

Lowry Landfill Superfund Site Aurora, Colorado Surface Water Data Review

August 16, 2020



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Lowry Landfill Superfund Site, Aurora, Colorado

Surface Water Data Review

July 23, 2020

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1. Summary and Purpose

This white paper was prepared for the Lowry Landfill Superfund Site (LLSS) Community Advisory Group (CAG) in preparation for their participation and review of pending updates to the site conceptual model and groundwater monitoring plan. The need for this document was reviewed in a technical meeting with U.S. EPA Region 8 Superfund and the Colorado Department of Public Health and the Environment (CDPHE) on May 11, 2020, and is outlined in Figure 1.

Several key events at the site have resulted in the need to update the conceptual site model and monitoring plan. These events include:

- 1) Remedy performance monitoring wells along the northern boundary of the Site indicate regulatory compliance standards for numerous landfill leachate contaminants in shallow groundwater have been/are being exceeded for more than ten years;
- 2) A plume of the leachate contaminant 1,4-dioxane in shallow groundwater and surface water extends from the Site northward over 2 miles along Murphy Creek;
- 3) Since 1994, there has been no surface water monitoring program for the Site. Requirements for such a plan are specified in orders/agreements that reference the Surface Water Removal Action (SWRA);
- 4) Murphy Creek surface water north of and off the Site is partially recharged by shallow groundwater contaminated by leachate;
- 5) Surface water data, monitoring, and risk assessments north of the Site are inadequate to evaluate risk to human health from possible exposure to landfill contaminants in surface water;
- 6) The current Conceptual Site Model does not: adequately account for the surface water-groundwater relationship along Murphy Creek; identify data gaps; and monitor appropriately to reduce uncertainty and enable credible risk evaluation from potential contaminant exposure north of the landfill.

Ultimately, this review finds that the flawed Surface Water Removal Action (SWRA) monitoring program presents uncertainty for all the surface water results, interpretations and applications. Without being able to approximate and/or separate storm events or base flow, the resulting data is fraught with uncertainty to determine the effectiveness of the SWRA or shallow groundwater controls. In addition, the proposed risk assessment calculations utilizing a data set is more than ten years old, sparse (seven points) and unreliable does not meet a reasonable standard to make site decisions.

2. Introduction

The 507-acre LLSS historical facility is in western Arapahoe County, Colorado, about two miles east of Aurora. The Site operated from the mid-1960s until 1990 and includes a variety of liquid and solid wastes from industry and municipalities in lined/unlined pits and trenches (EPA, 2017). An estimated 145 million gallons of liquid waste was disposed at the Site although accurate records for this media are not available (Lawson, 1992). An estimated 13.7 million cubic yards of refuse were co-disposed with liquid in the waste pits with approximately 141 thousand cubic yards of refuse below the water table surface elevation. The type of contaminants reported in groundwater and subsurface liquid in the source area includes volatile organic compounds, semi-volatile organic compounds, trace metals, and radionuclides (Lawson, 1992).

The Site is located within the 7,800-acre Murphy Creek drainage system (Figure 2). An unnamed tributary to Murphy Creek along the facility western side (aka Unnamed Creek) is normally dry and conveys water during precipitation (storm water) or snow melt events. Groundwater is present under shallow and deep conditions with each system comprised of two zones: Alluvium/Dawson Formation (shallow); and unweathered Denver Formation/lignite (deep). Groundwater flow within the aquifer systems is predominantly to the north, although the shallow aquifer also shows components of flow to the east, west and south (EPA, 2017).

Surface water flows northward from the Site along the Murphy Creek drainage a distance of about four miles until it joins Coal Creek in the Triple Creek Greenway Corridor (Aurora, 2015). Historical surface water issues for the LLSS include storm runoff at the site along with seeps resulting in discharge to an unnamed creek; both surface water and the seeps are all located in the 7,800-acre Murphy Creek Drainage. The unnamed creek flows into Murphy Creek through the Murphy Creek golf course and residential area (Figure 3), past Gun Club Estates (older homes on private wells) then northeast through Denver suburbs before flowing into the South Platte River via Sand Creek.

3. History of Surface Water CERCLA Investigation

The U.S. Environmental Protection Agency (EPA) began monitoring the Lowry Landfill in 1981 when the Site was first considered for the National Priority List (NPL). Prior to that, from the mid-1960s until 1980, the City and County of Denver operated the landfill, and in 1980, Waste Management of Colorado took over operation of the landfill (EPA, 2020). In 1984 Lowry was placed on the NPL of Superfund sites (Lawson, 1992).

Under EPA oversight, response actions occurred prior to and after the 1994 signing of the record of decision (ROD). The ROD includes remedies for soils, surface water, sediments, groundwater, and landfill gases with on-site and off-site institutional controls. Containment is the primary remedy for Lowry achieved by a combination of slurry walls (an underground wall that prevents groundwater migration), groundwater collection trenches and extraction wells that act to prevent migration of chemicals of concern (COC) in concentrations in excess of site-specific limits set by

EPA. When an issue is detected in the network of monitoring wells, such as the unexpected detection of a previously unknown contaminant, appropriate contingency measures are considered, and if needed, actions are taken (EPA, 2020).

Following the 1984 Administrative Order on Consent (AOC), EPA required the design, construction and operation of a groundwater control and treatment system at the northern boundary of the Site known as the north boundary barrier wall or NBBW (EPA, 2017). This was followed by the 1991 AOC with EPA that required construction and operation of the SWRA. The SWRA consisted of upgrades to the groundwater treatment plant and a collection system within Unnamed Creek to segregate contaminated groundwater from uncontaminated surface water.

The 1994 ROD described contaminated seepage in the Unnamed Creek drainage (and sediments) from subsurface liquids into shallow groundwater-surface water as a primary threat to human health. To address these issues, the selected ROD remedy for surface water was included in Operable Unit 5 (OU5), Surface Water and Sediment for the Site, along with OU4 (Soils). The remedy was described as “No Further Action” because controls including the SWRA, were already operational at the Site mitigating contaminated water. As described in Section 11.5 of the ROD, the “remedy and current operations” components include (EPA, 1994):

- *Continued maintenance of the existing cover on the landfill mass*
- *Continued maintenance of other covered areas, including the unnamed creek drainage, vegetated areas, and the former tire pile area (after it is reclaimed), including visual monitoring for soil and sediment erosion*
- *As modified by this ROD, continued operation and maintenance of the SWRA and all its components, as set forth in the Consent Order (Docket No. CERCLA VH-91-12) and Modified Consent Decree (Civil Action 84- F-1507), including the existing ground-water barrier wall*
- *Mitigation of 0.87 acres of wetlands loss through construction of 0.87 acres of new wetlands*
- *Periodic monitoring of surface water runoff*

Remedial Action Objectives for the selected remedy for soils, surface water, and sediments were stated as (EPA, 1994):

- *Protection of human health and the environment from direct contact or ingestion of soils, surface water, and sediments containing contaminants that exceed the performance standards*
- *Protection of human health from inhalation of volatilized contaminants from the soils, surface water, or sediments; and inhalation of contaminated airborne particulate matter from soils or sediments that exceeds performance standards*
- *Minimization of the production and migration of contaminated surface water to the saturated zone and ground water*
- *Minimization of the migration of soils and sediments by erosion or entrainment by wind or water*

- *Minimization of migration of contaminated surface water offsite and into other media*

Section 11.5.1 of the ROD calls for annual monitoring of the surface water runoff into Unnamed Creek: “*to evaluate the incidence of and potential for contaminant migration.*” Three automated surface water samplers were installed along the western edge of the landfill in Section 31 and at the confluence of Unnamed Creek and Murphy Creek. Surface water sample parameters for laboratory analysis were not specified pending the later Remedial Design phase of the Site remediation process and EPA approval.

