ROCKY FLATS ENVIRONMENTAL TECHNOLOGY SITE QUARTERLY ENVIRONMENTAL MONITORING REPORT JANUARY – MARCH 2003

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MAY 2003

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PREPARED BY URS GROUP, INC

THE DATA IN THIS DOCUMENT MAY BE PRELIMINARY AND COULD CHANGE AFTER THE DATA HAVE BEEN VERIFIED OR VALIDATED.

MAY 2003

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TABLE OF CONTENTS

FIGURES

FIGURES (continued)

TABLES

TABLES (continued)

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HIGHLIGHTS FOR JANUARY - MARCH 2003

This report is produced and distributed quarterly as part of the Agencies' ongoing Agreement in Principle and as a forum for the Rocky Flats Cleanup Agreement (RFCA) quarterly monitoring requirement. As discussed at a previous Exchange of Information Meetings, the Site is consolidating its reporting for selected media. In an effort to provide a more meaningful interpretation of the data presented and to save some natural resources, namely trees, the Site will be providing analytical data in the following formats.

Airborne effluent data are represented by a single graph providing cumulative plutonium emissions for 1999, 2000, 2001, 2002, and 2003. Ambient air data are represented by two graphs – a summary of estimated off-site dose as compared to a 10 Mrem per year standard, and air concentrations at perimeter sample locations expressed as a percentage of EPA's air concentration-based dose limit for members of the public. Meteorological data are represented by one windrose and a climatic summary for each month in the reporting period.

Surface water data are presented for several purposes. Compliance data are presented in support of the Site National Pollutant Discharge Elimination System (NPDES) permit are presented for the reporting period. Data collected in support of RFCA routinely include stations GS01, GS03, GS08, GS10, GS11, GS31, SW022, SW027, and SW093. These data include a hydrograph, mean daily flow and available water quality measurements for each location during the reporting period. Performance monitoring and source detection stations may be reported as locations are added or removed from the program. These additional Surface Water stations are presented in the same manner as the routine stations. Some locations, like GS32, have no flow monitoring capabilities and only analytical data are provided. A quarterly summary of the Incidental Waters program is also provided.

Airborne Effluent

Complete isotopic analytical data through January 2003 are included in this report. All data are within the normally observed ranges of concentrations for their respective locations. Consistent with all other uses of these data, only positive values are included in the total release calculation (the negative values are treated as zeros). The uncertainty calculation reflects all data error.

Ambient Air

Isotopic analytical data for December 2002 and January 2003 for coarse (>10 micrometer aerodynamic equivalent diameter (AED)) and fine (≤10 micrometer AED) ambient air samples are included in this report. All data are within the normally observed ranges of concentrations for their respective locations.

Beginning first quarter 2002, this report now includes an additional section, Demolition and Remediation Performance Monitoring. Two projects began during the 4th quarter 2002; the 903 Pad Remediation Project, which began the week of November 14th, 2002 and is ongoing, and the Solar Pond Remediation

Project, which began November 12th, 2002 and was completed by December 12th, 2002. In this report, a graph displaying typical results from a two-week sample period has been included.

Meteorology and Climatology

Meteorological data are routinely measured from instruments on a 61-meter tower located in the west buffer zone at an elevation of 1,870 meters (6,140 feet) above sea level. All meteorological data are collected on a real-time basis and are transmitted as 15-minute averaged values to the Computer Assisted Protective Action Recommendations System (CAPARS) model for emergency response purposes. The same data are logged at the tower and downloaded for air quality and surface water modeling purposes.

Climatic summaries and wind roses for January, February and March 2003 are included in this report.

As a result of the protocols used to validate the meteorological data, each 15-minute averaged observation is validated, rather than the entire observation record for the same time period (which might contain 70 different observations – e.g., temperature, wind speed, etc.). Missing data are reported with respect to the wind speed and wind direction values, for example, rather than recording all observations missing for the same 15-minute period. Due to a calibration failure that occurred during the February 2003 meteorological calibration, 10-meter wind direction data were invalidated and replaced with 25-meter wind direction data for the November 2002 through February 2003 period. The substitution of 25-m data for the 10-m data resulted in negligible changes in previously reported November-December 2002 windrose wind frequency distributions.

Surface Water

Surface water analytical data collected during the reporting period for NPDES permit compliance are presented in this report. All reported data were within permit limitations and typical of historical measurements. Included in this report are two surface water locations that monitor the Mound Site area. These locations are SW061 and SW132 and are sampled quarterly for isotopic Pu/Am, selected total and dissolved metals, and EPA VOA Method 8260.

Hydrologic Monitoring and Rocky Flats Cleanup Agreement (RFCA) Monitoring

All available analytical data collected during the reporting period from samples supporting RFCA and Hydrologic Monitoring programs are included in this report. During the second quarter of FY03, 111 automated surface-water monitoring composite samples were collected and submitted for analysis.

Reportable 30-day average values for plutonium (Pu) were observed at Point of Evaluation (POE) GS10 for the period from March 9, 2003 through March 22, 2003. The calculated 30-day moving average for americium (Am) was not reportable for the same period. This newest GS10 reportable event is consistent with seasonal water-quality observations made every spring/summer since 1997 at this location, following

implementation of RFCA flow-paced monitoring. No new source evaluation is planned due of the repetitive nature of the event, the previously completed comprehensive investigation(s) of the sub drainage basins tributary to GS10, and the Site's commitment to investigate the area as part of the accelerated action evaluation of Pond B-1.

Reportable 30-day average values for plutonium were observed at Point of Evaluation (POE) SW093 for the period from February 28, 2003 through March 21, 2003 inclusive, using validated data. As of March 22, 2003, the 30-day average for plutonium was below reportable levels. The calculated 30-day moving average for americium was not reportable for the same period. Recent flume construction activities at SW093 and Site closure activities upstream of SW093 may have contributed to the recent reportable values.

The 30-day moving average values for all other Points of Evaluation (POE) and Points of Compliance (POC) locations were below the RFCA action levels and standards for all monitored analytes.

Incidental Water Monitoring

A summary of Incidental Waters dispositioned during the reporting period are presented in this report.

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1.0 AIR DATA

1.1 EFFLUENT AIR DATA

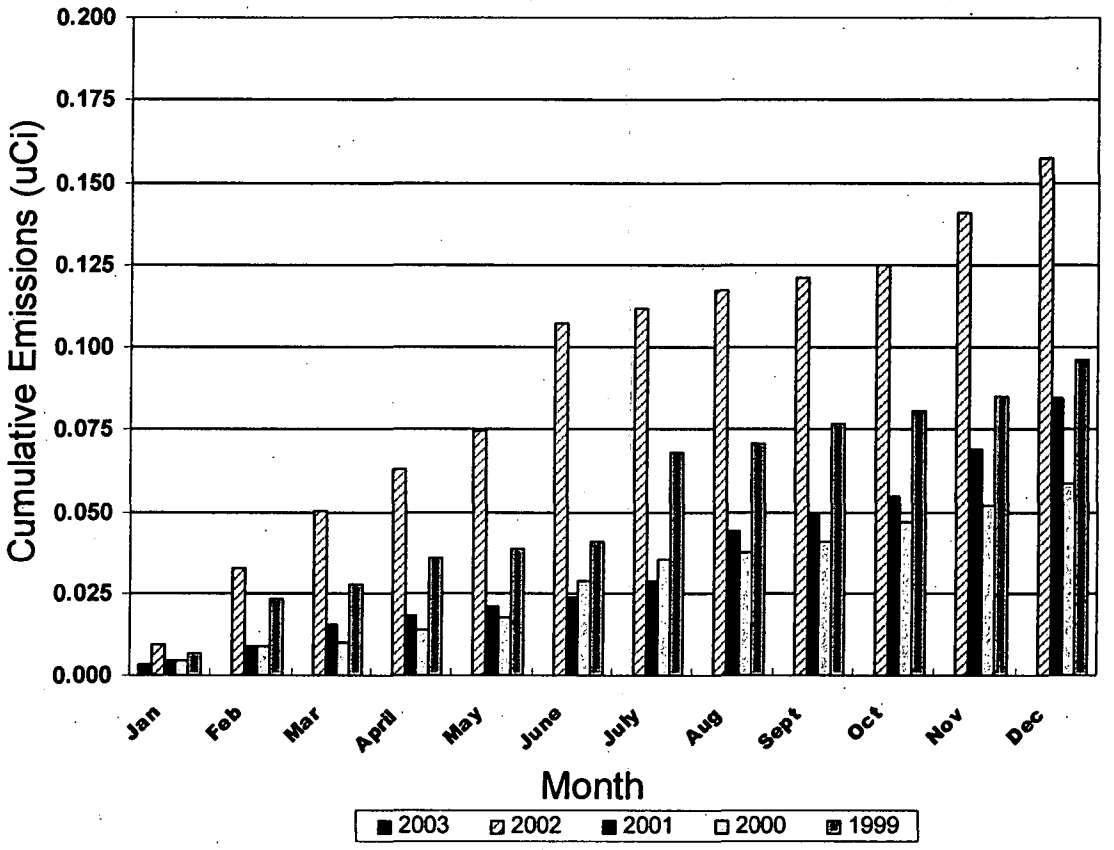
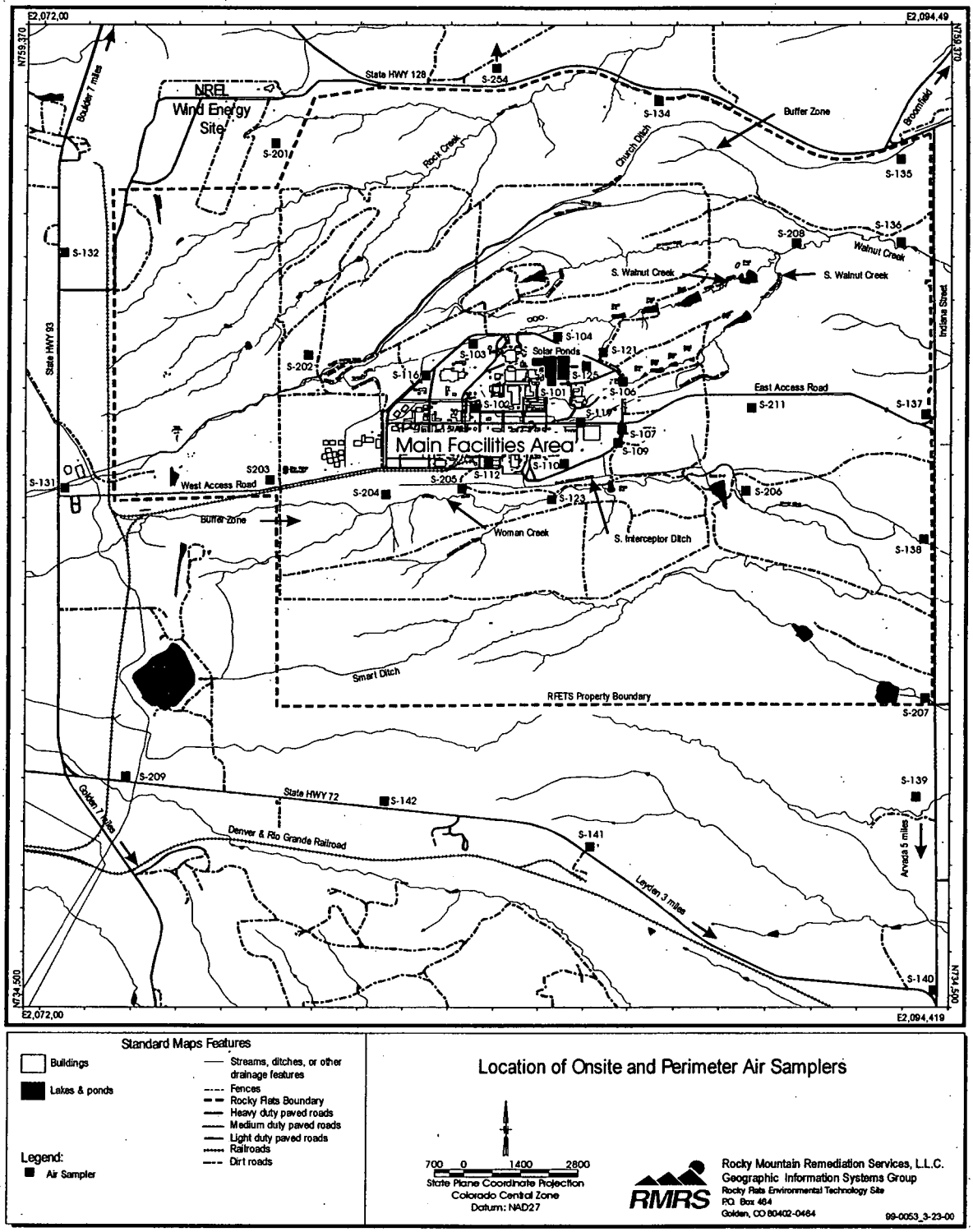


Figure 1-1. Cumulative Plutonium Airborne Effluent Emissions

The above graph shows the cumulative airborne effluent emissions of plutonium from the monitored building stacks. Isotopic results from the most recently analyzed effluent stack samples (December 2002 through January 2003) are consistent with the previous three years' measured concentrations, with a cumulative, 2003 year-to-date plutonium emission of 0.0032 micro-Curies (μCi). The 2002 year-end cumulative plutonium emission was 0.16 micro-Curies (μCi).

Figure 1-2. Location of Onsite and Perimeter Air Samplers.



1.2 AMBIENT AIR DATA

1.2.1 Perimeter Sampler Locations

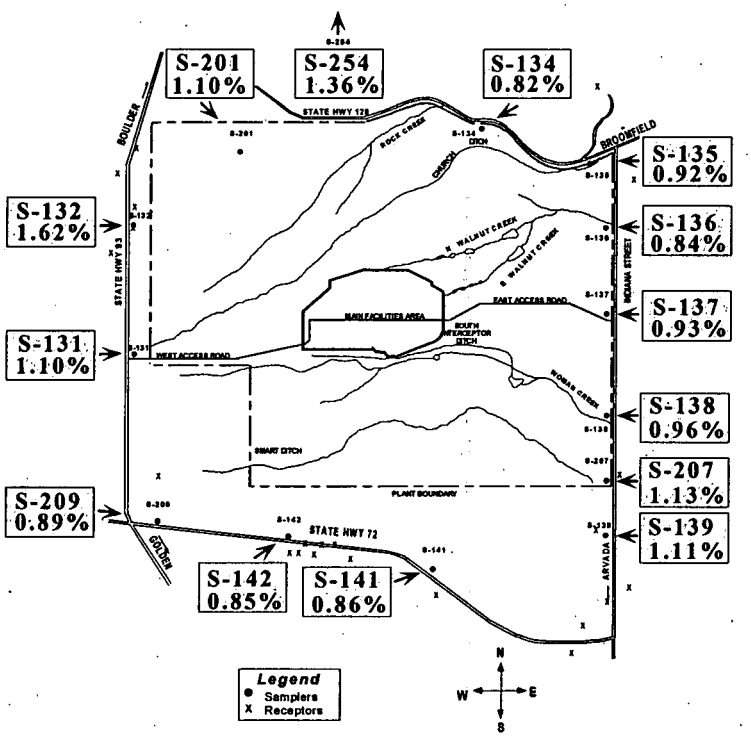


Figure 1-3. Perimeter Samplers Dose Map.

The above map illustrates the perimeter Radioactive Ambient Air Monitoring Program (RAAMP) sampler locations and the twelve-month rolling-average maximum potential dose through January 2003, expressed as a percentage of EPA's air concentration-based dose limit for members of the public. The percentage values are based on the measured air concentrations, averaged over the year and converted as a percent of the Rad NESHAP concentration limits.

The percentages include the naturally occurring uranium isotopes as well as the isotopes from site contributions. The highest effective dose equivalents (EDEs) in December 2002 and January 2003 were observed at locations S-132 and S-254, respectively. For the twelve-month rolling-average percentage of the Rad NESHAP concentration limit through January 2003, perimeter samplers range from 0.82% at S-134 to 1.62% at S-132, consistent with previously reported data.

1.2.2 Perimeter Sampler Locations – Dose Rate Graphs

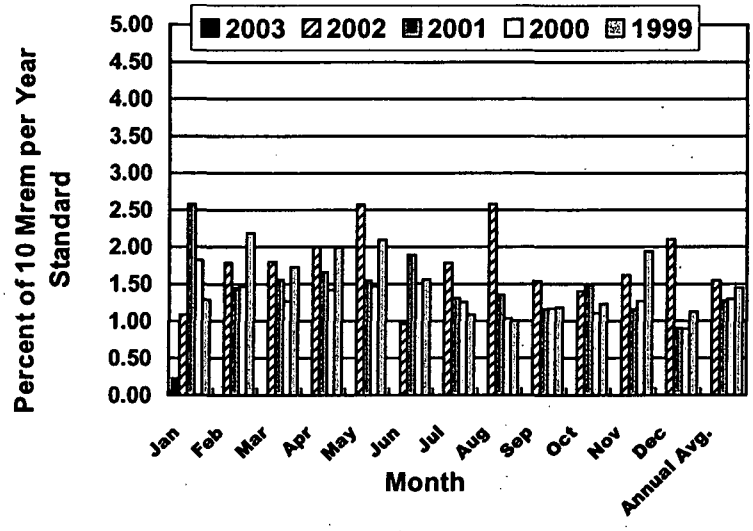


Figure 1-4. Offsite Dose Rate Summary.

The above graph illustrates the monthly estimated maximum potential dose rates at the perimeter sampler showing the highest total radionuclide concentrations, including contributions from naturally occurring uranium isotopes. The highest potential dose rates for December 2002 and January 2003 occurred at locations S-132 and S-254, respectively.

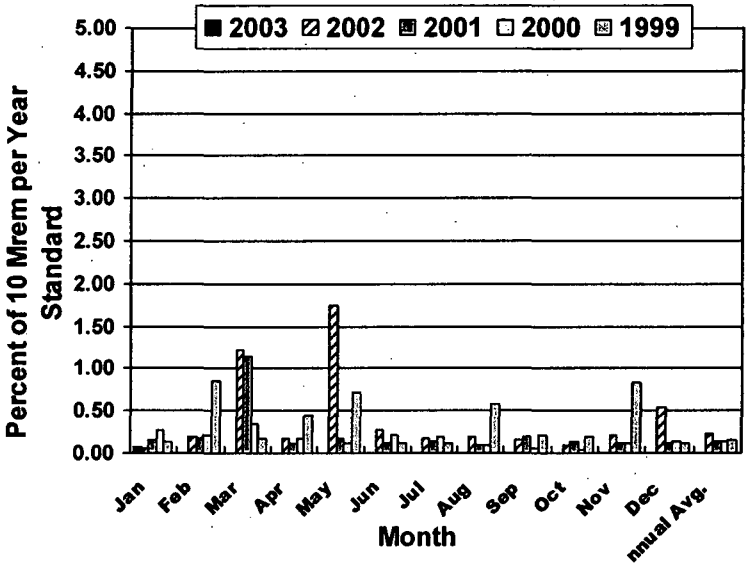


Figure 1-5. Offsite Dose Rate Summary Without U-234 and U-238.

Since the majority of the observed uranium appears to be due to natural soil contributions, omitting the dose contributions from uranium 234 and 238 may better reflect the contribution from Site operations at the same sampling locations. This view displays the maximum potential offsite dose rate, resulting from Site activities, to be less than 1.8% percent of the 10 mrem standard. The highest potential dose rates for December 2002 and January 2003 occurred at locations S-132 and S-136, respectively.

Ambient concentrations and dose rates for 2002/2003 are consistent with data from 1999 through 2001.

1.2.3 Demolition and Remediation Performance Air Monitoring

In February 2002, the Air Quality Monitoring (AQM) Program began reporting performance monitoring data from ongoing demolition and remediation projects. Performance Monitoring for Radionuclides (PM-Rad) for the 903 Pad Remediation Project began the week of November 14th, 2002 and is ongoing. The Solar Pond Remediation Project was also monitored; the project began November 12th and was completed by December 12th, 2002. Figure 1-6 is representative of the results for the PM-Rad network locations during a typical two-week period in the 1st quarter of 2003.

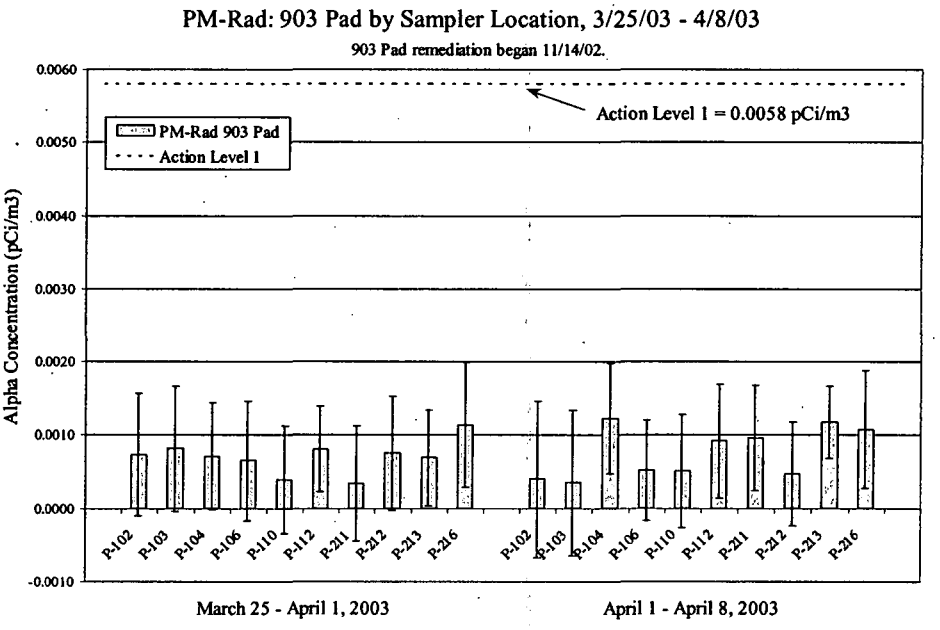


Figure 1-6. 903 Pad Performance Monitoring for Radionuclides.

For reference, a map illustrating the sampling locations used for PM-Rad of Industrial Area and 903 Pad demolition and remediation activities is included as Figure 1-7.

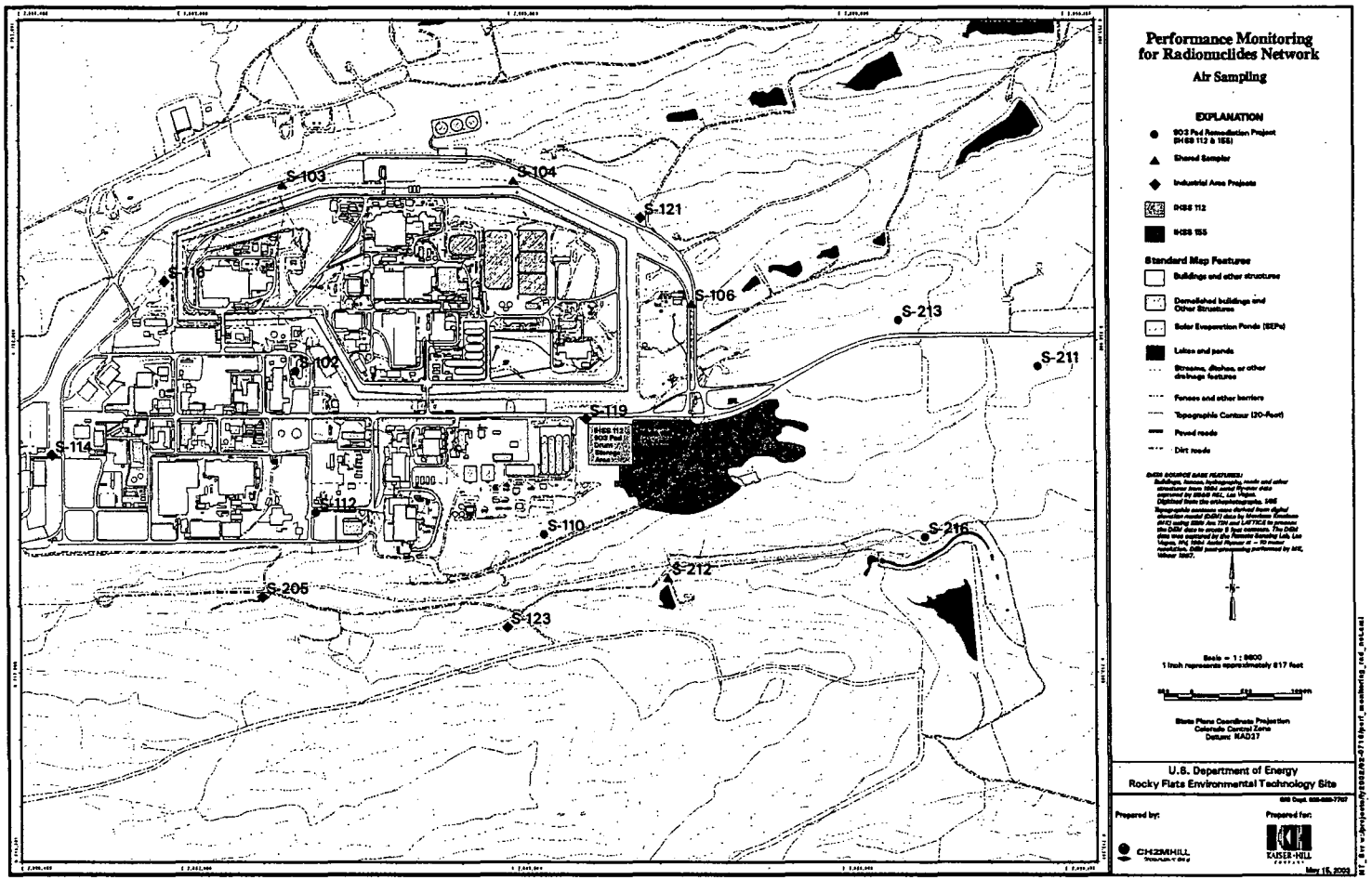
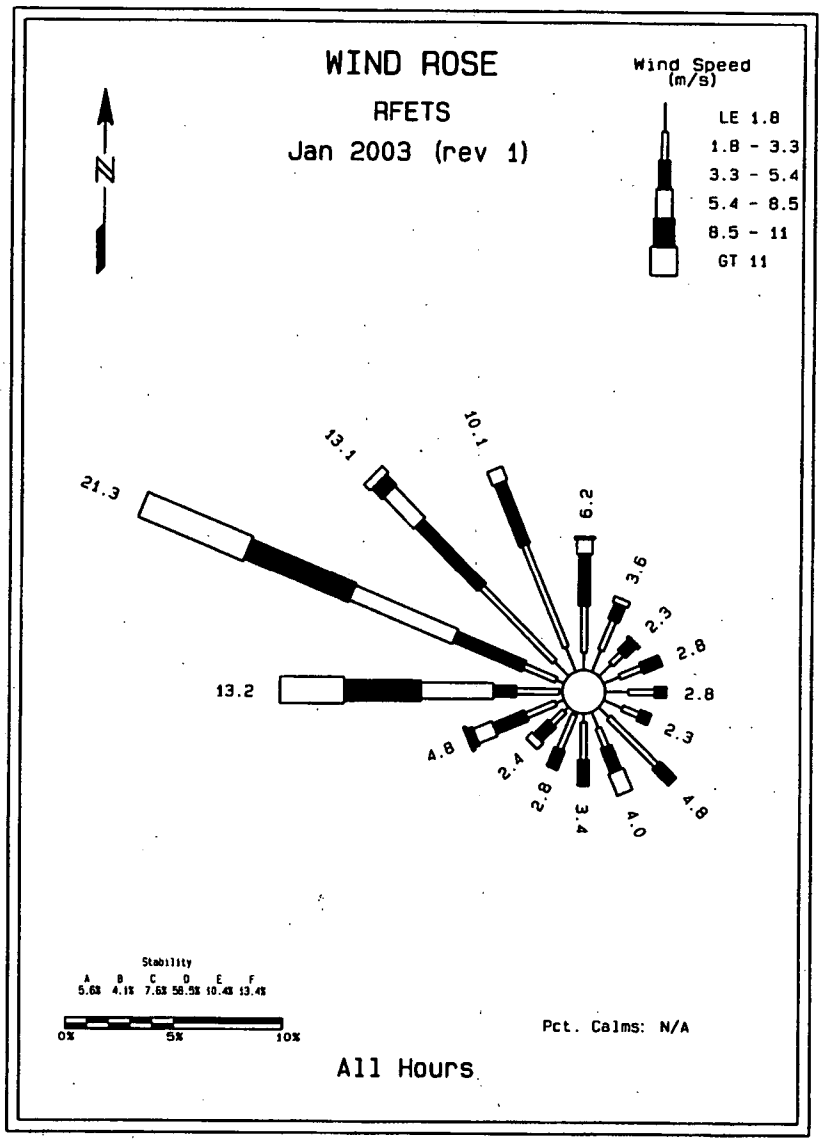


Figure 1-7. Industrial Area and 903 Pad Performance Monitoring for Radionuclides Network.

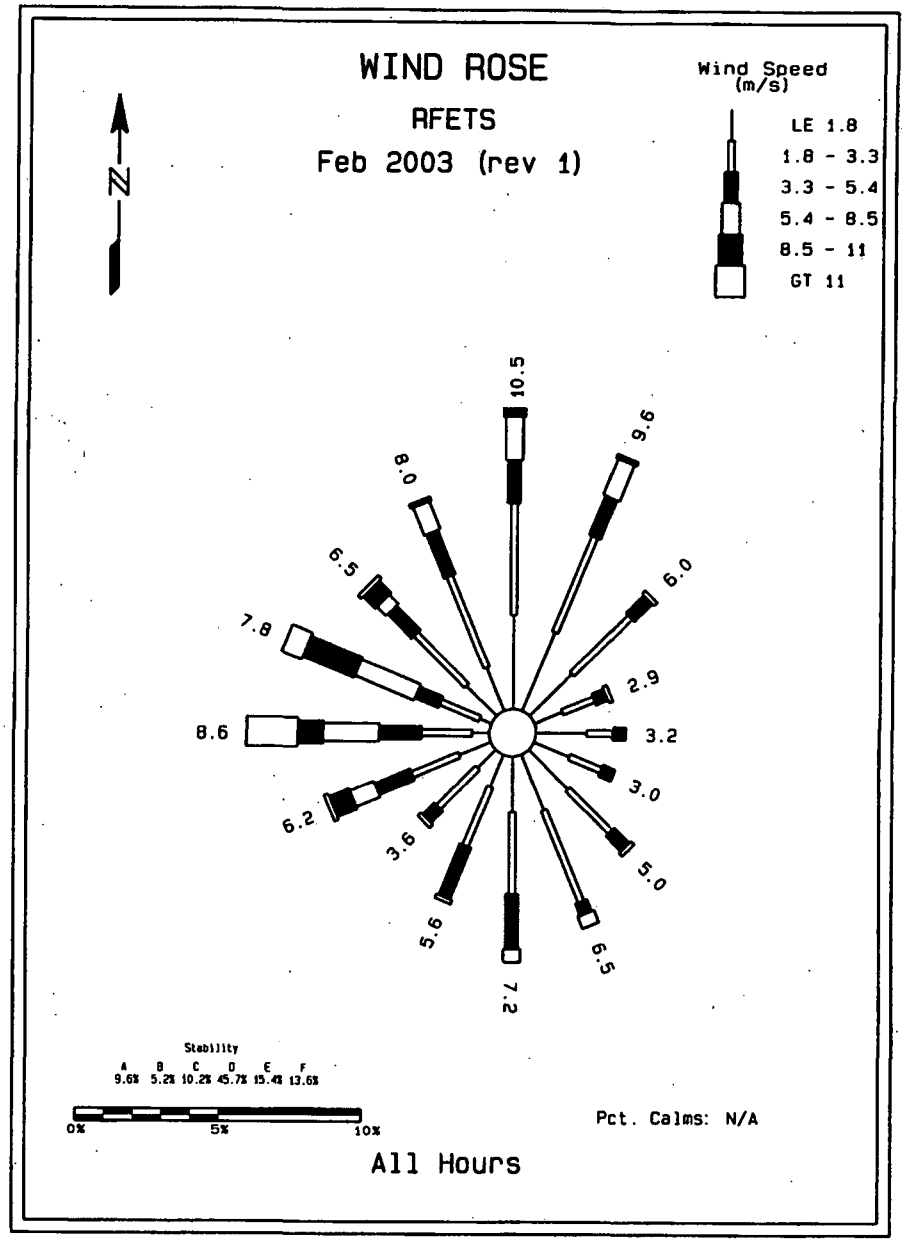
2.0 METEOROLOGY AND CLIMATOLOGY

2.1 WIND ROSES FOR JANUARY, FEBRUARY, AND MARCH 2003



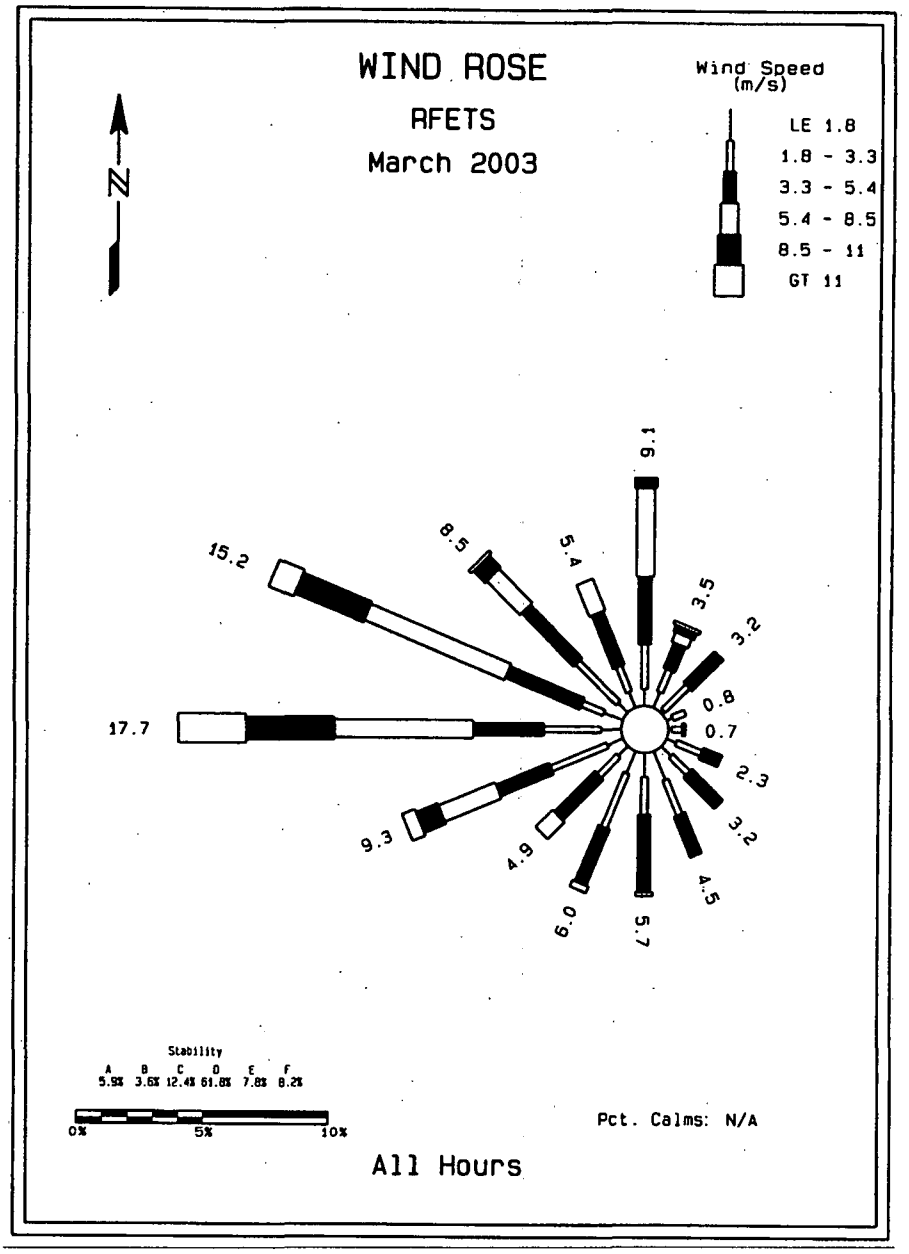
Monthly Climatic Summary											
Month	Temperature (°F)			Mean Dew Point (°F)	Mean Relative Humidity (%)	Wind Speed (mph)		Pressure Mean (mb)	Solar Total (kW-h/m²)	Precipitation (in)	
	Mean Daily High	Mean Daily Low	Daily Mean			Mean	Max			Total	Max
Jan-03	49.82	28.09	39.88	25.01	60.33	11.57	74.2	815.55	71.74	0.0400	0.0100

