00185	13966-06-8	GAMMA SCAN	10/09/95	5.00 PC1/L	U	COMP			
L_00186	13966-06-8	GAMMA SCAN	10/09/95	5.00 PC1/L	U	GRAB	436	7.65	91.20
L_00191	13966-06-8	GAMMA SCAN	10/23/95	10.00 PC1/L	U	COMP			
L_00192	13966-06-8	GAMMA SCAN	10/23/95	10.00 PC1/L	U	GRAB	454	7.39	106.20
L_00194	13966-06-8	GAMMA SCAN	10/30/95	9.60 PC1/L	U	COMP			
L_00195	13966-06-8	GAMMA SCAN	10/30/95	9.60 PC1/L	U	GRAB	450	8.30	132.25
L_00215	13966-06-8	GAMMA SCAN	11/07/95	10.00 PC1/L	U	GRAB	321	7.49	1151.00
L_00217	13966-06-8	GAMMA SCAN	11/07/95	11.00 PC1/L	U	COMP			
L_00218	13966-06-8	GAMMA SCAN	11/14/95	6.00 PC1/L	U	GRAB	271	7.54	1200.00
L_00220	13966-06-8	GAMMA SCAN	11/14/95	10.00 PC1/L	U	COMP			
L_00221	13966-06-8	GAMMA SCAN	11/21/95	10.00 PC1/L	U	GRAB	341	7.46	135.40
L_00223	13966-06-8	GAMMA SCAN	11/21/95	10.00 PC1/L	U	COMP			
L_00224	13966-06-8	GAMMA SCAN	11/28/95	10.00 PC1/L	U	GRAB	453	7.58	150.10
L_00226	13966-06-8	GAMMA SCAN	11/28/95	10.00 PC1/L	U	COMP			
L_00241	13966-06-8	GAMMA SCAN	12/03/95	10.00 PC1/L	U	GRAB	378	7.56	148.80
L_00242	13966-06-8	GAMMA SCAN	12/06/95	10.00 PC1/L	U	COMP			
L_00244	13966-06-8	GAMMA SCAN	12/06/95	11.00 PC1/L	U	GRAB	348	7.60	823.00

WHC-SD-LFF-EV-001, ρ_{ZnO}

Sample No	Con ID	Method	Sample Date	Results	Units	Lab qifr	Grab/ Comp	Flow	pH	Cond
TIN-113										
L00246	13966-06-8	GAMMA SCAN	12/09/95	9.40	PCI/L	U	GRAB	313	7.41	122.00
L00248	13966-06-8	GAMMA SCAN	12/12/95	10.00	PCI/L	U	GRAB	260	7.53	135.80
L00249	13966-06-8	GAMMA SCAN	12/12/95	9.30	PCI/L	U	COMP			
L00251	13966-06-8	GAMMA SCAN	12/15/95	10.00	PCI/L	U	GRAB	404	7.60	142.70
L00253	13966-06-8	GAMMA SCAN	12/18/95	9.50	PCI/L	U	GRAB	451	7.50	140.00
L00254	13966-06-8	GAMMA SCAN	12/20/95	10.00	PCI/L	U	COMP			
L00256	13966-06-8	GAMMA SCAN	12/21/95	13.00	PCI/L	U	GRAB	408	7.36	112.00
L00258	13966-06-8	GAMMA SCAN	12/24/95	10.00	PCI/L	U	GRAB	316	7.50	148.00
L00259	13966-06-8	GAMMA SCAN	12/27/95	9.70	PCI/L	U	COMP			
L00261	13966-06-8	GAMMA SCAN	12/27/95	10.00	PCI/L	U	GRAB	480	7.37	112.90
L00263	13966-06-8	GAMMA SCAN	12/30/95	9.20	PCI/L	U	GRAB	416	7.48	150.90
L00297	13966-06-8	GAMMA SCAN	1/01/96	90.00	PCI/L	U	GRAB	559	7.45	150.00
L00299	13966-06-8	GAMMA SCAN	1/04/96	10.00	PCI/L	U	GRAB	303	7.53	151.70
L00301	13966-06-8	GAMMA SCAN	1/04/96	10.00	PCI/L	U	COMP			
L00302	13966-06-8	GAMMA SCAN	1/07/96	9.30	PCI/L	U	GRAB	353	7.44	145.00
L00306	13966-06-8	GAMMA SCAN	1/10/96	10.00	PCI/L	U	GRAB	512	7.37	49.30
L00308	13966-06-8	GAMMA SCAN	1/10/96	9.80	PCI/L	U	COMP			
L00309	13966-06-8	GAMMA SCAN	1/13/96	10.00	PCI/L	U	GRAB	296	7.49	142.20
L00311	13966-06-8	GAMMA SCAN	1/16/96	9.50	PCI/L	U	GRAB	283	7.52	138.60
L00313	13966-06-8	GAMMA SCAN	1/18/96	10.00	PCI/L	U	COMP			
L00314	13966-06-8	GAMMA SCAN	1/19/96	10.00	PCI/L	U	GRAB	305	7.46	142.70
L00316	13966-06-8	GAMMA SCAN	1/22/96	9.30	PCI/L	U	GRAB	482	7.50	141.00
L00318	13966-06-8	GAMMA SCAN	1/25/96	10.00	PCI/L	U	GRAB	393	7.43	143.00
L00320	13966-06-8	GAMMA SCAN	1/25/96	9.40	PCI/L	U	COMP			
L00321	13966-06-8	GAMMA SCAN	1/28/96	9.00	PCI/L	U	GRAB	318	7.40	140.90
L00323	13966-06-8	GAMMA SCAN	1/31/96	9.00	PCI/L	U	GRAB	495	7.30	73.00
L00325	13966-06-8	GAMMA SCAN	1/31/96	9.00	PCI/L	U	COMP			
L00347	13966-06-8	GAMMA SCAN	2/03/96	9.00	PCI/L	U	GRAB	492	7.53	340.00
L00349	13966-06-8	GAMMA SCAN	2/06/96	9.00	PCI/L	U	GRAB	869	7.14	333.00
L00351	13966-06-8	GAMMA SCAN	2/09/96	9.00	PCI/L	U	GRAB	288	7.64	152.50