Despite the requirement for a surface water monitoring program in the ROD, the second five-year report stated (U.S. Environmental Protection Agency Region 8, 2007):

The current interim compliance monitoring program for surface water has been in place since 1996 and has not been re-considered or developed into a long-term compliance monitoring program for surface water. The Work Settling Defendants should develop a long-term compliance monitoring plan for surface water.

The second five year review continued with specifying that groundwater investigations north of the site had found 1,4-dioxane above performance standards in surface water two and half miles downstream of the site (Attachment 1, Figure 3). The review specified results as high as 79 µg/L 1,4-dioxane, the concentration on January 12, 2006 at SW3A, an order of magnitude above performance standards and three orders of magnitude above the 10⁻⁶ risk level drinking water concentration. (U.S. EPA, 2013).

Following the 2007 Five-Year Review, the 2008 Stormwater Monitoring Plan was developed to address long-term compliance monitoring (EMSI, 2008). The basis for the development of the EMSI plan was not the release of groundwater to surface water, the problem indicated in the Five-Year Review, but for stormwater runoff control only. A single sampling point (SWMP 1) immediately north of the site was established for a single, annual, grab sample associated with precipitation events (rain, snow melt) to be tested for: 1) Oil and Grease; 2) pH; 3) Chemical Oxygen Demand (COD); and 4) Total Suspended Solids (TSS). The single sampling point for storm water is sampled by a dip method without any quantification of the flow rate. The four stormwater monitoring parameters are not mentioned in leachate contaminant discussions in the ROD or specified in the Second Five-Year Review (EPA, 1994; EPA, 2007).

Surface water was a component of the investigation into leachate contamination in shallow groundwater north of the Site (EMSI, Addendum No. 1 to Work Plan for North End Investigation, 2006). The North End Investigation was initiated because elevated concentrations of 1,4-dioxane were detected in compliance wells around the North Boundary Barrier Wall (NBBW), a non-permeable, engineered slurry wall north of the confluence of Unnamed Creek and Murphy Creek (Figure 4). The North End Investigation Report first addendum included results from two surface water samples: ditch water at Quincy Avenue and Murphy Creek; and water upstream of the confluence of Unnamed Creek-Murphy Creek (EMSI, Addendum No. 1 to Work Plan for North End Investigation, 2006). The purpose of the additional samples was to, “obtain screening level information on the chemistry of shallow groundwater where it discharges into Murphy Creek.” The 2006 sample test results showed 1,4-dioxane in Murphy Creek surface

water, and levels ranged from 0 to 10 µg/L (Attachment 1). This data was used in a Human Health Risk Screening evaluation by EPA Region 8 as part of the Second Five-Year Review (EPA, 2007).

Further surface water monitoring and sampling did not occur until 2016, again as a component of the continuation of the North End Investigation, by then entering its second decade. The only justification for this sampling is described as (EMSI, 2016):

As requested by USEPA during a technical meeting on October 13, 2015, and as clarified in your emails dated November 4, 2015, December 8, 2015, and January 15, 2016, this Work Plan presents a work scope to sample existing monitoring wells, piezometers, and surface water stations for 1,4-dioxane, volatile organic compounds (VOCs), metals, nitrate, and nitrite beginning at the Yale Avenue extension well transect and extending northward to and including the recently-installed piezometers along Mississippi Avenue. In addition, one surface water sampling station (SW-3) is located south of the Yale Avenue extension.

Work Settling defendants (WSDs) understand that USEPA's data quality objective for having groundwater sampled is to update the transverse and longitudinal extent of 1,4-dioxane and other compounds north of Section 31. It is not intended to modify or replace the USEPA-approved North End Groundwater Monitoring Plan (EMSI, 2007 and 2008). As indicated above, WSDs have included surface water sampling as requested by the agency. USEPA's stated data quality objective for having surface water sampled is to update the surface water/groundwater quality relationship within the North End study area.

Surface water sampling locations in 2006 and 2016 were similar except for two new pond locations justified as (EMSI, 2016):

Surface Water sampling stations SWMC-08 and 09 are pond locations. Water stored in the ponds is effluent from Aurora's Sand Creek WWTP. The ponds are lined, so sampling from these stations does not address the surface water data quality objective stated above at these two sampling locations. However, because the effluent is applied to the Murphy Creek golf course for turf irrigation, and because sampling of this pond water in 2006 indicated the presence of 1,4-dioxane (SWMC-8 @ 1.6J and SWMC-9 @ 1.9J ug/L) the surface water data quality objective is addressed where the effluent is applied, plus downstream/downgradient from that application.

The Work Settling Defendants referenced in these excerpts are the Responsible Parties (RPs). Data from the 2006 and 2016 surface water sampling investigations is included in Attachment 1. A summary of the chronology of events related to surface water issues at the LLSS is presented in Table 1.

It is unclear from the provided stormwater document (EMSI, 2008) what the long-term stormwater management control looks like. The list of components of the selected remedy

include activities such as maintenance of existing cover areas and monitoring for surface water runoff, which are erosion and sediment control components of a stormwater closure plan.

The 2008 document also discusses the applicability of ARARs to the site, identifying that a landfill with stabilized final cover is not required to meet stormwater management goals; however, this statement lacks citations. Additionally, it is unclear what the suggested exemption has to do with the request from EPA to prepare a comprehensive surface water monitoring program. A superfund site is allowed exemptions from administration of regulatory tasks, such as permit applications, because EPA acknowledges that superfund sites are not typical regulated facilities and require discretion for appropriate emergency response and management, including increased standards of practice to ensure reduction of risk and impact to human health and the environment.

In addition to the general exemption and management discretion of Superfund Sites, the State of Colorado defines that “a discharge which either the Division [Water Quality Control Division of the Department of Public Health and Environment] or the EPA Regional Administrator determines to contribute to violation of a water quality standard or is a significant contributor of pollutants to state waters” are required to obtain a Stormwater Discharge Permit – Phase I (5 Code of Colorado Regulations 1002-61.3(2)(e)(vii)). In this case, the request from EPA and acknowledged discharges off-site would mean that this site meets this standard and the state ARAR would be applicable.

4. Surface Water Data

The surface water data for this review (Attachment 1) is contained in the “Surface Water Data” and “North End Investigation” sections from the most recent Site Operations and Maintenance Report (EMSI, 2019). The surface water data records can be divided into two sets: 1) Pre 1992 SWRA construction; and 2) Post 1992 SWRA construction. The data for both are included in Attachment 1 with the older data general labeled as the “DIO” series from May 20, 1985 to May 13, 1986. The Post 1992 SWRA construction current data set begins in June of 1997. The 1900 date on the final data point is an error in the database, but kept with Table 1 for completeness (EMSI, 2019). There is an eleven-year gap of no data collection or no data reported (2006-2017). The discussion below considers the data after June of 1997.

The EMSI generated database do not include data record entries describing surface water flow measurements, weather conditions, and type of flow (stormwater or base flow). Therefore, the surface water samples are assumed to be opportunistic grab samples taken in a general location near a feature (channel, seep, pond) that may or may not be filtered if such a notation is omitted in the data record.

The amount and representativeness of surface water data at the LLSS are limited and not designed to understand the surface water-groundwater system interrelationship with respect to leachate contamination source and migration. The suite of general water quality parameters and laboratory tests reported in the surface samples from 2006 and 2016 are incomplete to determine

if there is risk and exposure to humans and the environment. Changes in site system operations such as injection of potable water north of the NBBW (resulting in contaminant dilution) and variations in extraction well pump rates have the potential to impact the discharge of groundwater seeping into Murphy Creek complicating data interpretation.