Figure 2-1. Wind Rose for Rocky Flats Environmental Technology Site for January 2003



Monthly Climatic Summary											
Month	Temperature (°F)			Mean Dew Point (°F)	Mean Relative Humidity (%)	Wind Speed (mph)		Pressure Mean (mb)	Solar Total (kW-h/m²)	Precipitation (in)	
	Mean Daily High	Mean Daily Low	Daily Mean			Mean	Max			Total	Max
Feb-03	38.32	18.72	28.35	18.84	73.69	8.23	78.29	809.1	88.75	0.7200	0.0300

Figure 2-2. Wind Rose for Rocky Flats Environmental Technology Site for February 2003



Monthly Climatic Summary											
Month	Temperature (°F)			Mean Dew Point (°F)	Mean Relative Humidity (%)	Wind Speed (mph)		Pressure Mean (mb)	Solar Total (kW-h/m²)	Precipitation (in)	
	Mean Daily High	Mean Daily Low	Daily Mean			Mean	Max			Total	Max
Mar-03	49.68	32.52	41.04	26.13	62	11.38	80.82	808.59	141.73	3.4400	0.1100

Figure 2-3. Wind Rose for Rocky Flats Environmental Technology Site for March 2003

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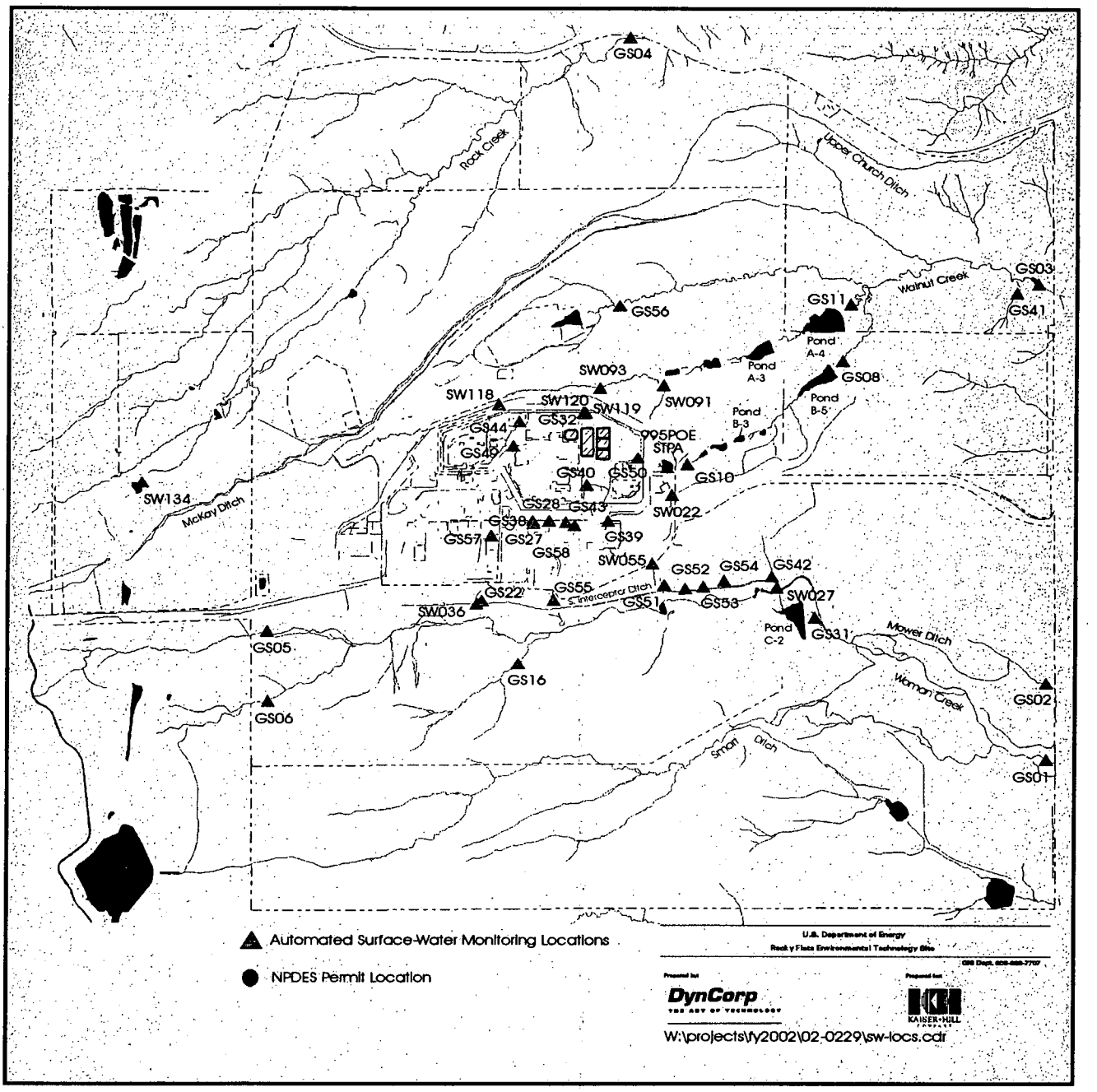
3.0 SURFACE WATER DATA

Figure 3-1. Holding Ponds and Liquid Effluent Water Courses



3.1 NPDES SUMMARY DATA

Table 3-1. Sewage Treatment Plant (Outfall STP1), Dates of discharge: 01/01/03 – 03/31/03.

Parameter & Units	Measured 30-day Average	Limit 30-Day Average	Measured 7-Day Average	Limit 7-Day Average	Measured Daily Minimum	Limit Daily Minimum	Measured Daily Maximum	Limit Daily Maximum	Measured Result	% Removal (Calc.)	% Removal Minimum
pH, SU	N/A	N/A	N/A	N/A	6.6 – 6.9	6.5	7.6 – 8.4	9.0	N/A	N/A	N/A
TSS, mg/l	< 4	15	N/A	N/A	N/A	N/A	< 4 - 6	25	N/A	N/A	N/A
TSS (Influent), mg/l	84 - 88	a	N/A	N/A	N/A	N/A	140 - 190	a	N/A	N/A	N/A
TSS, % removal	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	95%	85%
Total Phos., mg/l	3	8	N/A	N/A	N/A	N/A	4 - 6	12	N/A	N/A	N/A
Total Cr., ug/l	N/A	N/A	N/A	N/A	N/A	N/A	< 2	50	N/A	N/A	N/A
Potentially Dissolved Ag, ug/l	< 0.3	0.6	N/A	N/A	N/A	N/A	< 0.3	3.8	N/A	N/A	N/A
F. Coliform,	<2 - <4	200b	<2 - 9	400b	N/A	N/A	N/A	N/A	N/A	N/A	N/A
CBOD5, mg/l	3 - 5	8	N/A	N/A	N/A	N/A	5 - 10	20	N/A	N/A	N/A
CBOD5 (Influent), mg/l	70 - 106	a	N/A	N/A	N/A	N/A	140 - 180	a	N/A	N/A	N/A
CBOD5, % removal	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	94% - 95%	85%
Oil & Grease	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	c	N/A	N/A
NO3/NO2 as N, mg/l	N/A	N/A	N/A	N/A	N/A	N/A	3 - 7	a	N/A	N/A	N/A
NO2 as N, mg/l	N/A	N/A	N/A	N/A	N/A	N/A	1.4 – 2.4	4.5	N/A	N/A	N/A
Ammonia as N, mg/l	N/A	N/A	N/A	N/A	N/A	N/A	4 - 15	a	N/A	N/A	N/A
Alkalinity, mg/l	N/A	N/A	N/A	N/A	N/A	N/A	120 - 140	a	N/A	N/A	N/A

a Report Only
b Geometric Mean
c No Sheen Observed
N/A Not Applicable
Note: Results are the range of value(s) measured during the reporting period.

CBOD5 Carbonaceous Biochemical Oxygen Demand, 5-Day Test
TSS Total Suspended Solids
SU Standard Units

Table 3-1. Sewage Treatment Plant, Outfall STP1 (continued).

Parameter & Units	Measured 30-day Average	Limit 30-Day Average	Measured 7-Day Average	Limit 7-Day Average	Measured Daily Minimum	Limit Daily Minimum	Measured Daily Maximum	Limit Daily Maximum	Measured Result	% Removal (calc)	% Removal Minimum
Gross alpha, pCi/l	< 1 - 1	11	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Gross beta, pCi/l	6 - 8	19	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Ceriodaphnia Acute test	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	PASS	N/A	N/A
Fathead Minnows Acute test	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	PASS	N/A	N/A
Ceriodaphnia Chronic test	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	PASS	N/A	N/A
Fathead Minnows Chronic test	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	PASS	N/A	N/A
Carbon Tetrachloride, ug/l	< 1	5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,2 Dichloro-ethane, ug/l	< 1	5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Benzene, ug/l	< 1	5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,1 Dichloro-ethylene, ug/l	< 1	7	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,1,1 Trichloro-ethane, ug/l	< 1	200	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
1,2 Dichloro-ethylene (transl), ug/l	< 1	70	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Trichloro-Ethylene, ug/l	< 1	5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
Tetrachloro -ethylene, ug/l	< 1	5	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A

N/A Not Applicable
NS Not Sampled

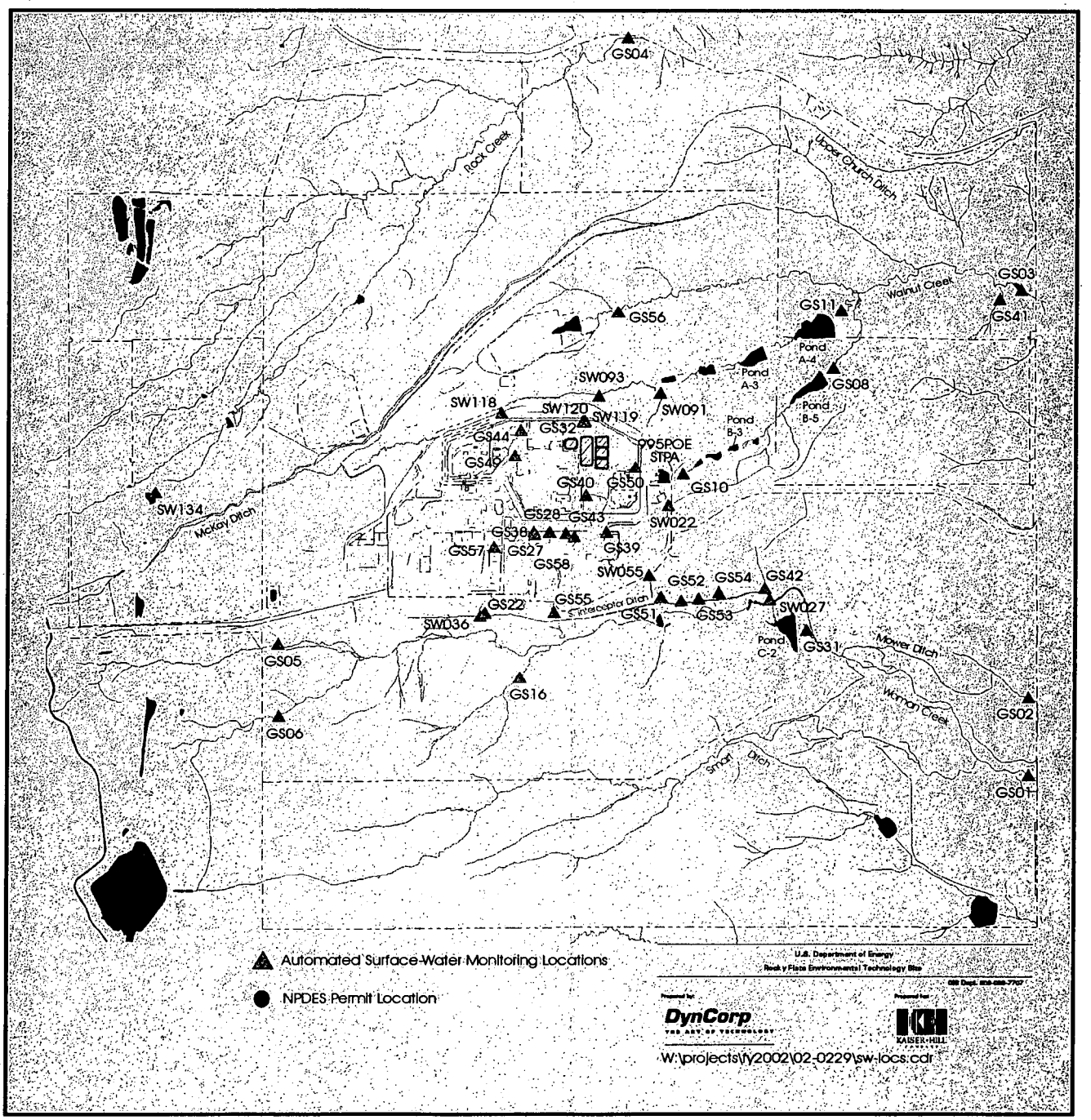
3.2 MOUND PLUME SUMMARY DATA

Table 3-2. Mound Plume Locations SW061 and SW132

Analyte	SW061 3/27/03	SW132 3/27/03
Pu 239/240, pCi/l	0.022 +/- 0.016	0.003 +/- 0.009
Am 241, pCi/l	0.009 +/- 0.011	0.002 +/- 0.009
Silver, dissolved, ug/l	< 0.20	< 0.20
Aluminum, total, ug/l	920	431
Arsenic, total, ug/l	1.0	< 0.88
Barium, total, ug/l	195	177
Beryllium, total, ug/l	0.25	0.29
Cadmium, dissolved, ug/l	0.22	0.36
Copper, dissolved, ug/l	2.0	1.8
Iron, total, ug/l	778	411
Mercury, total, ug/l	< 0.10	< 0.10
Manganese, total, ug/l	67.9	85.5
Nickel, dissolved, ug/l	1.4	1.5
Lead, dissolved, ug/l	0.76	< 0.65
Antimony, total, ug/l	0.75	1.9
Selenium, dissolved, ug/l	< 0.90	1.8
Zinc, dissolved, ug/l	183	124
EPA VOA Method 8260, compounds found >RFCA Seg 5 Action Level	Not Detected	Not Detected

4.0 HYDROLOGIC AND ROCKY FLATS CLEAN-UP AGREEMENT (RFCA) DATA

Figure 4-1. Gaging Station Locations



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4.1 FLOW MONITORING

Table 4-1. Gaging Station GS01: Mean Daily Discharge (cubic feet per second).

Day	Jan-03	Feb-03	Mar-03
1	0.010	0.043	0.137
2	0.011	0.053	0.177
3	*0.007*[a]	0.059	0.237
4	0.009	0.058	0.241
5	0.009	0.061	0.151
6	0.010	*0.060*[a]	0.133
7	0.037	*0.056*[a]	*0.150*[a]
8	0.047	*0.057*[a]	0.194
9	0.039	*0.055*[a]	0.211
10	*0.033*[a]	*0.031*[a]	0.172
11	*0.026*[a]	0.030	0.133
12	0.029	*0.030*[a]	0.104
13	0.022	0.074	0.078
14	0.021	0.167	0.070
15	*0.023*[a]	0.277	0.056
16	*0.023*[a]	0.245	0.051
17	*0.026*[a]	0.169	0.117
18	*0.023*[a]	0.141	0.826
19	0.022	0.113	0.618
20	0.021	0.099	0.937
21	0.020	0.099	1.086
22	*0.017*[a]	0.103	1.576
23	*0.019*[a]	*0.086*[a]	3.704
24	0.022	*0.082*[a]	6.029
25	0.022	*0.074*[a]	7.433
26	0.020	0.062	*19.426*[a]
27	0.021	0.096	*13.474*[a]
28	0.025	0.126	4.790
29	0.031		2.741
30	0.035		*7.585*[a]
31	0.038		12.615
Monthly Average (cfs)	0.023	0.093	2.750

Monthly Discharge

Cubic Feet	62140	224942	7365840
Gallons	464843	1682685	55100313
Acre-Feet	1.43	5.16	169.07

Note: Mean flow values are reported to the nearest 0.001 cfs, values less than 0.0005 cfs are reported as zero.

Gaging Station GS01 is located at 39° 52' 40"N, 105° 09' 55"W, at Woman Creek and Indiana Street (See Section 4 Map). This station is a RFCA Point of Compliance, a Buffer Zone Monitoring Location and a monitoring point for water leaving the Site and flowing to Woman Creek Reservoir. This station collects samples for selected radionuclides using continuous flow-paced sampling and storm event sampling for selected water quality parameters, metals, and major ions.

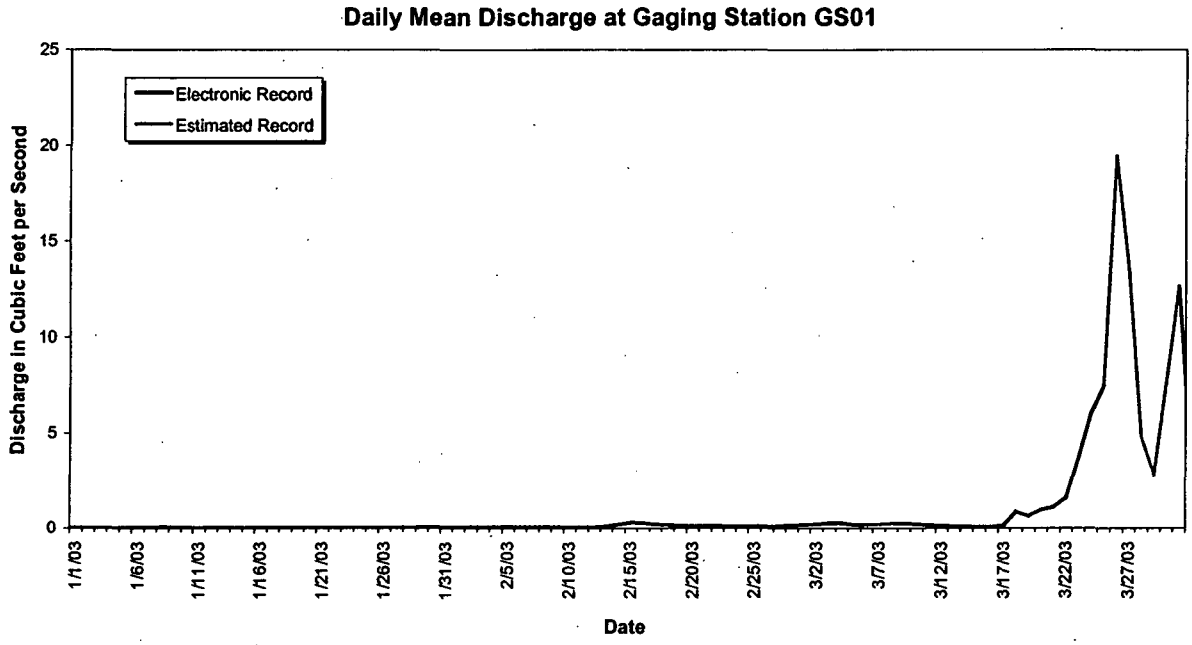

Figure 4-2. Mean Daily Discharge at GS01, Water Year 2003 (Jan, Feb, and Mar 2003).

Table 4-2. Gaging Station GS02: Mean Daily Discharge (cubic feet per second).

Day	Jan-03	Feb-03	Mar-03
1	0.000	0.000	0.000
2	0.000	0.000	0.000
3	0.000	0.000	0.000
4	0.000	0.000	0.000
5	0.000	0.000	0.000
6	0.000	0.000	0.000
7	0.000	0.000	0.000
8	0.000	0.000	0.000
9	0.000	0.000	0.000
10	0.000	0.000	0.000
11	0.000	0.000	0.000
12	0.000	0.000	0.000
13	0.000	0.000	0.000
14	0.000	0.000	0.000
15	0.000	0.000	0.000
16	0.000	0.000	0.000
17	0.000	0.000	BD
18	0.000	0.000	BD
19	0.000	0.000	BD
20	0.000	0.000	BD
21	0.000	0.000	BD
22	0.000	0.000	BD
23	0.000	0.000	BD
24	0.000	0.000	BD
25	0.000	0.000	BD
26	0.000	0.000	BD
27	0.000	0.000	BD
28	0.000	0.000	BD
29	0.000		BD
30	0.000		BD
31	0.000		BD
Monthly Average (cfs)	0.000	0.000	0.000

Monthly Discharge

Cubic Feet	0	0	0
Gallons	0	0	0
Acre-Feet	0.00	0.00	0.00

Note: Mean flow values are reported to the nearest 0.001 cfs, values less than 0.0005 cfs are reported as zero.

BD = Bad data due to equipment failures.

Buffer Zone Hydrologic monitoring location GS02 is located at state plane 2093817, 746302 on Mower Ditch 200 feet west of Indiana Street. This station monitors runoff from an area north of Mower Ditch between Pond C-2 and Indiana Street. The GS02 drainage area is approximately 157.7 acres. This station collects samples for sediment/sand, Ca, Mg, Na, K, Cl, F, SO4, HCO3, and TSS using storm-event, rising-limb, flow-paced composite sampling.

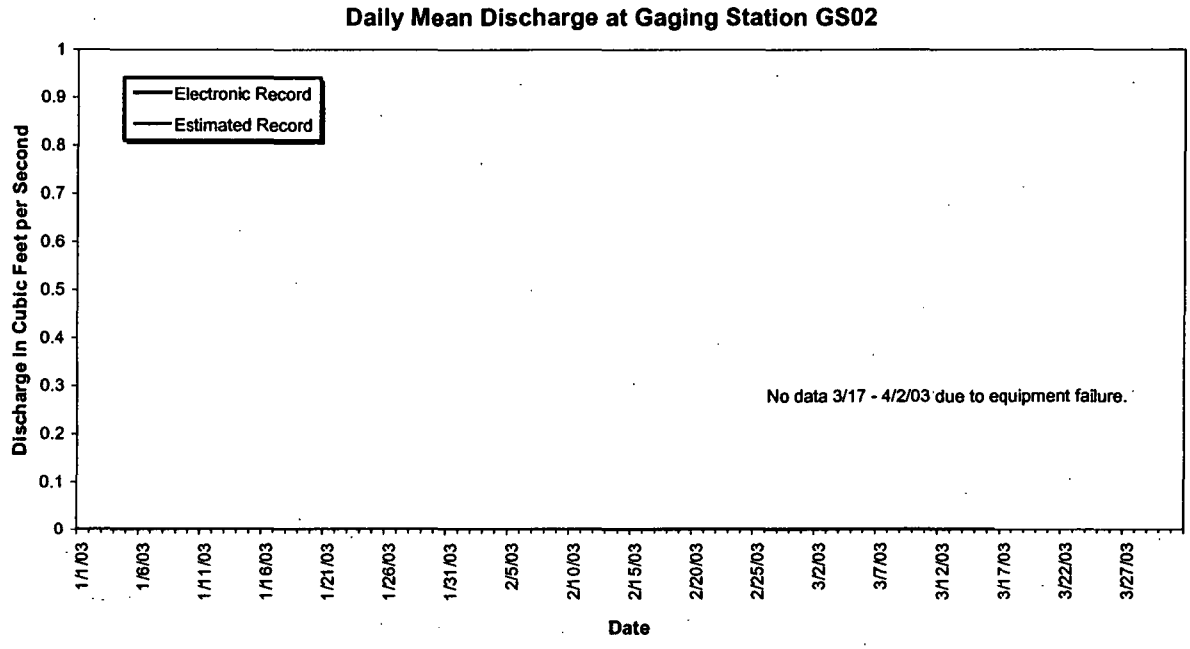

Figure 4-3. Mean Daily Discharge at GS02, Water Year 2003 (Jan, Feb, and Mar 2003).

Table 4-3. Gaging Station GS03: Mean Daily Discharge (cubic feet per second).

Day	Jan-03	Feb-03	Mar-03
1	0.000	0.000	0.013
2	0.000	0.000	0.010
3	0.003	0.000	0.010
4	0.000	0.000	0.021
5	0.000	0.000	0.010
6	0.002	0.000	0.020
7	0.000	0.000	0.007
8	0.000	0.000	0.005
9	0.000	0.000	0.004
10	0.000	0.000	0.003
11	0.000	*0.000*[a]	0.002
12	0.000	*0.000*[a]	0.001
13	0.000	1.283	0.004
14	0.000	3.389	0.004
15	0.000	3.402	0.001
16	0.000	2.983	0.004
17	0.000	3.006	0.015
18	0.000	3.236	0.044
19	0.000	3.102	0.039
20	0.000	3.033	0.010
21	0.000	1.801	0.010
22	0.000	0.889	0.668
23	0.000	0.606	2.843
24	0.005	0.254	7.825
25	0.000	0.024	12.483
26	0.000	0.017	*22.260*[a]
27	0.000	0.012	10.940
28	0.000	0.011	7.679
29	0.000		6.834
30	0.000		8.078
31	0.000		8.517
Monthly Average (cfs)	0.000	0.966	2.850

Monthly Discharge

Cubic Feet	897	2337062	7634630
Gallons	6712	17482438	57111005
Acre-Feet	0.02	53.64	175.24

Note: Mean flow values are reported to the nearest 0.001 cfs, values less than 0.0005 cfs are reported as zero.

[a] Contains data estimated from field observations and electronic record at adjacent or comparable gages.

Gaging Station GS03 is located at 39° 54' 7"N, 105° 9' 59"W, at Walnut Creek and Indiana Street (See Section 4 Map). This station is a RFCA Point of Compliance, a Buffer Zone Monitoring Location and a monitoring point for water leaving the Site and flowing to the Broomfield Diversion Ditch. This station collects samples for selected radionuclides using continuous flow-paced sampling and storm event sampling for selected water quality parameters, metals, and major ions.

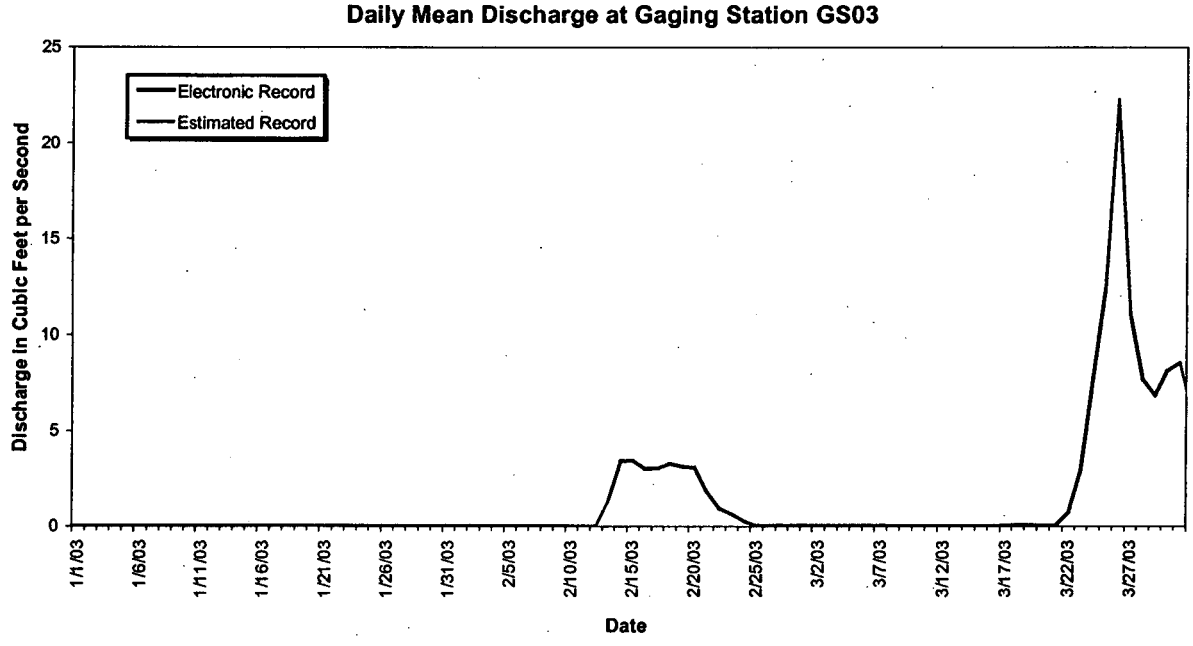

Figure 4-4. Mean Daily Discharge at GS03, Water Year 2003 (Jan, Feb, and Mar 2003).

Table 4-4. Gaging Station GS04: Mean Daily Discharge (cubic feet per second).

Day	Jan-03	Feb-03	Mar-03
1	0.000	0.056	0.155
2	0.000	0.058	0.208
3	0.000	0.055	0.259
4	0.013	*0.071*[a]	0.195
5	0.050	0.084	*0.157*[a]
6	0.075	*0.080*[a]	0.152
7	0.087	*0.060*[a]	0.169
8	0.087	*0.060*[a]	0.178
9	*0.070*[a]	*0.059*[a]	0.162
10	*0.046*[a]	*0.058*[a]	0.147
11	*0.018*[a]	0.071	0.134
12	0.019	0.105	0.122
13	0.007	0.222	0.104
14	0.000	0.336	0.094
15	0.007	0.408	0.081
16	*0.011*[a]	0.288	0.072
17	0.014	0.285	0.146
18	0.011	0.180	0.854
19	0.007	0.150	0.619
20	0.002	*0.136*[a]	0.602
21	0.007	0.139	0.759
22	0.008	0.135	1.123
23	0.009	*0.111*[a]	2.742
24	0.012	*0.077*[a]	4.209
25	0.010	*0.078*[a]	*6.807*[a]
26	0.017	*0.079*[a]	*15.341*[a]
27	0.030	0.087	*9.032*[a]
28	0.052	0.141	*4.473*[a]
29	0.054		*3.067*[a]
30	0.057		*6.223*[a]
31	0.051		*6.589*[a]
Monthly Average (cfs)	0.027	0.131	2.096

Monthly Discharge

Cubic Feet	71691	317058	5613753
Gallons	536285	2371761	41993791
Acre-Feet	1.65	7.28	128.85

Note: Mean flow values are reported to the nearest 0.001 cfs, values less than 0.0005 cfs are reported as zero.

[a] Contains data estimated from field observations and electronic record at adjacent or comparable gages.

Buffer Zone Hydrologic monitoring location GS04 is located at state plane 2085568, 758145 on Rock Creek 300 feet upstream of the box culvert under Hwy. 128. This station monitors runoff from the Rock Creek drainage in the northwest Buffer Zone. The GS04 drainage area is approximately 1500 acres. This station collects samples for sediment/sand, Ca, Mg, Na, K, Cl, F, SO4, HCO3, and TSS using storm-event, rising-limb, flow-paced composite sampling.

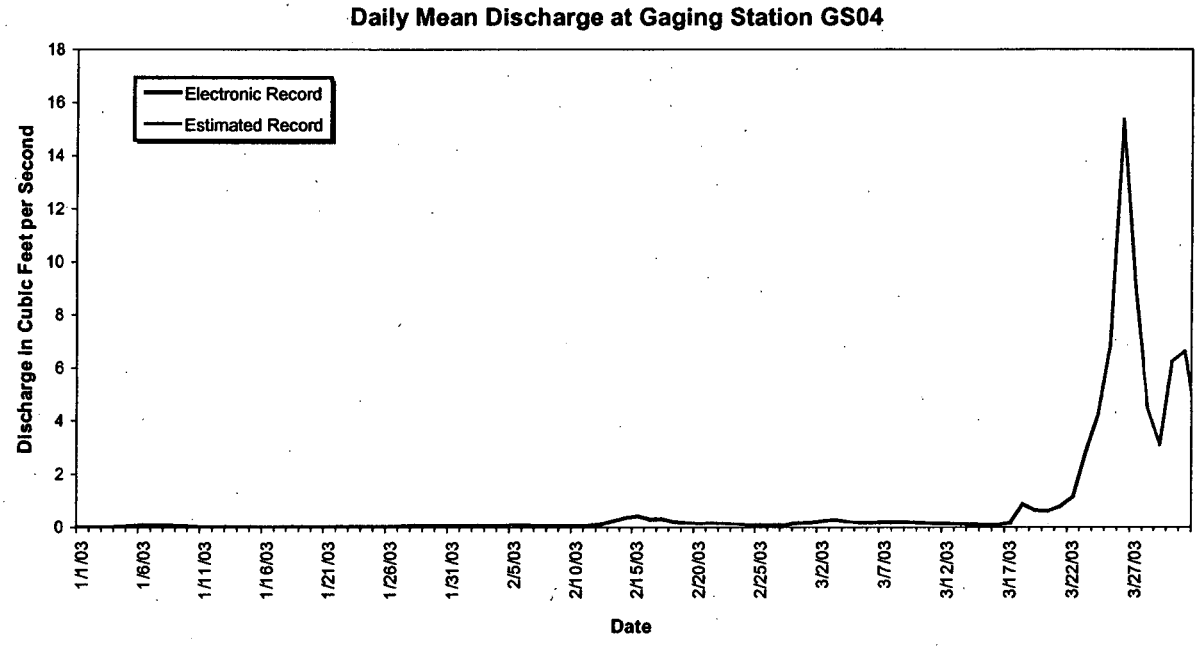

Figure 4-5. Mean Daily Discharge at GS04, Water Year 2003 (Jan, Feb, and Mar 2003).

Table 4-5. Gaging Station GS05: Mean Daily Discharge (cubic feet per second).

Day	Jan-03	Feb-03	Mar-03
1	0.010	0.019	WR
2	*0.016*[a]	0.022	WR
3	0.021	0.028	WR
4	0.016	0.027	WR
5	0.017	0.029	WR
6	0.018	0.036	*0.123*[a]
7	0.017	WR	0.097
8	0.016	WR	0.139
9	0.016	WR	0.102
10	*0.015*[a]	WR	0.070
11	*0.016*[a]	WR	0.048
12	*0.017*[a]	WR	0.035
13	0.018	WR	0.025
14	0.016	WR	0.024
15	0.016	0.096	0.022
16	*0.014*[a]	0.078	0.025
17	*0.011*[a]	0.077	0.137
18	0.009	0.054	0.193
19	0.012	0.044	0.256
20	0.008	0.037	0.384
21	0.007	0.035	0.505
22	*0.007*[a]	0.033	0.876
23	*0.012*[a]	*0.023*[a]	2.997
24	0.017	WR	3.218
25	0.018	WR	*5.380*[a]
26	0.019	WR	*11.210*[a]
27	0.018	WR	*3.809*[a]
28	0.016	WR	2.319
29	0.018		0.983
30	0.019		*4.482*[a]
31	0.020		*6.061*[a]
Monthly Average (cfs)	0.015	0.043	1.674

Monthly Discharge

Cubic Feet	40477	55214	3760152
Gallons	302787	413032	28127894
Acre-Feet	0.93	1.27	86.31

Note: Mean flow values are reported to the nearest 0.001 cfs, values less than 0.0005 cfs are reported as zero.