WHC-SD-L1EF-EV-001, ρ_{eff} , θ

Sample No	Con ID	Method	Sample Date	Results Units	Lab qfr	Grab/ Comp	Flow	pH	Cond
TIN-113									
L00353	13966-06-8	GAMMA SCAN	2/09/96	9.00	PCU/L	COMP			
L00354	13966-06-8	GAMMA SCAN	2/12/96	9.00	PCU/L	GRAB	275	7.53	147.00
L00356	13966-06-8	GAMMA SCAN	2/15/96	9.00	PCU/L	GRAB	275	7.16	246.10
L00358	13966-06-8	GAMMA SCAN	2/15/96	9.00	PCU/L	COMP			
L00359	13966-06-8	GAMMA SCAN	2/18/96	9.00	PCU/L	GRAB	240	7.49	144.90
L00361	13966-06-8	GAMMA SCAN	2/21/96	9.00	PCU/L	GRAB	310	7.41	151.30
L00363	13966-06-8	GAMMA SCAN	2/23/96	9.00	PCU/L	COMP			
L00364	13966-06-8	GAMMA SCAN	2/24/96	9.00	PCU/L	GRAB	396	7.50	148.00
L00366	13966-06-8	GAMMA SCAN	2/27/96	9.00	PCU/L	GRAB	341	7.20	137.00
L00368	13966-06-8	GAMMA SCAN	3/01/96	10.00	PCU/L	GRAB	339	7.35	574.00
L00370	13966-06-8	GAMMA SCAN	3/01/96	10.00	PCU/L	COMP			
L00396	13966-06-8	GAMMA SCAN	3/09/96	10.00	PCU/L	GRAB	303	7.45	224.59
L00400	13966-06-8	GAMMA SCAN	3/09/96	10.00	PCU/L	COMP			
L00401	13966-06-8	GAMMA SCAN	3/16/96	10.00	PCU/L	GRAB	379	7.57	170.90
L00403	13966-06-8	GAMMA SCAN	3/16/96	10.00	PCU/L	COMP			
L00404	13966-06-8	GAMMA SCAN	3/24/96	10.00	PCU/L	GRAB	348	7.70	144.00
L00406	13966-06-8	GAMMA SCAN	3/24/96	10.00	PCU/L	COMP			
L00407	13966-06-8	GAMMA SCAN	3/30/96	9.00	PCU/L	GRAB	366	7.49	159.90
L00409	13966-06-8	GAMMA SCAN	3/30/96	10.00	PCU/L	COMP			
L00443	13966-06-8	GAMMA SCAN	4/07/96	9.00	PCU/L	GRAB	290	7.05	268.00
L00445	13966-06-8	GAMMA SCAN	4/07/96	10.00	PCU/L	COMP			
L00446	13966-06-8	GAMMA SCAN	4/14/96	9.00	PCU/L	GRAB	297	7.19	156.10
L00448	13966-06-8	GAMMA SCAN	4/14/96	9.00	PCU/L	COMP			
L00449	13966-06-8	GAMMA SCAN	4/21/96	10.00	PCU/L	GRAB	572	7.60	158.00
L00451	13966-06-8	GAMMA SCAN	4/21/96	10.00	PCU/L	COMP			
L00452	13966-06-8	GAMMA SCAN	4/28/96	10.00	PCU/L	GRAB	357	7.48	162.80
L00454	13966-06-8	GAMMA SCAN	4/28/96	10.00	PCU/L	COMP			

WHC-SD-LEF-EV-001, Rev D

Sample No	Con ID	Method	Sample Date	Results Units	Lab qfr	Grab/ Comp	Flow	pH	Cond
TOTAL DISSOLVED SOLIDS									
L00010	TDS	EPA-600 160.1	6/08/95	61.00 MG/L	COMP				
L00027	TDS	EPA-600 160.1	7/06/95	61.50 MG/L	J	COMP			
L00051	TDS	EPA-600 160.1	8/05/95	104.00 MG/L	J	COMP			
L00157	TDS	EPA-600 160.1	9/03/95	115.00 MG/L	COMP				
L00188	TDS	EPA-600 160.1	10/16/95	99.00 MG/L	J	COMP			
L00218	TDS	EPA-600 160.1	11/14/95	129.00 MG/L	GRAB	271	7.54	1200.00	
L00220	TDS	EPA-600 160.1	11/14/95	125.00 MG/L	COMP				
L00242	TDS	EPA-600 160.1	12/06/95	64.00 MG/L	J	COMP			
L00244	TDS	EPA-600 160.1	12/06/95	84.00 MG/L	GRAB	348	7.60	823.00	
L00299	TDS	EPA-600 160.1	1/04/96	56.00 MG/L	J	GRAB	303	7.53	151.70
L00301	TDS	EPA-600 160.1	1/04/96	67.00 MG/L	J	COMP			
L00351	TDS	EPA-600 160.1	2/09/96	46.00 MG/L	GRAB	288	7.64	152.50	
L00353	TDS	EPA-600 160.1	2/09/96	75.00 MG/L	COMP				
L00396	TDS	EPA-600 160.1	3/09/96	121.00 MG/L	GRAB	303	7.45	224.59	
L00400	TDS	EPA-600 160.1	3/09/96	123.00 MG/L	COMP				
L00443	TDS	EPA-600 160.1	4/07/96	141.00 MG/L	GRAB	290	7.05	268.00	
L00445	TDS	EPA-600 160.1	4/07/96	127.00 MG/L	COMP				
LTOP00004	TDS	EPA-600 160.1	5/19/95	75.00 MG/L	COMP				
LTOP00007	TDS	EPA-600 160.1	5/25/95	89.50 MG/L	COMP				
TOTAL SUSPENDED SOLIDS									
L00445	TSS	EPA-600 160.2	4/07/96	14.00 MG/L	COMP				
TOTAL TRIHALOMETHANES									
L00323	THM	SW-846 8260A	1/31/96	3.00 ug/L	GRAB	495	7.30	73.00	
L00347	THM	SW-846 8260A	2/03/96	3.00 ug/L	GRAB	492	7.53	340.00	
L00349	THM	SW-846 8260A	2/06/96	2.00 ug/L	J	GRAB	869	7.14	333.00
L00351	THM	SW-846 8260A	2/09/96	6.00 ug/L	GRAB	288	7.64	152.50	