As noted for the North End Investigation by the RPs, shallow groundwater discharges into Murphy Creek north of the Site and becomes surface water. The interrelationship between shallow groundwater and surface water flow in the Murphy Creek drainage is assumed to be analogous to the drainage system west of the landfill; Toll Gate Creek. Toll Gate Creek is a perennial gaining stream system elevated in natural selenium above aquatic standards that receives diffuse groundwater inflow during low flow conditions along an 18 km reach (Paschke, 2013). The Toll Gate Creek stream system was likely ephemeral before suburban development that included channelized storm runoff, lined-unlined channels/ponds and turf irrigation resulting in year-round surface water flow conditions. The Toll Gate Creek report may be an analog study of information necessary to understanding the natural source of molybdenum in shallow groundwater north of the NBBW in Murphy Creek.

The Murphy Creek system is analogous to the hydrogeology of Toll Gate Creek in that shallow groundwater from saturated Alluvium/weathered Dawson Formation discharge into and contribute to surface water as diffuse base flow. Shallow groundwater is present in Alluvium/weathered Dawson Formation at 0 to 60 feet below ground surface at the Site (EPA, 2017). Conditions indicate segments of Murphy Creek are intermittent where: 1) the bottom of the Murphy Creek streambed channel is above the elevation of shallow groundwater in the Alluvium/weathered Dawson units; 2) there is continuous flow at certain times of the year in the stream channel; and 3) the stream system receives water from a spring (seep), groundwater source (diffuse), or seasonal runoff (Levick, 2008). The definition of “ephemeral” requires that the streambed channel elevation is *always* above the top of the groundwater surface (Levick, 2008). The original assessment in the 1992 Remedial Investigation (Vol. I, Section 3.3.1, p.3-8) describes the Murphy Creek stream system as “ephemeral” (Lawson, 1992). Based on hydrologic conditions and observations of the stream system described in Site reports, Murphy Creek immediately north of the site is an intermittent stream.

Although it is not possible to determine sampling methods or filtering from the data set, weather data can provide some insight regarding flow conditions. For example, a review of the data from the weather station at the nearby airport shows that when the highest surface water value was reported, 79 µg/L 1,4-dioxane, the concentration on January 12, 2006 at SW3A, there had been no rain for a week, only 0.01 inches for the previous week and the nearby, downstream, gage (Sand Creek Gage) was running at 13 cfs, almost 40 cfs below average. This was very likely a sample of groundwater discharge.

For the samples used in the human health risk screening, collected on April 19, 2006, conditions were also dry with little rain that month and only 0.1 inches for the week. The 2016 data collected on May 9 and 10, however was during a period of more rain with 0.16 inches on the 9th and over 2.7 inches for the month. These later samples likely included more stormwater than surface water and the results do show lower concentrations when specific locations are compared. A simple paired Student t-test for the Creek set as a group (SWMC-01 through

SWMC-07) show the lower results from the later, likely stormwater, samples are significantly lower (95% confidence interval).

Due to the different types of samples, stormwater versus base flow, a suggestion of decreasing concentrations with time is not appropriate. However, the samples do indicate that stormwater releases may be less than releases from groundwater.

The surface water samples also include samples that are from lined ponds (SWMC-08 and SWMC-09) that are described as irrigation water from the City of Aurora Sand Creek Wastewater Treatment Plant (Sand Creek WWTP) used to irrigate the Murphy Creek Golf Course. The 1,4-dioxane concentrations from these ponds were 1.6 and 1.9 µg/L (J-flagged data) in 2006 but yielded lower concentrations (<0.15 and 0.17 µg/L) in 2016. The configuration of these ponds is unknown, lower values could include factors such as reduced 1,4-dioxane in plant influent, changes in treatment processes or stormwater dilution.

As indicated above, the annual sampling outlined in the 2008 plan (Engineering Management Support Inc., 2008) only provides data on TSS, COD and oil and grease with two years of pH data. The sampling does not include actual COCs. Analysis of the data finds that COD does correlate with rainfall, higher precipitation factors result in elevated COD releases, slope significant at the 95% confidence interval Figure 5. Samples at this location are also showing substantial total suspended solids (TSS) and detectable oil and grease (Attachment 1).

5. Screening Level Risk Assessment

A screening level risk assessment limited to 1,4-dioxane was provided by EPA as part of this review process on June 11, 2020 (Teschner, 2020). EPA Project Manager Linda Kiefer discussed this screening effort with the Citizens Advisor Group at multiple monthly meetings in 2019 and 2020 reasoning its purpose to support a no health risk conclusion for releases from the north end of the site.

The undated Assessment, provided as Appendix C of the Second Five Year Review for the LLSS (U.S. EPA Region 8, 2007), is based on data collected as part of the first amendment of the North End Investigation (Engineering Management Support, Inc., 2006). The seven data points sampled for 1,4-dioxane and nitrate only (Attachment 1) from March 2006. Only locations were provided for these samples; however, it can be reasonably determined that these samples were likely taken during base flow conditions. In addition, pond samples were excluded as was the value for 1,4-dioxane at SW3A taken 65 days earlier (79 µg/L).

The calculations presented in the 2007 assessment screening appear to not utilize the highest reported value for 1,4-dioxane (79 µg/L) that was specified in the second five year review or the upper confidence level of the mean; both methods consistent with U.S. EPA 2002, available prior to 2006 (U.S. EPA, 2002). In addition, samples from ponds (SWMC-08 and SWMC-09) were omitted without justification. The upper value of the 95% confidence value of the mean for

surface water data north of the site collected in the first quarter of 2016 is 23.9 µg/L using a simple detection limit substitution method for non-detects, and the maximum value is 79 µg/L.

The calculations in the 2007 risk assessment screening also used factors that were updated between 2010 and 2013 with the oral slope factor now 10^{-1} , compared to 10^{-2} and the 10^{-6} risk level for drinking water now 0.35 µg/L, compared to 3 µg/L.

Development has also continued in the area with new homes and apartments (Figure 6) on both sides of Murphy Creek along the plume of 1,4-dioxane, plus public parks and trails crossing and near the creek (Figure 7). With the plume of 1,4-dioxane now known to extend into and/or near Gun Club Estates (Figure 6), with their private drinking water wells, the assumption of a complete pathway for drinking water is correct.

6. Discussion

Remedy performance monitoring wells along the northern boundary of the Site indicate regulatory compliance standards for numerous landfill leachate contaminants in shallow groundwater have been/are being exceeded (Attachment 1). This is consistent with a plume of the leachate contaminant 1,4-dioxane in shallow groundwater and possibly surface water that extends from the Site northward over two miles in the area of Murphy Creek.

Since 1994, there has been no surface water monitoring program for LLSS despite requirements associated with the Surface Water Removal Action (SWRA). The 1994 ROD and the 2007 Second Five Year Review LLSS also are clear on the need for a surface water monitoring program. In both documents, surface water flow comprised of base flow was identified as an issue and monitoring of this condition along with the relationship to groundwater was identified and discussed. However, only stormwater flows are included in the 2008 surface water monitoring plan. The 2008 surface water plan also does not include actual site contaminants and as such, does not address the issues described in the ROD or later documents regarding surface water and/or storm water.