[a] Contains data estimated from field observations and electronic record at adjacent or comparable gages.

BD = Bad data due to equipment failures.

WR = No data or unacceptable data due to winter icing conditions.

Buffer Zone Hydrologic monitoring location GS05 is located at state plane 2078428, 747260 on Woman Creek 320 feet east of the west Buffer Zone fence. This station monitors runoff from the Woman Creek drainage southwest of the Site including areas west of Hwy. 93. This station collects samples for sediment/sand, Ca, Mg, Na, K, Cl, F, SO4, HCO3, and TSS using storm-event, rising-limb, flow-paced composite sampling.

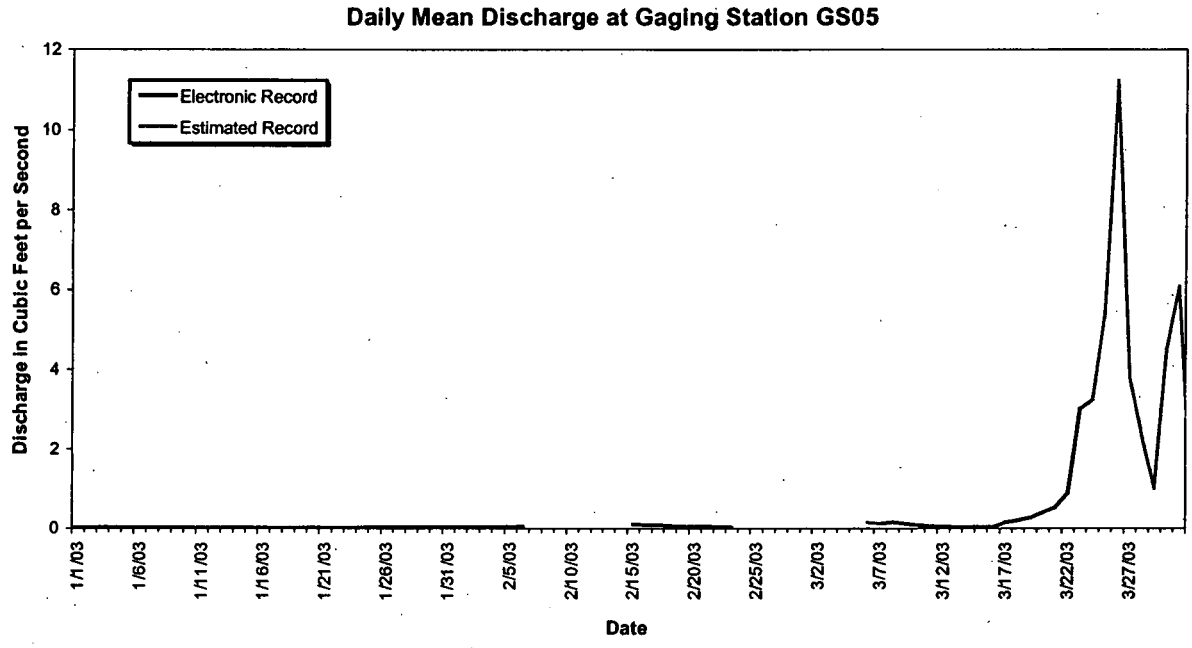

Figure 4-6. Mean Daily Discharge at GS05, Water Year 2003 (Jan, Feb, and Mar 2003).

Table 4-6. Gaging Station GS06: Mean Daily Discharge (cubic feet per second).

Day	Jan-03	Feb-03	Mar-03
1	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0011
8	0.0000	0.0000	0.0006
9	0.0000	0.0000	0.0000
10	0.0000	0.0000	0.0000
11	0.0000	0.0000	0.0000
12	0.0000	0.0000	0.0000
13	0.0000	0.0000	0.0000
14	0.0000	*0.0046*[a]	0.0000
15	0.0000	0.0000	0.0000
16	0.0000	0.0000	0.0000
17	0.0000	0.0000	0.0036
18	0.0000	0.0000	0.0027
19	0.0000	0.0000	0.0028
20	0.0000	0.0000	0.0022
21	0.0000	0.0000	0.0054
22	0.0000	0.0000	0.0112
23	0.0000	0.0000	0.2127
24	0.0000	0.0000	0.4261
25	0.0000	0.0000	0.5372
26	0.0000	0.0000	*1.5692*[a]
27	0.0000	0.0000	0.5116
28	0.0000	0.0000	0.2534
29	0.0000		0.1301
30	0.0000		0.4688
31	0.0000		0.1909
Monthly Average (cfs)	0.0000	0.0002	0.1397

Monthly Discharge

Cubic Feet	0	396	374052
Gallons	0	2961	2798104
Acre-Feet	0.00	0.01	8.59

Note: Mean flow values are reported to the nearest 0.001 cfs, values less than 0.0005 cfs are reported as zero.
[a] Contains data estimated from field observations and electronic record at adjacent or comparable gages.

Buffer Zone Hydrologic monitoring location GS06 is located at state plane 2078449, 745968 on the Owl Branch to Woman Creek 330 feet east of the west Buffer Zone fence. This station monitors runoff from the area northeast of Rocky Flats Lake. This station collects samples for sediment/sand, Ca, Mg, Na, K, Cl, F, SO4, HCO3, and TSS using storm-event, rising-limb, flow-paced composite sampling.

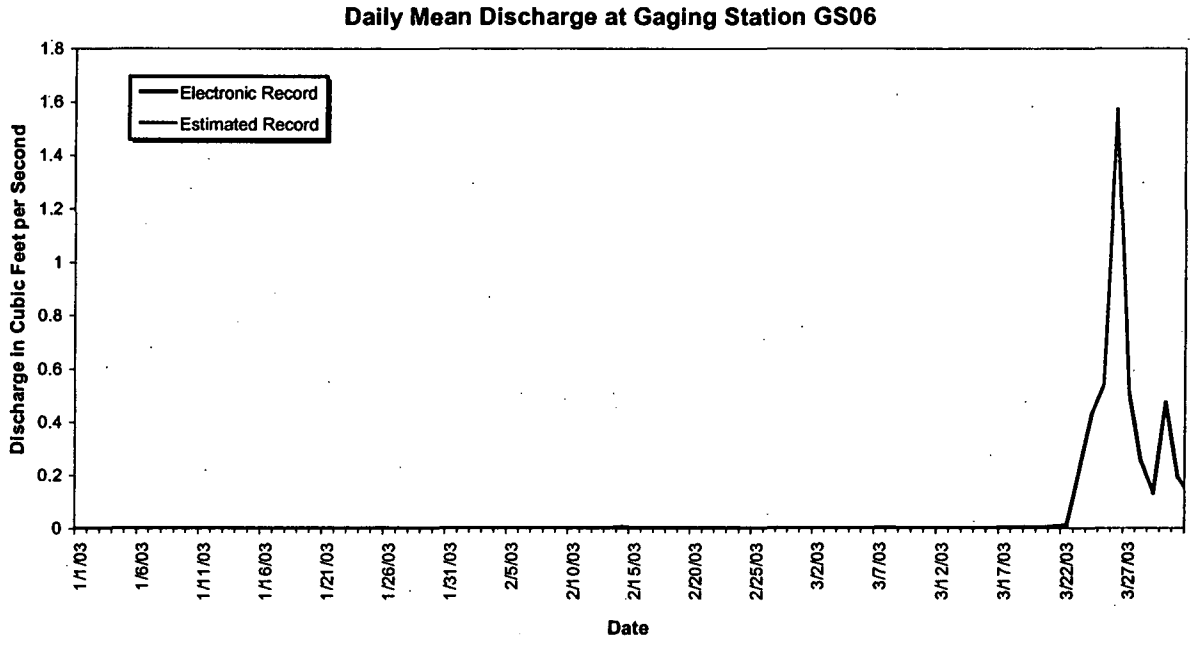

Figure 4-7. Mean Daily Discharge at GS06, Water Year 2003 (Jan, Feb, and Mar 2003).

Table 4-7. Gaging Station GS08: Mean Daily Discharge (cubic feet per second).

Day	Jan-03	Feb-03	Mar-03
1	0.000	0.000	0.000
2	0.000	0.000	0.000
3	0.000	0.000	0.000
4	0.000	0.000	0.000
5	0.000	0.000	0.000
6	0.000	0.000	0.000
7	0.000	0.000	0.000
8	0.000	0.000	0.000
9	0.000	0.000	0.000
10	0.000	0.000	0.000
11	0.000	0.000	0.000
12	0.000	0.000	0.000
13	0.000	1.046	0.000
14	0.000	1.576	0.000
15	0.000	1.563	0.000
16	0.000	1.642	0.000
17	0.000	1.581	0.000
18	0.000	1.381	0.000
19	0.000	1.378	0.000
20	0.000	1.538	0.000
21	0.000	1.342	0.000
22	0.000	0.951	0.000
23	0.000	0.709	0.000
24	0.000	0.199	1.832
25	0.000	0.000	4.286
26	0.000	0.000	4.148
27	0.000	0.000	3.147
28	0.000	0.000	2.485
29	0.000		2.375
30	0.000		2.214
31	0.000		1.693
Monthly Average (cfs)	0.000	0.532	0.715

Monthly Discharge

Cubic Feet	0	1287930	1916277
Gallons	0	9634387	14334750
Acre-Feet	0.00	29.56	43.99

Note: Mean flow values are reported to the nearest 0.001 cfs, values less than 0.0005 cfs are reported as zero.

[a] Contains data estimated from field observations and electronic record at adjacent or comparable gages.

Gaging Station GS08 is located 39° 53' 54"N, 105° 10' 48"W, at the Pond B-5 Outfall on South Walnut Creek (See Section 4 Map). This station is a RFCA Point of Compliance and monitors water discharged from Pond B-5 to South Walnut Creek. This station collects samples for selected radionuclides using continuous flow-paced sampling.

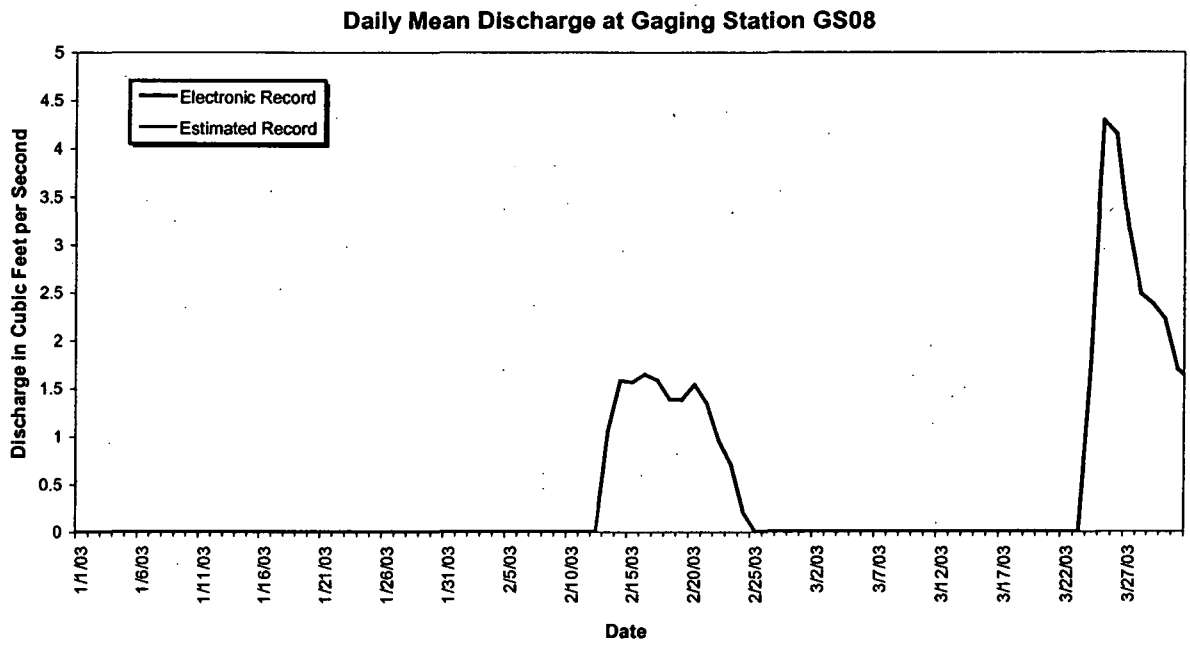

Figure 4-8. Mean Daily Discharge at GS08, Water Year 2003 (Jan, Feb, and Mar 2003).

Table 4-8. Gaging Station GS10: Mean Daily Discharge (cubic feet per second).

Day	Jan-03	Feb-03	Mar-03
1	0.014	0.017	0.035
2	0.014	0.019	0.233
3	0.016	0.112	0.052
4	0.016	0.021	0.029
5	0.018	0.024	0.038
6	0.027	0.024	0.032
7	0.021	0.021	0.034
8	0.020	0.022	0.034
9	0.019	0.023	0.033
10	0.018	0.042	0.031
11	0.021	0.017	0.031
12	0.023	0.028	0.032
13	0.021	0.026	0.028
14	0.030	0.169	0.029
15	0.025	0.182	0.027
16	0.012	0.026	0.027
17	0.015	0.026	*1.301*[a]
18	0.014	0.023	0.278
19	0.017	0.023	0.577
20	0.017	0.050	1.026
21	0.016	0.024	1.626
22	0.013	0.024	1.755
23	0.017	0.028	3.867
24	0.030	0.040	1.464
25	0.016	0.037	1.711
26	0.017	0.025	1.973
27	0.018	0.058	0.613
28	0.015	0.076	0.397
29	0.015		0.161
30	0.016		0.400
31	0.016		0.382
Monthly Average (cfs)	0.018	0.043	0.589

Monthly Discharge

Cubic Feet	48954	104171	1577387
Gallons	366204	779250	11799676
Acre-Feet	1.12	2.39	36.21

Note: mean flow values are reported to the nearest 0.001 cfs, values less than 0.0005 cfs are reported as zero.

[a] Contains data estimated from field observations and electronic record at adjacent or comparable gages.

Gaging Station GS10 is located 39° 53' 35"N, 105° 11' 27"W on South Walnut Creek above the Pond B-1 Bypass (See Section 4 Map). This station is a RFCA Action Level Framework and a New Source Detection Location and monitors water leaving the Site Industrial Area and entering the B-Series Ponds and South Walnut Creek. This station collects samples for selected radionuclides, metals, and water quality parameters using continuous flow-paced sampling.

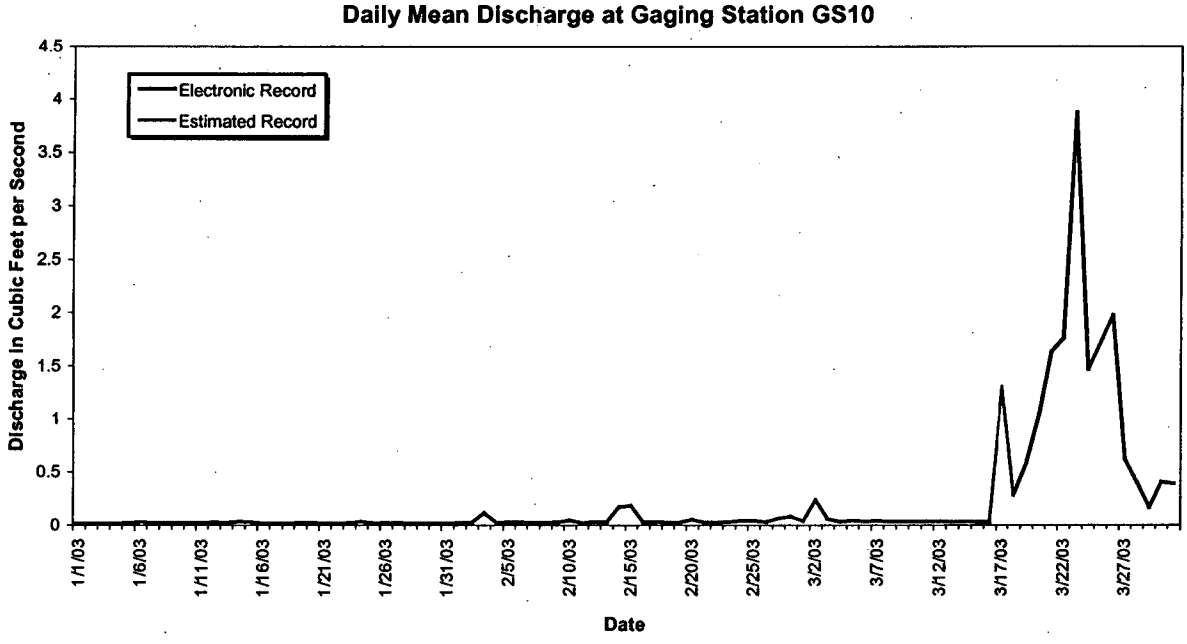

Figure 4-9. Mean Daily Discharge at GS10, Water Year 2003 (Jan, Feb, and Mar 2003).

Table 4-9. Gaging Station GS11: Mean Daily Discharge (cubic feet per second).

Day	Jan-03	Feb-03	Mar-03
1	0.000	0.000	0.000
2	0.000	0.000	0.000
3	0.000	0.000	0.000
4	0.000	0.000	0.000
5	0.000	0.000	0.000
6	0.000	0.000	0.000
7	0.000	0.000	0.000
8	0.000	0.000	0.000
9	0.000	0.000	0.000
10	0.000	0.000	0.000
11	0.000	0.000	0.000
12	0.000	0.000	0.000
13	0.000	1.463	0.000
14	0.000	2.117	0.000
15	0.000	1.928	0.000
16	0.000	1.303	0.000
17	0.000	1.522	0.000
18	0.000	1.778	0.000
19	0.000	1.709	0.000
20	0.000	1.444	0.000
21	0.000	0.347	0.000
22	0.000	0.000	0.000
23	0.000	0.000	0.000
24	0.000	0.000	0.000
25	0.000	0.000	0.000
26	0.000	0.000	0.000
27	0.000	0.000	2.235
28	0.000	0.000	3.537
29	0.000		3.363
30	0.000		3.230
31	0.000		3.428
Monthly Average (cfs)	0.000	0.486	0.509

Monthly Discharge

Cubic Feet	0	1175982	1364496
Gallons	0	8796958	10207142
Acre-Feet	0.00	26.99	31.32

Note: Mean flow values are reported to the nearest 0.001 cfs, values less than 0.0005 cfs are reported as zero.
[a] Contains data estimated from field observations and electronic record at adjacent or comparable gages.

Gaging Station GS11 is located 39° 54' 3"N, 105° 10' 47"W, at the Pond A-4 Outfall on North Walnut Creek (See Section 4 Map). This station is a RFCA Point of Compliance and monitors water discharged from Pond A-4 to North Walnut Creek. This station collects samples for selected radionuclides using continuous flow-paced sampling.

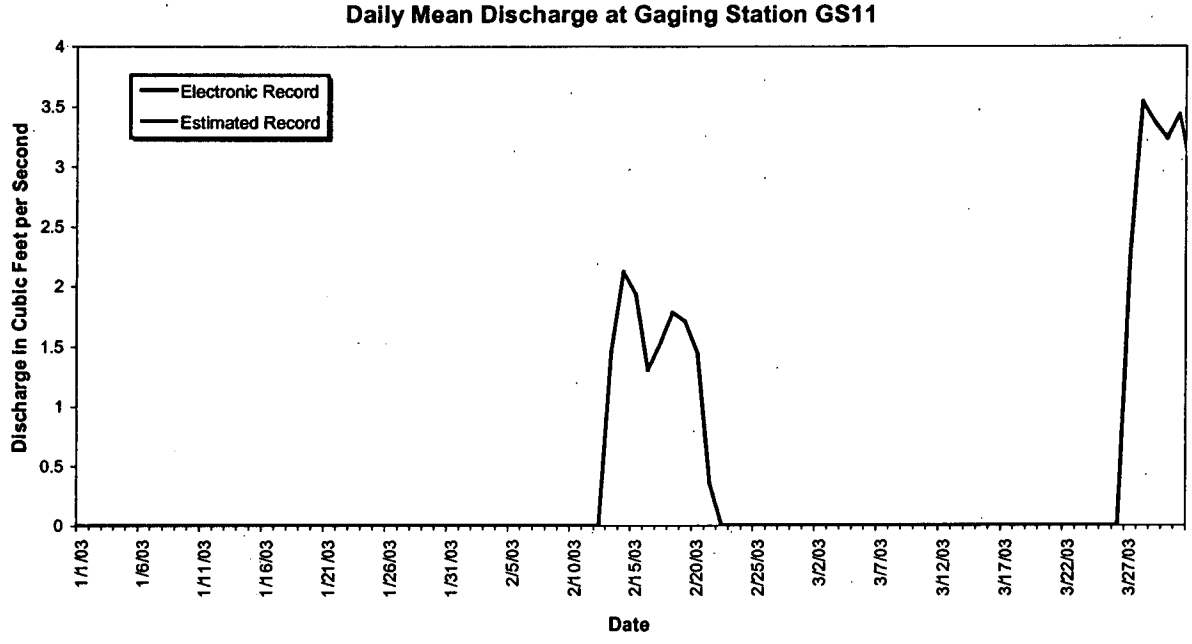

Figure 4-10. Mean Daily Discharge at GS11 Water Year 2003 (Jan, Feb, and Mar 2003).

Table 4-10. Gaging Station GS16: Mean Daily Discharge (cubic feet per second).

Day	Jan-03	Feb-03	Mar-03
1	WR	0.061	0.083
2	WR	*0.063*[a]	0.097
3	0.116	WR	0.113
4	*0.098*[a]	WR	WR
5	0.090	WR	WR
6	0.087	WR	*0.089*[a]
7	*0.075*[a]	WR	0.094
8	*0.073*[a]	WR	0.088
9	WR	WR	0.075
10	WR	WR	0.065
11	WR	WR	0.059
12	WR	WR	0.051
13	WR	WR	0.048
14	WR	WR	0.046
15	WR	WR	0.039
16	WR	*0.120*[a]	0.044
17	WR	0.112	0.189
18	WR	0.094	WR
19	WR	*0.081*[a]	WR
20	WR	0.077	WR
21	WR	0.070	WR
22	WR	0.071	WR
23	WR	WR	*0.542*[a]
24	WR	WR	0.425
25	WR	WR	0.501
26	*0.083*[a]	WR	1.202
27	0.089	*0.073*[a]	0.600
28	*0.077*[a]	0.087	0.305
29	*0.076*[a]		*0.224*[a]
30	0.072		*0.893*[a]
31	0.065		0.845
Monthly Average (cfs)	0.083	0.083	0.280

Monthly Discharge

Cubic Feet	86394	78667	580229
Gallons	646274	588474	4340413
Acre-Feet	1.98	1.81	13.32

Note: Mean flow values are reported to the nearest 0.001 cfs, values less than 0.0005 cfs are reported as zero.
[a] Contains data estimated from field observations and electronic record at adjacent or comparable gages.
WR = No data or unacceptable data due to winter icing conditions.

Buffer Zone Hydrologic monitoring location GS16 is located at state plane 2083406, 746659 on Antelope Springs Creek 970 feet upstream of Woman Creek. This station monitors discharge from Antelope Springs and runoff from the surrounding area. The GS16 drainage area is approximately 105 acres. This station collects flow data only.

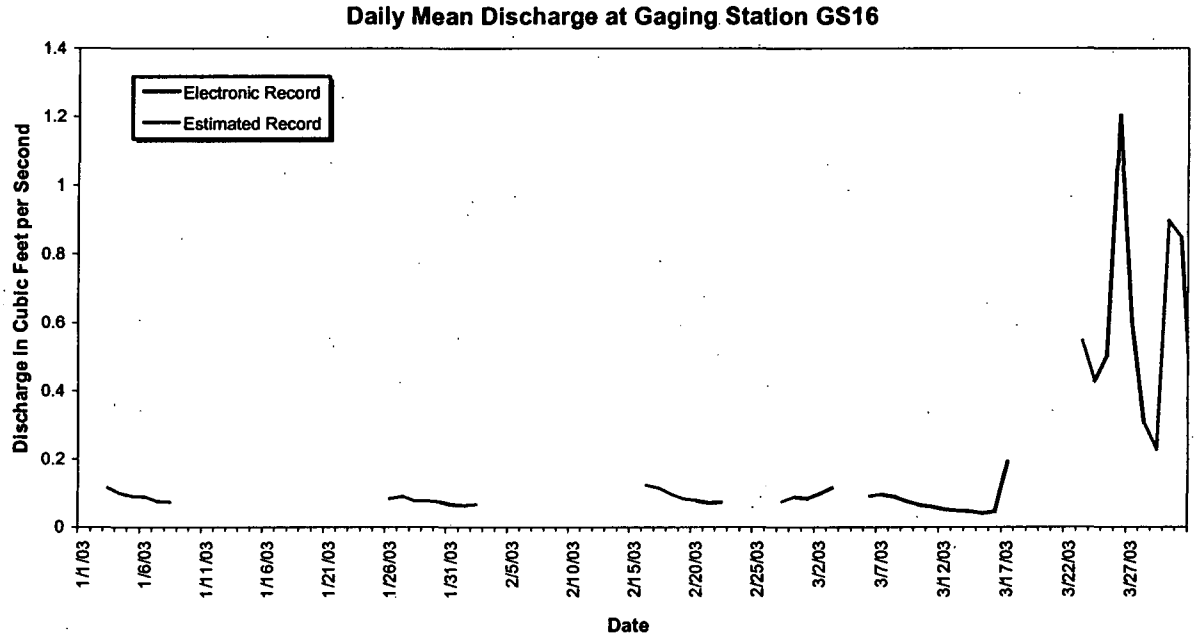

Figure 4-11. Mean Daily Discharge at GS16, Water Year 2003 (Jan, Feb, and Mar 2003).

Table 4-11. Gaging Station GS21: Mean Daily Discharge (cubic feet per second).

Day	Jan-03	Feb-03	Mar-03
1	*0.002*[a]	0.001	*0.003*[a]
2	*0.003*[a]	*0.003*[a]	*0.009*[a]
3	0.007	*0.004*[a]	0.004
4	0.008	*0.003*[a]	*0.002*[a]
5	0.006	*0.003*[a]	*0.003*[a]
6	0.001	*0.004*[a]	*0.002*[a]
7	0.001	*0.003*[a]	0.001
8	0.000	*0.003*[a]	0.001
9	*0.002*[a]	*0.003*[a]	0.001
10	*0.002*[a]	*0.003*[a]	0.001
11	*0.002*[a]	*0.002*[a]	0.000
12	0.002	*0.003*[a]	*0.000*[a]
13	0.002	0.002	0.000
14	0.002	0.005	0.000
15	0.003	0.008	0.000
16	*0.002*[a]	*0.002*[a]	0.000
17	*0.003*[a]	0.005	0.028
18	*0.003*[a]	0.002	0.027
19	0.004	*0.002*[a]	0.030
20	0.004	*0.002*[a]	0.029
21	*0.004*[a]	0.002	*0.037*[a]
22	*0.005*[a]	*0.003*[a]	*0.042*[a]
23	*0.004*[a]	*0.004*[a]	*0.061*[a]
24	0.003	*0.004*[a]	*0.037*[a]
25	0.002	*0.003*[a]	*0.033*[a]
26	0.002	*0.003*[a]	0.024
27	0.001	*0.004*[a]	*0.009*[a]
28	0.002	*0.005*[a]	0.007
29	0.002		*0.003*[a]
30	0.002		*0.006*[a]
31	0.001		0.006
Monthly Average (cfs)	0.0029	0.0032	0.0130

Monthly Discharge

Cubic Feet	7637	7662	34894
Gallons	57132	57316	261025
Acre-Feet	0.18	0.18	0.80

Note: Mean flow values are reported to the nearest 0.001 cfs, values less than 0.0005 cfs are reported as zero.
[a] Contains data estimated from field observations and electronic record at adjacent or comparable gages.

Gaging station GS21 was installed on 12/10/02 as a Performance Monitoring location in support of D&D for the 400 and 600 Areas. GS21 is located at state plane 2083049, 748139 in a ditch SE of B664. The GS21 drainage area is approximately 3.2 acres. This station will collect samples for Pu, Am, uranium isotopes, CLP metals, and TSS using continuous flow-paced composite sampling.

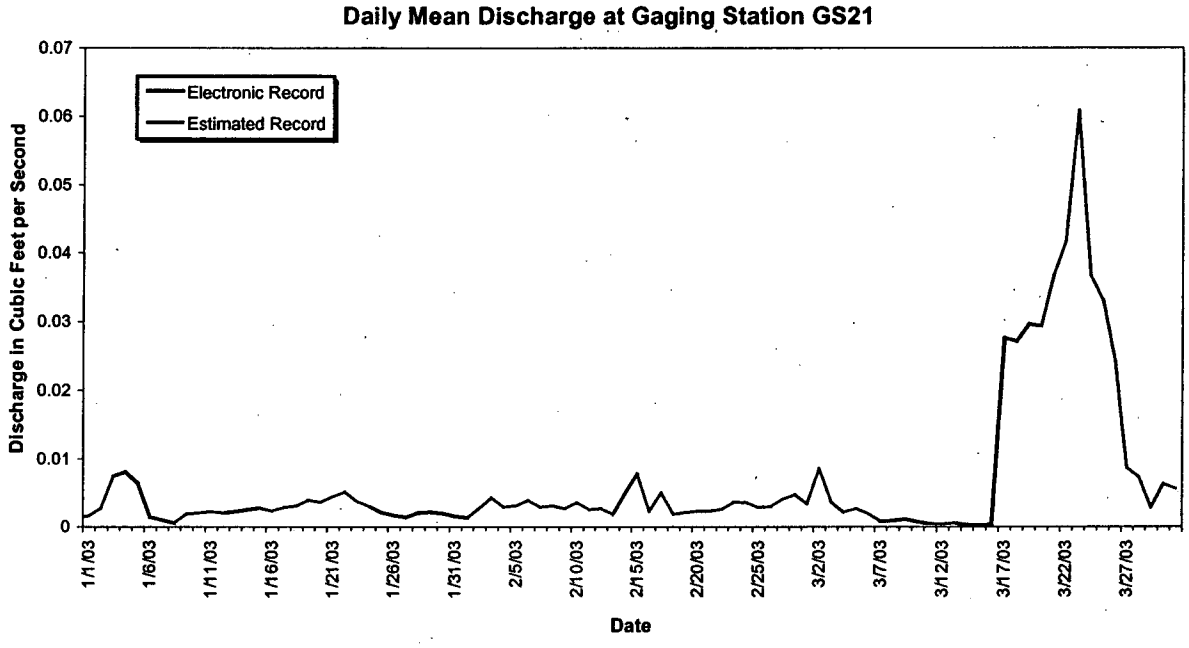

Figure 4-12. Mean Daily Discharge at GS21, Water Year 2003 (Jan, Feb, and Mar 2003).

Table 4-12. Gaging Station GS22: Mean Daily Discharge (cubic feet per second).

Day	Jan-03	Feb-03	Mar-03
1	0.007	0.004	0.018
2	0.006	0.009	0.100
3	0.006	0.057	0.019
4	0.006	0.019	0.015
5	0.010	0.022	0.021
6	0.022	0.035	0.017
7	0.008	*0.017*[a]	0.015
8	0.005	0.013	0.010
9	0.008	0.012	0.009
10	0.009	0.042	0.009
11	0.008	0.008	0.008
12	0.009	0.016	0.008
13	0.006	0.013	0.008
14	0.009	0.070	0.007
15	0.009	0.070	0.007
16	0.008	0.008	0.009
17	0.007	0.008	0.361
18	0.007	0.008	0.069
19	0.006	0.008	0.165
20	0.004	0.007	0.286
21	0.004	0.016	0.290
22	0.004	0.011	0.289
23	*0.012*[a]	0.033	0.554
24	0.012	*0.032*[a]	0.246
25	0.007	0.034	0.238
26	0.006	0.017	0.327
27	0.005	0.047	0.119
28	0.006	0.041	0.095
29	0.006		0.040
30	0.004		0.104
31	0.005		0.060
Monthly Average (cfs)	0.007	0.024	0.114

Monthly Discharge

Cubic Feet	19934	58401	304322
Gallons	149120	436873	2276487
Acre-Feet	0.46	1.34	6.99

Note: Mean flow values are reported to the nearest 0.001 cfs, values less than 0.0005 cfs are reported as zero.

[a] Contains data estimated from field observations and electronic record at adjacent or comparable gages.

Gaging station GS22 was upgraded as a Performance monitoring location in support of D&D activities for the 400 Area. GS22 is located at state plane 2082678, 747820 on the outlet of a culvert draining a portion of the 400 Area immediately upstream from the SID south of B664. The GS22 drainage area is approximately 17.2 acres. This station collects samples for Pu, Am, uranium isotopes, CLP metals, and TSS using continuous flow-paced composite sampling.

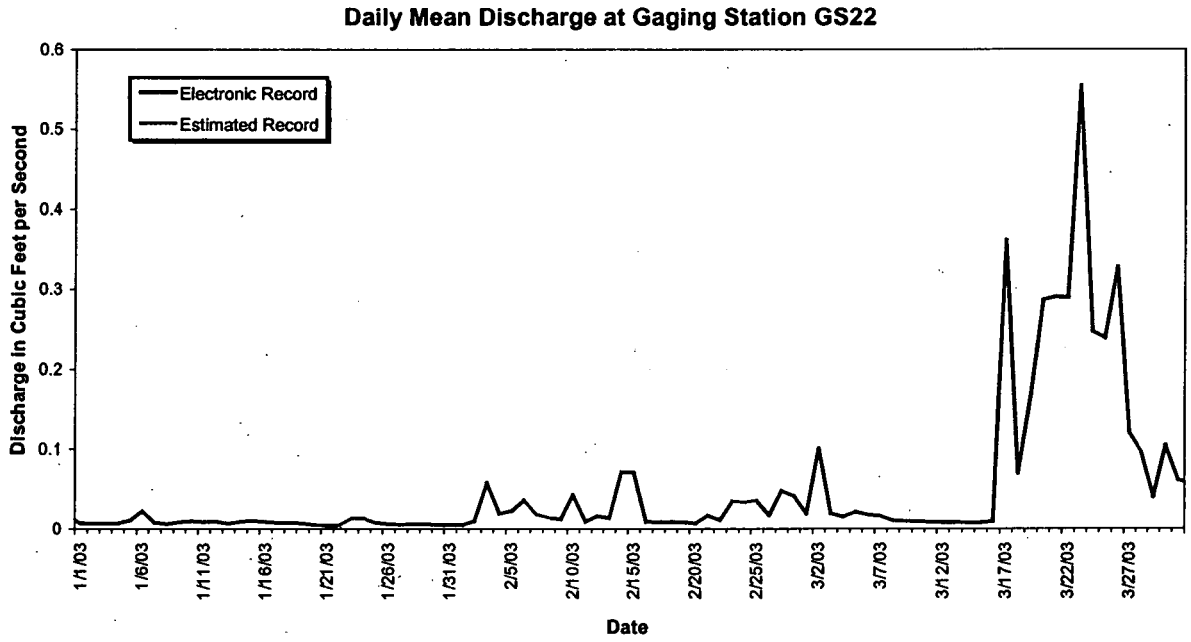

Figure 4-13. Mean Daily Discharge at GS22, Water Year 2003 (Jan, Feb, and Mar 2003).