WHC-SD-LFF-EV-001, $\rho_{\text{UJ}} 0$

Sample No	Con ID	Method	Sample Date	Results Units	Lab qLfr	Grab/qlfr Comp	Flow	pH	Cond
TOTAL TRIHALOMETHANES									
L00354	THM	SW-846 8260A	2/12/96	4.00	UG/L	GRAB	275	7.53	147.00
L00356	THM	SW-846 8260A	2/15/96	3.00	UG/L	GRAB	275	7.16	246.10
L00359	THM	SW-846 8260A	2/18/96	5.00	UG/L	GRAB	240	7.49	144.90
L00361	THM	SW-846 8260A	2/21/96	6.00	UG/L	GRAB	310	7.41	151.30
L00364	THM	SW-846 8260A	2/24/96	6.00	UG/L	GRAB	396	7.50	148.00
L00366	THM	SW-846 8260A	2/26/96	5.00	UG/L	GRAB	341	7.20	137.00
L00368	THM	SW-846 8260A	3/01/96	8.00	UG/L	GRAB	339	7.35	574.00
L00396	THM	SW-846 8260A	3/09/96	12.00	UG/L	GRAB	303	7.45	224.59
L00401	THM	SW-846 8260A	3/16/96	8.00	UG/L	GRAB	379	7.57	170.90
L00404	THM	SW-846 8260A	3/24/96	6.00	UG/L	GRAB	348	7.70	144.00
L00407	THM	SW-846 8260A	3/30/96	8.00	UG/L	J	GRAB	366	7.49
L00443	THM	SW-846 8260A	4/07/96	3.00	UG/L	J	GRAB	290	7.05
L00446	THM	SW-846 8260A	4/14/96	10.90	UG/L	J	GRAB	297	7.19
L00449	THM	SW-846 8260A	4/21/96	8.50	UG/L	J	GRAB	572	7.60
L00452	THM	SW-846 8260A	4/28/96	9.00	UG/L	J	GRAB	357	7.48
WTPH-G									
L00010	TPH-G	SW-846 8015M (WTP	6/08/95	0.00	UG/L	U	GRAB	569	7.45
L00044	TPH-G	SW-846 8015M (WTP	7/27/95	250.00	UG/L	U	GRAB	360	7.65
L00071	TPH-G	SW-846 8015M (WTP	8/25/95	250.00	UG/L	U	GRAB	253	7.60
L00178	TPH-G	SW-846 8015M (WTP	9/29/95	250.00	UG/L	U	GRAB	287	7.55
L00189	TPH-G	SW-846 8015M (WTP	10/16/95	250.00	UG/L	U	GRAB	434	7.65
L00218	TPH-G	SW-846 8015M (WTP	11/14/95	250.00	UG/L	U	GRAB	271	7.54
L00244	TPH-G	SW-846 8015M (WTP	12/06/95	250.00	UG/L	U	GRAB	348	7.60
L00299	TPH-G	SW-846 8015M (WTP	1/04/96	250.00	UG/L	U	GRAB	303	7.53
L00351	TPH-G	SW-846 8015M (WTP	2/09/96	250.00	UG/L	U	GRAB	288	7.64
L00396	TPH-G	SW-846 8015M (WTP	3/09/96	250.00	UG/L	U	GRAB	303	7.45
L00443	TPH-G	SW-846 8015M (WTP	4/07/96	250.00	UG/L	U	GRAB	290	7.05
LTEOP00004	TPH-G	SW-846 8015M (WTP	5/19/95	100.00	UG/L	J	GRAB	343	7.86

WHC-SD-LEF-EV-001, Revision 0

Sample No	Con ID	Method	Sample Date	Results Units	Lab q1fr	Val q1fr	Grab/ Comp	Flow pH	Cond
WTPH-G	LTEOP0007 TPH-G	SW-846 8015M (WTP	5/25/95	0.00 ug/l	U	GRAB	341	7.92	152.66
ZINC-65									
100194	13982-39-3	GAMMA SCAN	10/30/95	15.00 PCI/L	U	COMP			
100195	13982-39-3	GAMMA SCAN	10/30/95	16.00 PCI/L	U	GRAB	450	8.30	132.25
100215	13982-39-3	GAMMA SCAN	11/07/95	15.00 PCI/L	U	GRAB	321	7.49	1151.00
100217	13982-39-3	GAMMA SCAN	11/07/95	10.00 PCI/L	U	COMP			
100218	13982-39-3	GAMMA SCAN	11/14/95	9.00 PCI/L	U	GRAB	271	7.54	1200.00
100220	13982-39-3	GAMMA SCAN	11/14/95	15.00 PCI/L	U	COMP			
100221	13982-39-3	GAMMA SCAN	11/21/95	15.00 PCI/L	U	GRAB	341	7.46	135.40
100223	13982-39-3	GAMMA SCAN	11/21/95	15.00 PCI/L	U	COMP			
100224	13982-39-3	GAMMA SCAN	11/28/95	15.00 PCI/L	U	GRAB	453	7.58	150.10
100226	13982-39-3	GAMMA SCAN	11/28/95	15.00 PCI/L	U	COMP			
100241	13982-39-3	GAMMA SCAN	12/03/95	14.00 PCI/L	U	GRAB	378	7.56	148.80
100242	13982-39-3	GAMMA SCAN	12/06/95	16.00 PCI/L	U	COMP			
100244	13982-39-3	GAMMA SCAN	12/06/95	15.00 PCI/L	U	GRAB	348	7.60	823.00
100246	13982-39-3	GAMMA SCAN	12/09/95	14.00 PCI/L	U	GRAB	313	7.41	122.00
100248	13982-39-3	GAMMA SCAN	12/12/95	16.00 PCI/L	U	GRAB	260	7.53	135.80
100249	13982-39-3	GAMMA SCAN	12/12/95	15.00 PCI/L	U	COMP			
100251	13982-39-3	GAMMA SCAN	12/15/95	16.00 PCI/L	U	GRAB	404	7.60	142.70
100253	13982-39-3	GAMMA SCAN	12/18/95	15.00 PCI/L	U	GRAB	451	7.50	140.00
100254	13982-39-3	GAMMA SCAN	12/20/95	14.00 PCI/L	U	COMP			
100256	13982-39-3	GAMMA SCAN	12/21/95	20.00 PCI/L	U	GRAB	408	7.36	112.00
100258	13982-39-3	GAMMA SCAN	12/24/95	15.00 PCI/L	U	GRAB	316	7.50	148.00
100259	13982-39-3	GAMMA SCAN	12/27/95	14.00 PCI/L	U	COMP			
100261	13982-39-3	GAMMA SCAN	12/27/95	16.00 PCI/L	U	GRAB	480	7.37	112.90
100263	13982-39-3	GAMMA SCAN	12/30/95	15.00 PCI/L	U	GRAB	416	7.48	150.90
100297	13982-39-3	GAMMA SCAN	1/01/96	38.00 PCI/L	U	GRAB	559	7.45	150.00
100299	13982-39-3	GAMMA SCAN	1/04/96	14.00 PCI/L	U	GRAB	303	7.53	151.70