Monitoring decisions for surface water reflect an error in managing surface water compared stormwater. In the 2008 Surface Water Monitoring Plan, surface water releases from the site are attributed to stormwater only:

Both unnamed creek and the perimeter drainage ditches are dry and only contain water flow in response to significant (generally one-inch of precipitation or more) precipitation or snow melt events. As part of the development of this SWMP, a site visit was conducted with EPA in 2006 to assess monitoring requirements. Based on that site visit and subsequent evaluations conducted by EPA, EPA determined that the water being sampled pursuant to the ICMP did not meet the definition of surface water, but instead represented overland flow in response to storm events; that is it is actually stormwater not surface water.

However, for 36 surface and stormwater sampling events found in the database, only 4 events recorded more than one inch of precipitation in the previous 72 hours. More than 50% had no

precipitation in the previous 24 hours and a handful had no precipitation in the previous week (Table 2). This does not show that Murphy Creek always has water, but the description found in the workplan is incorrect; base flow samples can and have been collected with some frequency. At least one of these base flow samples, SWMC-03, compared to nearby well MW142WD do show similar 1,4-dioxane concentrations for base flow and possible dilution of 1,4-dioxane in base flow by stormwater (Table 4) but this observation is very limited by the small data set.

The flawed SWRA monitoring program presents uncertainty for all the surface water results, interpretations and applications. Without being able to approximate and/or separate storm events or base flow in association with measurements or estimates of flow, the resulting data is fraught with uncertainty to determine the effectiveness of the SWRA or shallow groundwater controls.

Adding to this uncertainty is the lack of surface water sampling that includes the COCs. In addition to the only annual program from the 2008 Surface Water Monitoring Plan limited sampling to pH, COD, TSS and Oil and Grease, the more comprehensive programs such as the 2006 sampling limited sampling to 1,4-dioxane and nitrate. Programs for surface water monitoring have even lacked planning and description; reported locations such as “SW-WL” are not described in reporting while others such as “SW-Quincy” appear to be opportunistic and outside of planning. Subsequently, evaluating surface conditions now or historically is not possible with the current data set; only forensic estimates are possible with a reliance on maximum values et cetera.

The Human Health Risk Screening is developed with only 7 data points. Discussion describing why those data points were selected and others omitted was not included in the report. In addition, the method for selecting the exposure point concentration did not represent the maximum concentration or an upper confidence interval of the surface water data collected that quarter. Subsequently, the Human Health Risk Screening underestimated the risk and, considering the changes in what is known about 1,4-dioxane toxicology, the document was out of date 24 months after it was presented. It is noteworthy that simply recalculating the Human Health Risk Screening is not a solution. In addition to the data set being undersized, it should include all the site COCs and the data is notably now half a decade old.

There is a case for background 1,4-dioxane due to the use of City of Aurora Sand Creek treated wastewater for irrigation on the Murphy Creek Golf Course. There is limited data on Sand Creek WWTP effluent and influent also presented in the latest database for the site (Engineering Management Support Inc, 2019). The data is presented in Table 3 and shows that in 2006 the effluent concentration was 1.6 µg/L and a month later, 1.7 µg/L with none detected in influent. This does support the concentrations found in the ponds in 2006 but if that relationship is extended to the 2016 data from the ponds, then the 1,4-dioxane concentrations in irrigation water were approaching non detect levels by 2016.

Once 1,4-dioxane is in surface water either from discharge from groundwater or from the use of reclaimed irrigation with 1,4-dioxane present it is not expected to biodegrade. However, it will volatilize at a moderate rate from water and soil surfaces to air and is subject to photooxidation with an estimated half life of 1-3 days (S. Wilbur, 2012). With the effluent used for irrigation

presented as stored in ponds prior to application, these processes would limit the contribution of 1,4-dioxane to both shallow groundwater and surface water. In addition, the highest concentrations in surface water, 79 µg/L 1,4-dioxane at SW3A from January 2006, was found up gradient and at higher elevation than the golf course. There is a significant potential that 1,4-dioxane contributions from irrigation water may not be significant.

In summary, the current Conceptual Site Model and Monitoring Plan(s) do not: adequately account for the surface water-groundwater relationship along Murphy Creek; identify data gaps; and monitor appropriately to reduce uncertainty and enable credible risk evaluation from potential contaminant exposure north of the landfill.

7. Recommendations

These recommendations are based on the following conclusions:

- There is no surface water monitoring plan for the site COCs despite directions in the ROD and suggestions in the five-year review.
- The historical data shows releases to surface water, including in the latest data.
- There are issues with data use in the now outdated Human Health Risk Screening.
- Limited data for the City of Aurora Sand Creek WWTP effluent used as irrigation water do not support its use as a significant contributor of 1,4-dioxane.

The recommendations include:

- Developing a surface water monitoring plan that includes Murphy Creek and its Tributaries in and near the known 1,4-dioxane plume.
- The 2007 Risk Screening should not be referenced, it is out of date and appears to have miscalculated the exposure point calculation.
- There needs to be a separation between stormwater monitoring and surface water monitoring through a comprehensive water monitoring program that also identifies shallow groundwater interface in surface water monitoring.
- Simple flow measurements are needed to meet the requirements for surface water monitoring.
- The shallow groundwater and surface water assessment cannot be two separate programs.
- In addition to the COCs, general water quality parameters should also be collected with routine monitoring for shallow groundwater and surface water to improve understanding of the groundwater/surface water system.

8. References

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Figures

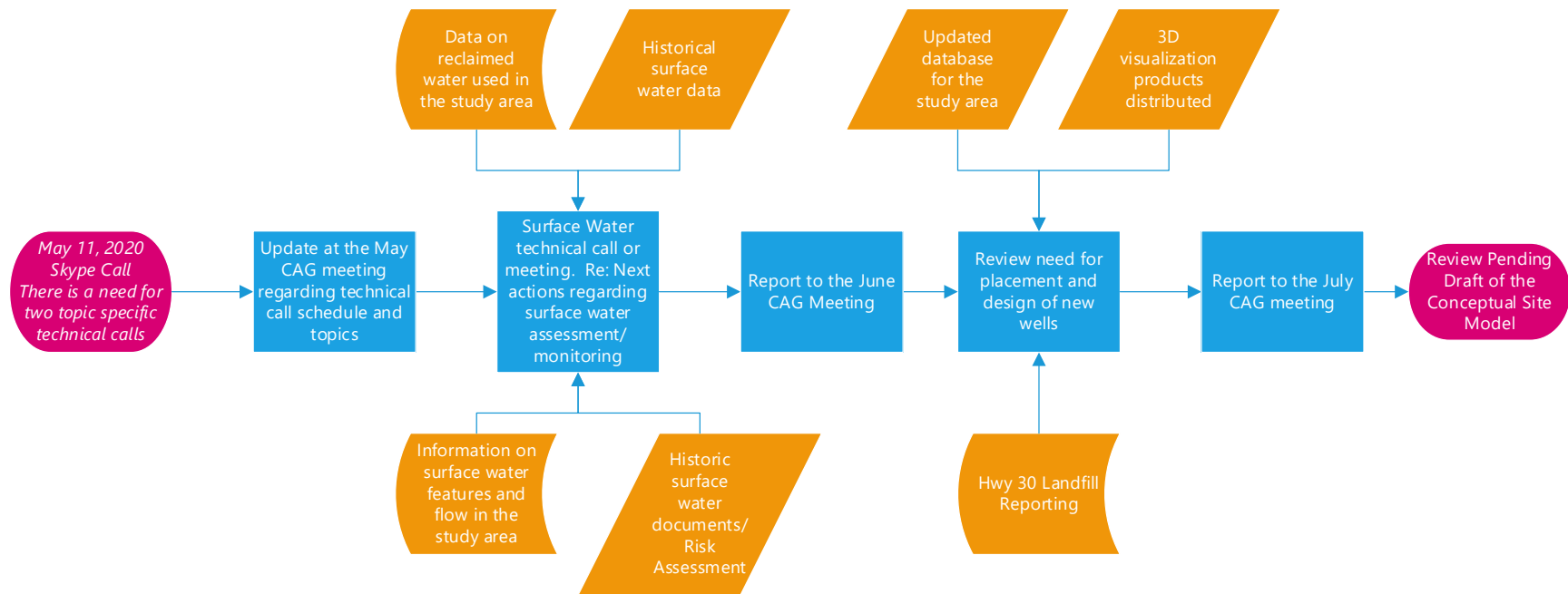


Figure 1. Flow chart for collection and review of surface water and groundwater data in preparation of review of the Conceptual Site Model and later updated Groundwater Monitoring Plan for the LLSS.