Table 4-13. Gaging Station GS27: Mean Daily Discharge (cubic feet per second).

Day	Jan-03	Feb-03	Mar-03
1	No Data	No Data	*0.0000*[a]
2	No Data	No Data	0.0000
3	No Data	No Data	0.0000
4	No Data	No Data	0.0000
5	No Data	No Data	0.0000
6	No Data	No Data	0.0000
7	No Data	No Data	0.0000
8	No Data	No Data	0.0000
9	No Data	No Data	0.0000
10	No Data	No Data	0.0000
11	No Data	No Data	0.0000
12	No Data	No Data	0.0000
13	No Data	No Data	0.0000
14	No Data	No Data	0.0000
15	No Data	No Data	0.0000
16	No Data	No Data	0.0000
17	No Data	No Data	0.0006
18	No Data	No Data	0.0013
19	No Data	*0.0000*[a]	0.0008
20	No Data	*0.0000*[a]	*0.0007*[a]
21	No Data	0.0000	*0.0011*[a]
22	No Data	0.0000	0.0021
23	No Data	0.0000	0.0042
24	No Data	0.0000	0.0022
25	No Data	0.0000	*0.0038*[a]
26	No Data	0.0000	0.0060
27	No Data	0.0000	*0.0005*[a]
28	No Data	*0.0000*[a]	*0.0003*[a]
29	No Data		*0.0000*[a]
30	No Data		*0.0005*[a]
31	No Data		0.0000
Monthly Average (cfs)	No Data	0.0000	0.0008

Monthly Discharge

Cubic Feet	No Data	0	2079
Gallons	No Data	0	15549
Acre-Feet	No Data	0.00	0.05

Note: mean flow values are reported to the nearest 0.001 cfs, values less than 0.0005 cfs are reported as zero.
[a] Contains data estimated from field observations and electronic record at adjacent or comparable gages.

Gaging Station GS27 is located at State Plane 2080529; 751216, at the small drainage ditch NW of Building 884 (see Section 4 Map). This location is a Performance and Best Management Practices Monitoring Location and monitors water draining from the Building 889 area. This station collects samples for selected radionuclides using continuous, flow-paced sampling.

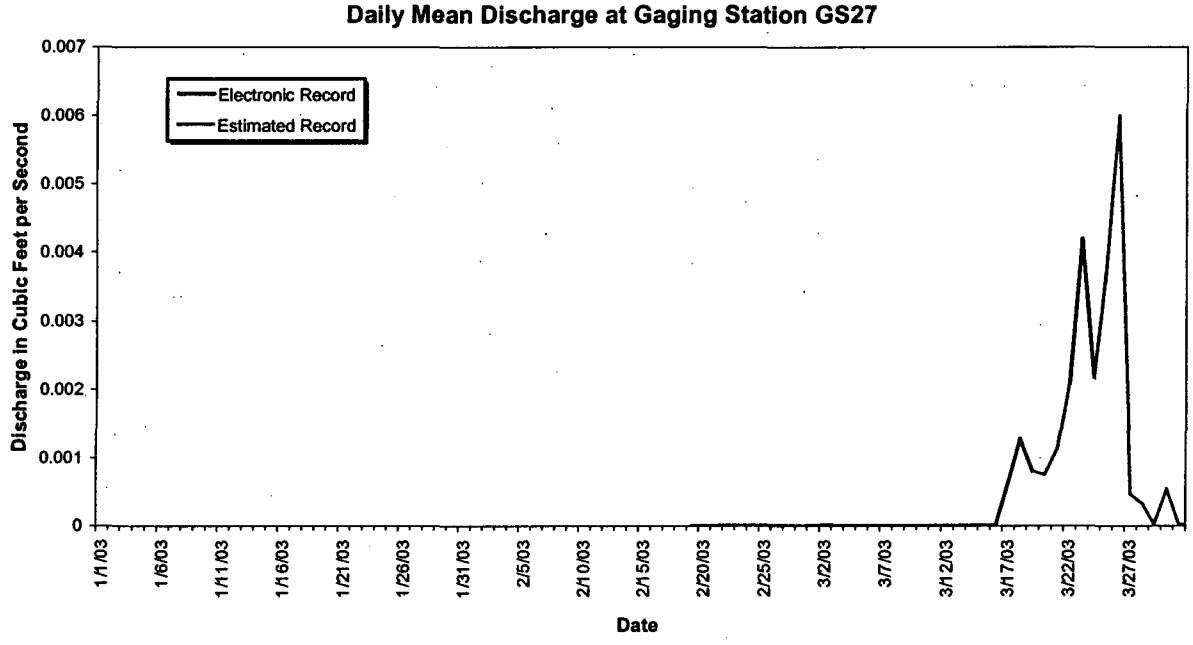

Figure 4-14. Mean Daily Discharge at GS27 Water Year 2003 (Jan, Feb, and Mar 2003).

Table 4-14. Gaging Station GS28: Mean Daily Discharge (cubic feet per second).

Day	Jan-03	Feb-03	Mar-03
1	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000
9	0.0000	0.0000	0.0000
10	0.0000	0.0000	0.0000
11	0.0000	0.0000	0.0000
12	0.0000	0.0000	0.0000
13	0.0000	0.0000	0.0000
14	0.0000	0.0000	0.0000
15	0.0000	0.0000	0.0000
16	0.0000	0.0000	0.0000
17	0.0000	0.0000	0.0115
18	0.0000	0.0000	0.0000
19	0.0000	0.0000	0.0000
20	0.0000	0.0000	0.0032
21	0.0000	0.0000	*0.0081*[a]
22	0.0000	0.0000	0.0214
23	0.0000	0.0000	0.0620
24	0.0000	0.0000	0.0133
25	0.0000	0.0000	0.0206
26	0.0000	0.0000	0.0315
27	0.0000	0.0000	*0.0006*[a]
28	0.0000	0.0000	0.0000
29	0.0000		0.0000
30	0.0000		0.0000
31	0.0000		0.0000
Monthly Average (cfs)	0.0000	0.0000	0.0056

Monthly Discharge

Cubic Feet	0	0	14879
Gallons	0	1	111305
Acre-Feet	0.00	0.00	0.34

Note: mean flow values are reported to the nearest 0.001 cfs, values less than 0.0005 cfs are reported as zero.

[a] Contains data estimated from field observations and electronic record at adjacent or comparable gages.

Gaging station GS28 was re-installed as a Performance monitoring location in support of D&D activities for the 800 Area. GS28 is located at state plane 2084008, 749279 on a ditch NW of B865. The GS28 drainage area is approximately 3 acres. This station collects samples for Pu, Am, uranium isotopes, CLP metals, and TSS using continuous flow-paced composite sampling.

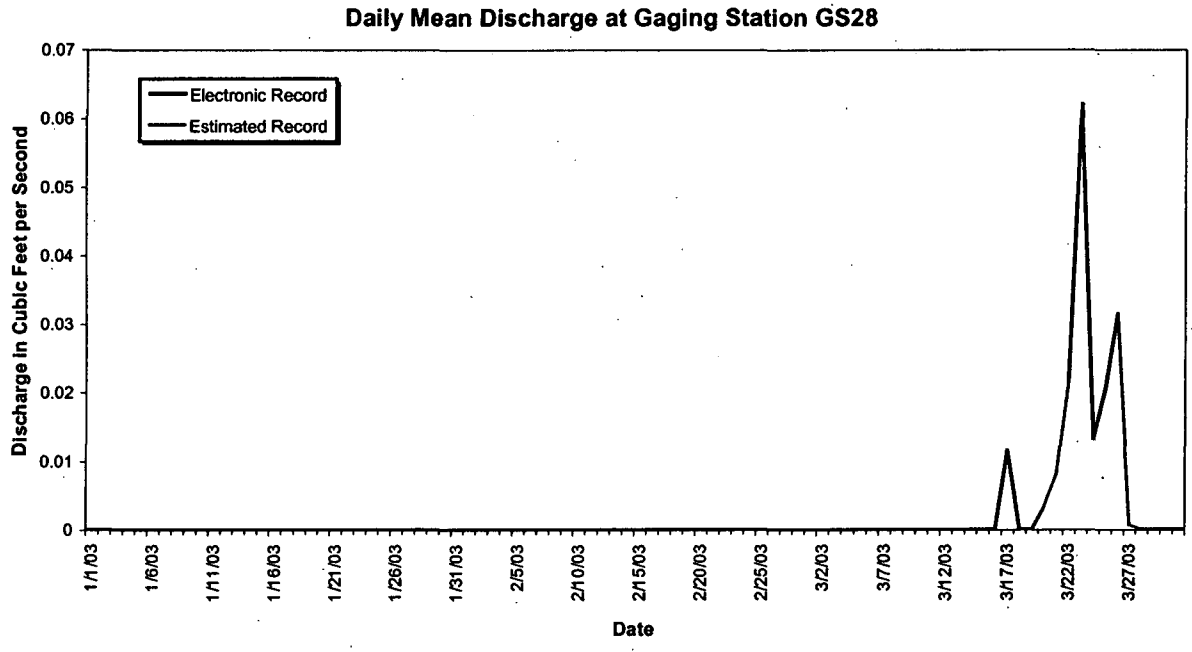

Figure 4-15. Mean Daily Discharge at GS28 Water Year 2003 (Jan, Feb, and Mar 2003).

Table 4-15. Gaging Station GS31: Mean Daily Discharge (cubic feet per second).

Day	Jan-03	Feb-03	Mar-03
1	0.000	0.000	0.000
2	0.000	0.000	0.000
3	0.000	0.000	0.000
4	0.000	0.000	0.000
5	0.000	0.000	0.000
6	0.000	0.000	0.000
7	0.000	0.000	0.000
8	0.000	0.000	0.000
9	0.000	0.000	0.000
10	0.000	0.000	0.000
11	0.000	0.000	0.000
12	0.000	0.000	0.000
13	0.000	0.000	0.000
14	0.000	0.000	0.000
15	0.000	0.000	0.000
16	0.000	0.000	0.000
17	0.000	0.000	0.000
18	0.000	0.000	0.000
19	0.000	0.000	0.000
20	0.000	0.000	0.000
21	0.000	0.000	0.000
22	0.000	0.000	0.000
23	0.000	0.000	0.000
24	0.000	0.000	0.000
25	0.000	0.000	0.000
26	0.000	0.000	0.000
27	0.000	0.000	0.000
28	0.000	0.000	0.000
29	0.000		0.000
30	0.000		0.000
31	0.000		0.000
Monthly Average (cfs)	0.000	0.000	0.000

Monthly Discharge

Cubic Feet	0	0	0
Gallons	0	0	0
Acre-Feet	0.00	0.00	0.00

Note: Mean flow values are reported to the nearest 0.001 cfs, values less than 0.0005 cfs are reported as zero.

[a] Contains data estimated from field observations and electronic record at adjacent or comparable gages.

Gaging Station GS31 is located at State Plane 2089268: 747506, at the Pond C-2 Outfall (See Section 4 Map). This station is a RFCA Point of Compliance and monitors water discharged from Pond C-2. This station collects samples for selected radionuclides using continuous flow-paced sampling.

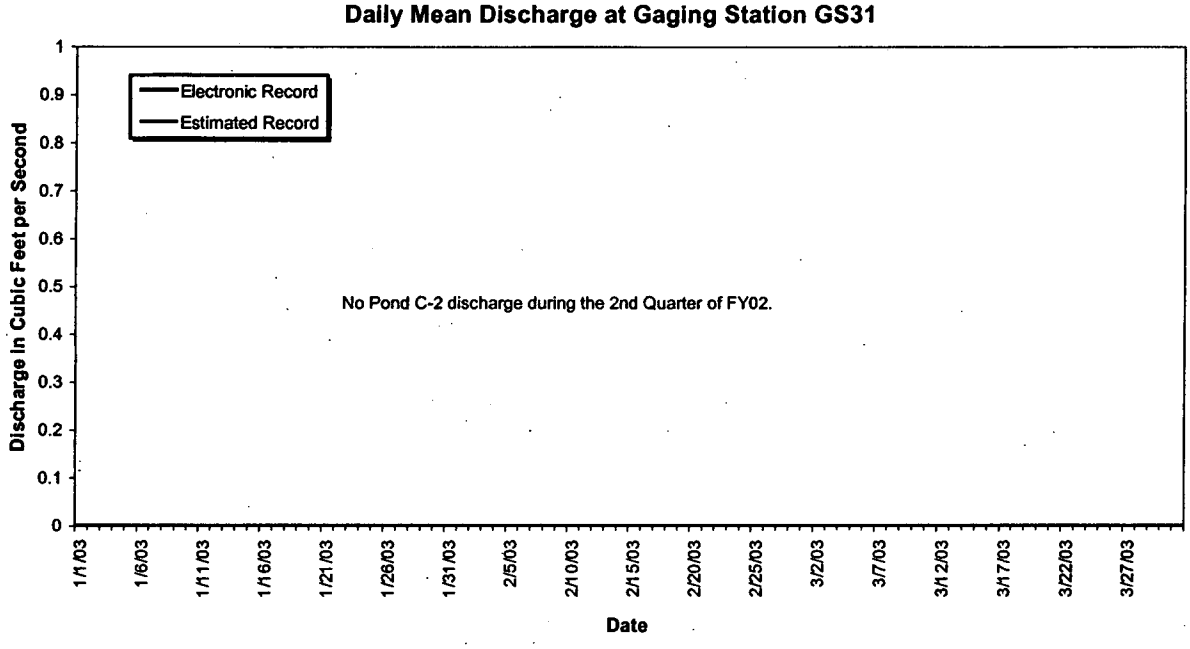

Figure 4-16. Mean Daily Discharge at GS31 Water Year 2003 (Jan, Feb, and Mar 2003).

Table 4-16. Gaging Station GS39: Mean Daily Discharge (cubic feet per second).

Day	Jan-03	Feb-03	Mar-03
1	0.000	0.000	*0.000*[a]
2	0.000	0.000	0.005
3	0.000	0.000	*0.000*[a]
4	0.000	*0.000*[a]	*0.000*[a]
5	0.000	*0.000*[a]	*0.000*[a]
6	0.000	*0.000*[a]	*0.000*[a]
7	*0.000*[a]	*0.000*[a]	0.000
8	0.000	*0.000*[a]	0.000
9	*0.000*[a]	0.000	0.000
10	0.000	*0.000*[a]	0.000
11	0.000	*0.000*[a]	0.000
12	0.000	*0.000*[a]	0.000
13	0.000	0.000	0.000
14	0.000	0.005	0.000
15	0.000	0.004	0.000
16	0.000	*0.000*[a]	0.000
17	0.000	*0.000*[a]	0.053
18	0.000	0.000	0.002
19	0.000	0.000	0.003
20	0.000	0.000	0.004
21	0.000	0.000	0.046
22	0.000	0.000	0.058
23	0.000	*0.000*[a]	0.161
24	0.000	*0.000*[a]	0.074
25	0.000	*0.000*[a]	0.049
26	0.000	*0.000*[a]	0.027
27	0.000	*0.011*[a]	0.010
28	0.000	*0.000*[a]	0.012
29	0.000		*0.000*[a]
30	0.000		0.006
31	0.000		0.005
Monthly Average (cfs)	0.0000	0.0007	0.0166

Monthly Discharge

Cubic Feet	0	1759	44586
Gallons	0	13159	333524
Acre-Feet	0.00	0.04	1.02

Note: Mean flow values are reported to the nearest 0.001 cfs, values less than 0.0005 cfs are reported as zero.
[a] Contains data estimated from field observations and electronic record at adjacent or comparable gages.

Gaging Station GS39 is located in the drainage ditch northwest of the 904 Pad. This location is a RFCA Source Location station monitoring water flowing from the area of the 903 Pad as well as part of the 904 Pad and contractor yard to South Walnut Creek. This station collects samples for selected radionuclides using continuous, flow-paced sampling.

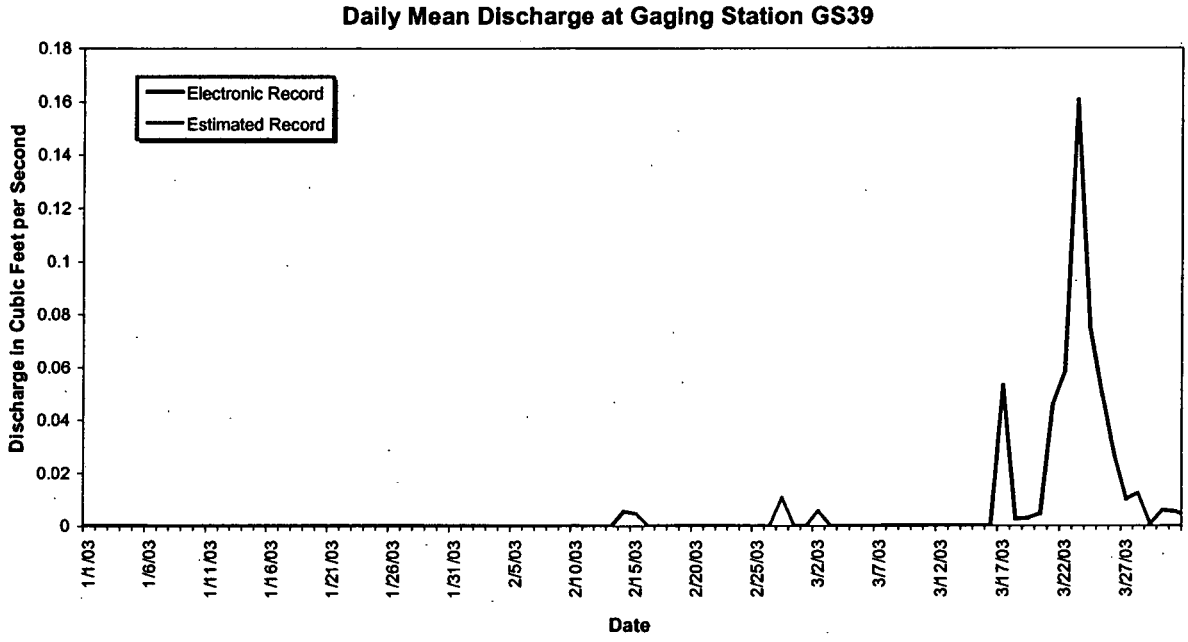

Figure 4-17. Mean Daily Discharge at GS39 Water Year 2003 (Jan, Feb, and Mar 2003).

Table 4-17. Gaging Station GS40: Mean Daily Discharge (cubic feet per second).

Day	Jan-03	Feb-03	Mar-03
1	0.018	0.028	0.027
2	0.017	0.035	0.114
3	0.018	0.094	0.036
4	0.021	0.044	0.032
5	0.028	0.051	0.043
6	0.037	*0.056*[a]	0.030
7	0.039	*0.037*[a]	0.030
8	0.039	*0.038*[a]	0.030
9	0.043	*0.039*[a]	0.030
10	0.049	*0.058*[a]	0.031
11	0.053	*0.030*[a]	0.032
12	0.051	0.034	0.031
13	0.041	0.030	0.030
14	0.060	0.096	0.028
15	0.049	0.085	0.024
16	0.031	0.019	0.026
17	0.031	0.019	0.436
18	0.026	0.021	0.161
19	0.024	0.018	0.292
20	0.025	0.054	0.389
21	0.027	0.018	0.485
22	*0.027*[a]	0.018	0.511
23	*0.026*[a]	0.024	0.927
24	0.049	*0.027*[a]	0.428
25	0.031	*0.025*[a]	0.467
26	0.026	*0.019*[a]	0.513
27	0.026	*0.045*[a]	0.188
28	0.029	0.041	0.145
29	0.030		0.079
30	0.029		0.125
31	0.031		0.104
Monthly Average (cfs)	0.033	0.039	0.188

Monthly Discharge

Cubic Feet	88943	95419	503201
Gallons	665337	713780	3764202
Acre-Feet	2.04	2.19	11.55

Note: Mean flow values are reported to the nearest 0.001 cfs, values less than 0.0005 cfs are reported as zero.
[a] Contains data estimated from field observations and electronic record at adjacent or comparable gages.

Gaging Station GS40 is located on the concrete spillway east of Tenth Street, south of Building 997. This location is a RFCA Performance Monitoring Location monitoring water flowing from the 700 area to South Walnut Creek. This station samples for selected radionuclides using continuous, flow-paced sampling.

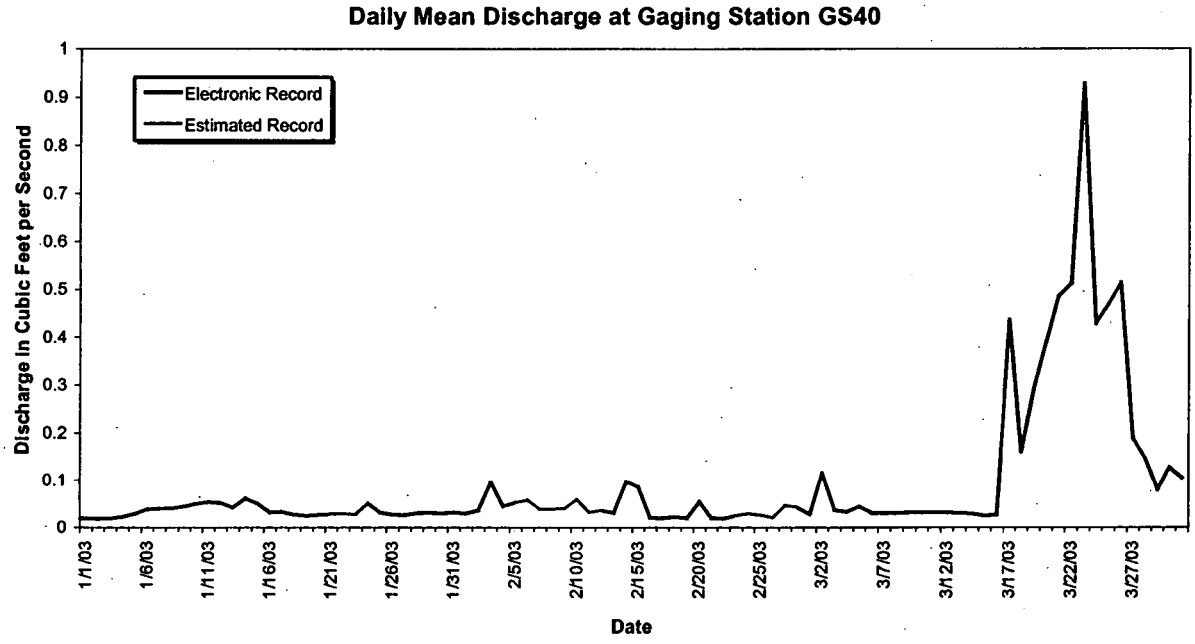

Figure 4-18. Mean Daily discharge at GS40 Water Year 2003 (Jan, Feb, and Mar 2003).

Table 4-18. Gaging Station GS42: Mean Daily Discharge (cubic feet per second).

Day	Jan-03	Feb-03	Mar-03
1	0.000	0.000	0.000
2	0.000	0.000	0.000
3	0.000	0.000	0.000
4	0.000	0.000	0.000
5	0.000	0.000	0.000
6	0.000	0.000	0.000
7	0.000	0.000	0.000
8	0.000	0.000	0.000
9	0.000	0.000	0.000
10	0.000	0.000	0.000
11	0.000	0.000	0.000
12	0.000	0.000	0.000
13	0.000	0.000	0.000
14	0.000	0.000	0.000
15	0.000	0.000	0.000
16	0.000	0.000	0.000
17	0.000	0.000	0.000
18	0.000	0.000	0.000
19	0.000	0.000	0.000
20	0.000	0.000	0.000
21	0.000	0.000	0.000
22	0.000	0.000	0.000
23	0.000	0.000	0.000
24	0.000	0.000	0.000
25	0.000	0.000	0.000
26	0.000	0.000	0.024
27	0.000	0.000	0.001
28	0.000	0.000	0.000
29	0.000		0.000
30	0.000		0.002
31	0.000		0.005
Monthly Average (cfs)	0.000	0.000	0.001

Monthly Discharge

Cubic Feet	0	0	2704
Gallons	0	0	20229
Acre-Feet	0.00	0.00	0.06

Note: Mean flow values are reported to the nearest 0.001 cfs, values less than 0.0005 cfs are reported as zero.
[a] Contains data estimated from field observations and electronic record at adjacent or comparable gages.

Gaging station GS42 was upgraded as a Performance monitoring location in support of characterization activities for the 903 Pad and Lip Area. GS42 is located at state plane 2088476, 748236 on a drainage swale immediately upstream from the SID north of Pond C-2. The GS42 drainage area is approximately 45.2 acres. This station collects samples for Pu, Am, uranium isotopes, and TSS using continuous flow-paced composite sampling.

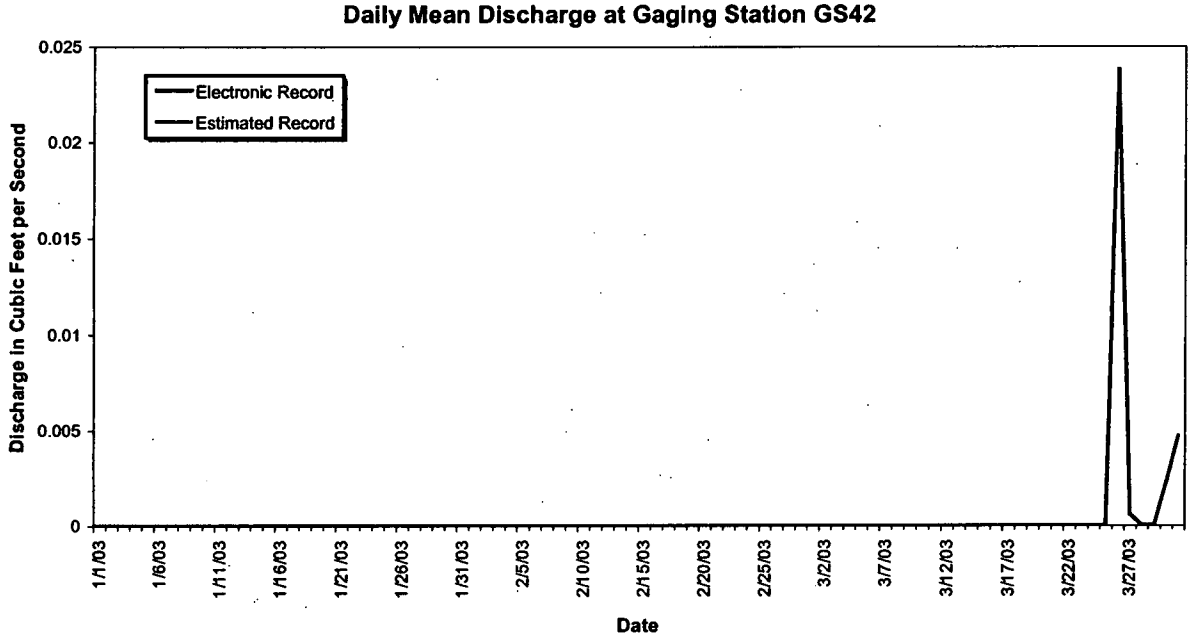

Figure 4-19. Mean Daily Discharge at GS42, Water Year 2003 (Jan, Feb, and Mar 2003).

Table 4-19. Gaging Station GS43: Mean Daily Discharge (cubic feet per second).

Day	Jan-03	Feb-03	Mar-03
1	0.000	0.000	0.000
2	0.000	0.000	*0.002*[a]
3	0.000	0.000	*0.000*[a]
4	0.000	0.000	*0.000*[a]
5	0.000	0.000	*0.000*[a]
6	*0.000*[a]	0.000	*0.000*[a]
7	*0.000*[a]	0.000	0.000
8	0.000	0.000	0.000
9	0.000	0.000	0.000
10	0.000	0.005	0.000
11	0.000	*0.002*[a]	0.000
12	0.000	*0.002*[a]	0.000
13	0.000	0.001	0.000
14	0.000	0.002	0.000
15	0.000	0.001	0.000
16	0.000	*0.002*[a]	0.000
17	0.000	0.000	0.019
18	0.000	0.000	0.000
19	0.000	0.000	0.000
20	0.000	0.000	0.005
21	0.000	0.000	0.055
22	0.000	0.000	0.026
23	0.000	0.000	0.057
24	0.000	0.000	0.025
25	0.000	0.000	0.036
26	0.000	0.000	0.048
27	0.000	*0.000*[a]	*0.005*[a]
28	0.000	*0.000*[a]	*0.004*[a]
29	0.000		*0.000*[a]
30	0.000		*0.006*[a]
31	0.000		0.003
Monthly Average (cfs)	0.000	0.001	0.009

Monthly Discharge

Cubic Feet	0	1237	25171
Gallons	0	9252	188295
Acre-Feet	0.00	0.03	0.58

Note: Mean flow values are reported to the nearest 0.001 cfs, values less than 0.0005 cfs are reported as zero.

[a] Contains data estimated from field observations and electronic record at adjacent or comparable gages.

Gaging station GS43 is located in the ditch at the northeast corner of T886A. This location is a RFCA Performance Monitoring Location monitoring runoff from the eastern portion of the 800 area including Building 875, T886A, and the eastern half of Building 886. Water passing this monitoring location continues to South Walnut Creek. This station samples for selected radionuclides and metals using continuous, flow-paced sampling.

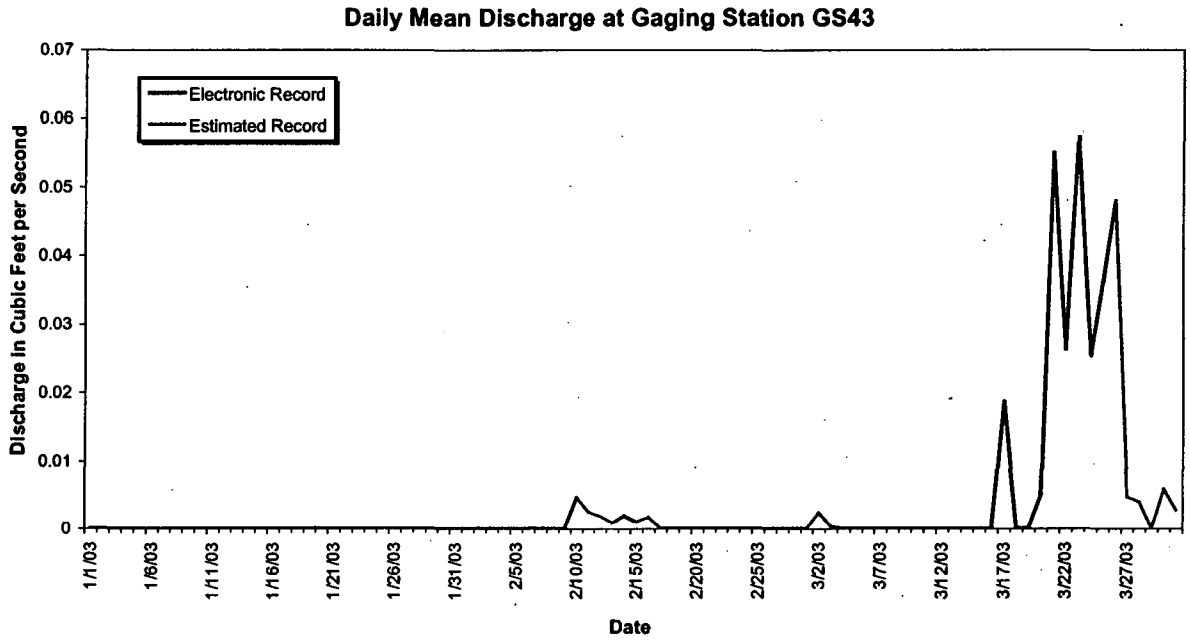

Figure 4-20. Mean Daily Discharge at GS43, Water Year 2003 (Jan, Feb, and Mar 2003).

Table 4-20. Gaging Station GS44 Mean Daily Discharge (cubic feet per second).

Day	Jan-03	Feb-03	Mar-03
1	0.000	0.000	*0.000*[a]
2	0.000	0.000	*0.004*[a]
3	0.000	*0.003*[a]	*0.000*[a]
4	0.000	*0.000*[a]	*0.003*[a]
5	0.000	*0.000*[a]	*0.001*[a]
6	0.000	*0.000*[a]	*0.000*[a]
7	0.000	*0.000*[a]	0.000
8	0.000	*0.000*[a]	0.000
9	0.000	0.000	0.000
10	0.000	*0.000*[a]	0.000
11	0.000	*0.000*[a]	0.000
12	0.000	*0.000*[a]	0.000
13	0.000	*0.000*[a]	0.000
14	0.000	0.005	0.000
15	0.000	*0.004*[a]	0.000
16	0.000	*0.000*[a]	0.000
17	0.000	0.000	0.047
18	0.000	0.000	0.006
19	0.000	0.000	0.013
20	0.000	0.000	0.022
21	0.000	0.000	0.043
22	0.000	0.000	0.066
23	0.000	0.000	0.144
24	0.000	0.000	0.048
25	0.000	0.000	0.061
26	0.000	0.000	0.065
27	0.000	0.001	0.022
28	0.000	*0.003*[a]	0.016
29	0.000		0.007
30	0.000		0.014
31	0.000		0.009
Monthly Average (cfs)	0.0000	0.0006	0.0191

Monthly Discharge

Cubic Feet	0	1471	51092
Gallons	0	11007	382193
Acre-Feet	0.00	0.03	1.17

Note: Mean flow values are reported to the nearest 0.001 cfs, values less than 0.0005 cfs are reported as zero.

[a] Contains data estimated from field observations and electronic record at adjacent or comparable gages.

Gaging station GS44 is located at state plane 2083411, 751100 on a drainage ditch between T771F and T771L. This station is a Performance Monitoring Location and monitors runoff from the west side of B771 and includes B771 footing drain water. This station collects samples for selected radionuclides and water quality parameters using continuous flow-paced composite sampling.

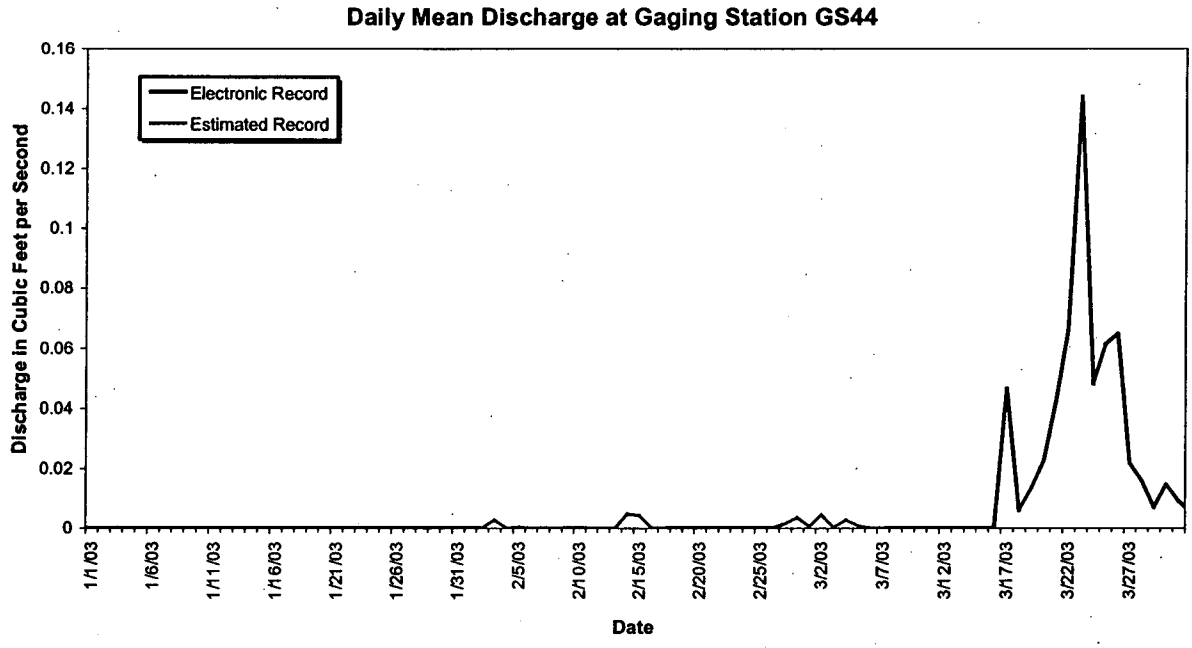

Figure 4-21. Mean Daily Discharge at GS44 Water Year 2003 (Jan, Feb, and Mar 2003).