WHC-SD-LEEF-EV-001, $\ell\omega D$

Sample No	Con ID	Method	Sample Date	Results	Units	Lab	Val	Grab/	Flow	pH	Cond
			q1fr	q1fr	Comp	q1fr	Comp	q1fr	Comp	q1fr	Comp
ZINC-65											
U00301	13982-39-3	GAMMA SCAN	1/04/96	14.00	PCI/L	COMP	353	7.44	145.00		
U00302	13982-39-3	GAMMA SCAN	1/07/96	14.00	PCI/L	GRAB	512	7.37	49.30		
U00306	13982-39-3	GAMMA SCAN	1/10/96	16.00	PCI/L	COMP	296	7.49	142.20		
U00308	13982-39-3	GAMMA SCAN	1/10/96	14.00	PCI/L	GRAB	283	7.52	138.60		
U00309	13982-39-3	GAMMA SCAN	1/13/96	14.00	PCI/L	COMP	305	7.46	142.70		
U00311	13982-39-3	GAMMA SCAN	1/16/96	14.00	PCI/L	GRAB	482	7.50	141.00		
U00313	13982-39-3	GAMMA SCAN	1/18/96	15.00	PCI/L	COMP	393	7.43	143.00		
U00314	13982-39-3	GAMMA SCAN	1/19/96	15.00	PCI/L	GRAB	318	7.40	140.90		
U00316	13982-39-3	GAMMA SCAN	1/22/96	14.00	PCI/L	COMP	495	7.30	73.00		
U00318	13982-39-3	GAMMA SCAN	1/25/96	14.00	PCI/L	GRAB	492	7.53	340.00		
U00320	13982-39-3	GAMMA SCAN	1/25/96	13.00	PCI/L	COMP	869	7.14	333.00		
U00321	13982-39-3	GAMMA SCAN	1/28/96	15.00	PCI/L	GRAB	288	7.64	152.50		
U00323	13982-39-3	GAMMA SCAN	1/31/96	15.00	PCI/L	COMP	275	7.53	147.00		
U00325	13982-39-3	GAMMA SCAN	1/31/96	15.00	PCI/L	GRAB	275	7.16	246.10		
U00347	13982-39-3	GAMMA SCAN	2/03/96	15.00	PCI/L	COMP	2/06/96	15.00	PCI/L	GRAB	
U00349	13982-39-3	GAMMA SCAN	2/06/96	15.00	PCI/L	GRAB	2/18/96	15.00	PCI/L	COMP	
U00351	13982-39-3	GAMMA SCAN	2/09/96	15.00	PCI/L	GRAB	2/21/96	15.00	PCI/L	COMP	
U00353	13982-39-3	GAMMA SCAN	2/09/96	15.00	PCI/L	GRAB	2/23/96	15.00	PCI/L	COMP	
U00354	13982-39-3	GAMMA SCAN	2/12/96	15.00	PCI/L	GRAB	2/24/96	15.00	PCI/L	COMP	
U00356	13982-39-3	GAMMA SCAN	2/15/96	15.00	PCI/L	GRAB	2/27/96	15.00	PCI/L	GRAB	
U00358	13982-39-3	GAMMA SCAN	2/15/96	15.00	PCI/L	COMP	3/01/96	15.00	PCI/L	GRAB	
U00359	13982-39-3	GAMMA SCAN	2/18/96	15.00	PCI/L	GRAB	3/01/96	15.00	PCI/L	COMP	
U00361	13982-39-3	GAMMA SCAN	2/21/96	15.00	PCI/L	GRAB	3/10	7.41	151.30		
U00363	13982-39-3	GAMMA SCAN	2/23/96	15.00	PCI/L	COMP	3/09/96	15.00	PCI/L	GRAB	
U00364	13982-39-3	GAMMA SCAN	2/24/96	15.00	PCI/L	GRAB	396	7.50	148.00		
U00366	13982-39-3	GAMMA SCAN	2/27/96	15.00	PCI/L	COMP	341	7.20	137.00		
U00368	13982-39-3	GAMMA SCAN	3/01/96	15.00	PCI/L	GRAB	339	7.35	574.00		
U00370	13982-39-3	GAMMA SCAN	3/01/96	15.00	PCI/L	COMP	303	7.45	224.59		
U00396	13982-39-3	GAMMA SCAN	3/09/96	15.00	PCI/L	GRAB					
U00400	13982-39-3	GAMMA SCAN	3/09/96	15.00	PCI/L	COMP					

WHC-SD-LEF-EV-001, μ cuv

Sample No	Con ID	Method	Sample Date	Results Units	Lab qfr	Val qfr	Grab/ Comp	Flow	pH	Cond
ZINC-65										
000401	13982-39-3	GAMMA SCAN	3/16/96	15.00	PCI/L	U	GRAB	379	7.57	170.90
000403	13982-39-3	GAMMA SCAN	3/16/96	15.00	PCI/L	U	COMP			
000404	13982-39-3	GAMMA SCAN	3/24/96	15.00	PCI/L	U	GRAB	348	7.70	144.00
000406	13982-39-3	GAMMA SCAN	3/24/96	15.00	PCI/L	U	COMP			
000407	13982-39-3	GAMMA SCAN	3/30/96	15.00	PCI/L	U	GRAB	366	7.49	159.90
000409	13982-39-3	GAMMA SCAN	3/30/96	15.00	PCI/L	U	COMP			
000443	13982-39-3	GAMMA SCAN	4/07/96	15.00	PCI/L	U	GRAB	290	7.05	268.00
000445	13982-39-3	GAMMA SCAN	4/07/96	15.00	PCI/L	U	COMP			
000446	13982-39-3	GAMMA SCAN	4/14/96	15.00	PCI/L	U	GRAB	297	7.19	156.10
000448	13982-39-3	GAMMA SCAN	4/14/96	15.00	PCI/L	U	COMP			
000449	13982-39-3	GAMMA SCAN	4/21/96	15.00	PCI/L	U	GRAB	572	7.60	158.00
000451	13982-39-3	GAMMA SCAN	4/21/96	15.00	PCI/L	U	COMP			
000452	13982-39-3	GAMMA SCAN	4/28/96	15.00	PCI/L	U	GRAB	357	7.48	162.80
000454	13982-39-3	GAMMA SCAN	4/28/96	15.00	PCI/L	U	COMP			

WHC-SD-LEF-EV-001, λ_{abs} 0

Sample No	Con ID	Method	Sample Date	Results	Units	Lab q/l fr	Val q/l fr	Grab/ Comp	Flow	pH	Cond
BIS(2-ETHYLHEXYL) PHthalate											
L00407	117-81-7	SW-846 8270B	3/30/96	1.00	UG/L	JB		GRAB	366	7.49	159.90
CYANIDE											
L00053	57-12-5	EPA-600 335.3	8/07/95	.48	UG/L	U	UR	GRAB	379	7.71	148.70
L00058	57-12-5	EPA-600 335.3	8/13/95	.39	UG/L	U	UR	GRAB	400	7.77	153.45
L00068	57-12-5	EPA-600 335.3	8/22/95	.97	UG/L	U	UR	GRAB	565	7.66	129.80
L00253	57-12-5	EPA-600 335.3	12/18/95	0.00	UG/L	U	UR	GRAB	451	7.50	140.00
SULFATE											
L00370	14808-79-8	EPA-600 300.0	3/01/96	10.40	MG/L	B		COMP			

APPENDIX C

**200 AREA TREATED EFFLUENT DISPOSAL PERMIT NO. ST 4502
NONCOMPLIANCE REPORT**

The 200 Area Treated Effluent Disposal Permit No. ST 4502 Noncompliance Report was transmitted to Ecology - correspondence number 96-EAP-131.

Hanford Site
200 Area Treated Effluent Disposal Facility
State Waste Discharge Permit No. ST 4502
Section G.21 Noncompliance Notification
April 1996

IRON

1.0 Introduction

In April 1995 the Department of Ecology issued a State Waste Discharge permit (ST 4502) to the Department of Energy to operate the 200 Area Treated Effluent Disposal Facility (TEDF). The permit contains a number of permit limitations and conditions. Among these limits is a 258 ppb monthly average for the concentration of iron contained in the discharge. This monthly average is to be measured by weekly composite samples collected at the discharge to the disposal ponds.

In setting the iron permit limit, Ecology considered the groundwater protection standard (300 ppb), the Practical Quantification Limit (100 ppb), the projected concentration in the effluent (258 ppb), and the concentration of iron in the groundwater. The three groundwater monitoring wells at the TEDF disposal site (699-41-35, 699-40-36, and 699-42-37) indicated that the iron concentration in the groundwater prior to operation was 948 ppb, 5243 ppb, and 16,941 ppb, respectively. As a result, Ecology placed a technology based enforcement limit in the final permit.