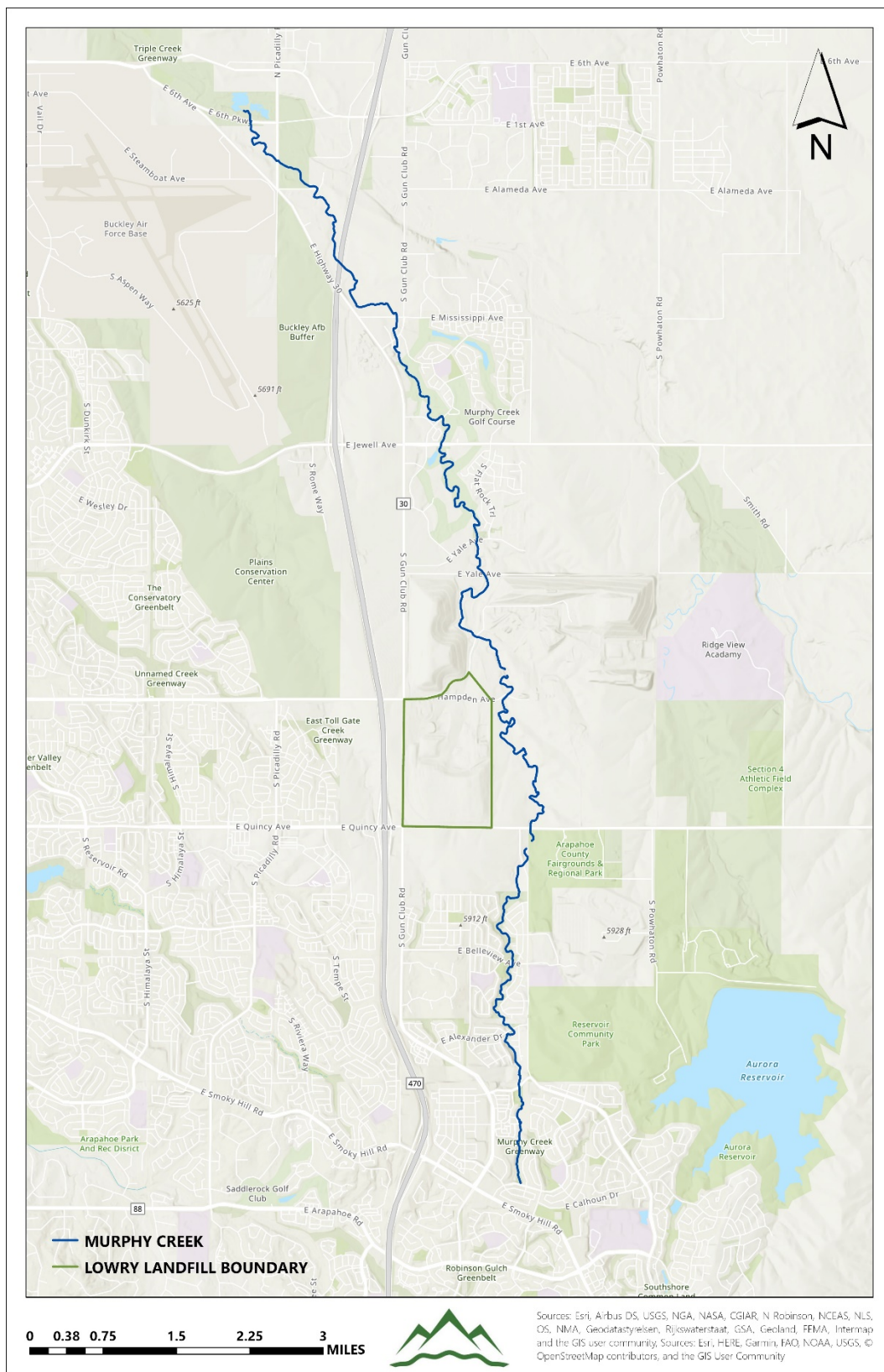


Figure 2. Map showing Murphy Creek and LLSS.

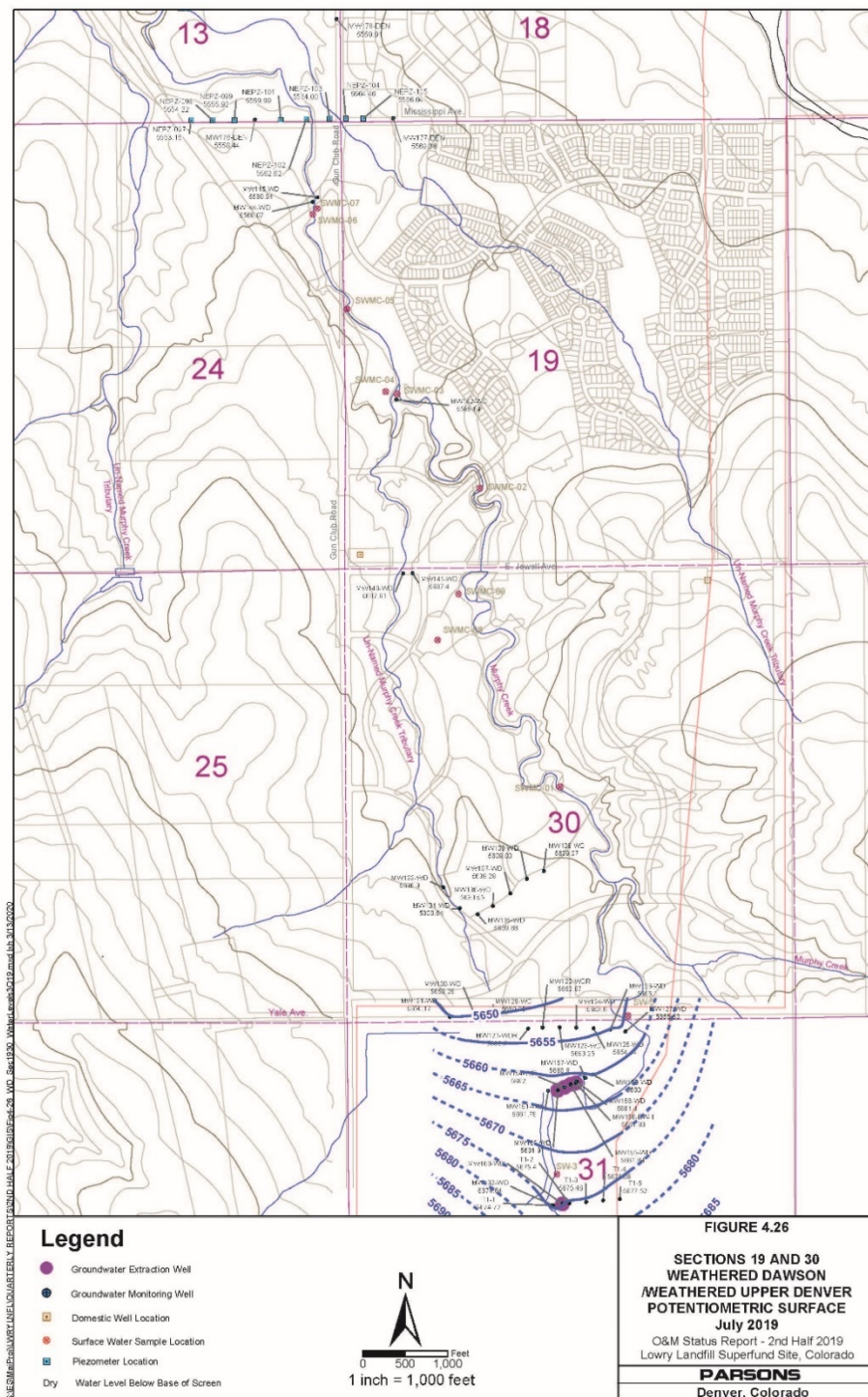


Figure 3. Map of the 2006 and 2016 surface water sampling locations, unnamed creek and Murphy Creek, Section 31 is immediately north of Section 6 where the LLSS is located.