Table 4-21. Gaging Station GS49 Mean Daily Discharge (cubic feet per second).

Day	Jan-03	Feb-03	Mar-03
1	0.0000	0.0000	*0.0004*[a]
2	0.0000	0.0000	*0.0039*[a]
3	0.0000	*0.0009*[a]	*0.0019*[a]
4	0.0000	*0.0000*[a]	*0.0000*[a]
5	0.0004	*0.0000*[a]	*0.0006*[a]
6	*0.0010*[a]	*0.0000*[a]	*0.0004*[a]
7	0.0000	*0.0001*[a]	0.0001
8	0.0000	*0.0000*[a]	0.0000
9	0.0000	0.0000	0.0000
10	0.0000	*0.0091*[a]	0.0000
11	0.0000	*0.0000*[a]	0.0000
12	0.0000	*0.0032*[a]	0.0000
13	0.0000	*0.0010*[a]	0.0000
14	0.0000	0.0047	0.0000
15	0.0000	*0.0048*[a]	0.0000
16	0.0000	*0.0005*[a]	0.0000
17	0.0000	*0.0001*[a]	0.0192
18	0.0000	0.0000	0.0113
19	0.0000	0.0000	0.0133
20	0.0000	0.0000	0.0134
21	0.0000	0.0000	0.0195
22	0.0000	0.0000	0.0210
23	0.0000	0.0000	0.0441
24	0.0000	0.0000	0.0185
25	0.0000	*0.0029*[a]	0.0241
26	0.0000	*0.0009*[a]	0.0285
27	0.0000	*0.0019*[a]	*0.0080*[a]
28	0.0000	*0.0034*[a]	*0.0076*[a]
29	0.0000		*0.0036*[a]
30	0.0000		*0.0106*[a]
31	0.0000		0.0090
Monthly Average (cfs)	0.0000	0.0012	0.0084

Monthly Discharge

Cubic Feet	119	2899	22392
Gallons	887	21683	167503
Acre-Feet	0.00	0.07	0.51

Note: Mean flow values are reported to the nearest 0.001 cfs, values less than 0.0005 cfs are reported as zero.
[a] Contains data estimated from field observations and electronic record at adjacent or comparable gages.
WR = No data or unacceptable data due to winter icing conditions.

Gaging station GS49 is located at state plane 2083292, 750652 on a drainage ditch northwest of B566. This station is a Performance Monitoring location and has been installed in support of D&D activities for Building 776/777. This station monitors runoff from the west side of the B776/777 complex. The GS49 drainage area is approximately 3.3 acres. This station collects samples for selected isotopes, metals, tritium, and TSS using continuous flow-paced composite sampling.

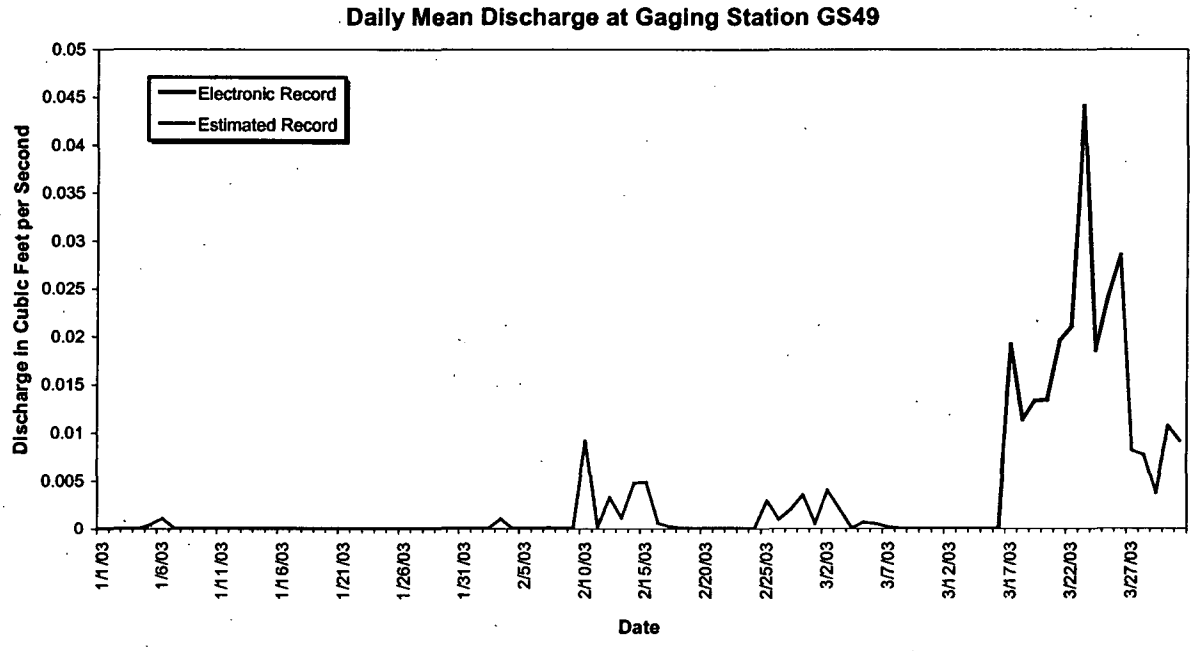

Figure 4-22. Mean Daily Discharge at GS49 Water Year 2003 (Jan, Feb, and Mar 2003).

Table 4-22. Gaging Station GS50 Mean Daily Discharge (cubic feet per second).

Day	Jan-03	Feb-03	Mar-03
1	0.000	0.000	0.000
2	0.000	0.000	0.000
3	0.000	0.000	0.000
4	0.000	0.000	*0.000*[a]
5	0.000	0.000	0.000
6	0.000	0.000	0.000
7	0.000	0.000	0.000
8	0.000	0.000	0.000
9	0.000	0.000	0.000
10	0.000	0.000	0.000
11	0.000	0.000	*0.000*[a]
12	0.000	0.000	0.000
13	0.000	0.000	0.000
14	0.000	0.000	0.000
15	0.000	0.000	0.000
16	0.000	0.000	0.000
17	0.000	0.000	0.001
18	0.000	0.000	0.000
19	0.000	0.000	0.000
20	0.000	0.000	0.000
21	0.000	0.000	0.011
22	0.000	0.000	0.034
23	0.000	0.000	0.040
24	0.000	0.000	0.020
25	0.000	0.000	0.021
26	0.000	0.000	0.021
27	0.000	0.000	0.000
28	0.000	0.000	0.000
29	0.000		0.000
30	0.000		0.000
31	0.000		0.000
Monthly Average (cfs)	0.000	0.000	0.005

Cubic Feet	0	14	12836
Gallons	0	101	96021
Acre-Feet	0.00	0.00	0.29

Note: Mean flow values are reported to the nearest 0.001 cfs, values less than 0.0005 cfs are reported as zero.

[a] Contains data estimated from field observations and electronic record at adjacent or comparable gages.

Gaging station GS50 is located at state plane 2085760, 750441 on a drainage ditch northeast of B990. This station is a performance monitoring location that was installed in support of remediation activities for the Solar Ponds and the ongoing GS10 Source Evaluation effort.. This station monitors runoff from the south side of the Solar Ponds and Triangle Area. The GS50 drainage area is approximately 4.1 acres. This station collects samples for Pu, Am, uranium isotopes, CLP metals, and TSS using continuous flow-paced composite sampling.

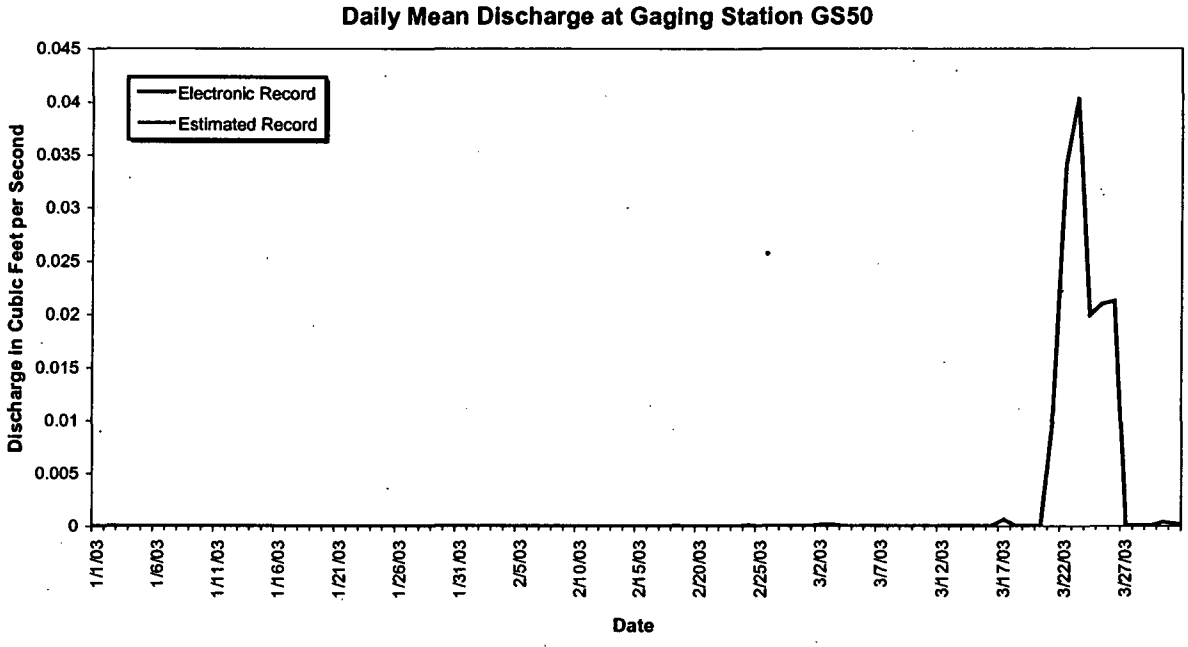

Figure 4-23. Mean Daily Discharge at GS50 Water Year 2003 (Jan, Feb, and Mar 2003).

Table 4-23. Gaging Station GS51: Mean Daily Discharge (cubic feet per second).

Day	Jan-03	Feb-03	Mar-03
1	0.000	0.000	*0.000*[a]
2	0.000	0.000	*0.000*[a]
3	0.000	*0.000*[a]	*0.000*[a]
4	0.000	*0.000*[a]	*0.000*[a]
5	0.000	*0.000*[a]	*0.000*[a]
6	0.000	*0.000*[a]	*0.000*[a]
7	0.000	*0.000*[a]	0.000
8	0.000	*0.000*[a]	0.000
9	0.000	*0.000*[a]	0.000
10	0.000	*0.000*[a]	0.000
11	0.000	*0.000*[a]	0.000
12	0.000	*0.000*[a]	0.000
13	0.000	*0.000*[a]	0.000
14	0.000	*0.000*[a]	0.000
15	0.000	0.000	0.000
16	0.000	*0.000*[a]	0.000
17	0.000	*0.000*[a]	0.000
18	0.000	0.000	*0.007*[a]
19	0.000	*0.000*[a]	*0.000*[a]
20	0.000	*0.000*[a]	*0.013*[a]
21	0.000	0.000	0.001
22	0.000	*0.000*[a]	0.004
23	0.000	0.000	0.049
24	0.000	*0.000*[a]	0.021
25	0.000	*0.000*[a]	0.049
26	0.000	*0.000*[a]	0.104
27	0.000	*0.000*[a]	0.008
28	0.000	*0.000*[a]	0.009
29	0.000		*0.001*[a]
30	0.000		0.012
31	0.000		0.003
Monthly Average (cfs)	0.0000	0.0000	0.0090

Monthly Discharge

Cubic Feet	0	0	24217
Gallons	0	0	181153
Acre-Feet	0.00	0.00	0.56

Note: Mean flow values are reported to the nearest 0.001 cfs, values less than 0.0005 cfs are reported as zero.
[a] Contains data estimated from field observations and electronic record at adjacent or comparable gages.

A new Performance monitoring location was installed in support of characterization activities for the 903 Pad and Lip Area. Gaging station GS51 is located at state plane 2086295, 748107 on a drainage ditch southeast of the 903 Pad immediately upstream from the SID. The GS51 drainage area is approximately 3.9 acres. This station collects samples for Pu, Am, uranium isotopes, and TSS using continuous flow-paced composite sampling.

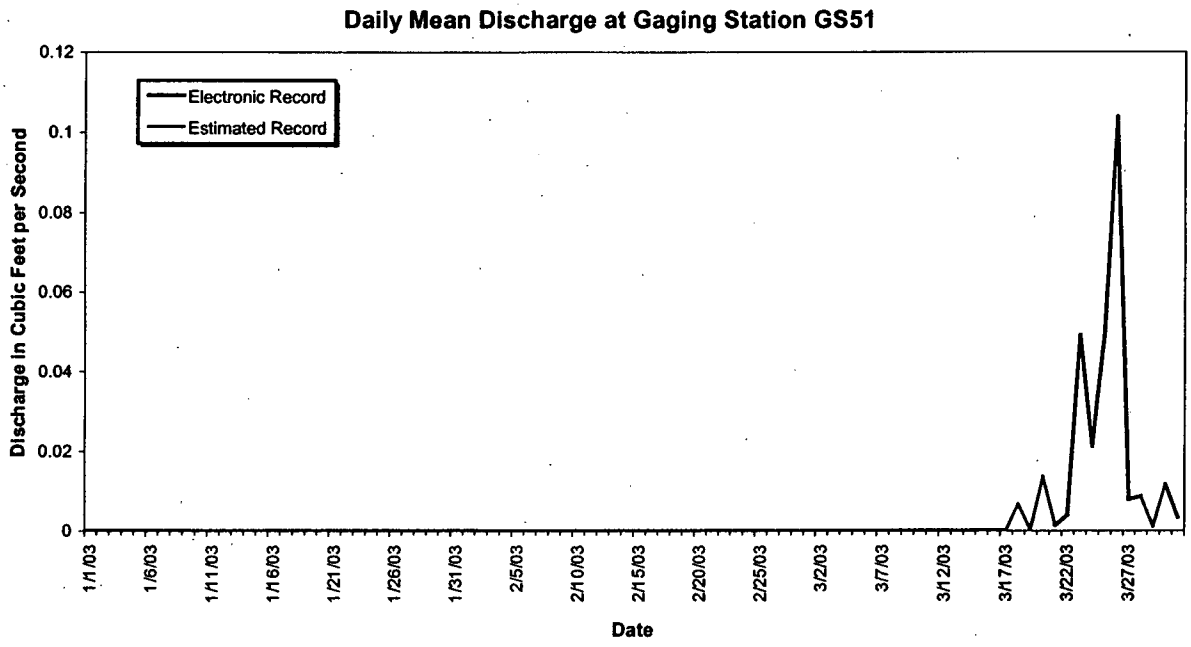

Figure 4-24. Mean Daily Discharge at GS51, Water Year 2003 (Jan, Feb, and Mar 2003).

Table 4-24. Gaging Station GS52: Mean Daily Discharge (cubic feet per second).

Day	Jan-03	Feb-03	Mar-03
1	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000
9	0.0000	0.0000	0.0000
10	0.0000	0.0000	0.0000
11	0.0000	0.0000	0.0000
12	0.0000	0.0000	0.0000
13	0.0000	0.0000	0.0000
14	0.0000	0.0000	0.0000
15	0.0000	0.0000	0.0000
16	0.0000	0.0000	0.0000
17	0.0000	0.0000	0.0000
18	0.0000	0.0000	0.0000
19	0.0000	0.0000	0.0000
20	0.0000	0.0000	0.0000
21	0.0000	0.0000	0.0000
22	0.0000	0.0000	0.0000
23	0.0000	0.0000	0.0000
24	0.0000	0.0000	0.0000
25	0.0000	0.0000	*0.0004*[a]
26	0.0000	0.0000	0.0010
27	0.0000	0.0000	*0.0001*[a]
28	0.0000	0.0000	*0.0000*[a]
29	0.0000		*0.0000*[a]
30	0.0000		*0.0003*[a]
31	0.0000		0.0001
Monthly Average (cfs)	0.0000	0.0000	0.0001

Monthly Discharge

Cubic Feet	0	0	159
Gallons	0	0	1189
Acre-Feet	0.00	0.00	0.00

Note: Mean flow values are reported to the nearest 0.001 cfs, values less than 0.0005 cfs are reported as zero.

[a] Contains data estimated from field observations and electronic record at adjacent or comparable gages.

A new Performance monitoring location was installed in support of characterization activities for the 903 Pad and Lip Area. Gaging station GS52 is located at state plane 2086715, 748043 on a gully southeast of the 903 Pad immediately upstream from the SID. The GS52 drainage area is approximately 4.3 acres. This station collects samples for Pu, Am, uranium isotopes, and TSS using continuous flow-paced composite sampling.

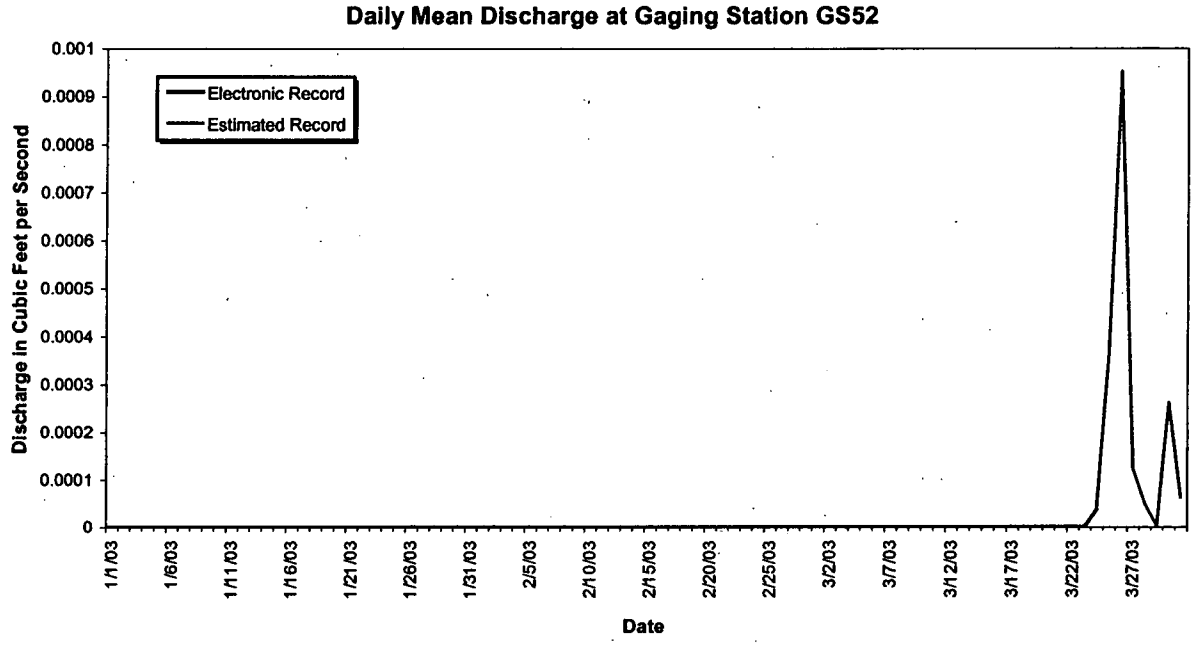

Figure 4-25. Mean Daily Discharge at GS52, Water Year 2003 (Jan, Feb, and Mar 2003).

Table 4-25. Gaging Station GS53: Mean Daily Discharge (cubic feet per second).

Day	Jan-03	Feb-03	Mar-03
1	0.000	0.000	*0.000*[a]
2	0.000	0.000	*0.000*[a]
3	0.000	0.000	*0.000*[a]
4	0.000	*0.000*[a]	0.000
5	0.000	0.000	0.000
6	0.000	0.000	0.000
7	0.000	0.000	0.000
8	0.000	*0.000*[a]	0.000
9	0.000	0.000	0.000
10	0.000	*0.000*[a]	0.000
11	0.000	*0.000*[a]	0.000
12	0.000	*0.000*[a]	0.000
13	0.000	*0.000*[a]	0.000
14	0.000	*0.000*[a]	0.000
15	0.000	*0.000*[a]	0.000
16	0.000	*0.000*[a]	0.000
17	0.000	0.000	0.000
18	0.000	0.000	0.000
19	0.000	0.000	0.000
20	0.000	0.000	0.000
21	0.000	0.000	0.000
22	0.000	0.000	0.000
23	0.000	0.000	0.000
24	0.000	0.000	0.000
25	0.000	0.000	*0.000*[a]
26	0.000	*0.000*[a]	0.000
27	0.000	*0.000*[a]	*0.000*[a]
28	0.000	*0.000*[a]	*0.000*[a]
29	0.000		*0.000*[a]
30	0.000		0.000
31	0.000		0.000
Monthly Average (cfs)	0.0000	0.0000	0.0000

Monthly Discharge

Cubic Feet	0	0	49
Gallons	0	0	367
Acre-Feet	0.00	0.00	0.00

Note: Mean flow values are reported to the nearest 0.001 cfs, values less than 0.0005 cfs are reported as zero.
[a] Contains data estimated from field observations and electronic record at adjacent or comparable gages.

A new Performance monitoring location was installed in support of characterization activities for the 903 Pad and Lip Area. Gaging station GS53 is located at state plane 2087071, 748074 on a gully east-southeast of the 903 Pad immediately upstream from the SID. The GS53 drainage area is approximately 10.1 acres. This station collects samples for Pu, Am, uranium isotopes, and TSS using continuous flow-paced composite sampling.

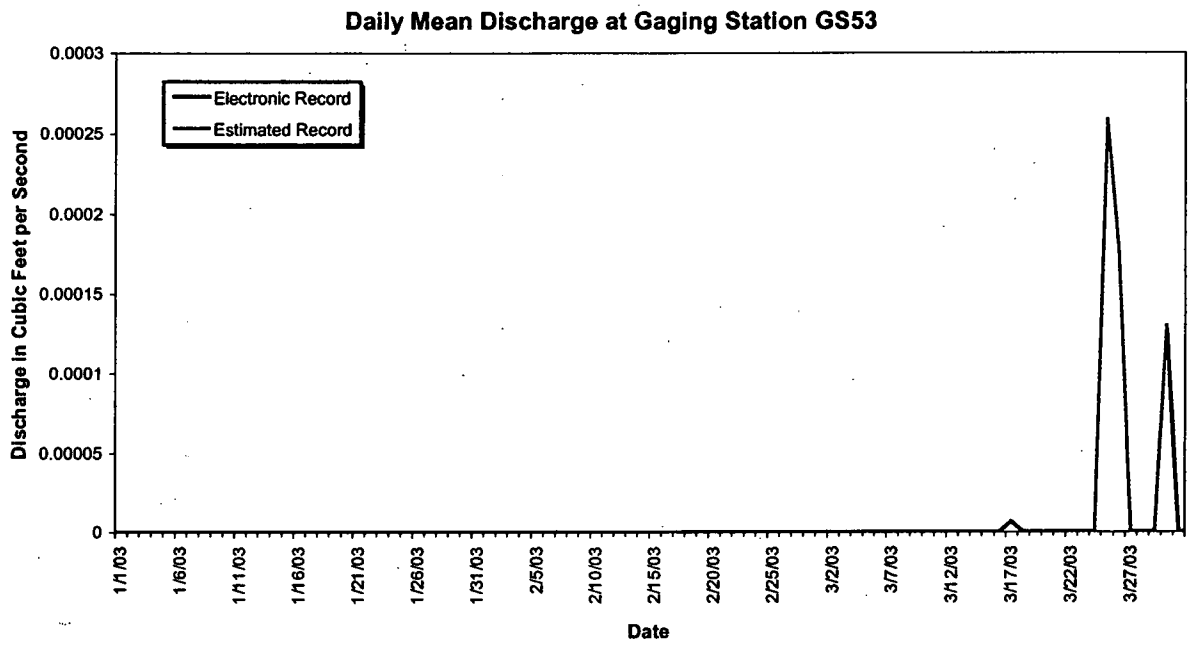

Figure 4-26. Mean Daily Discharge at GS53, Water Year 2003 (Jan, Feb, and Mar 2003).

Table 4-26. Gaging Station GS54: Mean Daily Discharge (cubic feet per second).

Day	Jan-03	Feb-03	Mar-03
1	0.000	0.000	*0.000*[a]
2	0.000	0.000	0.000
3	0.000	*0.000*[a]	0.000
4	0.000	0.000	0.000
5	0.000	*0.000*[a]	0.000
6	0.000	*0.000*[a]	0.000
7	0.000	*0.000*[a]	0.000
8	0.000	*0.000*[a]	0.000
9	0.000	*0.000*[a]	0.000
10	0.000	*0.000*[a]	0.000
11	0.000	*0.000*[a]	0.000
12	0.000	*0.000*[a]	0.000
13	0.000	*0.000*[a]	0.000
14	0.000	*0.000*[a]	0.000
15	0.000	*0.000*[a]	0.000
16	0.000	*0.000*[a]	0.000
17	0.000	0.000	*0.000*[a]
18	0.000	0.000	*0.000*[a]
19	0.000	0.000	0.000
20	0.000	0.000	0.000
21	0.000	0.000	0.000
22	0.000	0.000	0.000
23	0.000	0.000	0.000
24	0.000	0.000	0.000
25	0.000	0.000	*0.000*[a]
26	0.000	0.000	*0.000*[a]
27	0.000	0.000	0.000
28	0.000	*0.000*[a]	*0.000*[a]
29	0.000		*0.000*[a]
30	0.000		0.000
31	0.000		0.000
Monthly Average (cfs)	0.0000	0.0000	0.0000

Monthly Discharge

Cubic Feet	0	0	17
Gallons	0	0	130
Acre-Feet	0.00	0.00	0.00

Note: Mean flow values are reported to the nearest 0.001 cfs, values less than 0.0005 cfs are reported as zero.

[a] Contains data estimated from field observations and electronic record at adjacent or comparable gages.

A new Performance monitoring location was installed in support of characterization activities for the 903 Pad and Lip Area. Gaging station GS54 is located at state plane 2087476, 748188 on a gully east-southeast of the 903 Pad immediately upstream from the SID. The GS54 drainage area is approximately 9.5 acres. This station collects samples for Pu, Am, uranium isotopes, and TSS using continuous flow-paced composite sampling.

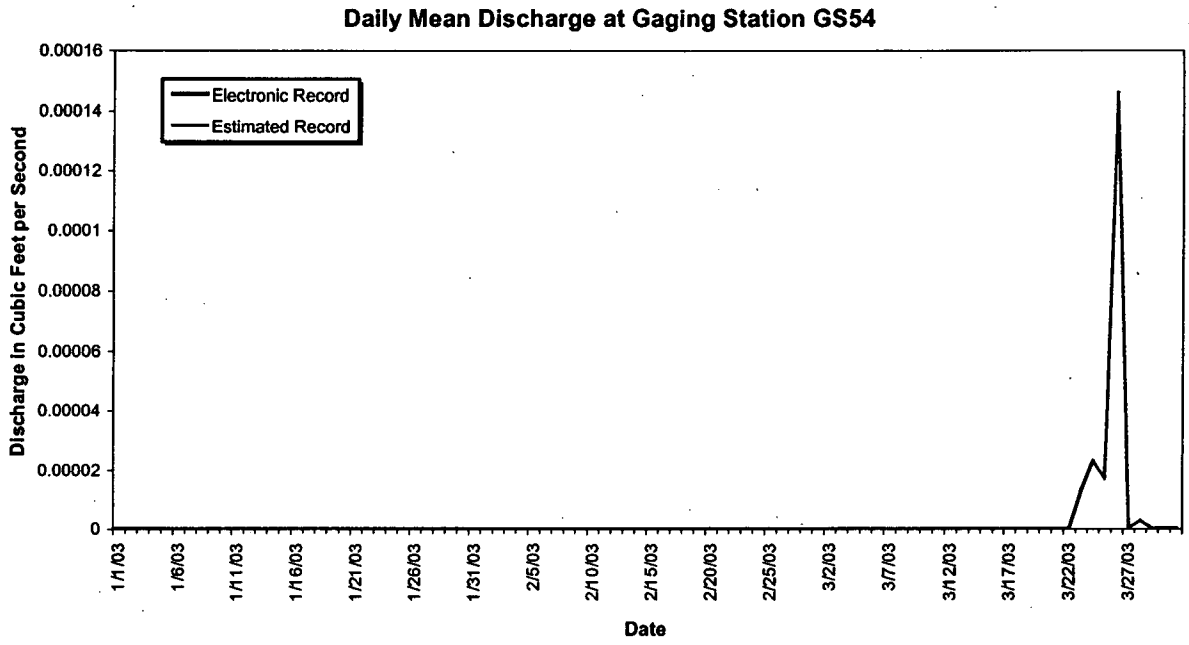

Figure 4-27. Mean Daily Discharge at GS54, Water Year 2003 (Jan, Feb, and Mar 2003).

Table 4-27. Gaging Station GS55: Mean Daily Discharge (cubic feet per second).

Day	Jan-03	Feb-03	Mar-03
1	0.006	0.009	0.016
2	0.006	0.014	0.043
3	0.006	0.020	0.023
4	0.007	0.012	0.016
5	0.007	0.010	0.018
6	0.009	0.011	0.017
7	0.007	0.011	*0.013*[a]
8	0.007	0.009	*0.012*[a]
9	0.006	0.009	*0.010*[a]
10	0.006	*0.021*[a]	*0.009*[a]
11	0.006	0.009	*0.008*[a]
12	0.007	*0.015*[a]	*0.007*[a]
13	0.007	0.015	0.007
14	0.006	0.041	0.007
15	0.006	0.041	0.007
16	0.006	0.021	0.008
17	0.006	0.019	0.124
18	0.006	0.013	0.050
19	0.006	0.012	0.082
20	0.006	0.012	0.093
21	0.008	0.012	0.138
22	0.007	0.012	0.176
23	0.008	0.041	0.387
24	0.008	0.014	0.184
25	0.009	0.023	0.208
26	0.013	0.014	0.234
27	0.015	0.018	0.108
28	0.013	0.023	0.085
29	0.006		0.057
30	0.006		0.091
31	0.008		0.074
Monthly Average (cfs)			

Monthly Discharge

Cubic Feet	20084	41736	199829
Gallons	150237	312208	1494825
Acre-Feet	0.46	0.96	4.59

Note: Mean flow values are reported to the nearest 0.001 cfs, values less than 0.0005 cfs are reported as zero.

[a] Contains data estimated from field observations and electronic record at adjacent or comparable gages.

Gaging station GS55 was installed as a Performance monitoring location in support of D&D activities for the B881 Area. GS55 is located at state plane 2084112, 747824 on the outlet of a small wetland area draining the B881 Area upstream from the SID south of B881. The GS55 drainage area is approximately 13.7 acres. This station collects samples for Pu, Am, uranium isotopes, CLP metals, and TSS using continuous flow-paced composite sampling.

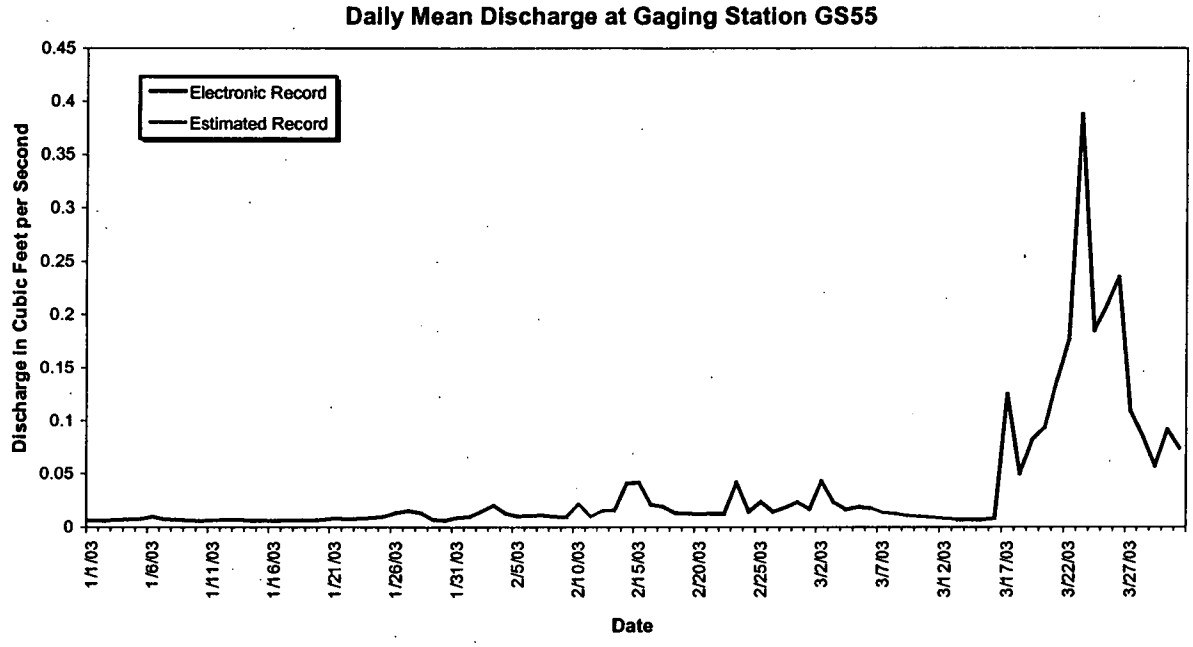

Figure 4-28. Mean Daily Discharge at GS55, Water Year 2003 (Jan, Feb, and Mar 2003).

Table 4-28. Gaging Station GS56: Mean Daily Discharge (cubic feet per second).

Day	Jan-03	Feb-03	Mar-03
1	0.000	0.000	0.000
2	0.000	0.000	0.000
3	0.000	0.000	0.000
4	0.000	0.000	0.000
5	0.000	0.000	0.000
6	0.000	0.000	0.000
7	0.000	0.000	0.000
8	0.000	0.000	0.000
9	0.000	0.000	0.000
10	0.000	0.000	0.000
11	0.000	0.000	0.000
12	0.000	0.000	0.000
13	0.000	0.000	0.000
14	0.000	0.000	0.000
15	0.000	0.000	0.000
16	0.000	0.000	0.000
17	0.000	0.000	0.010
18	0.000	0.000	0.025
19	0.000	0.000	0.020
20	0.000	0.000	0.066
21	0.000	0.000	0.124
22	0.000	0.000	0.190
23	0.000	0.000	0.716
24	0.000	0.000	0.819
25	0.000	0.000	1.061
26	0.000	0.000	2.147
27	0.000	0.000	0.414
28	0.000	0.000	0.280
29	0.000		0.148
30	0.000		0.393
31	0.000		0.364
Monthly Average (cfs)			

Monthly Discharge

Cubic Feet	0	0	585530
Gallons	0	0	4380067
Acre-Feet	0.00	0.00	13.44

Note: Mean flow values are reported to the nearest 0.001 cfs, values less than 0.0005 cfs are reported as zero.
[a] Contains data estimated from field observations and electronic record at adjacent or comparable gages.