Analysis of composite and grab samples collected on April 7, 1996 at the 200 Area TEDF Disposal sampling building indicated a total iron concentration of 3100 ppb and 1820 ppb respectively. As a result, the total iron levels exceeded the monthly enforcement limit for April 1996. In accordance with Section G.21 of the discharge permit Ecology was immediately notified on May 7, 1996, by telephone, and an occurrence report was issued on May 7, 1996 as required under DOE Order 232.1.

The State Waste Discharge Permit requires a detailed written report to be submitted within 30 days of discovery of the circumstances. This report has been prepared to fulfill this permit requirement. In accordance with Section G.21 of permit ST 4502, contained in this report is a discussion of the TEDF discharge monitoring, a description of the iron noncompliance and a discussion of the efforts undertaken to identify the source of the iron discharge, and finally a discussion of the proposed corrective/preventive actions.

2.0 Iron Monitoring Results

The State Waste Discharge permit requires the collection of both weekly composite samples for compliance monitoring, and ten randomly collected grab samples at the 200 Area TEDF Disposal each month as part of the Effluent Variability Study required in Section S.6. These sample results (through 04/28/96) are contained in Attachment 1.

The confidence interval for a mean gives information about its average concentration level. It offers little information, however, about the extreme sample that eventually arises in a population. To supplement this, a tolerance interval is designed to contain a designated portion of the population (e.g., 95% of all possible sample measurements) with a certain degree of confidence (e.g., 95% level of confidence).

Both Upper Confidence Limits (UCL) and Upper Tolerance Limits (UTL) were calculated for each season from the weekly composites collected over the first three seasons. This UCL₉₅ for each season's iron composites shows the average is comfortably below the 258 ppb limit (with 95% confidence). Nonetheless, the UTL_{95/95}'s calculated for two of these three seasons (i.e., 451 and 288 ppb) indicate we can expect >5% of the individual composite samples for iron will exceed the 258 ppb limit (with 95% confidence). This is the highest probability of noncompliance for a single sample of all analytes. The probability of a mean exceeding the permit limit is essentially zero, based upon the normal operating conditions preceding the April 1996 excursion.

Statistical analysis of the iron data does show this noncompliance to be a unique event, a statistical outlier. Compare this event to the compilation of the composite sample data over the three prior seasons. This data gives a mean of only 70.03 ppb and a standard deviation of 57.1 ppb. Further, fully 75% of the composite samples should be < 89 ppb, and 99.9% should be < 500 ppb. The samples collected on April 7, 1996 exceed the 99.9% confidence interval.

The attached charts display the consistency of the iron results for both composite and grab samples from July 1995 until the excursion in April 1996. Figures 1 & 2 show this for the analytical result for each of the composite and grab samples respectively. Their normal probability distributions are best described by the logs of these results. See Figures 3, 4 & 5 for the Normal Probability Plots for the composites, grabs and all samples, respectively. Note the two extreme outliers. These represent the grab sample and composite sample from April 7, 1996, 1820 ppb and 3100 ppb, respectively. Each plot clearly demonstrates these results are one to two orders of magnitude above all other iron results.

3.0 Evaluation of Iron Discharges

The 200 Area TEDF is a pipeline that conveys effluent from seven generating facilities to disposal/infiltration ponds, and does not provide any treatment. Each of the generating facilities was notified of the high iron result to advise them that a permit limit had been exceeded and an off normal occurrence declaration had been made. Each generator was requested to provide information with regards to potential sources, cause(s) and action(s) taken to mitigate the problem.

Additionally, the laboratory was requested to rerun the sample collected at the 200 Area TEDF Disposal sample building to confirm the analytical result. This was completed and indicated that the original result was correct. The laboratory was also requested to analyze an unpreserved sample collected on the same day. The result from this sample indicated an iron concentration of 101 ppb. The large difference between the preserved and non-preserved sample identified the majority of the iron present was as filtrable iron.

3.1 TEDF Operating Log

The 200 Area TEDF Operating logs for April 4, 5, 6 and 7 were examined to attempt to identify unusual conditions or events which might provide information to support identification of the source of the iron discharge. Information provided within the 200 Area TEDF control room log book identified a batch discharge from the 222-S Laboratory occurred between 1007 and 1530 on April 5 and boiler blowdowns from the 284-W Power Plant package boiler occurred on both April 4 and 5. Both of these facilities are located in the 200 West Area.

This information was significant as there is approximately a twenty-four to thirty-six hour delay from the time waste is discharged by the 200 West Area generating facilities until the waste is received at the 200 Area TEDF disposal ponds. In contrast, waste discharged from the 200 East Area generating facilities typically is received at the 200 Area TEDF disposal ponds between approximately one to two hours after discharge from the generating facility.

3.2 TEDF Operational Data

Operational data for the 200 Area TEDF Disposal Station were reviewed for total discharges, pH and conductivity. During review of this data the following observations were noted:

- Discharges for April 6 and 7 were 544,400 and 523,200 gallons respectively which represented an average daily discharge of 533,800 gallons for the time period which both composite and grab samples were taken (April 6, 1996 @ 1625 through April 7, 1996 @ 1710). It was noted the average flows for April 6 and 7 were approximately 30,000 gallons/day or 21 gallons/minute lower than the average daily flow for April.
- End of pipe pH values ranged from 6.94 to 7.26 which was slightly lower than a typical operational range of 7.1 to 7.5.
- End of pipe conductivity values were approximately 250 $\mu\text{S}/\text{cm}$ as compared with typical values of approximately 150 $\mu\text{S}/\text{cm}$.

3.3 TEDF Generator Data

A review of generating facility iron analytical results (Attachment 2) was conducted to identify discharges to the 200 Area TEDF which exceeded the 200 Area TEDF monthly average enforcement limit for total iron. Notification to each of the generating facilities was provided on May 9, 1996 to request identification of sources of iron contamination which exceeded the 258 ppb monthly average enforcement limit for total iron.

Generating facilities initiated a review of facility operating records and requested iron analysis of historical samples to attempt to reconstruct events leading to excessive iron discharges. As a result of this review, two 200 West Area facilities were identified as potential sources of iron contamination on April 5. Those facilities and the activities which potentially generated excessive total iron discharge were:

- 284-W Powerplant- drawdown of Package Boiler water level for replacement of low level cutout switch
- PFP - Restart of Air Washer #8 sanitary water supply

All other facilities were not considered to be probable sources of the iron contamination as the discharges did not have sufficient iron levels to account for the total iron levels noted at the 200 Area TEDF Disposal sample building. Those facilities and the historical discharges were:

- 222-S Laboratory - The batch discharge of 9800 gallons on April 5, 1996 had a total iron concentration of 93.4 $\mu\text{g/l}$.
- 242-A-81 Water Services Building - Discharges are less than 2000 gallons per day with the highest total iron concentration identified at 428 $\mu\text{g/l}$.
- B Plant - Historical total iron concentrations did not exceed 122 $\mu\text{g/l}$.
- PUREX - Average discharges of approximately 288,000 gallons/day in conjunction with the highest historical total iron concentration of 613 $\mu\text{g/l}$ would result in a 200 Area TEDF end of pipe concentration of 336 $\mu\text{g/l}$.
- T Plant - Discharges are less than 4000 gallons per day with the highest iron concentration identified as 1300 $\mu\text{g/l}$.