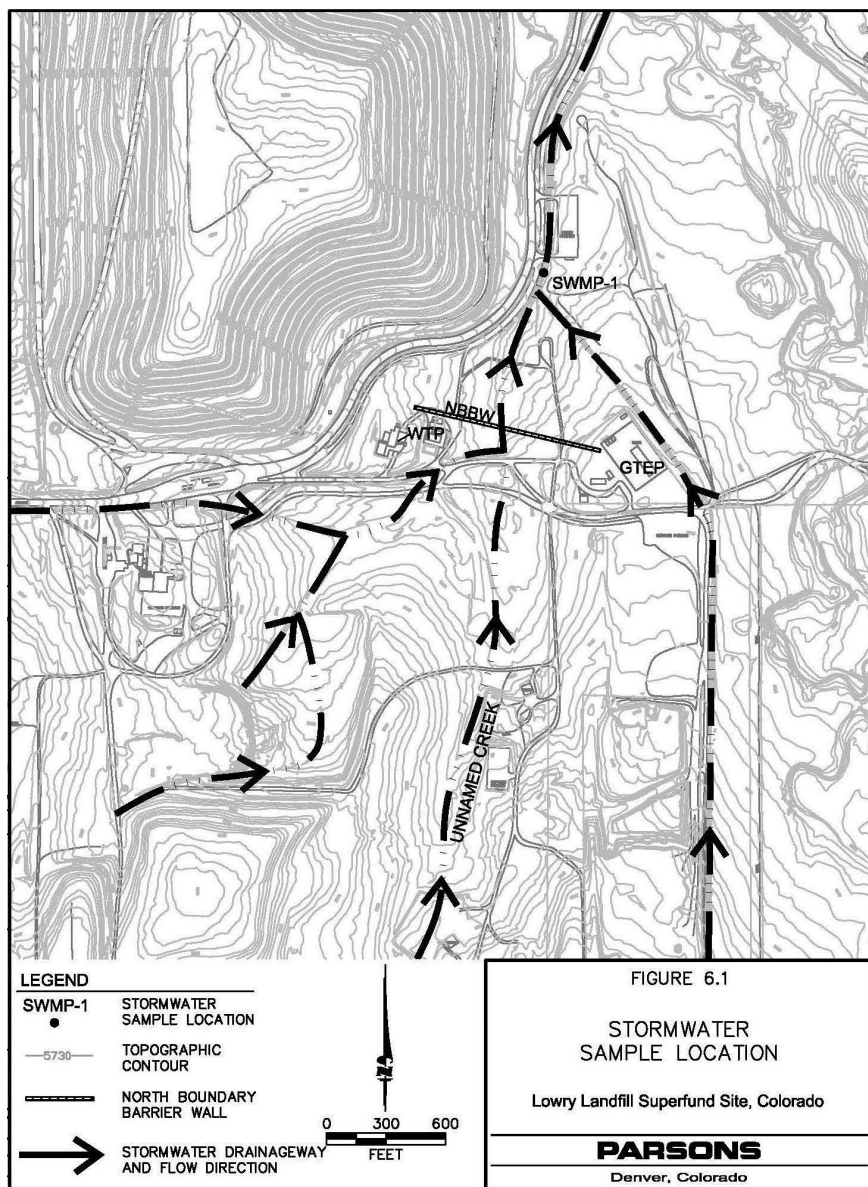


Figure 4. Map showing site flow and SWMP-1 sampling point (Engineering Management Support Inc., 2008).

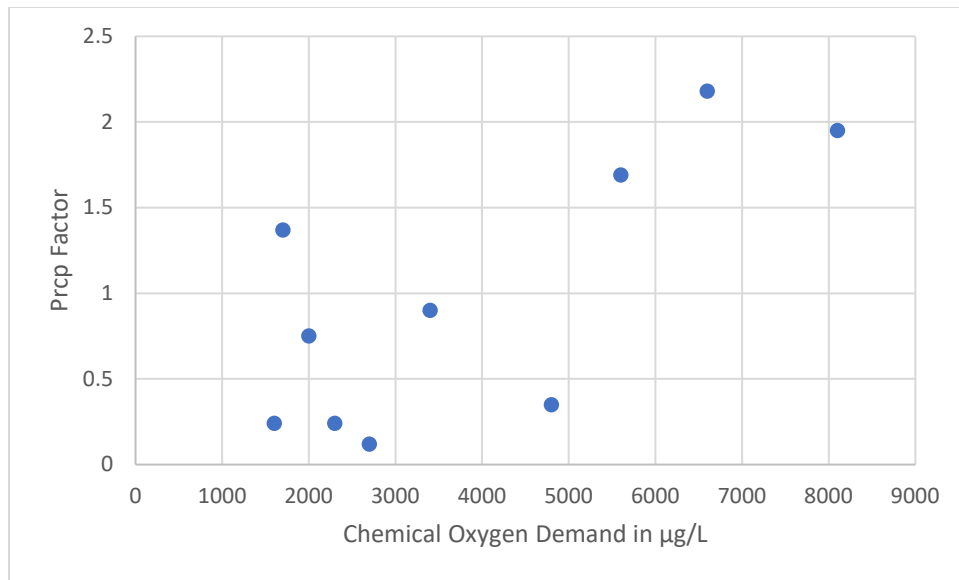


Figure 5. Prcp factor from Table 2 and COD values from SWMP 1.



Figure 6. Google earth images of the Murphy Creek 1,4-dioxane plume area, LLSS is immediately to the south of the image. Top image is from April of 2006 and bottom is August 2019. Note the residential development is along and now complete on both sides of Murphy Creek with additional development happening to the northeast. Homes with private wells include Gun Club Estates, circled in red.

Tables

Table 1. Chronology of Surface Water Issue Events, Lowry Landfill Superfund Site.