Gaging station GS56 was installed on 9/26/02 as a performance monitoring location in support of accelerated actions for the Present Landfill in No Name Gulch. GS56 is located at state plane 2085908, 753385 in No Name Gulch 1350 feet downstream of the Landfill Pond. The GS56 drainage area is approximately 130 acres. This station collects samples for Pu, Am, uranium isotopes, CLP metals, and TSS using continuous flow-paced composite sampling.

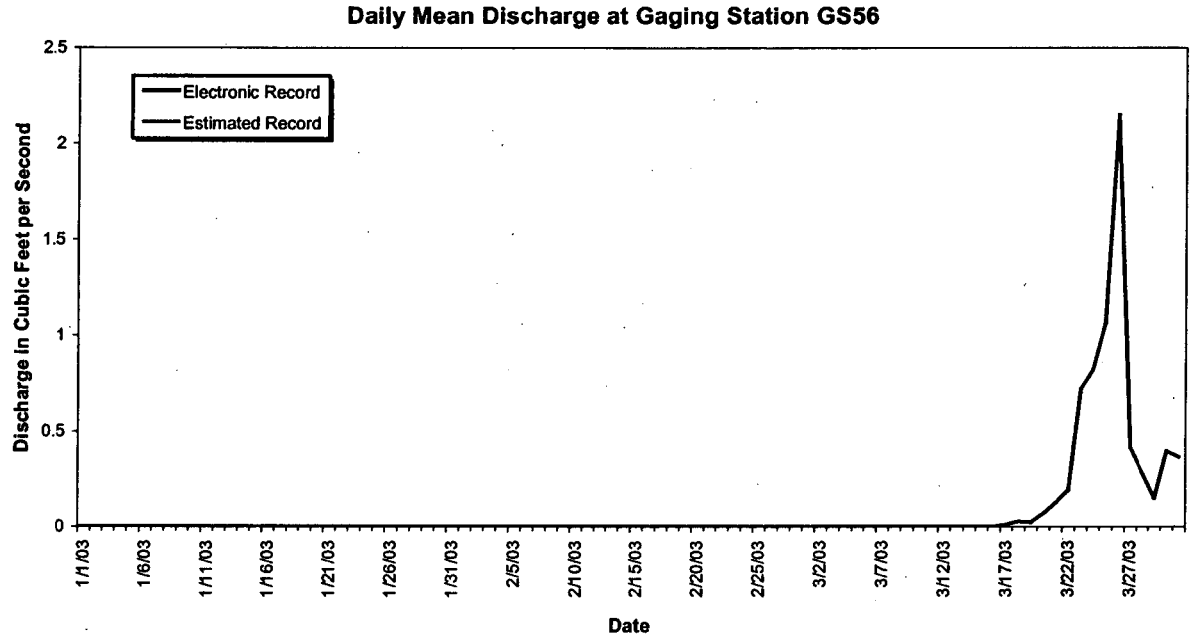

Figure 4-29. Mean Daily Discharge at GS56, Water Year 2003 (Jan, Feb, and Mar 2003).

Table 4-29. Gaging Station GS57: Mean Daily Discharge (cubic feet per second).

Day	Jan-03	Feb-03	Mar-03
1	*0.003*[a]	*0.000*[a]	*0.016*[a]
2	*0.003*[a]	*0.002*[a]	*0.039*[a]
3	0.003	*0.029*[a]	*0.014*[a]
4	0.003	*0.017*[a]	*0.009*[a]
5	0.003	*0.017*[a]	*0.012*[a]
6	*0.004*[a]	*0.017*[a]	*0.007*[a]
7	*0.002*[a]	*0.017*[a]	0.001
8	*0.002*[a]	*0.017*[a]	0.000
9	*0.003*[a]	*0.017*[a]	0.000
10	*0.003*[a]	*0.017*[a]	0.000
11	*0.003*[a]	*0.017*[a]	0.000
12	*0.003*[a]	*0.017*[a]	0.000
13	0.006	0.016	0.000
14	*0.004*[a]	0.035	0.000
15	*0.001*[a]	0.033	0.000
16	*0.003*[a]	*0.010*[a]	0.000
17	*0.003*[a]	*0.010*[a]	0.125
18	*0.000*[a]	*0.016*[a]	*0.073*[a]
19	*0.001*[a]	*0.013*[a]	*0.088*[a]
20	*0.001*[a]	*0.009*[a]	0.104
21	*0.003*[a]	*0.005*[a]	*0.153*[a]
22	*0.000*[a]	*0.007*[a]	0.189
23	*0.004*[a]	*0.023*[a]	0.311
24	*0.001*[a]	*0.023*[a]	0.123
25	*0.003*[a]	*0.023*[a]	0.136
26	0.004	*0.023*[a]	0.142
27	0.003	*0.033*[a]	0.051
28	*0.003*[a]	*0.031*[a]	*0.042*[a]
29	*0.004*[a]		*0.019*[a]
30	0.002		*0.032*[a]
31	*0.000*[a]		0.026
Monthly Average (cfs)	0.0026	0.0176	0.0552

Monthly Discharge

Cubic Feet	6924	42693	147825
Gallons	51799	319364	1105811
Acre-Feet	0.16	0.98	3.39

Note: Mean flow values are reported to the nearest 0.001 cfs, values less than 0.0005 cfs are reported as zero.
[a] Contains data estimated from field observations and electronic record at adjacent or comparable gages.
WR = No data or unacceptable data due to winter icing conditions.

Gaging station GS57 was installed as a Performance monitoring location in support of D&D activities for the 400 Area. GS57 is located at state plane 2082847, 749006 on a ditch NE of B444. The GS57 drainage area is approximately 8.6 acres. This station collects samples for Pu, Am, uranium isotopes, CLP metals, and TSS using continuous flow-paced composite sampling.

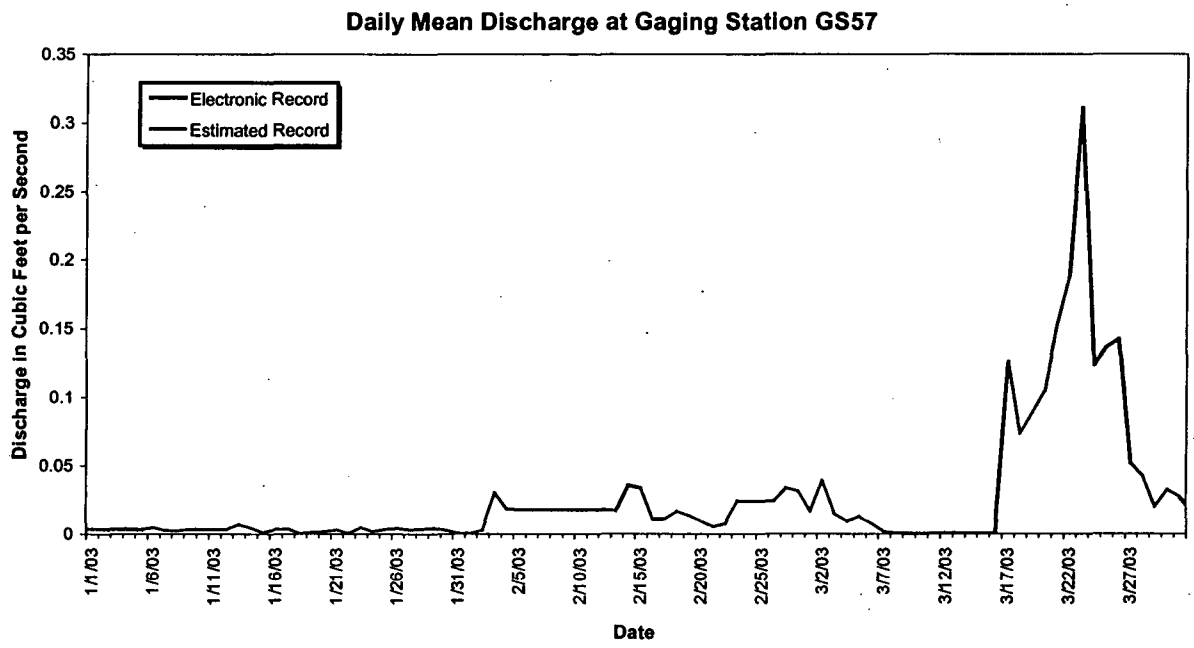

Figure 4-30. Mean Daily Discharge at GS57 Water Year 2003 (Jan, Feb, and Mar 2003).

Table 4-30. Gaging Station GS59: Mean Daily Discharge (cubic feet per second).

Day	Jan-03	Feb-03	Mar-03
1	0.044	0.024	0.084
2	*0.056*[a]	0.022	0.119
3	0.064	0.025	0.155
4	0.053	*0.021*[a]	0.097
5	0.054	0.019	0.081
6	0.066	*0.018*[a]	0.086
7	0.058	*0.018*[a]	0.128
8	0.063	*0.018*[a]	0.161
9	0.051	*0.021*[a]	0.125
10	*0.061*[a]	*0.021*[a]	0.086
11	*0.055*[a]	*0.023*[a]	0.066
12	*0.050*[a]	*0.093*[a]	0.044
13	0.064	0.155	0.032
14	0.056	0.215	0.027
15	0.054	0.237[a]	0.023
16	*0.056*[a]	0.169	0.025
17	*0.052*[a]	0.145	0.279
18	*0.056*[a]	0.117	1.325
19	0.052	0.101	0.742
20	0.055	*0.101*[a]	0.521
21	0.048	0.090	0.738
22	*0.042*[a]	0.077	1.199
23	*0.049*[a]	0.070	3.719
24	0.048	*0.064*[a]	4.472
25	0.048	*0.057*[a]	6.945
26	0.051	*0.068*[a]	*14.697*[a]
27	0.052	0.067	5.973
28	0.038	0.092	3.363
29	0.032		1.736
30	0.033		5.901
31	0.027		8.279
Monthly Average (cfs)	0.0512	0.0767	1.9751

Monthly Discharge

Cubic Feet	137168	185542	5290031
Gallons	1026092	1387948	39572181
Acre-Feet	3.15	4.26	121.42

Note: Mean flow values are reported to the nearest 0.001 cfs, values less than 0.0005 cfs are reported as zero.
[a] Contains data estimated from field observations and electronic record at adjacent or comparable gages.
WR = No data or unacceptable data due to winter icing conditions.

Gaging station GS59 was installed on 11/19/02 as a Performance monitoring location in support of accelerated actions for the Original Landfill in Woman Creek. GS59 is located at state plane 2083231, 747137 in Woman Creek south of former B850. The GS59 drainage area includes undetermined areas west of Highway 93 and the total area is unknown. This station collects samples for Pu, Am, uranium isotopes, CLP metals, and TSS using continuous flow-paced composite sampling.

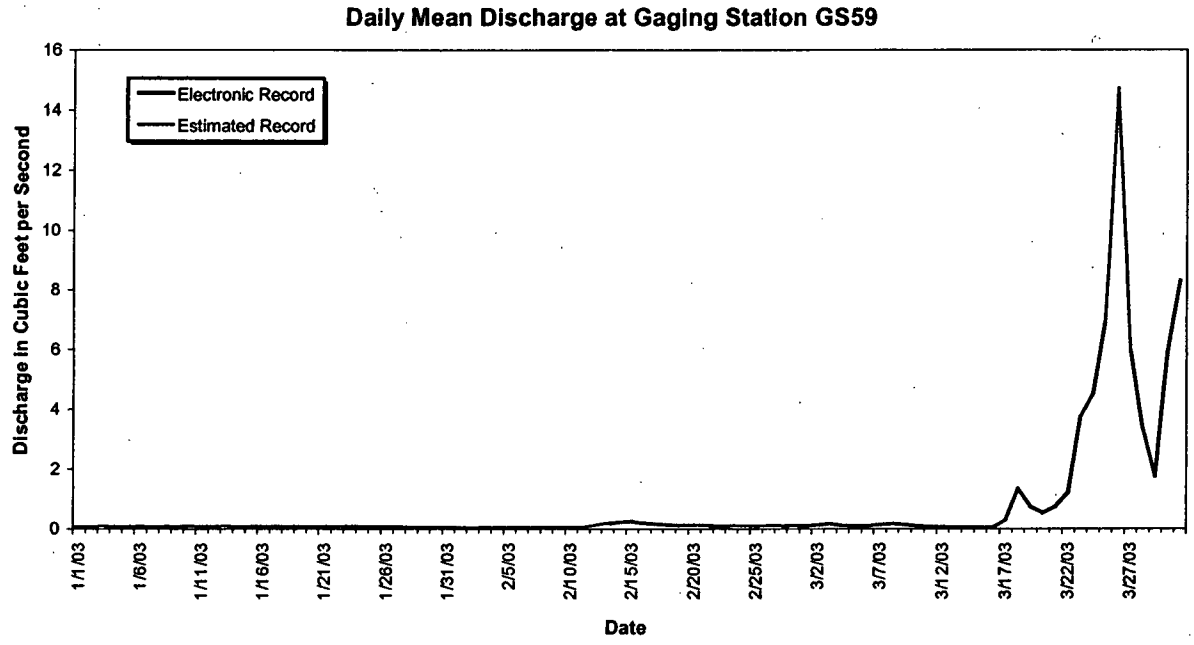

Figure 4-31. Mean Daily Discharge at GS59 Water Year 2003 (Jan, Feb, and Mar 2003).

Table 4-31. Gaging Station 995 POE Mean Daily Discharge (cubic feet per second).[a]

Day	Jan-03	Feb-03	Mar-03
1	0.15	0.11	0.13
2	0.12	0.12	0.14
3	0.10	0.09	0.16
4	0.09	0.13	0.17
5	0.09	0.12	0.17
6	0.10	0.12	0.15
7	0.11	0.12	0.14
8	0.13	0.14	0.10
9	0.16	0.13	0.16
10	0.19	0.12	0.13
11	0.10	0.12	0.16
12	0.09	0.15	0.18
13	0.18	0.10	0.10
14	0.17	0.10	0.11
15	0.23	0.14	0.11
16	0.08	0.14	0.12
17	0.10	0.12	0.17
18	0.10	0.12	0.26
19	0.10	0.13	0.26
20	0.10	0.12	0.26
21	0.10	0.12	0.51
22	0.10	0.13	0.51
23	0.34	0.12	0.63
24	0.15	0.12	0.60
25	0.14	0.12	0.60
26	0.15	0.12	0.60
27	0.10	0.13	0.53
28	0.12	0.13	0.34
29	0.12		0.58
30	0.08		0.34
31	0.09		0.33
Monthly Average (cfs)	0.13	0.12	0.28

Monthly Discharge

Cubic Feet			
Gallons			
Acre-Feet			

Note: Mean flow values are reported to the nearest 0.001 cfs, values less than 0.0005 cfs are reported as zero.
a – Flow data provided above for this location is measured using the totalizier at B995.

Gaging station 995POE is located on the Building 995 (WWTP) effluent flow stream at the V-notch weir immediately below the UV disinfection equipment. This station is a RFCA Action Level Framework Point of Evaluation and monitors effluent from the Site wastewater treatment plant. This station collects samples for selected radionuclides using continuous flow-paced composite sampling.

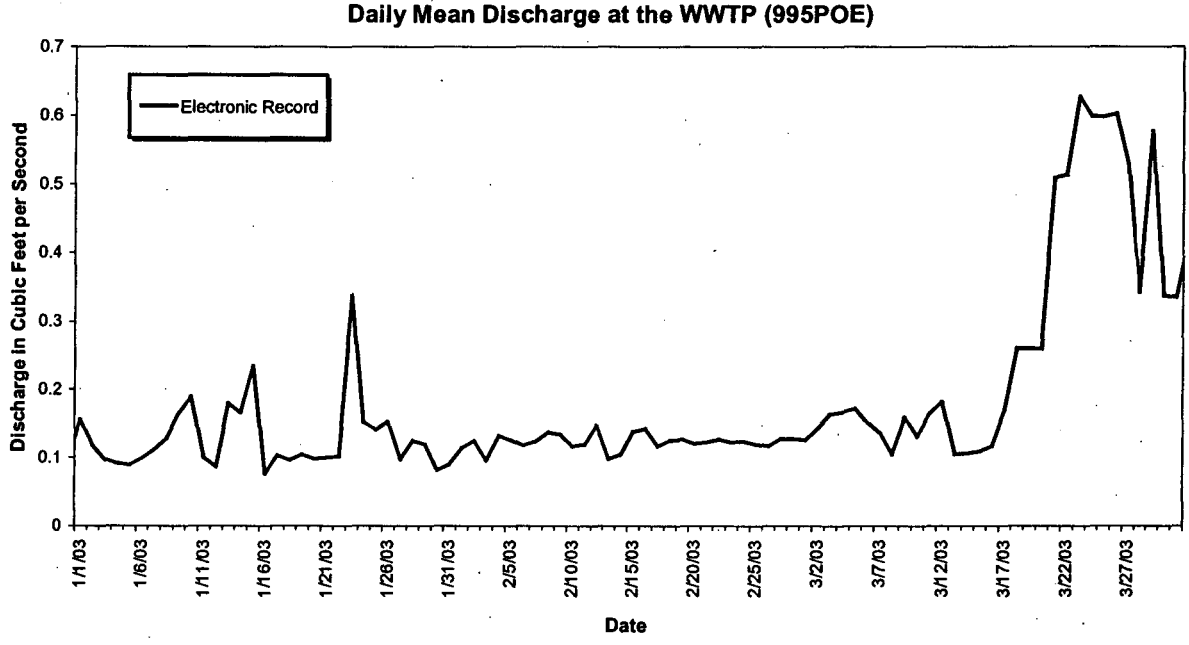

Figure 4-32. Mean Daily Discharge at 995 POE Water Year 2003 (Jan, Feb, and Mar 2003).

Table 4-32. Gaging Station SW022: Mean Daily Discharge (cubic feet per second).

Day	Jan-03	Feb-03	Mar-03
1	0.000	*0.000*[a]	*0.018*[a]
2	0.000	*0.001*[a]	*0.149*[a]
3	0.000	*0.098*[a]	*0.027*[a]
4	*0.000*[a]	*0.003*[a]	*0.000*[a]
5	*0.000*[a]	*0.007*[a]	*0.015*[a]
6	*0.000*[a]	*0.010*[a]	*0.003*[a]
7	*0.000*[a]	*0.012*[a]	*0.000*[a]
8	*0.000*[a]	*0.008*[a]	*0.000*[a]
9	0.000	*0.000*[a]	*0.000*[a]
10	0.000	*0.036*[a]	*0.000*[a]
11	0.000	*0.012*[a]	*0.000*[a]
12	0.000	*0.019*[a]	*0.000*[a]
13	0.000	*0.009*[a]	*0.000*[a]
14	0.000	*0.096*[a]	*0.000*[a]
15	0.000	*0.110*[a]	*0.000*[a]
16	0.000	*0.005*[a]	*0.000*[a]
17	0.000	*0.001*[a]	*0.669*[a]
18	0.000	*0.000*[a]	*0.057*[a]
19	0.000	*0.000*[a]	*0.042*[a]
20	0.000	*0.000*[a]	*0.038*[a]
21	0.000	*0.000*[a]	*0.038*[a]
22	*0.000*[a]	*0.000*[a]	*0.188*[a]
23	*0.000*[a]	*0.017*[a]	1.761
24	*0.000*[a]	*0.008*[a]	0.663
25	0.000	*0.065*[a]	0.712
26	0.000	*0.007*[a]	0.755
27	0.000	*0.025*[a]	0.208
28	0.000	*0.042*[a]	*0.161*[a]
29	0.000		*0.045*[a]
30	0.000		*0.112*[a]
31	0.000		0.094
Monthly Average (cfs)	0.000	0.021	0.186

Monthly Discharge

Cubic Feet	0	51097	497411
Gallons	0	382235	3720891
Acre-Feet	0.00	1.17	11.42

Note: Mean flow values are reported to the nearest 0.001 cfs, values less than 0.0005 cfs are reported as zero.
[a] Contains data estimated from field observations and electronic record at adjacent or comparable gages.

Gaging Station SW022 is located 39° 53' 30"N, 105° 11' 30"W, at the Central Avenue Ditch at the Inner East Gate (See Section 4 Map). This location is a RFCA New Source Detection Location and monitors water in the Central Avenue Ditch entering the B-Series Ponds and South Walnut Creek. Storm event samples are collected for selected radionuclides.

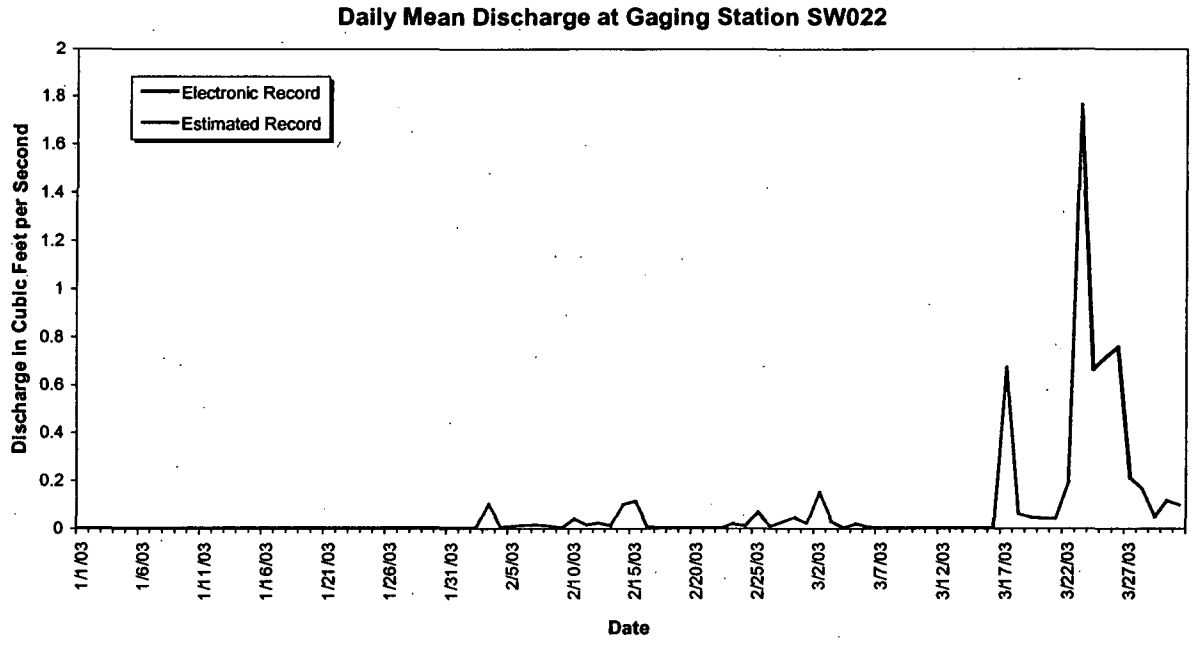

Figure 4-33. Mean Daily Discharge at SW022, Water Year 2003 (Jan, Feb, and Mar 2003).

Table 4-33. Gaging Station SW027: Mean Daily Discharge (cubic feet per second).

Day	Jan-03	Feb-03	Mar-03
1	0.000	0.000	0.000
2	0.000	0.000	0.000
3	0.000	0.000	0.000
4	0.000	0.000	0.000
5	0.000	0.000	0.000
6	0.000	0.000	0.000
7	0.000	0.000	0.000
8	0.000	0.000	0.000
9	0.000	0.000	0.000
10	0.000	0.000	0.000
11	0.000	0.000	0.000
12	0.000	0.000	0.000
13	0.000	0.000	0.000
14	0.000	0.000	0.000
15	0.000	0.000	0.000
16	0.000	0.000	0.000
17	0.000	0.000	0.080
18	0.000	0.000	0.297
19	0.000	0.000	0.028
20	0.000	0.000	*0.617*[a]
21	0.000	0.000	*0.823*[a]
22	0.000	0.000	0.871
23	0.000	0.000	1.808
24	0.000	0.000	0.932
25	0.000	0.000	0.900
26	0.000	0.000	1.398
27	0.000	0.000	0.438
28	0.000	0.000	0.266
29	0.000		0.106
30	0.000		0.147
31	0.000		0.155
Monthly Average (cfs)	0.000	0.000	0.286

Monthly Discharge

Cubic Feet	0	0	765938
Gallons	0	0	5729612
Acre-Feet	0.00	0.00	17.58

Note: Mean flow values are reported to the nearest 0.001 cfs, values less than 0.0005 cfs are reported as zero.

[a] Contains data estimated from field observations and electronic record at adjacent or comparable gages.

Gaging Station SW027 is located 39° 53' 12" N, 105° 11' 4"W, at the South Interceptor Ditch above Pond C-2 (See Section 4 Map). This station is a RFCA Action Level Framework and a New Source Detection Location and monitors water in the South Interceptor Ditch entering Pond C-2. This station collects samples for selected radionuclides, metals, and water quality parameters using continuous flow-paced sampling.

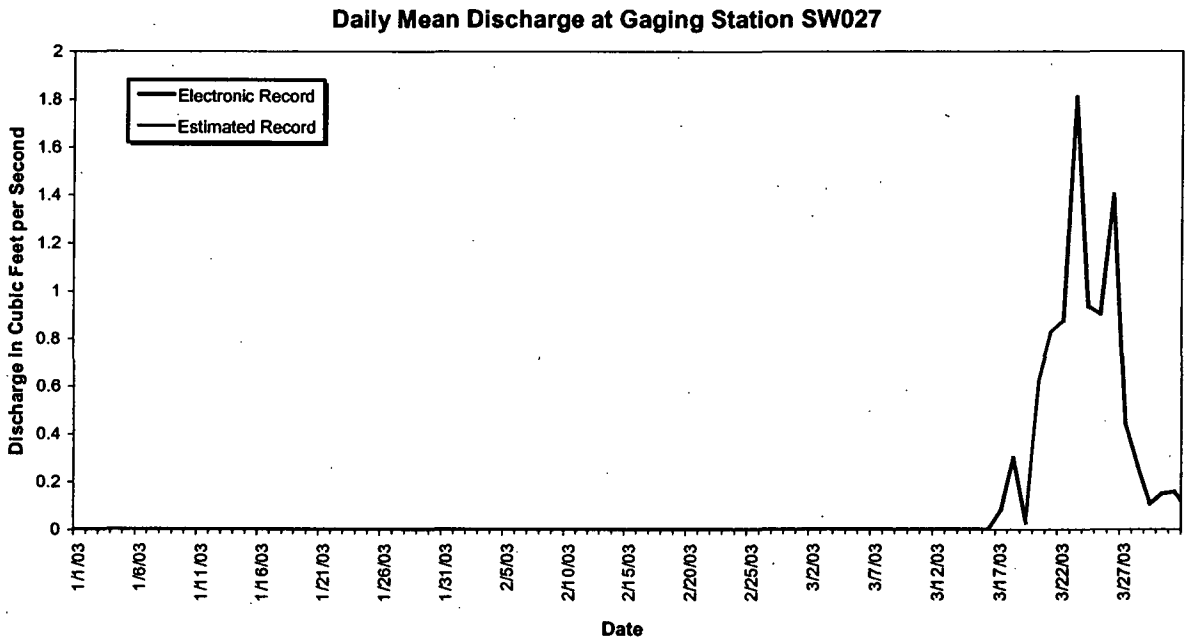

Figure 4-34. Mean Daily Discharge at SW027, Water Year 2003 (Jan, Feb, and Mar 2003).

Table 4-34. Gaging Station SW036: Mean Daily Discharge (cubic feet per second).

Day	Jan-03	Feb-03	Mar-03
1	0.000	0.000	0.000
2	0.000	0.000	0.000
3	0.000	0.000	0.000
4	0.000	0.000	0.000
5	0.000	0.000	0.000
6	0.000	0.000	0.000
7	0.000	0.000	0.000
8	0.000	0.000	0.000
9	0.000	0.000	0.000
10	0.000	0.000	0.000
11	0.000	0.000	0.000
12	0.000	0.000	0.000
13	0.000	0.000	0.000
14	0.000	0.000	0.000
15	0.000	0.000	0.000
16	0.000	0.000	0.000
17	0.000	0.000	0.000
18	0.000	0.000	0.001
19	0.000	0.000	0.002
20	0.000	0.000	0.006
21	0.000	0.000	0.012
22	0.000	0.000	0.022
23	0.000	0.000	0.061
24	0.000	0.000	0.054
25	0.000	0.000	0.075
26	0.000	*0.000*[a]	0.122
27	0.000	0.000	0.067
28	0.000	0.000	0.051
29	0.000		0.037
30	0.000		0.041
31	0.000		0.039
Monthly Average (cfs)	0.0000	0.0000	0.0190

Monthly Discharge

Cubic Feet	0	0	50882
Gallons	0	0	380622
Acre-Feet	0.00	0.00	1.17

Note: Mean flow values are reported to the nearest 0.001 cfs, values less than 0.0005 cfs are reported as zero.
[a] Contains data estimated from field observations and electronic record at adjacent or comparable gages.

Gaging station SW036 was installed as a Performance monitoring location in support of closure activities for the Old Lanfill adjacent to Woman Creek. SW036 is located at state plane 2082579, 747762 on the SID south of B664. The SW036 drainage area is approximately 16.4 acres. This station collects samples for Pu, Am, uranium isotopes, CLP metals, and TSS using continuous flow-paced composite sampling.

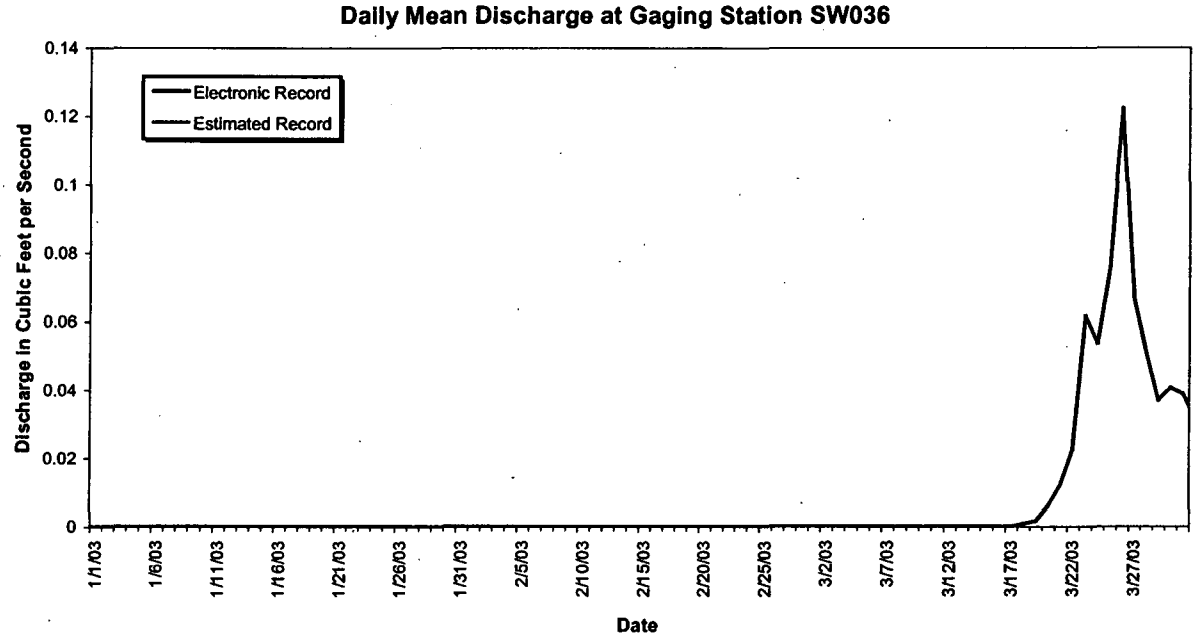

Figure 4-35. Mean Daily Discharge at SW036, Water Year 2003 (Jan, Feb, and Mar 2003).

Table 4-35. Gaging Station SW055: Mean Daily Discharge (cubic feet per second).

Day	Jan-03	Feb-03	Mar-03
1	0.0000	0.0000	*0.0000*[a]
2	0.0000	0.0000	*0.0000*[a]
3	0.0000	*0.0000*[a]	*0.0000*[a]
4	0.0000	*0.0000*[a]	*0.0000*[a]
5	0.0000	*0.0000*[a]	*0.0000*[a]
6	*0.0000*[a]	*0.0000*[a]	*0.0000*[a]
7	*0.0000*[a]	*0.0000*[a]	0.0000
8	0.0000	*0.0000*[a]	0.0000
9	0.0000	*0.0000*[a]	0.0000
10	0.0000	*0.0000*[a]	0.0000
11	0.0000	*0.0000*[a]	0.0000
12	0.0000	*0.0000*[a]	0.0000
13	0.0000	*0.0000*[a]	0.0000
14	0.0000	0.0000	0.0000
15	0.0000	0.0000	0.0000
16	0.0000	*0.0000*[a]	0.0000
17	0.0000	0.0000	0.0001
18	0.0000	0.0000	0.0000
19	0.0000	0.0000	0.0003
20	0.0000	0.0000	0.0030
21	0.0000	0.0000	0.0068
22	0.0000	0.0000	0.0103
23	0.0000	0.0000	0.0274
24	0.0000	*0.0000*[a]	0.0233
25	0.0000	*0.0000*[a]	0.0286
26	0.0000	*0.0000*[a]	0.0623
27	0.0000	0.0000	0.0098
28	0.0000	*0.0000*[a]	0.0085
29	0.0000		0.0032
30	0.0000		0.0136
31	0.0000		0.0085
Monthly Average (cfs)	0.0000	0.0000	0.0066

Monthly Discharge

Cubic Feet	0	0	17768
Gallons	0	0	132912
Acre-Feet	0.000	0.000	0.408

Note: Mean flow values are reported to the nearest 0.001 cfs, values less than 0.0005 cfs are reported as zero.

[a] Contains data estimated from field observations and electronic record at adjacent or comparable gages.

A new Performance monitoring location was installed in support of remediation activities for the 903 Pad and Lip Area. Gaging station SW055 is located at state plane 2086059, 748501 on a drainage ditch southeast of the 903 Pad just inside of the inner security fence. This station monitors runoff from the southeast side of the 903 Pad area. The SW055 drainage area is approximately 17.3 acres. This station collects samples for Pu, Am, and TSS using continuous flow-paced composite sampling.