3.3 284-W Powerplant

A review of the 284-W Package Boiler operations resulted in the identification of a discharge of approximately 150 gallons with a minimum iron concentration of 27.3 mg/l on April 4 and 5 (Attachment 3). The sample was obtained from the steam side of the boiler as there is no sample point on the bottom side of the boiler from which the discharge occurred.

While iron concentrations can be expected to be higher on the bottom side of the boiler where the April 4 and 5 discharge originated, it is not thought this concentration would be any greater than two times the steam side concentration. This is based upon results of the visual inspection conducted in August 1995 where no evidence of any sludge layer was noted as would be expected from historical operating experience at the 284-W and 284-E Power Plant boilers.

Should the concentration have been at 50 mg/l, the total iron discharged from this source would have resulted in a 200 Area TEDF end of pipe composite sample concentration of approximately 22 $\mu\text{g/l}$. Further analysis identified a 284-W Package boiler discharge total iron concentration of approximately 11,000 mg/l would be required to result in the 200 Area TEDF end of pipe composite sample concentration of 3100 $\mu\text{g/l}$. Such a discharge would be expected to occur from a substantial sludge blanket being observed within the bottom side of the package boiler. This was not thought to be likely given the short operating history of the package boiler and the observations noted during the August 1995 visual inspection.

3.4 PFP Discharge

During restart of Air Washer #8 sanitary water supply at PFP on April 5, 1996, facility personnel noted the sanitary water feed to the unit was reddish brown in color, however there was no measurable effect noted in the weekly composite sample which showed a total iron concentration of 6 $\mu\text{g/l}$. Subsequent sampling after facility hot sanitary water system maintenance activities on May 10, 1996 identified total iron discharges as high as 6.45 mg/l in the discharge to the 200 Area TEDF. With a routine discharge from PFP to the 200 Area TEDF of approximately 58,000 gallons/day and a total iron concentration of 6.45 mg/l , the resulting iron discharged would represent a total iron concentration at the 200 Area TEDF end of pipe of approximately 720 $\mu\text{g/l}$. Further analysis identified a PFP discharge total iron concentration of approximately 29 mg/l would be required to result in the 200 Area TEDF end of pipe composite sample concentration of 3100 $\mu\text{g/l}$. This is not thought to be likely as the iron concentration in discharge to the 200 Area TEDF has not been noted this high to date.

3.5 Sanitary Water

Different facilities noted the sanitary water supply both inside the respective facility and entering the facility was occasionally reddish brown due to rust. Those facilities were 222-S, PFP, PUREX and T Plant. Recent sample results from the PUREX sanitary water system showed iron levels as high as 24.1 mg/l . The 222-S and T Plant facilities also indicated the potential for steam condensate to be a source of iron contamination.

The 242-A-81 Water Services Building noted elevated iron levels in their discharges which are thought to have originated from the facility drain system and/or the cooling water supply system as the function of this facility is to provide screening for the cooling water supply and back flow prevention to protect the raw water supply system. It is thought that only corrosion products could be a source of iron contamination from this facility.

4.0 Conclusion

It is concluded a single source of iron was not responsible for the April 7, 1996 levels. Instead the elevated levels were likely due to three sources of iron contamination. These three sources include: sanitary water delivery systems, the 284-W Power Plant package boiler and potentially, facility steam distribution systems.

The sanitary water system and the steam system used on the Hanford site are old, constructed of metallic iron pipe and designed to provide water and steam at a significantly greater demand than currently needed. Because of this excess capacity, the potential for stagnation increases and slugs of iron are potentially discharged to the TEDF from site operations. This can occur when lines are flushed, or when intermittently used lines are put into service such as occurred at PFP. This is supported by the numerous observations of rusty water in the facilities and in the TEDF monitoring data that shows periods of elevated iron concentrations.

The sanitary water distribution system is constructed of ductile iron piping up to the facility boundaries and does not appear to be a significant source of iron corrosion products based upon examination of piping coupons obtained during hot tapping activities. In contrast, the sanitary water system at generating facilities appears for the most part to be constructed of either galvanized or carbon steel piping. These systems are typically over forty years in age and show extensive evidence of significant corrosion.

It was not possible to identify a single source of elevated iron concentrations in the 200 Area TEDF. Examination of facility operations identified the need for maintaining close control of the 284-W Power Plant package boiler to prevent excessive iron discharges in the future. This discharge may be controlled administratively as well as through operating chemistry adjustments.

It is concluded that a combination of events most likely resulted in the elevated levels. These include a relatively high background iron concentration in the TEDF discharge from old, seldom used sanitary water systems, and possibly steam delivery systems in combination with the blowdown from the 284-W powerplant.

5.0 Corrective/Preventive Actions

With the conclusion that elevated iron levels at the TEDF discharge were the result of a high background concentration along with discharge drainage of the 284-W package boiler and routine operations at PFP, no corrective action can be taken. However, to maintain compliance to permit conditions in the future, the following preventive action will be initiated:

- A sample point will be added to the 284-W Power Plant package boiler bottom side and the discharge analyzed for total iron. Data from this sample point will provide information to provide better quantification information on the iron releases. This information will be utilized to develop administrative and operational chemistry controls.

In addition, discussions will be initiated with Ecology to reevaluate the iron enforcement limit. Based on a better knowledge of the operation of contributing systems, and the information collected in the first year of TEDF operations, it appears that the sanitary water and steam delivery systems on the Hanford Site are contributing more iron than expected. However, system replacement or upgrades, or treatment of the water from these systems could be extremely expensive, and would potentially take money away from more significant Site Cleanup activities. Therefore, a commitment to make any modifications to those systems cannot be made at this time.

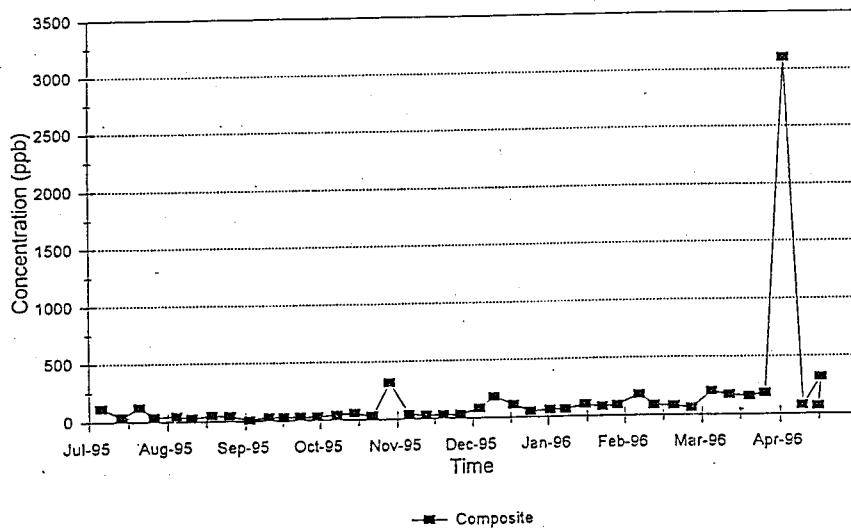
284-W Power Plant Package Boiler Operating History