Year	Event	Result
1984	Consent Decree with RPs	Address & manage surface water contamination
1986	Consent Decree	Same as above?
1988	EPA EE/CA	Present & evaluate surface water management alternatives & costs as potential remedies
1990	EPA makes Action Recommendation	EPA selects preferred alternative to manage surface water issues
1991	Modified Consent Order	Specifies that surface water be managed to performance standards
1992	Construction & Upgrades to Water Treatment Plant (WTP)	More contaminated seepage captured & treated around down gradient boundaries of facility
1993	Barrier Wall Modified Consent Order	Manage leachate fluid with barrier wall system
1994	Record of Decision (ROD) under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA or Superfund) for site remediation & management with responsible parties	Identified surface water, shallow groundwater, & sediment contaminated by leachate as a threat to human health & environment. “No Further Action” remedy to this threat because the Surface Water Removal Action (SWRA components: landfill cover, slurry wall ground collection trench, & groundwater extraction wells) & institutional controls prevent exposure to contaminated water.
1996	Interim surface water monitoring program begins	Program focused on storm water runoff sampling & no performance criteria
2000	Water treatment plant (WTP) construction finished	
2005	North Toe Groundwater Extraction System WTP upgraded	
2006	Contaminant 1,4 Dioxane levels in detected in surface water over 2 miles north of facility	Levels of 1,4 dioxane at SW-03 (79 ug/L) are 87 times greater than the LLSF performance standard of 0.9 ug/L
2007	SECOND FIVE YEAR REVIEW (includes the Human Health Risk Assessment Screening.	Recommended development of long-term surface water monitoring plan
2008	Final Storm water Management Plan completed	Focus on storm water general parameters not land fill leachate contaminants
2012	THIRD FIVE YEAR REVIEW	Claims remedies for OU-4 (soils) & OU-5 (surface water) are protective of human health-environment
2016	Limited North End Surface Water Sampling	Conducted to update surface water-groundwater relationship in north end study area for 1,4 dioxane detections

Year	Event	Result
2017	FOURTH FIVE YEAR REVIEW	Claims remedies for OU-4 (soils) & OU-5 (surface water) are protective of human health-environment
2020	Elevated dissolved molybdenum in groundwater north of site	Dissolved Mo level in groundwater up to 1,000s of mg/L measured in north barrier extraction wells. Possibly natural source of Mo, but release suspected to involve leachate chemical interaction with shallow groundwater
2020	Surface Water Issue White Paper	Spells out the weaknesses & inadequacies of the surface water remedy & monitoring program

Table 2. Weather data from Denver/Stapleton and data from the Sand Creek Gage (USGS 394839104570300 Sand Creek at mouth, near Commerce City, CO) downstream from Murphy Creek. The Prcp Factor is $\text{Prcp. 24rs} + (\text{Prcp. 72 hrs}/3) + (\text{Prcp 7 days}/7) + (\text{Prcp 30 days}/30)$. Base flow was considered Prcp factor <0.5 , gage flow near or below average of 51, storm flow Prcp. Factor 0.2-0.5 and flow above average.

Sample Date	Sand Creek Gage	Prcp. 24 hrs	Prcp 72 hrs	Prcp 7 days	Prcp Month	Prcp Factor
Units	cfs	in	in	in	in	in/d weighted
6/16/1997	118	0	0.11	0.46	3.39	0.22
8/25/1998	124	0	0	0.57	2.99	0.18
7/30/1999	69	0	0.36	0.36	1.68	0.23
8/23/2000	21	0.01	0.01	3.17	3.17	0.57
7/9/2001	251	0.83	1.06	2.58	3.44	1.67
4/23/2003	331	0	0	0.29	0.87	0.07
4/24/2003	612	1.21	1.21	1.5	2.08	1.90
5/15/2003	35	0	0	2.02	3.88	0.42
7/26/2003	66	0	0	0	0.23	0.01
8/30/2003	353	0.65	0.75	0.77	1.36	1.06
7/22/2004	101	0	0	0.9	1.76	0.19
8/18/2004	701	0	0	0.05	2.01	0.07
6/3/2005	501	0.3	0.3	0.59	1.16	0.52
6/10/2005	466	0.63	0.63	1.81	2.64	1.19
1/12/2006	13	0	0	0	0.01	0.00
1/25/2006	12	0	0	0.3	0.33	0.05
3/30/2006	15	0	0	0	0.85	0.03
4/19/2006	82	0	0	0.1	0.69	0.04
4/26/2006	68	0	0.21	0.21	0.36	0.11
7/2/2006	48	0	0	0	0.06	0.00
7/3/2006	211	0.02	0.02	0.02	0.12	0.03

Sample Date	Sand Creek Gage	Prcp. 24 hrs	Prcp 72 hrs	Prcp 7 days	Prcp Month	Prcp Factor
Units	cfs	in	in	in	in	in/d weighted
4/24/2007	1190	0.34	0.35	0.38	1.47	0.56
4/26/2007	297	0.02	1.62	1.66	2.33	0.87
8/16/2008	793	0.45	0.83	0.89	1.5	0.90
4/19/2009	429	0.72	2.36	2.38	3.06	1.95
4/23/2010	929	0.97	1.33	1.37	2.35	1.69
7/14/2011	348	0.55	1.67	5.14	10.1	2.18
9/13/2013	741	0	0	0.17	2.99	0.12
5/13/2014		0.05	1.14	1.7	2.44	0.75
5/9/2015	494	0.68	0.93	1.73	3.98	1.37
7/29/2015	45.1	0	0	0.01	1.2	0.04
4/22/2016	132	0	0.03	1.67	3.18	0.35
5/4/2016	54	0	0.08	0.53	2.49	0.19
5/9/2016	34.5	0.16	0.2	0.2	2.72	0.35
5/10/2016	57.7	0	0.2	0.2	2.72	0.19
7/23/2018	304	0.14	0.14	0.14	1.11	0.24
6/18/2019	84.6	0.08	0.14	0.16	2.6	0.24

Table 3. Data for the City of Aurora Sand Creek Wastewater Treatment Plant (WWTP) including method detection limits (MDL). All units in µg/L, data from latest Operation and Maintenance report (Engineering Management Support Inc, 2019).

Sample Date	Sample Location	Parameter Name	Result	MDL	Reporting Limit
02-May-06	SAND CREEK WWTP EFF	Calcium	64000	34	200
02-May-06	SAND CREEK WWTP EFF	Iron	38	21	100
02-May-06	SAND CREEK WWTP EFF	Magnesium	12000	43	200
14-Jun-06	SAND CREEK WWTP EFF	1,4-Dioxane	1.7	0.5	5
14-Jun-06	SAND CREEK WWTP INF	1,4-Dioxane	<0.5	0.5	5
02-May-06	SAND CREEK WWTP EFF	Potassium	12000	240	3000
02-May-06	SAND CREEK WWTP EFF	Sodium	110000	31	5000
02-May-06	SAND CREEK WWTP EFF	Bromide	440	130	200
02-May-06	SAND CREEK WWTP EFF	Fluoride	880	60	1000
02-May-06	SAND CREEK WWTP EFF	Nitrogen, Nitrate	6100	42	500
02-May-06	SAND CREEK WWTP EFF	Nitrogen, Nitrite	230	49	500
02-May-06	SAND CREEK WWTP EFF	Orthophosphate as P	<500	190	500
02-May-06	SAND CREEK WWTP EFF	Chloride	85000	1300	15000
02-May-06	SAND CREEK WWTP EFF	Sulfate	170000	1200	25000
02-May-06	SAND CREEK WWTP EFF	1,4-Dioxane	1.8	0.5	5

Table 4. 1,4-dioxane values from a shallow wells (MW142WD) near a location sampled for surface water under base flow and surface water flow conditions.

<i>Date</i>	<i>Value</i>	<i>Date</i>	<i>Value</i>
<i>MW142WD</i>	<i>µg/L</i>	<i>SWMC-03</i>	<i>µg/L</i>
<i>(base Flow)</i>			
<i>21-Sep-06</i>	<i>9.9</i>	<i>30-Mar-06</i>	<i>10</i>
<i>25-Oct-06</i>	<i>11</i>	<i>19-April-06</i>	<i>9.4</i>
<i>(storm flow)</i>			
<i>03-May-16</i>	<i>3.3</i>	<i>09-May-16</i>	<i>0.49</i>

Attachment 1

Surface water data for the LLSS (Engineering Management Support Inc, 2019). Entries without Fraction indicated are unknown, entries without flag are values above Minimum Detection limit (MDL). J- estimated value, U – not detected, Reporting limit provided as results. Grey data likely stormwater, blue potentially base flow and green indeterminate. No color is associated with data not evaluated for flow conditions.