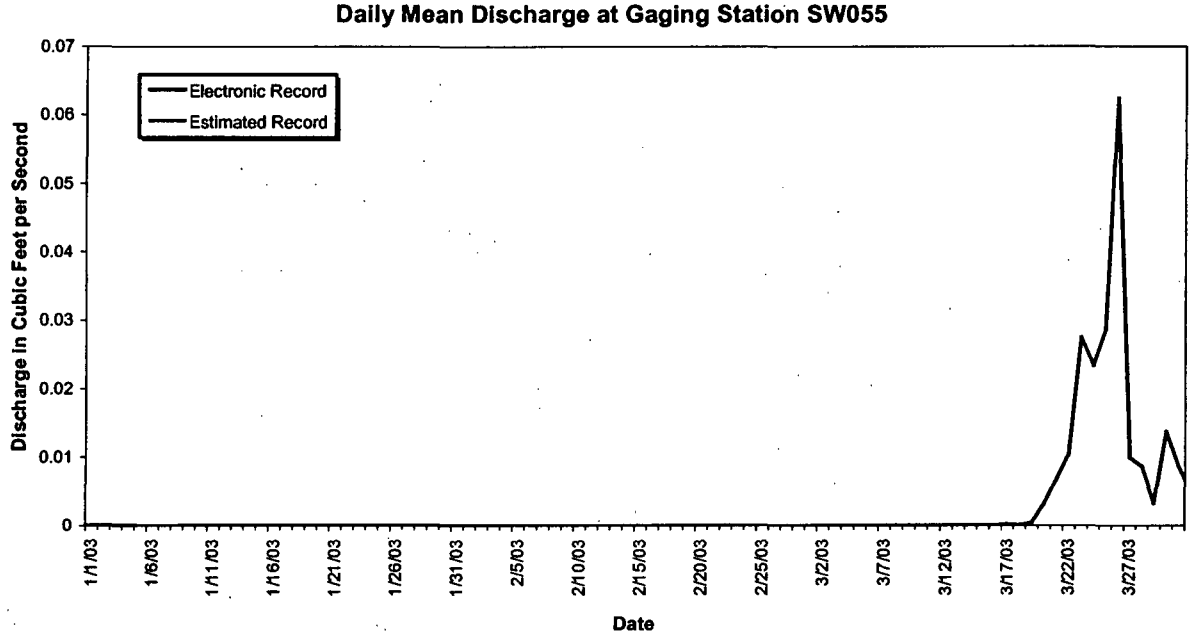

Figure 4-36. Mean Daily Discharge at SW055, Water Year 2003 (Jan, Feb, and Mar 2003).

Table 4-36. Gaging Station SW091: Mean Daily Discharge (cubic feet per second).

Day	Jan-03	Feb-03	Mar-03
1	0.000	0.000	0.000
2	0.000	0.000	0.000
3	0.000	0.000	0.000
4	0.000	0.000	0.000
5	*0.000*[a]	0.000	0.000
6	0.000	0.000	0.000
7	0.000	0.000	0.000
8	0.000	0.000	0.000
9	0.000	0.000	0.000
10	0.000	0.000	0.000
11	0.000	0.000	0.000
12	0.000	0.000	0.000
13	0.000	0.000	0.000
14	0.000	0.000	0.000
15	0.000	0.000	0.000
16	0.000	0.000	0.000
17	0.000	0.000	0.000
18	0.000	0.000	0.000
19	0.000	0.000	0.000
20	0.000	0.000	WR
21	0.000	0.000	WR
22	0.000	0.000	WR
23	0.000	0.000	WR
24	0.000	0.000	WR
25	0.000	0.000	0.072
26	0.000	0.000	0.065
27	0.000	0.000	0.014
28	0.000	0.000	0.006
29	0.000		*0.005*[a]
30	0.000		0.020
31	0.000		0.029
Monthly Average (cfs)	0.000	0.000	0.008

Monthly Discharge

Cubic Feet	39	7	18276
Gallons	290	53	136714
Acre-Feet	0.001	0.000	0.419

Note: Mean flow values are reported to the nearest 0.001 cfs, values less than 0.0005 cfs are reported as zero.

[a] Contains data estimated from field observations and electronic record at adjacent or comparable gages.

WR = No data or unacceptable data due to winter icing conditions.

Gaging Station SW091 is located at State Plane 2086064; 751322, along the drainage NE of the Solar Ponds draining to the A-Series Ponds (See Section 4 Map). This location is a RFCA New Source Detection Location and monitors water draining from the area NE of the Solar Ponds. Storm event samples are collected for selected radionuclides.

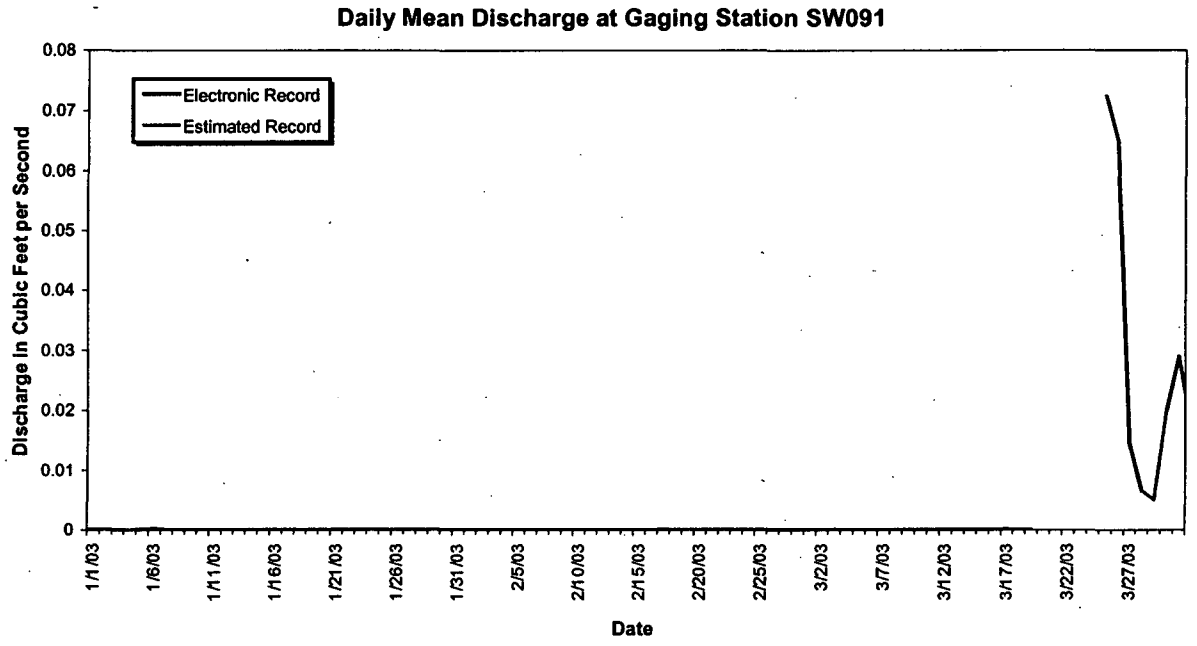

Figure 4-37. Mean Daily Discharge at SW091, Water Year 2003 (Jan, Feb, and Mar 2003).

Table 4-37. Gaging Station SW093: Mean Daily Discharge (cubic feet per second).

Day	Jan-03	Feb-03	Mar-03
1	0.065	0.043	0.061
2	0.060	0.044	0.241
3	0.061	0.097	0.135
4	0.059	0.048	0.066
5	0.058	0.051	0.061
6	0.067	0.053	0.058
7	0.064	0.048	0.057
8	0.066	0.043	0.055
9	0.056	0.042	0.052
10	0.044	0.048	0.050
11	0.050	0.048	0.050
12	0.052	0.051	0.047
13	0.065	0.060	0.046
14	0.062	0.189	0.045
15	0.062	0.214	0.046
16	0.081	0.073	0.048
17	0.061	0.066	1.593
18	0.043	0.059	0.673
19	0.059	0.054	0.932
20	0.091	0.053	1.843
21	0.074	0.052	2.803
22	0.035	0.051	3.107
23	0.041	0.050	7.342
24	0.052	0.041	3.394
25	0.054	0.043	2.490
26	0.067	0.046	3.054
27	*0.123*[a]	0.061	0.978
28	0.141	0.072	0.714
29	0.156		0.345
30	0.108		0.713
31	0.044		0.755
Monthly Average (cfs)	0.068	0.064	1.028

Monthly Discharge

Cubic Feet	183346	155544	2752205
Gallons	1371526	1163548	20587923
Acre-Feet	4.21	3.57	63.17

Note: Mean flow values are reported to the nearest 0.001 cfs, values less than 0.0005 cfs are reported as zero.

[a] Contains data estimated from field observations and electronic record at adjacent or comparable gages.

Gaging Station SW093 is located 39° 53' 51"N, 105° 11' 48"W, along North Walnut Creek at the 72" culvert 1000 feet above the Pond A-1 Bypass (See Section 4 Map). This station is a RFCA Action Level Framework and a New Source Detection Location and monitors water leaving the Site Industrial Area and entering the A-Series Ponds and North Walnut Creek. This station collects samples for selected radionuclides, metals, and water quality parameters using continuous flow-paced sampling.

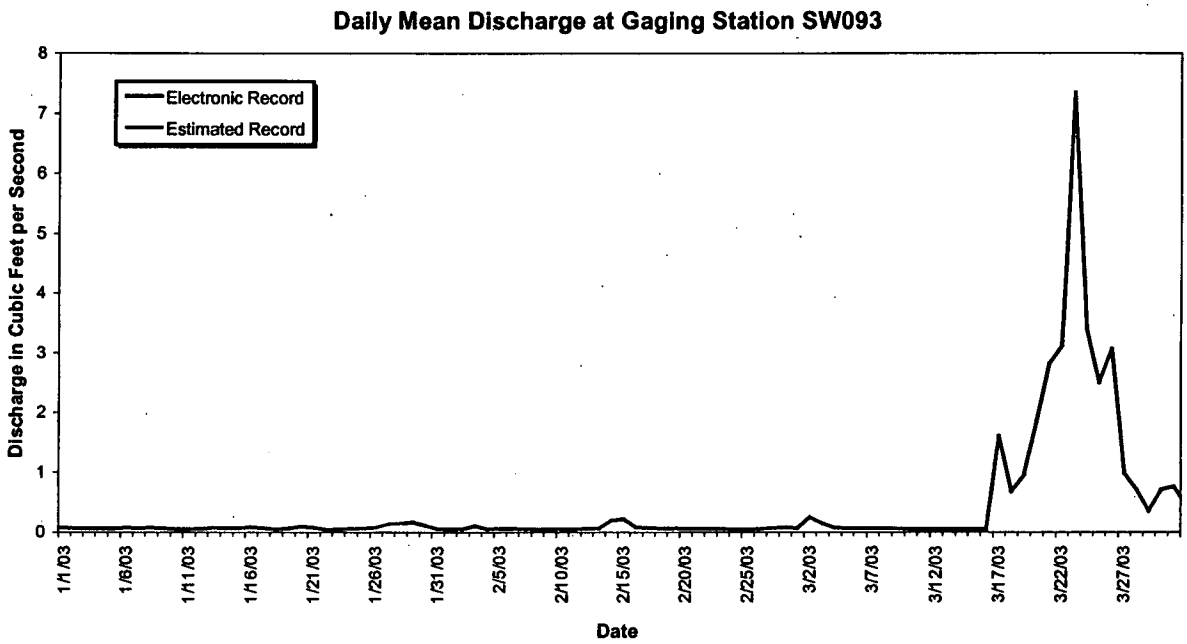

Figure 4-38. Mean Daily Discharge at SW093, Water Year 2003 (Jan, Feb, and Mar 2003).

Table 4-38. Gaging Station SW118: Mean Daily Discharge (cubic feet per second).

Day	Jan-03	Feb-03	Mar-03
1	0.023	0.005	0.029
2	WR	0.005	0.141
3	WR	0.011	0.088
4	0.023	*0.006*[a]	*0.068*[a]
5	0.018	0.007	*0.046*[a]
6	0.015	0.003	0.041
7	WR	0.002	0.033
8	WR	WR	0.026
9	WR	WR	0.020
10	WR	WR	0.015
11	WR	WR	0.013
12	WR	WR	0.012
13	WR	WR	0.010
14	WR	WR	0.010
15	WR	WR	0.007
16	WR	WR	0.008
17	WR	WR	0.158
18	WR	WR	0.252
19	WR	WR	0.352
20	WR	WR	0.752
21	WR	WR	0.578
22	WR	WR	0.634
23	WR	WR	0.987
24	WR	WR	0.613
25	WR	WR	0.661
26	WR	WR	0.897
27	WR	0.015	0.507
28	0.174	0.028	0.358
29	0.118		0.294
30	0.059		0.378
31	0.008		0.339
Monthly Average (cfs)	0.055	0.009	0.269

Monthly Discharge

Cubic Feet	37813	7012	719589
Gallons	282860	52454	5382903
Acre-Feet	0.87	0.16	16.52

Note: Mean flow values are reported to the nearest 0.001 cfs, values less than 0.0005 cfs are reported as zero.
[a] Contains data estimated from field observations and electronic record at adjacent or comparable gages.
WR = No data or unacceptable data due to winter icing conditions.

Buffer Zone Hydrologic monitoring location SW118 is located at state plane 2082961, 751417 on North Walnut Creek northeast of B371 along the IA Perimeter Road. This station monitors runoff from the area northwest of the former PA. The SW118 drainage area is approximately 50 acres. This station collects flow data only.

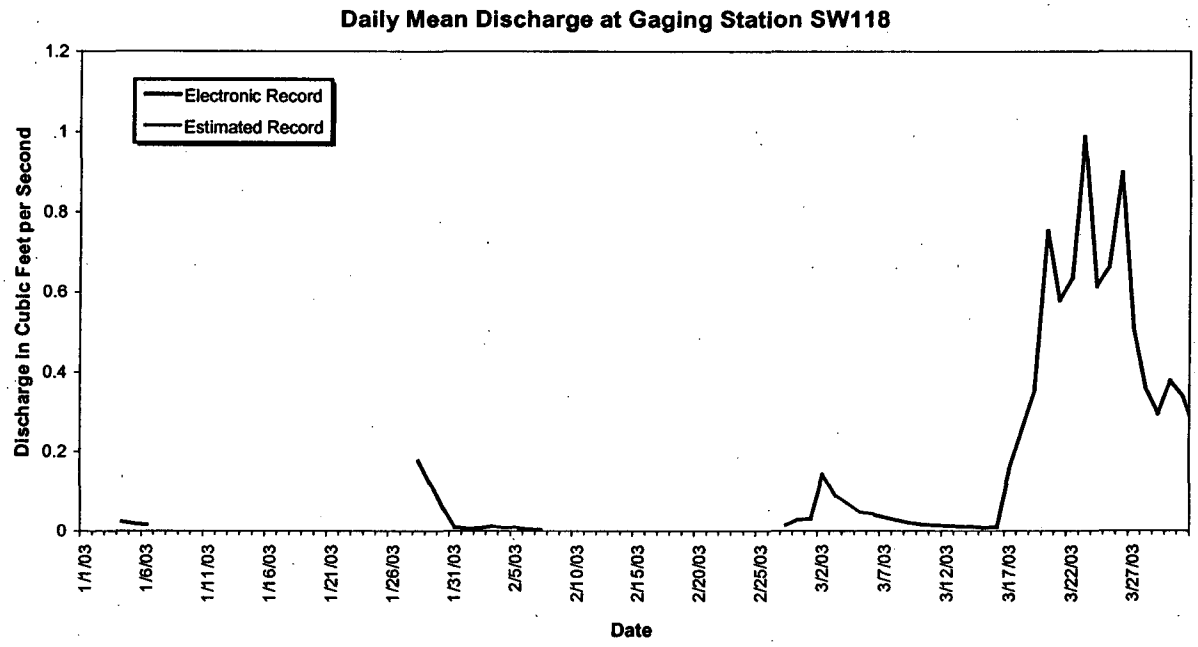

Figure 4-39. Mean Daily Discharge at SW118, Water Year 2003 (Jan, Feb, and Mar 2003).

Table 4-39. Gaging Station SW119: Mean Daily Discharge (cubic feet per second).

Day	Jan-03	Feb-03	Mar-03
1	*0.0000*[a]	0.0000	0.0000
2	*0.0000*[a]	0.0000	0.0004
3	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000
9	0.0000	0.0000	0.0000
10	0.0000	0.0000	0.0000
11	0.0000	0.0000	0.0000
12	0.0000	0.0000	0.0000
13	0.0000	0.0000	0.0000
14	0.0000	0.0001	0.0000
15	0.0000	0.0006	0.0000
16	0.0000	0.0000	0.0000
17	0.0000	0.0000	0.0064
18	0.0000	0.0000	0.0060
19	0.0000	0.0000	0.0048
20	0.0000	*0.0000*[a]	0.0064
21	0.0000	0.0000	0.0111
22	0.0000	0.0000	0.0151
23	0.0000	0.0000	0.0226
24	0.0000	0.0000	0.0308
25	0.0000	*0.0000*[a]	0.0183
26	0.0000	0.0000	0.0397
27	0.0000	0.0000	*0.0194*[a]
28	0.0000	0.0000	*0.0097*[a]
29	0.0000		*0.0013*[a]
30	0.0000		*0.0179*[a]
31	0.0000		0.0183
Monthly Average (cfs)	0.0000	0.0000	0.0074

Monthly Discharge

Cubic Feet	0	57	19702
Gallons	0	430	147379
Acre-Feet	0.00	0.00	0.45

Note: Mean flow values are reported to the nearest 0.001 cfs, values less than 0.0005 cfs are reported as zero.
[a] Contains data estimated from field observations and electronic record at adjacent or comparable gages.

Gaging station SW119 is located at state plane 2084723, 751268 on a drainage ditch north of Solar Pond 207A along the PA perimeter road and was installed in support of remediation activities for the Solar Ponds. This performance monitoring station monitors runoff from the east and north sides of the Solar Ponds and Triangle Area. The SW119 drainage area is approximately 7.6 acres. This station collects samples for Pu, Am, uranium isotopes, CLP metals, and TSS using continuous flow-paced composite sampling.

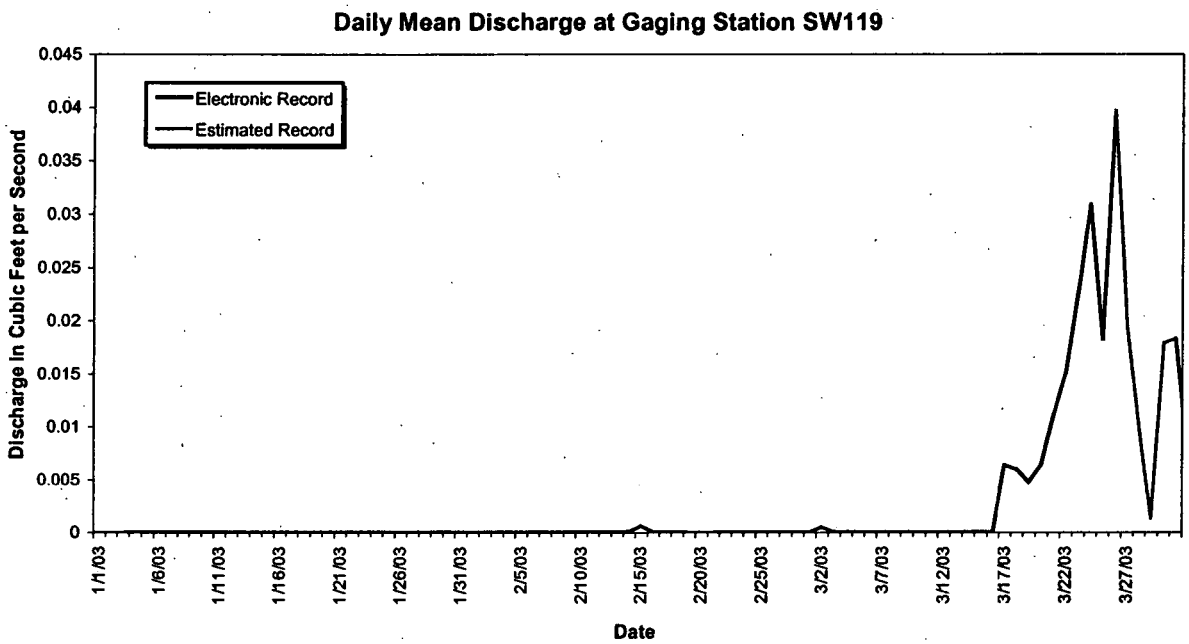

Figure 4-40. Mean Daily Discharge at SW119, Water Year 2003 (Jan, Feb, and Mar 2003).

Table 4-40. Gaging Station SW120: Mean Daily Discharge (cubic feet per second).

Day	Jan-03	Feb-03	Mar-03
1	0.0000	0.0000	0.0000
2	0.0000	0.0000	0.0000
3	0.0000	0.0000	0.0000
4	0.0000	0.0000	0.0000
5	0.0000	0.0000	0.0000
6	0.0000	0.0000	0.0000
7	0.0000	0.0000	0.0000
8	0.0000	0.0000	0.0000
9	0.0000	0.0000	0.0000
10	0.0000	0.0000	0.0000
11	0.0000	0.0000	0.0000
12	0.0000	0.0000	0.0000
13	0.0000	0.0000	0.0000
14	0.0000	0.0000	0.0000
15	0.0000	0.0059	0.0000
16	0.0000	*0.0035*[a]	0.0000
17	0.0000	*0.0002*[a]	0.0433
18	0.0000	0.0000	0.0550
19	0.0000	0.0000	*0.0378*[a]
20	0.0000	0.0000	*0.0425*[a]
21	0.0000	0.0000	*0.0554*[a]
22	0.0000	0.0000	0.1045
23	0.0000	0.0000	0.2049
24	0.0000	0.0000	0.0742
25	0.0000	0.0000	0.0870
26	0.0000	0.0000	0.1025
27	0.0000	0.0000	0.0353
28	0.0000	0.0000	*0.0266*[a]
29	0.0000		*0.0137*[a]
30	0.0000		*0.0267*[a]
31	0.0000		0.0203
Monthly Average (cfs)	0.000	0.000	0.030

Monthly Discharge

Cubic Feet	0	832	80331
Gallons	1	6222	600920
Acre-Feet	0.00	0.02	1.84

Note: Mean flow values are reported to the nearest 0.001 cfs, values less than 0.0005 cfs are reported as zero.

[a] Contains data estimated from field observations and electronic record at adjacent or comparable gages.

Gaging Station SW120 is located at state plane 2084681.6 E 751269 N, in the drainage ditch north of the Solar Ponds along the south side of the PA Perimeter Road. This location is a Performance monitoring location in support of D&D activities for the B771/774 area. SW120 also serves as a Source Location monitoring point in support of Source Evaluation efforts for POE SW093. This location collects continuous flow-paced samples that are analyzed for Pu, U, Am, CLP metals, and TSS.

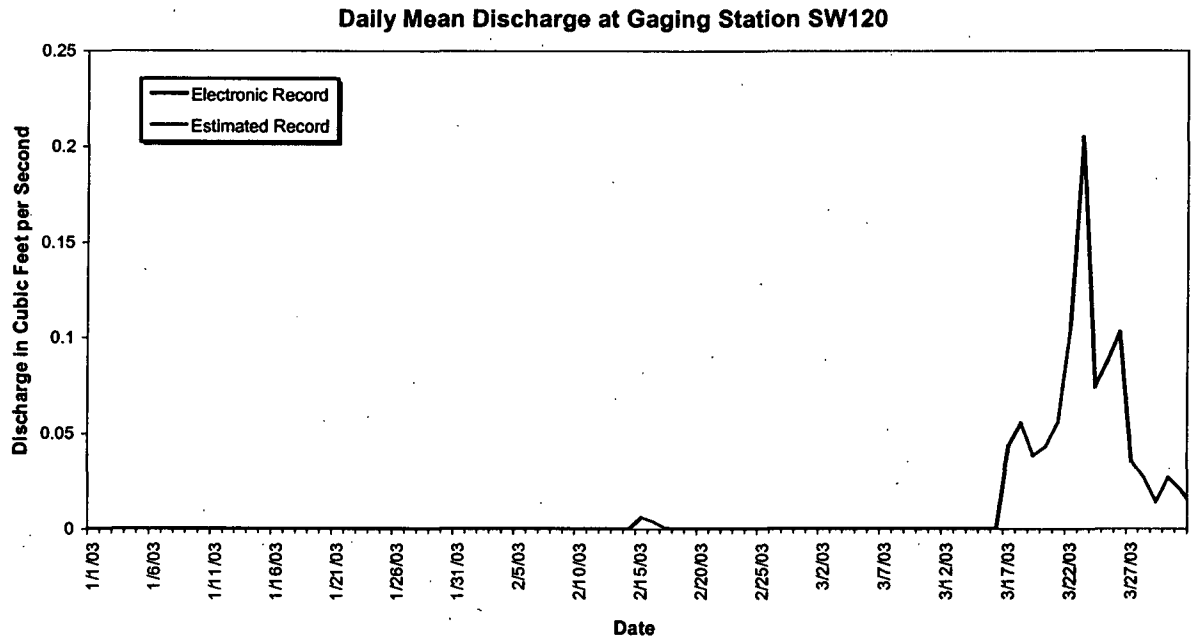

Figure 4-41. Mean Daily Discharge at SW120, Water Year 2003 (Jan, Feb, and Mar 2003).

Table 4-41. Gaging Station SW134: Mean Daily Discharge (cubic feet per second).

Day	Jan-03	Feb-03	Mar-03
1	0.000	0.000	0.000
2	0.000	0.000	0.001
3	0.000	WR	0.000
4	0.000	WR	0.000
5	0.000	WR	*0.000*[a]
6	0.000	WR	0.000
7	0.000	WR	0.000
8	0.000	WR	0.000
9	0.000	WR	0.000
10	*0.001*[a]	WR	0.000
11	WR	WR	0.000
12	WR	WR	0.000
13	0.000	0.000	0.000
14	0.000	0.000	0.000
15	0.000	0.000	0.000
16	0.000	0.000	0.000
17	0.000	0.000	0.009
18	0.001	0.000	0.016
19	0.000	0.000	0.018
20	0.000	0.000	0.019
21	0.000	0.000	0.022
22	WR	0.000	0.036
23	WR	0.000	0.265
24	0.000	0.000	0.039
25	0.000	0.000	0.128
26	0.000	0.000	0.411
27	0.000	0.000	0.548
28	0.000	0.000	0.359
29	0.000		0.335
30	0.000		0.198
31	0.000		0.001
Monthly Average (cfs)	0.000	0.000	0.078

Monthly Discharge

Cubic Feet	207	31	207679
Gallons	1550	228	1553545
Acre-Feet	0.00	0.00	4.77

Note: Mean flow values are reported to the nearest 0.001 cfs, values less than 0.0005 cfs are reported as zero.

[a] Contains data estimated from field observations and electronic record at adjacent or comparable gages.
WR = No data or unacceptable data due to winter icing conditions.

Buffer Zone Hydrologic monitoring location SW134 is located at state plane 2075942, 750049 on a tributary to Rock Creek at the northeast corner of the gravel pits north of the West Access Road. This station monitors runoff and pumped discharges from the gravel pits. This station collects samples for sediment/sand, Ca, Mg, Na, K, Cl, F, SO4, HCO3, and TSS using rising-limb, flow-paced composite sampling.

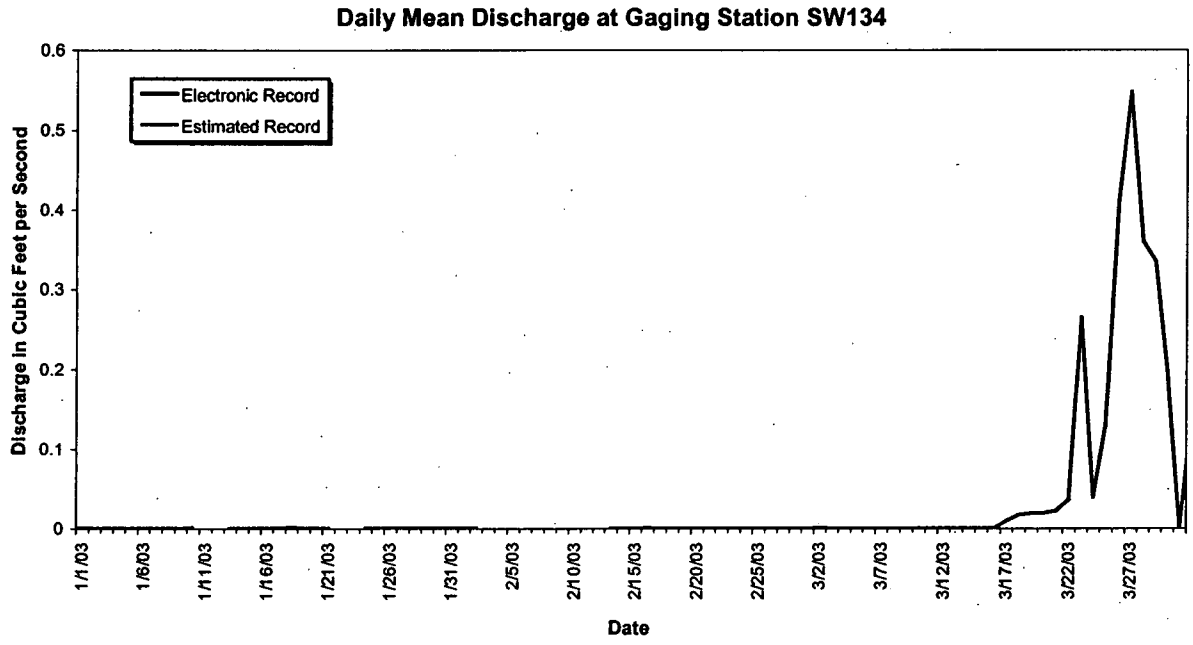

Figure 4-42. Mean Daily Discharge at SW134, Water Year 2003 (Jan, Feb, and Mar 2003).

4.2 WATER QUALITY DATA

Table 4-42. Radionuclides, Water Year 2003 [Jan, Feb, and Mar 2003].

Location	Sample Dates	Pu-239, -240 (pCi/L)	Am-241 (pCi/L)	Total Uranium (pCi/L)	Tritium (pCi/L)
GS01	5/28/02 - 2/3/03	-0.001	0.017	B	353
GS01	2/3 - 2/13/03	-0.001	0.009	4.551	-111
GS01	2/13 - 2/27/03	-0.001	0.003	5.885	299
GS01	2/27 - 3/10/03	0.001	0.035	5.697	47
GS01	3/10 - 3/22/03	-0.003	-0.002	4.108	24
GS01	3/22 - 3/24/03	0.002	0.001	1.848	-59
GS01	3/24 - 3/27/03	-0.002	-0.002	0.874	-101
GS01	3/27 - 3/31/03	0.003	-0.002	0.561	28
GS01	3/31 - 4/3/03	0.006	0.006	0.571	0
GS03	11/5 - 2/13/03	0.026	0.015	1.042	172
GS03	2/13 - 2/15/03	0.004	0.012	1.892	140
GS03	2/15 - 2/17/03	0.004	0.000	1.516	166
GS03	2/17 - 2/19/03	0.002	0.004	1.873	164
GS03	2/19 - 2/25/03	0.008	0.009	1.546	107
GS03	2/25 - 3/12/03	0.002	-0.002	1.553	153
GS03	3/12 - 3/23/03	-0.001	-0.004	1.068	162
GS03	3/23 - 3/24/03	0.012	0.005	2.239	153
GS03	3/24 - 3/26/03	0.014	0.021	1.942	207
GS03	3/26 - 3/28/03	0.010	0.000	0.949	210
GS03	3/28 - 4/1/03	0.007	0.003	1.681	123
GS08	2/13 - 2/17/03	0.003	0.004	0.830	A
GS08	2/17 - 2/24/03	0.001	-0.002	0.863	A
GS08	3/24 - 3/26/03	0.000	0.008	1.103	A
GS08	3/26 - 3/28/03	0.013	0.008	1.486	A
GS08	3/28 - 4/1/03	-0.001	0.006	1.389	A
GS10	12/17 - 2/10/03	0.065	0.118	3.736	A
GS10	2/10 - 3/3/03	0.063	0.002	2.800	A

Table Notes: ND = not detected; R = rejected; A = not applicable; B = not collected; C = incomplete analysis

Table 4-42. Radionuclides, Water Year 2003 [Jan, Feb, and Mar 2003] (continued).

Location	Sample Dates	Pu-239, -240 (pCi/L)	Am-241 (pCi/L)	Total Uranium (pCi/L)	Tritium (pCi/L)
GS10	3/3 - 3/20/03	0.642	R	2.713	A
GS10	3/20 - 3/22/03	0.048	R	0.979	A
GS10	3/22 - 3/23/03	0.084	0.050	1.341	A
GS10	3/23 - 3/31/03	0.089	0.051	2.099	A
GS10	3/31 - 4/7/03	0.049	0.068	3.410	A
GS11	2/13 - 2/17/03	-0.001	0.000	1.974	A
GS11	2/17 - 2/21/03	-0.003	0.008	2.370	A
GS11	3/27 - 3/28/03	0.000	0.010	2.664	A
GS11	3/28 - 3/31/03	0.006	0.004	2.575	A
GS11	3/31 - 4/3/03	0.002	0.000	2.692	A
GS21	12/16/02 - 3/6/03	0.007	0.065	0.136	A
GS21	3/6 - 3/25/03	0.014	0.003	0.746	A
GS21	3/25 - 4/3/03	0.012	-0.002	0.305	A
GS22	11/27/02 - 2/17/03	0.001	0.012	2.214	A
GS22	2/17 - 3/22/03	0.004	R	0.966	A
GS22	3/22 - 4/1/03	0.010	0.009	1.594	A
GS27	3/17/03	1.220	0.314	3.889	A
GS27	3/26/03	0.047	0.017	0.448	A
GS28	10/1/02 - 3/21/03	0.036	0.037	0.959	A
GS28	3/21 - 3/24/03	0.034	0.007	0.624	A
GS28	3/24 - 4/8/03	0.028	0.008	0.985	A
GS32	2/3/03	0.237	0.212	2.756	34
GS32	2/14/03	0.132	0.679	2.666	-111
GS32	2/27/03	0.096	0.023	4.118	105
GS32	3/17/03	0.201	R	3.951	-35
GS39	10/2/02 - 3/22/03	0.051	R	0.463	A
GS39	3/22 - 3/24/03	0.085	0.050	0.295	A
GS39	3/24 - 4/7/03	0.235	0.100	0.971	A

Table Notes: ND = not detected; R = rejected; A = not applicable; B = not collected; C = incomplete analysis

Table 4-42. Radionuclides, Water Year 2003 [Jan, Feb, and Mar 2003] (continued).

Location	Sample Dates	Pu-239,-240 (pCi/L)	Am-241 (pCi/L)	Total Uranium (pCi/L)	Tritium (pCi/L)
GS40	1/6 - 2/13/03	0.010	0.026	1.525	-93
GS40	2/13 - 3/17/03	R	0.043	3.685	-40
GS40	3/17 - 3/23/03	0.028	0.032	1.183	-2
GS40	3/23 - 4/3/03	0.031	0.057	2.282	28
GS42	3/26 - 3/30/03	0.729	0.120	0.142	A
GS42	3/30 - 4/1/03	1.130	0.139	0.289	A
GS43	11/7/02 - 3/21/03	0.122	0.027	2.560	A
GS43	3/21 - 3/24/03	0.030	0.009	0.723	A
GS43	3/24 - 3/26/03	0.008	0.007	0.714	A
GS43	3/26 - 4/6/03	0.005	0.014	0.561	A
GS44	10/28/02 - 3/3/03	0.011	0.122	1.417	77
GS44	3/3 - 3/21/03	0.047	0.036	1.810	8
GS44	3/21 - 3/26/03	0.017	0.007	1.138	-170
GS44	3/26 - 4/10/03	0.021	0.020	2.398	47
GS49	1/5 - 3/21/03	0.016	0.027	0.628	-112
GS49	3/21 - 3/26/03	0.002	0.006	0.289	-219
GS49	3/26 - 4/10/03	-0.001	0.008	0.316	43
GS50	5/24/02 - 3/25/03	0.016	0.055	0.292	A
GS50	3/25 - 4/24/03	C	C	C	A
GS51	5/24/02 - 3/21/03	2.410	0.389	2.637	A
GS51	3/21 - 3/24/03	0.383	0.086	0.204	A
GS51	3/24 - 3/26/03	1.300	0.143	0.245	A
GS51	3/26 - 3/27/03	3.540	0.865	0.704	A
GS51	3/27 - 4/9/03	6.890	1.280	1.411	A
GS52	5/24/02 - 3/24/03	0.370	0.065	2.860	A
GS52	3/24 - 3/27/03	0.508	0.068	1.883	A
GS52	3/27 - 4/4/03	0.356	0.054	2.940	A
GS53	3/17 - 4/19/03	1.655	0.235	1.443	A

Table Notes: ND = not detected; R = rejected; A = not applicable; B = not collected; C = incomplete analysis

Table 4-42. Radionuclides, Water Year 2003 [Jan, Feb, and Mar 2003] (continued).