- August 1995 Package boiler drained approximately 9 months after being filled with untreated water. No significant corrosion or corrosion product sludge noted during visual inspection of bottom side at this time.
- November 1995 Package boiler refilled with treated water and operated for approximately two weeks then drained and put into dry lay-up.
- Prior to March 21, 1996 Package boiler refilled with water treated with Dearborn 155 added as a corrosion control agent.
- March 25 & 26, 1996 Package boiler drained of approximately 250 gallons from bottom side and run for two days. Package boiler then put into standby.
- April 4 & 5, 1996 Approximately 150 gallons drained out of bottom side of boiler to access a low level cutout switch for maintenance.
- May 10, 1996 Sample taken from steam side condensate with the following results:

Iron	27.3	mg/l
TDS	460	mg/l
SS	49	µg/l

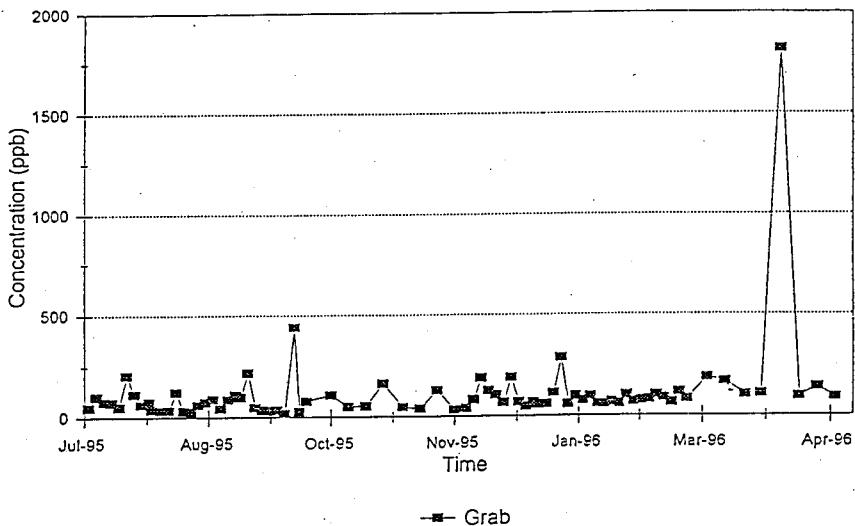
EV^{data}
WHC-SD-LEF-BF-001
Rev 0

Variability Study for W-049H Project
Daily Composite Results for Iron



WHC- SD - LEF - EF-001,
EVRW0
CWS

Variability Study for W-049H Project
Daily Grab Results for Iron



WAC-SD-LEF-~~EF~~-001,
EV Revo
cm

Normal Probability Plot for Iron
Composite Samples, W-049H Project

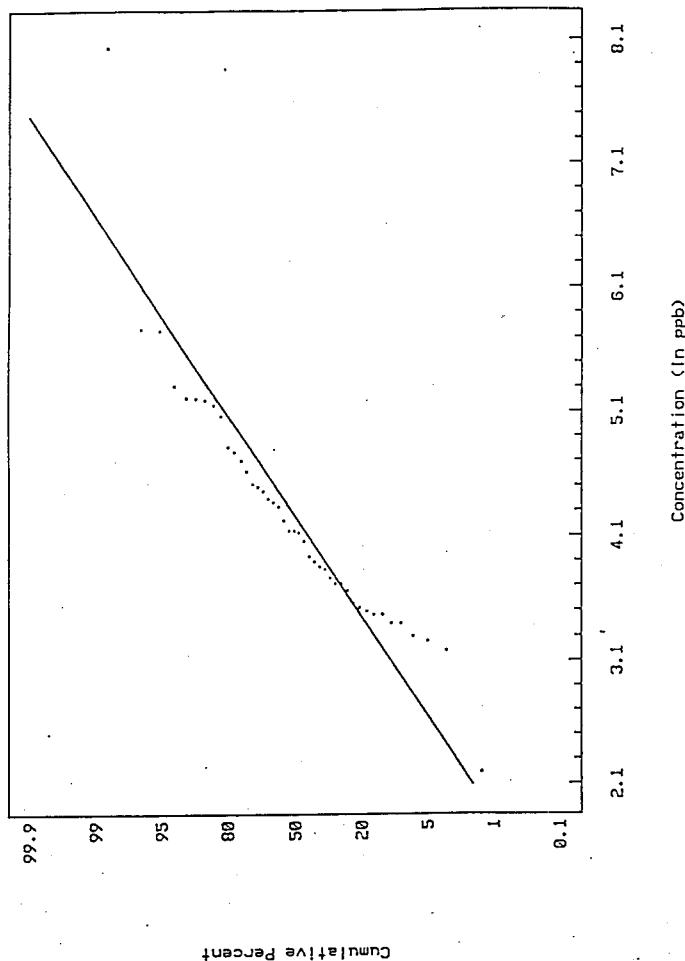
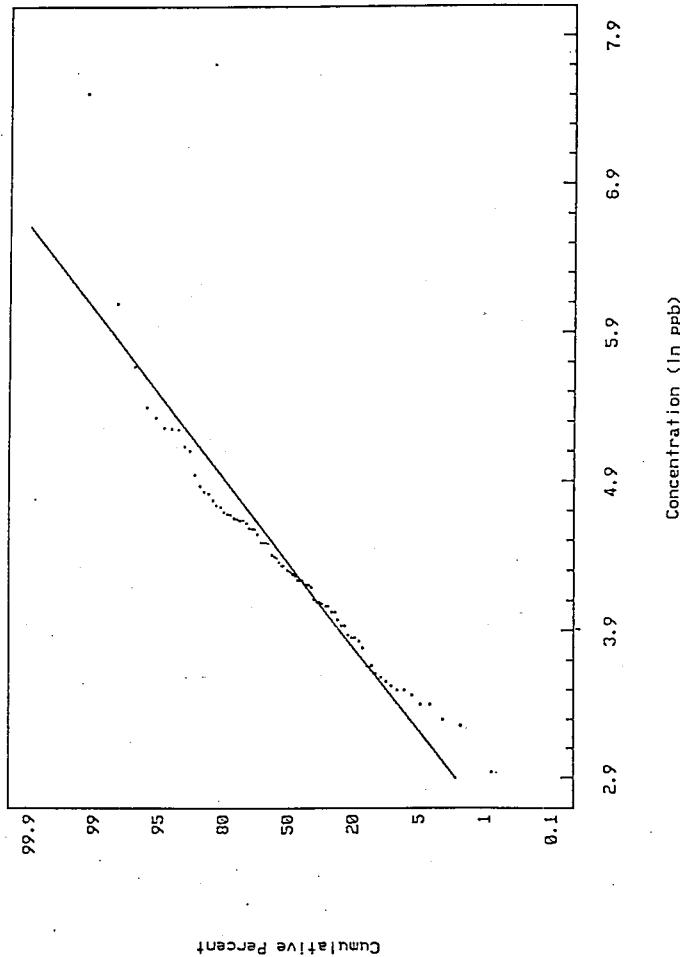


FIGURE 4

WHC-SD-LEF-EP-001,
EV Rev 0
CV

Normal Probability Plot for Iron
Grab Samples, W-049H Project

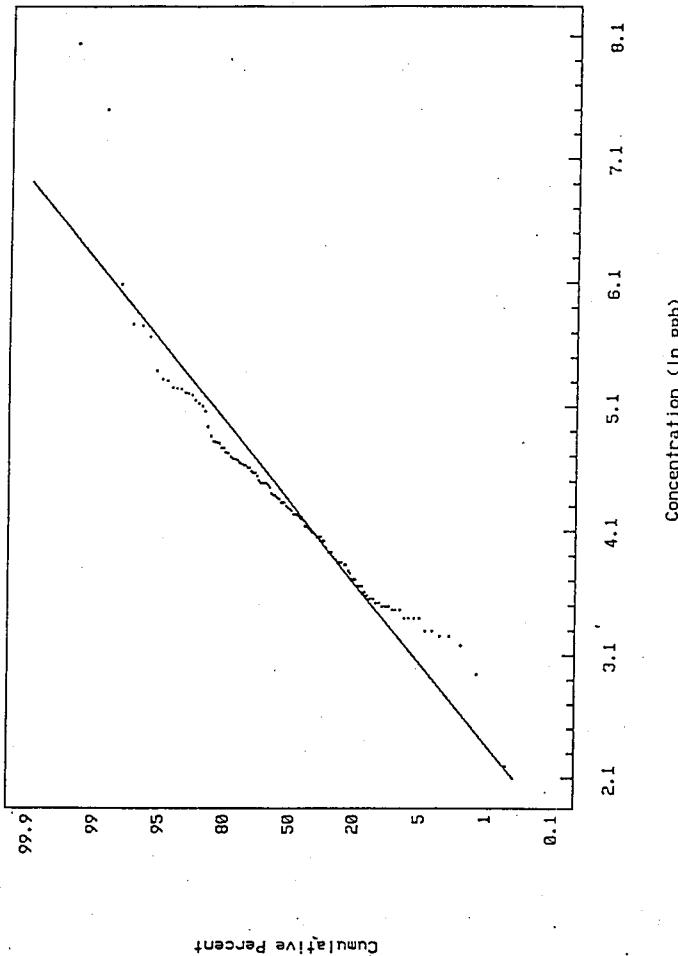


C-11

FIGURE 5

WHD-SD-LEF-~~EF~~-001,
EV Rev 0
cc

Normal Probability Plot for Iron
All Samples, W-049H Project





Westinghouse
Hanford Company

P.O. Box 1970 Richland, WA 99352

July 11, 1996

9653047D

Mr. T. K. Teynor, Director
Waste Programs Division
U.S. Department of Energy
Richland Operations Office
Richland, Washington 99352

Dear Mr. Teynor:

WHC-SD-LEF-EV-001, EFFLUENT VARIABILITY STUDY RESULTS FOR THE 200 AREA
TREATED EFFLUENT DISPOSAL FACILITY

A letter is attached for your use in transmitting the subject report to the State of Washington Department of Ecology. This fulfills the requirements of Milestone LEP-96-0029.

I certify that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete.

Should you have any questions, please contact Mr. N. J. Sullivan on 373-5643.

Very truly yours,

A. J. DiLiberto, Director
Liquid Effluents Services
Projects and Site Services

hh

Attachment

RL - G. M. Bell (w/o attachment)
E. M. Bowers
R. N. Krekel
R. A. Quintero
J. E. Rasmussen (w/o attachment)
A. H. Wirkkala (w/o attachment)

9653047D

ATTACHMENT

GHOST LETTER TO STATE OF WASHINGTON DEPARTMENT OF ECOLOGY,
"WHC-SD-LEF-EV-001, EFFLUENT VARIABILITY STUDY RESULTS FOR THE
200 AREA TREATED EFFLUENT DISPOSAL FACILITY"

Mr. D. S. Dougherty, P.E.
Nuclear Waste Program
State of Washington
Department of Ecology
1315 West 4th Avenue
Kennewick, Washington 99336-6018

Dear Mr. Dougherty:

WHC-SD-LEF-EV-001, EFFLUENT VARIABILITY STUDY RESULTS FOR THE 200 AREA TREATED
EFFLUENT DISPOSAL FACILITY

The State Waste Discharge Permit ST 4502 includes a special permit condition (S.6). This specifies a statistical study of the variability of permitted constituents in the effluent from the 200 Area Treated Effluent Disposal Facility. The permit condition requires the U.S. Department of Energy, Richland Operations Office to provide the State of Washington Department of Ecology with the result of this study within one year of approval of the study plan. The due date of this enclosed report is July 17, 1996.

Should you have any questions or comments, please contact Randall Krekel, RL, at 376-4264 or Roger A. Quintero, RL, at 376-0421.

Sincerely,

James E. Rasmussen, Director
Environmental Assurance, Permits,
and Policy

Enclosure

cc w/encl:	cc w/o encl:
D. Flyckt, WHC	W. Dixon, WHC
R. Jim, YIN	D. Lundstrom, Ecology
J. Luke, WHC	
D. Powaukee, NPT	
M. Selby, Ecology	
D. Sherwood, EPA	
J. Wilkinson, CTUIR	
S. Skurla, Ecology	

Hanford Site
WHC-SD-LEF-EV-001, Effluent Variability Study Results for the
200 Area Treated Effluent Disposal Facility

I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of a fine and/or imprisonment for knowing violations.

Thomas K. Teynor, Director
Waste Programs Division
U.S. Department of Energy
Richland Operations Office

Date

ENCLOSURE

WHC-SD-LEF-EV-001, EFFLUENT VARIABILITY STUDY RESULTS FOR THE
200 AREA TREATED EFFLUENT DISPOSAL FACILITY

DISTRIBUTION SHEET

To T. K. Teynor, RL	From A. J. DiLiberto	Page 1 of 1 Date 7/12/96		
Project Title/Work Order Effluent Variability Study Results for the 200 Area Treated Effluent Disposal Facility				EDT No. 611042
			ECN No.	
Name	MSIN	Text With All Attach.	Text Only	Attach./ Appendix Only
C. J. Chou	H6-06	✓		
L. K. Deere	H6-29	✓		
A. J. DiLiberto	H6-10	✓		
W. T. Dixon	H6-21	✓		
D. L. Flyckt	S6-71	✓		
E. M. Greager	H6-20	✓		
D. L. Halgren	L6-04	✓		
R. E. Johnson	H6-25	✓		
D. W. Lindsey	S6-71	✓		
J. J. Luke	H6-25	✓		
E. W. Miller	S6-71	✓		
S. R. Moreno	B3-06	✓		
N. J. Sullivan	S6-71	✓		
W. R. Thackaberry	S6-71	✓		
P. M. Warren	S6-71	✓		
B. D. Williamson	B3-15	✓		