Location	Sample Dates	Pu-239,-240 (pCi/L)	Am-241 (pCi/L)	Total Uranium (pCi/L)	Tritium (pCi/L)
GS54	3/25 - 4/6/03	0.139	0.002	0.131	A
GS55	11/27/02 - 1/16/03	0.002	0.001	3.609	A
GS55	1/16 - 2/17/03	0.007	0.002	3.056	A
GS55	2/17 - 3/7/03	0.005	-0.004	3.270	A
GS55	3/7 - 3/22/03	0.016	0.009	1.897	A
GS55	3/22 - 3/27/03	0.009	0.012	2.154	A
GS55	3/27 - 4/3/03	-0.002	-0.002	5.057	A
GS56	3/17 - 3/25/03	-0.002	0.000	2.248	A
GS56	3/25 - 3/26/03	0.000	0.002	0.608	A
GS56	3/26 - 4/14/03	0.002	-0.002	1.002	A
GS57	1/9 - 3/21/03	0.026	0.015	1.102	A
GS57	3/21 - 3/23/03	0.010	0.002	0.440	A
GS57	3/23 - 3/25/03	-0.002	0.000	1.088	A
GS57	3/25 - 4/3/03	0.018	-0.002	2.387	A
GS59	11/19/02 - 2/27/03	-0.001	0.004	3.866	A
GS59	2/27 - 3/25/03	0.003	0.038	1.246	A
GS59	3/25 - 3/27/03	0.000	-0.002	0.437	A
GS59	3/27 - 3/31/03	0.000	0.000	0.252	A
GS59	3/31 - 4/9/03	-0.002	-0.002	0.402	A
SW022	11/6/02 - 3/21/03	0.213	0.042	1.887	A
SW022	3/21 - 3/23/03	0.191	0.043	0.764	A
SW022	3/23 - 4/9/03	0.117	0.034	0.972	A
SW027	10/4/02 - 3/21/03	0.012	-0.002	0.392	A
SW027	3/21 - 3/24/03	0.005	0.004	0.740	A
SW027	3/24 - 3/27/03	0.151	0.016	1.886	A
SW027	3/27 - 4/9/03	0.022	0.007	3.634	A
SW036	3/17 - 3/22/03	0.003	-0.002	26.009	A
SW036	3/22 - 3/25/03	0.000	-0.002	21.558	A

Table Notes: ND = not detected; R = rejected; A = not applicable; B = not collected; C = incomplete analysis

Table 4-42. Radionuclides, Water Year 2003 [Jan, Feb, and Mar 2003] (continued).

Location	Sample Dates	Pu-239, -240 (pCi/L)	Am-241 (pCi/L)	Total Uranium (pCi/L)	Tritium (pCi/L)
SW036	3/25 - 3/27/03	-0.003	0.001	23.935	A
SW036	3/27 - 4/1/03	0.000	-0.002	39.524	A
SW055	5/24/02 - 3/21/03	0.180	0.033	0.096	A
SW055	3/21 - 3/24/03	0.211	0.050	0.091	A
SW055	3/24 - 3/28/03	1.790	0.208	0.216	A
SW055	3/28 - 4/3/03	2.980	0.265	0.567	A
SW091	3/23/03	0.003	0.017	0.068	A
SW091	3/26/03	0.028	0.043	1.367	A
SW093	1/6 - 1/27/03	0.005	0.003	4.460	A
SW093	1/27 - 2/3/03	0.004	0.001	3.349	A
SW093	2/3 - 2/17/03	0.230	0.113	3.231	A
SW093	2/17 - 3/3/03	0.088	0.059	3.867	A
SW093	3/3 - 3/20/03	0.384	R	3.319	A
SW093	3/20 - 3/22/03	0.001	0.006	0.918	A
SW093	3/22 - 3/24/03	0.016	0.017	1.375	A
SW093	3/24 - 3/31/03	0.052	0.039	2.450	A
SW093	3/31 - 4/7/03	0.050	0.013	3.396	A
SW119	10/29/02 - 3/2/03	0.035	0.064	1.986	A
SW119	3/2 - 3/21/03	0.055	0.068	1.947	A
SW119	3/21 - 3/24/03	0.019	0.027	0.957	A
SW119	3/24 - 4/3/03	0.035	0.026	1.967	A
SW120	10/2/02 - 3/21/03	0.198	R	4.035	-12
SW120	3/21 - 3/24/03	0.081	0.040	1.111	5
SW120	3/24 - 4/3/03	0.155	0.107	4.917	80
995POE	1/10 - 2/27/03	0.002	0.002	0.238	167
995POE	2/27 - 3/31/03	0.002	0.002	1.099	0
995POE	3/31 - 4/23/03	C	C	C	C

Table Notes: ND = not detected; R = rejected; A = not applicable; B = not collected; C = incomplete analysis

Table 4-43. POE Metals, Water Year 2003 (Jan, Feb, and Mar 2003).

Location	Sample Dates	Be ug/L	Dissolved Cd ug/L	Cr ug/L	Dissolved Ag ug/L
GS10	12/17 - 2/10/03	0.06	ND	1.6	ND
GS10	2/10 - 3/3/03	0.23	0.30	5.0	ND
GS10	3/3 - 3/20/03	0.82	0.13	21.4	0.34
GS10	3/20 - 3/22/03	0.15	ND	5.6	ND
GS10	3/22 - 3/23/03	0.50	0.10	7.9	ND
GS10	3/23 - 3/31/03	0.17	0.14	7.7	ND
GS10	3/31 - 4/7/03	0.23	0.25	3.8	ND
SW027	10/4/02 - 3/21/03	0.07	ND	4.1	ND
SW027	3/21 - 3/24/03	ND	ND	1.5	ND
SW027	3/24 - 3/27/03	0.08	0.12	2.3	0.26
SW027	3/27 - 4/9/03	0.07	ND	0.8	ND
SW093	1/6 - 1/27/03	ND	ND	1.5	ND
SW093	1/27 - 2/3/03	ND	ND	0.3	ND
SW093	2/3 - 2/17/03	0.29	0.21	7.5	ND
SW093	2/17 - 3/3/03	0.10	0.20	2.0	ND
SW093	3/3 - 3/20/03	1.20	ND	27.5	ND
SW093	3/20 - 3/22/03	0.10	ND	4.7	ND
SW093	3/22 - 3/24/03	0.12	ND	4.5	0.20
SW093	3/24 - 3/31/03	0.34	ND	6.3	ND
SW093	3/31 - 4/7/03	0.26	0.26	5.2	ND

Table Notes: ND = not detected; R = rejected; A = not applicable; B = not collected; C = incomplete analysis

Table 4-44. Other Metals, Water Year 2003 (Jan, Feb, and Mar 2003).

Analyte (ug/L)	GS22	GS22	GS22	GS28	GS28
	11/27 - 2/17/03	2/17 - 3/22/03	3/22 - 4/1/03	10/1/02 - 3/21/03	3/21 - 3/24/03
ALUMINUM	4070	7420	5950	7040	1900
ANTIMONY	0.84	1.4	1.4	0.99	ND
ARSENIC	1.8	3.8	3.1	3.1	1.4
BARIUM	191	120	125	58.8	29.4
BERYLLIUM	0.22	0.52	0.28	0.36	0.04
CADMIUM	0.7	0.44	0.75	0.35	0.12
CALCIUM	93600	37000	33400	19700	10800
CHROMIUM	5.9	12.8	13	7.2	2.1
COBALT	1.9	2.8	2.5	1.7	0.34
COPPER	36.8	29.6	72.2	13.7	5.7
IRON	3510	7820	7590	5010	1360
LEAD	9.2	17.6	21	6.6	2.6
LITHIUM	34.3	22	9.7	8.4	2.9
MAGNESIUM	12100	6760	5100	2860	1740
MANGANESE	99.8	125	119	64.6	17.1
MERCURY	ND	ND	ND	ND	ND
MOLYBDENUM	1	1.3	0.78	0.85	0.82
NICKEL	5.6	7.8	7.4	5.4	2
POTASSIUM	3980	4340	3000	3920	1350
SELENIUM	ND	ND	ND	ND	ND
SILVER	ND	ND	0.94	ND	ND
SODIUM	528000	126000	53300	32300	15400
STRONTIUM	454	227	177	79.7	63.3
THALLIUM	ND	ND	ND	ND	1.8
TIN	ND	1.5	1.3	ND	ND
VANADIUM	9.6	19.8	17.8	15.1	4.5
ZINC	626	430	503	150	70.3

Table Notes: ND = not detected; R = rejected; A = not applicable; B = not collected; C = incomplete analysis

Table 4-44. Other Metals, Water Year 2003 [Jan, Feb, and Mar 2003] (continued).

Analyte (ug/L)	GS28	GS32	GS32	GS32	GS32
	3/24 - 4/8/03	2/3/03	2/14/03	2/27/03	3/17/03
ALUMINUM	3000	3620	25600	1500	2840
ANTIMONY	1.5	11.7	29	10.4	14.4
ARSENIC	1.3	2.4	10.8	2.1	3.2
BARIUM	41.4	156	421	167	679
BERYLLIUM	0.27	0.21	1.3	0.09	0.08
CADMIUM	0.17	1.1	3.1	0.7	3.3
CALCIUM	15400	76100	112000	92000	235000
CHROMIUM	3.4	13.5	34.5	2.5	4
COBALT	0.53	2.8	9.6	1.2	2.3
COPPER	6.5	58.4	93.1	17.2	27.4
IRON	2320	9810	35300	7970	6720
LEAD	2.9	7.3	51.9	2.9	3
LITHIUM	3.7	41.9	81	57.4	125
MAGNESIUM	2230	7380	13300	8340	27900
MANGANESE	28.2	304	685	257	640
MERCURY	ND	ND	ND	ND	ND
MOLYBDENUM	0.69	2.5	4.2	3.2	4.5
NICKEL	2.4	12.9	26.6	5.7	8.1
POTASSIUM	1760	38800	67500	50700	97600
SELENIUM	ND	ND	ND	ND	ND
SILVER	ND	ND	0.24	ND	0.28
SODIUM	12100	1210000	1770000	1340000	4830000
STRONTIUM	82.3	501	725	646	1730
THALLIUM	ND	ND	ND	ND	ND
TIN	ND	ND	3	ND	ND
VANADIUM	7.4	9.8	61.9	5.1	6.3
ZINC	71.6	3350	12200	3120	4990

Table Notes: ND = not detected; R = rejected; A = not applicable; B = not collected; C = incomplete analysis

Table 4-44. Other Metals, Water Year 2003 [Jan, Feb, and Mar 2003] (continued).

Analyte (ug/L)	GS40 1/6 - 2/13/03	GS40 2/13 - 3/17/03	GS40 3/17 - 3/23/03	GS40 3/23 - 4/3/03	GS43 11/7/02 - 3/21/03
ALUMINUM	1810	6610	6000	3220	14300
ANTIMONY	26.9	29.9	21.8	18.4	2.6
ARSENIC	2.8	3.9	3.1	2.5	5.5
BARIUM	321	592	96.5	175	114
BERYLLIUM	0.11	0.28	0.29	0.38	0.58
CADMIUM	2.1	2	0.73	1.2	0.47
CALCIUM	115000	180000	26300	57600	41300
CHROMIUM	2.5	7.7	7.9	5.5	13.8
COBALT	1.1	2	1.7	0.92	3.4
COPPER	9.5	14.7	12.8	8	15.3
IRON	4490	11900	6020	3820	9840
LEAD	5.3	8.5	9.1	5.3	15.5
LITHIUM	49.5	43.9	11.6	10.1	32
MAGNESIUM	20000	45600	5730	11600	4790
MANGANESE	756	1450	146	183	140
MERCURY	ND	ND	ND	ND	ND
MOLYBDENUM	1.5	2	1.6	1.4	1.4
NICKEL	3.4	7.4	5.5	3.4	10.4
POTASSIUM	68900	16700	9300	15500	38600
SELENIUM	ND	ND	ND	1.5	ND
SILVER	ND	0.21	ND	ND	ND
SODIUM	1180000	962000	103000	208000	133000
STRONTIUM	990	1420	182	400	240
THALLIUM	ND	ND	ND	ND	ND
TIN	ND	ND	ND	ND	ND
VANADIUM	4.2	12.5	14.1	8.9	28.2
ZINC	473	585	279	283	155

Table Notes: ND = not detected; R = rejected; A = not applicable; B = not collected; C = incomplete analysis

Table 4-44. Other Metals, Water Year 2003 [Jan, Feb, and Mar 2003] (continued).

Analyte (ug/L)	GS43 3/21 - 3/24/03	GS43 3/24 - 3/26/03	GS43 3/26 - 4/6/03	GS44 10/28/02 - 3/3/03	GS44 3/3 - 3/21/03
ALUMINUM	5070	3080	2340	10300	17200
ANTIMONY	1.5	0.66	1.4	1.6	0.94
ARSENIC	2.6	1	1.7	3.8	5.4
BARIUM	42.3	51.9	79.6	610	397
BERYLLIUM	0.2	0.12	0.23	0.35	0.68
CADMIUM	ND	0.15	0.14	0.98	0.68
CALCIUM	16200	21800	37600	137000	81600
CHROMIUM	6.1	3.9	3	10.1	15.8
COBALT	1.1	0.75	0.69	2.6	4.2
COPPER	6.4	4.4	4.1	17.2	23.9
IRON	3680	2450	1890	7140	11900
LEAD	5.1	3	2.9	5.9	12.1
LITHIUM	6.3	9.1	10.8	96.1	77.8
MAGNESIUM	2140	2570	4620	18800	12000
MANGANESE	46.1	35.3	34.6	221	258
MERCURY	ND	ND	ND	ND	ND
MOLYBDENUM	1.1	1.3	1.3	1.7	1.8
NICKEL	4.3	3	2.3	8.3	11.7
POTASSIUM	7910	49200	48800	16200	14900
SELENIUM	ND	ND	1	ND	ND
SILVER	ND	0.3	ND	ND	ND
SODIUM	14200	10600	26900	2220000	1770000
STRONTIUM	82.6	198	303	755	479
THALLIUM	1.2	ND	ND	ND	ND
TIN	1.4	ND	ND	ND	ND
VANADIUM	10.5	6.9	5.8	19.2	32.2
ZINC	61.1	47.7	48.1	511	445

Table Notes: ND = not detected; R = rejected; A = not applicable; B = not collected; C = incomplete analysis

Table 4-44. Other Metals, Water Year 2003 [Jan, Feb, and Mar 2003] (continued).

Analyte (ug/L)	GS44 3/21 - 3/26/03	GS44 3/26 - 4/10/03	GS49 1/5 - 3/21/03	GS49 3/21 - 3/26/03	GS49 3/26 - 4/10/03
ALUMINUM	10500	11500	11800	6010	4770
ANTIMONY	0.99	0.96	2.3	2.4	1.7
ARSENIC	3.0	2.6	4.5	2.4	1.6
BARIUM	87.4	163	62.9	34	50.9
BERYLLIUM	0.40	0.41	0.53	0.23	0.21
CADMIUM	0.19	ND	0.13	0.10	0.1
CALCIUM	26200	65300	8790	6920	14300
CHROMIUM	11.2	10.8	12.4	6.2	4.8
COBALT	1.8	2.0	2.4	0.84	0.78
COPPER	11.8	13.9	24.4	8.8	10.2
IRON	7720	7910	8320	4250	3370
LEAD	6.6	7.3	7.2	3.2	3.3
LITHIUM	12.8	22.8	10.4	4.3	4.8
MAGNESIUM	5820	12000	2640	1640	2660
MANGANESE	70.4	90.9	102	36	34.5
MERCURY	ND	0.14	ND	ND	0.13
MOLYBDENUM	1.7	1.2	0.99	0.74	0.65
NICKEL	7.2	8.2	8.5	4.4	4.7
POTASSIUM	6280	7340	3380	2040	2150
SELENIUM	2.1	2.0	ND	ND	ND
SILVER	ND	ND	ND	ND	ND
SODIUM	45800	185000	79000	13200	45000
STRONTIUM	149	355	42.1	32.6	68.2
THALLIUM	ND	ND	ND	ND	ND
TIN	ND	ND	ND	ND	ND
VANADIUM	21.2	21.9	21.3	10.5	8.6
ZINC	108	132	158	122	206

Table Notes: ND = not detected; R = rejected; A = not applicable; B = not collected; C = incomplete analysis

Table 4-44. Other Metals, Water Year 2003 [Jan, Feb, and Mar 2003] (continued).

Analyte (ug/L)	GS50 5/24/02 - 3/25/03	GS50 3/25 - 4/24/03	GS55 11/27/02 - 1/16/03	GS55 1/16 - 2/17/03	GS55 2/17 - 3/7/03
ALUMINUM	1960	c	101.5	851	631
ANTIMONY	0.97	c	ND	ND	ND
ARSENIC	1.6	c	ND	0.99	1.3
BARIUM	30	c	144.5	149	153
BERYLLIUM	0.23	c	0.035	0.04	0.07
CADMIUM	0.2	c	ND	0.21	0.18
CALCIUM	15600	c	81050	70200	80400
CHROMIUM	8.7	c	0.48	1.3	1.1
COBALT	0.45	c	0.21	0.6	0.49
COPPER	5.3	c	1.9	4.3	6.1
IRON	1440	c	174.5	798	554
LEAD	2.6	c	ND	ND	2.3
LITHIUM	3.7	c	13.55	13.4	14.2
MAGNESIUM	1750	c	21100	17000	16400
MANGANESE	20.8	c	21.85	95.8	84.4
MERCURY	ND	c	R	ND	ND
MOLYBDENUM	1.3	c	1.35	1.5	1.4
NICKEL	6.2	c	0.96	1.5	1.6
POTASSIUM	4570	c	2930	2590	2380
SELENIUM	1.1	c	ND	ND	ND
SILVER	ND	c	ND	ND	ND
SODIUM	15000	c	45350	104000	155000
STRONTIUM	55.1	c	611.5	513	499
THALLIUM	ND	c	ND	ND	ND
TIN	ND	c	ND	ND	ND
VANADIUM	4.7	c	0.27	1.8	1.4
ZINC	25.4	c	25.1	53.2	54.4

Table Notes: ND = not detected; R = rejected; A = not applicable; B = not collected; C = incomplete analysis

Table 4-44. Other Metals, Water Year 2003 [Jan, Feb, and Mar 2003] (continued).

Analyte (ug/L)	GS55 3/7 - 3/22/03	GS55 3/22 - 3/27/03	GS55 3/27 - 4/3/03	GS56 3/17 - 3/25/03	GS56 3/25 - 3/26/03
ALUMINUM	8930	3850	610	280	13000
ANTIMONY	1.7	ND	0.78	ND	1.3
ARSENIC	2.6	1.2	1.3	ND	3.1
BARIUM	112	60.1	112	84.4	130
BERYLLIUM	0.54	0.17	0.19	0.16	0.48
CADMIUM	0.19	0.18	0.18	ND	ND
CALCIUM	36200	22600	51800	39000	19700
CHROMIUM	9.4	5.7	1.1	0.48	13
COBALT	2	0.84	0.35	ND	2.4
COPPER	12.9	6	3.7	2.9	9.6
IRON	6850	2740	514	191	7980
LEAD	8.1	3.1	1.3	ND	8.5
LITHIUM	13.8	5.7	7.5	8.8	9.7
MAGNESIUM	8890	5170	12500	6530	4540
MANGANESE	174	37.3	44.6	2.4	59
MERCURY	ND	ND	ND	ND	ND
MOLYBDENUM	1.6	1.6	1.5	1.2	2.2
NICKEL	6	4.4	0.91	1.9	7.9
POTASSIUM	3480	2220	2460	2160	4080
SELENIUM	1.2	ND	2.5	1.4	1.4
SILVER	ND	0.22	ND	ND	ND
SODIUM	92100	32900	66600	14100	4770
STRONTIUM	234	148	383	204	106
THALLIUM	ND	ND	ND	ND	ND
TIN	ND	ND	ND	ND	ND
VANADIUM	18.9	8.7	2.1	1.4	28.2
ZINC	120	73.6	55.3	9.8	44.2

Table Notes: ND = not detected; R = rejected; A = not applicable; B = not collected; C = incomplete analysis

Table 4-44. Other Metals, Water Year 2003 [Jan, Feb, and Mar 2003] (continued).

Analyte (ug/L)	GS56 3/26 - 4/14/03	GS57 1/9 - 3/21/03	GS57 3/21 - 3/23/03	GS57 3/23 - 3/25/03	GS57 3/25 - 4/3/03
ALUMINUM	1770	11300	4900	3730	2640
ANTIMONY	1.9	1.6	0.93	1.2	1
ARSENIC	1.1	4.6	3.1	2.4	2.5
BARIUM	85.8	92.9	35.5	39.2	59.7
BERYLLIUM	ND	0.53	0.26	0.28	0.24
CADMIUM	ND	1	0.24	0.25	0.47
CALCIUM	30700	29400	12500	16600	24000
CHROMIUM	2.2	13.1	5.7	4.8	3.6
COBALT	0.22	3.3	1.3	0.58	0.47
COPPER	4.4	20.1	9.5	7	6.3
IRON	995	9180	3840	2780	1920
LEAD	1.3	12.8	7.3	3.8	2.6
LITHIUM	6.2	22.3	6.3	4.8	6.2
MAGNESIUM	4870	6170	2270	2510	3410
MANGANESE	5.8	159	54.1	35.5	29.2
MERCURY	ND	ND	ND	ND	ND
MOLYBDENUM	1.5	1.9	1.6	1.3	0.93
NICKEL	3.1	10.1	4.3	3.1	2.8
POTASSIUM	2670	6170	2540	2690	2740
SELENIUM	1.4	ND	ND	1.1	ND
SILVER	ND	0.28	ND	ND	ND
SODIUM	9060	231000	41700	47200	146000
STRONTIUM	158	128	58.5	73.5	123
THALLIUM	ND	ND	ND	ND	ND
TIN	Undetect	ND	0.97	ND	ND
VANADIUM	4.3	22.6	9.6	7.7	5.9
ZINC	9.5	664	256	220	350

Table Notes: ND = not detected; R = rejected; A = not applicable; B = not collected; C = incomplete analysis

Table 4-44. Other Metals, Water Year 2003 [Jan, Feb, and Mar 2003] (continued).

Analyte (ug/L)	GS59 11/19/02 - 2/27/03	GS59 2/27 - 3/25/03	GS59 3/25 - 3/27/03	GS59 3/27 - 3/31/03	GS59 3/31 - 4/9/03
ALUMINUM	33.4	87.95	3060	1080	983
ANTIMONY	0.62	0.715	ND	1.2	ND
ARSENIC	0.99	ND	0.9	ND	ND
BARIUM	90.3	89.85	60.1	51.6	63.7
BERYLLIUM	ND	0.165	0.15	0.13	0.08
CADMIUM	ND	ND	0.13	0.15	ND
CALCIUM	56400	50300	14600	17900	23500
CHROMIUM	0.71	0.32	3.8	1.2	1.4
COBALT	ND	ND	1.1	0.2	0.29
COPPER	1.6	1.15	3.8	2.4	2.4
IRON	41.4	80.8	2650	791	705
LEAD	ND	ND	3	1.3	ND
LITHIUM	7.1	7.2	4.3	3.5	4.7
MAGNESIUM	12100	11500	4150	4640	5850
MANGANESE	2.3	2.85	78.7	18.9	11.6
MERCURY	ND	ND	ND	ND	0.12
MOLYBDENUM	0.83	ND	0.85	ND	0.55
NICKEL	1.5	1.025	3.2	1.4	1.8
POTASSIUM	1010	1395	3340	2220	2210
SELENIUM	ND	1.6	0.93	ND	ND
SILVER	ND	ND	0.3	ND	ND
SODIUM	22800	39250	18900	18300	22500
STRONTIUM	327	288.5	90.3	111	147
THALLIUM	ND	ND	ND	ND	ND
TIN	ND	ND	ND	ND	ND
VANADIUM	0.47	0.55	6.1	2.3	2.4
ZINC	9.1	9.1	17.4	9.6	8.2

Table Notes: ND = not detected; R = rejected; A = not applicable; B = not collected; C = incomplete analysis

Table 4-44. Other Metals, Water Year 2003 [Jan, Feb, and Mar 2003] (continued).

Analyte (ug/L)	SW036 3/17 - 3/22/03	SW036 3/22 - 3/25/03	SW036 3/25 - 3/27/03	SW036 3/27 - 4/1/03	SW091 3/23/03
ALUMINUM	61	56.2	151	28.7	1020
ANTIMONY	ND	ND	ND	0.96	ND
ARSENIC	1.175	ND	ND	0.95	ND
BARIUM	185	127	150	179	16.4
BERYLLIUM	0.185	0.04	0.04	ND	0.13
CADMIUM	ND	0.12	0.13	0.11	0.11
CALCIUM	113500	97700	108000	145000	4340
CHROMIUM	5.9	1.8	1.4	2.3	8.3
COBALT	1.55	ND	ND	0.36	ND
COPPER	6.4	2.8	3.4	3	2.4
IRON	113.5	70	136	40.4	712
LEAD	ND	ND	ND	ND	1.1
LITHIUM	6.55	7.3	7.6	9.2	4.7
MAGNESIUM	35250	24000	24200	29400	907
MANGANESE	32.5	17.2	9.6	4.4	13.7
MERCURY	ND	ND	ND	ND	ND
MOLYBDENUM	3.9	3.6	4.3	5	0.64
NICKEL	47.3	1.5	1.8	1.5	7.5
POTASSIUM	3540	2630	3300	3610	1700
SELENIUM	ND	ND	1.1	2.3	0.98
SILVER	ND	0.24	ND	ND	ND
SODIUM	44350	28300	48500	63300	752
STRONTIUM	877.5	604	633	761	25.1
THALLIUM	ND	ND	ND	ND	ND
TIN	ND	ND	ND	ND	1.2
VANADIUM	1.45	0.75	1.2	0.6	2.6
ZINC	21.5	15.3	11.1	8.4	19.1

Table Notes: ND = not detected; R = rejected; A = not applicable; B = not collected; C = incomplete analysis

Table 4-44. Other Metals, Water Year 2003 [Jan, Feb, and Mar 2003] (continued).

Analyte (ug/L)	SW091	SW119	SW119	SW119	SW119
	3/26/03	10/29/02 - 3/2/03	3/2 - 3/21/03	3/21 - 3/24/03	3/24 - 4/3/03
ALUMINUM	2150	1730	4630	1630	2860
ANTIMONY	1.3	0.77	0.84	ND	1.4
ARSENIC	2.4	1.4	2.7	1.1	1.3
BARIUM	84.8	738	313	72.3	76.9
BERYLLIUM	0.21	0.07	0.25	0.15	0.22
CADMIUM	0.2	1.5	0.58	ND	0.13
CALCIUM	29600	207000	106000	28400	29900
CHROMIUM	7.9	2.4	4.9	1.8	2.9
COBALT	0.71	0.81	1.4	0.42	0.69
COPPER	4.8	6.6	7.3	4.4	5.1
IRON	1640	1210	3060	1120	1920
LEAD	3	1.4	4.9	1.3	1.4
LITHIUM	17.3	83.7	63	27	23.7
MAGNESIUM	6130	27500	19300	6980	7650
MANGANESE	29.4	116	106	14.6	16.5
MERCURY	ND	ND	ND	ND	ND
MOLYBDENUM	2	0.8	1.5	0.79	0.8
NICKEL	4.5	3.6	4.7	2.3	2.5
POTASSIUM	6830	19500	12000	4330	5580
SELENIUM	2	ND	ND	ND	ND
SILVER	ND	ND	0.37	ND	ND
SODIUM	18600	2490000	1080000	176000	80800
STRONTIUM	176	1210	694	217	232
THALLIUM	ND	0.91	ND	ND	ND
TIN	ND	ND	ND	ND	ND
VANADIUM	6.2	3.4	10	3.5	6.2
ZINC	21.6	43.2	41	18.2	15.8

Table Notes: ND = not detected; R = rejected; A = not applicable; B = not collected; C = incomplete analysis

Table 4-44. Other Metals, Water Year 2003 [Jan, Feb, and Mar 2003] (continued).

Analyte (ug/L)	SW120 10/2/02 - 3/21/03	SW120 3/21 - 3/24/03	SW120 3/24 - 4/3/03
ALUMINUM	5460		
ANTIMONY	1.7	1.5	1.3
ARSENIC	3.7	2.9	2.1
BARIUM	177	62.9	121
BERYLLIUM	0.28	0.23	0.29
CADMIUM	0.26	0.13	0.14
CALCIUM	87900	27300	59100
CHROMIUM	8	4.8	3
COBALT	1.6	0.46	0.61
COPPER	10.4	6.6	5.4
IRON	4160	2680	1820
LEAD	4.8	2.8	2
LITHIUM	36.9	11.9	19.4
MAGNESIUM	16900	5400	11500
MANGANESE	79.1	31.3	23.2
MERCURY	ND	ND	ND
MOLYBDENUM	1.9	1.1	1.3
NICKEL	7.3	3.1	2.7
POTASSIUM	12300	6790	9870
SELENIUM	ND	ND	2.3
SILVER	ND	ND	ND
SODIUM	527000	100000	129000
STRONTIUM	490	152	349
THALLIUM	ND	ND	ND
TIN	ND	ND	ND
VANADIUM	11.4	7.8	5.5
ZINC	75.3	75.8	52.4

Table Notes: ND = not detected; R = rejected; A = not applicable; B = not collected; C = incomplete analysis

Table 4-45. Water Quality Parameters, Water Year 2003 (Jan, Feb, and Mar 2003).

Location	Sample Dates	Hardness mg/L
GS10	12/17 - 2/10/03	390
GS10	2/10 - 3/3/03	350
GS10	3/3 - 3/20/03	220
GS10	3/20 - 3/22/03	120
GS10	3/22 - 3/23/03	77
GS10	3/23 - 3/31/03	160
GS10	3/31 - 4/7/03	250
SW027	10/4/02 - 3/21/03	200
SW027	3/21 - 3/24/03	120
SW027	3/24 - 3/27/03	130
SW027	3/27 - 4/9/03	230
SW093	1/6 - 1/27/03	500
SW093	1/27 - 2/3/03	340
SW093	2/3 - 2/17/03	700
SW093	2/17 - 3/3/03	770
SW093	3/3 - 3/20/03	390
SW093	3/20 - 3/22/03	200
SW093	3/22 - 3/24/03	180
SW093	3/24 - 3/31/03	220
SW093	3/31 - 4/7/03	280

Table 4-46. Buffer Zone/Hydrologic Water Quality Parameters, Water Year 2003 (Mar 2003).

Location	Sample Dates	Analytes (mg/L)								
		TSS	Ca	Mg	Na	K	Cl	F	SO_4	Total Alkalinity
GS01	3/17/03	ND	71.80	19.00	51.20	1.94	110.0	0.5	55.0	150.0
GS01	3/25/03	B	39.90	9.27	38.00	2.06	B	B	B	B
GS03	3/17/03	20	60.20	19.90	149.00	6.70	340.0	0.7	48.0	55.0
GS03	3/22/03	13	64.90	18.00	131.00	6.81	320.0	0.6	43.0	62.0
GS03	3/25/03	C	26.20	5.33	54.20	4.59	C	C	C	C
GS04	3/17/03	B	35.20	8.56	22.20	1.80	29.0	0.5	44.0	110.0
SW134	3/23/03	170	4.98	1.25	1.92	1.11	3.0	0.3	4.0	8.2

Table Notes:

ND = not dectected

B = not collected

C = incomplete analysis

5.0 INCIDENTAL WATERS

5.1 INCIDENTAL WATERS DEFINITION AND ROUTING MATRIX

An incidental water is defined as precipitation, surface water, groundwater, utility water, process water, or waste water collecting in one or more of several types of containments. These containments can include excavation sites, foundation drains, secondary containment berms, electrical vaults, utility pits and manholes, or other natural or manmade depressions, which must be dewatered.

Water collected in this manner has the potential to become contaminated via contact with the surrounding containment material. Sampling and disposition of incidental waters is conducted per Site Procedure 1-C91-EPR-SW.01, *Control and Disposition of Incidental Waters.* Incidental waters are typically sampled for pH, nitrates, conductivity, and gross alpha and gross beta (when radionuclides are suspected). Additional testing for volatile organic compounds and metals is performed when a specific potential contaminant source is known to exist. Disposition depends on the analytical results. Routing options for incidental waters are outlined in the following table.

Table 5-1. Incidental Waters Routing Matrix.

Incidental Water Routing	Routing Criteria	Treatment Processes
Ground/Storm Drain	• Water meets discharge limits per Incidental Waters procedure	N/A
Building 995 Waste Water Treatment Plant (WWTP)	• Water above discharge to ground limits • Water meets Internal Waste Streams Program review criteria	Activated Sludge w/ tertiary clarifiers Dual media filtration UV disinfection
Building 891 Consolidated Water Treatment Facility (CWTF)	• Water above discharge to ground limits • Water not accepted by WWTP • Water meets CWTF acceptance criteria and has both radionuclide and organic constituents	Chemical precipitation Microfiltration UV/ peroxide oxidation Granular activated carbon Ion exchange
Aqueous Wast Treatment System (AWTS)	• Water above discharge to ground limits • Water not accepted by WWTP • Water may have radionuclides, organic, RCRA Permitted wastes	Liquids shipped offiste for treatment by approved vendor

5.2 QUARTERLY INCIDENTAL WATER DISPOSITIONS

Eighteen (18) incidental waters were sampled/dispositioned during the second quarter of FY03. The following table summarizes the location and route of disposal.

Table 5-2. Quarterly Incidental Water Dispositions FY2003 (Jan, Feb, and Mar 2003).

Location Or Building	Location Type	Location Description	Number of Incidental Waters	Route of Disposal
130	Utility Pit	South side of B 130 under the truck scale.	1	To B891
231B	Secondary Containment	Secondary containment	1	To B995
460	Cooling Tower	Cooling Tower Discharge	1	To Ground or Storm Drain
559	Excavation	Pull box north of 559	1	To B891
569	Steam Pit	North Steam Pit	1	To Ground or Storm Drain
707	Fire Suppression System	Water used for fire suppression	1	To Ground or Storm Drain
750PAD	Potable Water	Testing high pressure washer with clean water	1	To Ground or Storm Drain
865	Cooling Tower	C865 Cooling tower	1	To Ground or Storm Drain
887	Utility Pit	887 Lift station previously used to send water to 995.	1	To B995
966	Sump	966 Pad Sump	1	To Ground or Storm Drain
968	Excavation	Excavation for water line cut and cap isolation	1	To Ground or Storm Drain
993	Drum	Tank in slab of 993	1	To B995
Central Ave	Utility Pit	Pull box - Central Ave	5	To B891
OLDLANDFILL	Drum	3 Drums of water from drilling operations in old landfill	1	To B995

The 18 incidental waters requiring treatment were routed to the following Site treatment facilities:

- Building 995 – WWTP 4
- Building 891 – CWTF 7
- AWTS 0
- Ground 7
- Cancelled 0