Sample Date	Master Loc	Parameter Name	Fraction	Result	Units	MDL	Flag
6/18/2019	SWMP-1	Chemical Oxygen Demand		120000	ug/L	43000	
6/18/2019	SWMP-1	HEM (Oil and Grease)		2300	ug/L	1500	J
6/18/2019	SWMP-1	Total Suspended Solids		4500000	ug/L	9200	
7/23/2018	SWMP-1	Chemical Oxygen Demand		57000	ug/L	20000	J
7/23/2018	SWMP-1	HEM (Oil and Grease)		1600	ug/L	1500	J
7/23/2018	SWMP-1	Total Suspended Solids		2000000	ug/L	11000	
5/10/2016	SWMC-02	1,1,1-Trichloroethane		1	ug/L	0.16	U
5/10/2016	SWMC-02	1,1,2,2-Tetrachloroethane		1	ug/L	0.21	U
5/10/2016	SWMC-02	1,1,2-Trichloroethane		1	ug/L	0.27	U
5/10/2016	SWMC-02	1,1-Dichloroethane		1	ug/L	0.22	U
5/10/2016	SWMC-02	1,1-Dichloroethene		1	ug/L	0.23	U
5/10/2016	SWMC-02	1,2-Dichloroethane		1	ug/L	0.13	U
5/10/2016	SWMC-02	1,2-Dichloropropane		1	ug/L	0.18	U
5/10/2016	SWMC-02	1,4-Dioxane		0.49	ug/L	0.15	J
5/10/2016	SWMC-02	1,4-Dioxane		200	ug/L	57	U
5/10/2016	SWMC-02	Acetone		8.4	ug/L	1.9	J
5/10/2016	SWMC-02	Arsenic		15	ug/L	4.4	U
5/10/2016	SWMC-02	Benzene		1	ug/L	0.16	U
5/10/2016	SWMC-02	Bromodichloromethane		1	ug/L	0.17	U
5/10/2016	SWMC-02	Bromoform		1	ug/L	0.19	U
5/10/2016	SWMC-02	Cadmium		0.77	ug/L	0.45	J
5/10/2016	SWMC-02	Carbon Tetrachloride		1	ug/L	0.19	U
5/10/2016	SWMC-02	Chlorobenzene		1	ug/L	0.17	U
5/10/2016	SWMC-02	Chloroform		1	ug/L	0.16	U
5/10/2016	SWMC-02	cis-1,2-Dichloroethene		1	ug/L	0.15	U
5/10/2016	SWMC-02	Dibromochloromethane		1	ug/L	0.17	U
5/10/2016	SWMC-02	Ethylbenzene		1	ug/L	0.16	U
5/10/2016	SWMC-02	Iron		50	ug/L	22	J B

Sample Date	Master Loc	Parameter Name	Fraction	Result	Units	MDL	Flag
5/10/2016	SWMC-02	Methylene Chloride		1	ug/L	0.32	U
5/10/2016	SWMC-02	Naphthalene		1	ug/L	0.22	U
5/10/2016	SWMC-02	Nitrogen, Nitrate		270	ug/L	42	J
5/10/2016	SWMC-02	Nitrogen, Nitrite		500	ug/L	49	U
5/10/2016	SWMC-02	Tetrachloroethene		1	ug/L	0.2	U
5/10/2016	SWMC-02	Toluene		1	ug/L	0.17	U
5/10/2016	SWMC-02	Trans-1,2-Dichloroethene		0.5	ug/L	0.15	U
5/10/2016	SWMC-02	Trichloroethene		1	ug/L	0.16	U
5/10/2016	SWMC-02	Vinyl Chloride		2	ug/L	0.1	U
5/10/2016	SWMC-05	1,1,1-Trichloroethane		1	ug/L	0.16	U
5/10/2016	SWMC-05	1,1,2,2-Tetrachloroethane		1	ug/L	0.21	U
5/10/2016	SWMC-05	1,1,2-Trichloroethane		1	ug/L	0.27	U
5/10/2016	SWMC-05	1,1-Dichloroethane		1	ug/L	0.22	U
5/10/2016	SWMC-05	1,1-Dichloroethene		1	ug/L	0.23	U
5/10/2016	SWMC-05	1,2-Dichloroethane		1	ug/L	0.13	U
5/10/2016	SWMC-05	1,2-Dichloropropane		1	ug/L	0.18	U
5/10/2016	SWMC-05	1,4-Dioxane		0.54	ug/L	0.15	J
5/10/2016	SWMC-05	1,4-Dioxane		200	ug/L	57	U
5/10/2016	SWMC-05	Acetone		5.8	ug/L	1.9	J
5/10/2016	SWMC-05	Arsenic		15	ug/L	4.4	U
5/10/2016	SWMC-05	Benzene		1	ug/L	0.16	U
5/10/2016	SWMC-05	Bromodichloromethane		1	ug/L	0.17	U
5/10/2016	SWMC-05	Bromoform		1	ug/L	0.19	U
5/10/2016	SWMC-05	Cadmium		0.75	ug/L	0.45	J
5/10/2016	SWMC-05	Carbon Tetrachloride		1	ug/L	0.19	U
5/10/2016	SWMC-05	Chlorobenzene		1	ug/L	0.17	U
5/10/2016	SWMC-05	Chloroform		1	ug/L	0.16	U
5/10/2016	SWMC-05	cis-1,2-Dichloroethene		1	ug/L	0.15	U
5/10/2016	SWMC-05	Dibromochloromethane		1	ug/L	0.17	U

Sample Date	Master Loc	Parameter Name	Fraction	Result	Units	MDL	Flag
5/10/2016	SWMC-05	Ethylbenzene		1	ug/L	0.16	U
5/10/2016	SWMC-05	Iron		36	ug/L	22	J B
5/10/2016	SWMC-05	Methylene Chloride		1	ug/L	0.32	U
5/10/2016	SWMC-05	Naphthalene		1	ug/L	0.22	U
5/10/2016	SWMC-05	Nitrogen, Nitrate		150	ug/L	42	J
5/10/2016	SWMC-05	Nitrogen, Nitrite		500	ug/L	49	U
5/10/2016	SWMC-05	Tetrachloroethene		1	ug/L	0.2	U
5/10/2016	SWMC-05	Toluene		1	ug/L	0.17	U
5/10/2016	SWMC-05	Trans-1,2-Dichloroethene		0.5	ug/L	0.15	U
5/10/2016	SWMC-05	Trichloroethene		1	ug/L	0.16	U
5/10/2016	SWMC-05	Vinyl Chloride		2	ug/L	0.1	U
5/10/2016	SWMC-06	1,1,1-Trichloroethane		1	ug/L	0.16	U
5/10/2016	SWMC-06	1,1,2,2-Tetrachloroethane		1	ug/L	0.21	U
5/10/2016	SWMC-06	1,1,2-Trichloroethane		1	ug/L	0.27	U
5/10/2016	SWMC-06	1,1-Dichloroethane		1	ug/L	0.22	U
5/10/2016	SWMC-06	1,1-Dichloroethene		1	ug/L	0.23	U
5/10/2016	SWMC-06	1,2-Dichloroethane		1	ug/L	0.13	U
5/10/2016	SWMC-06	1,2-Dichloropropane		1	ug/L	0.18	U
5/10/2016	SWMC-06	1,4-Dioxane		0.6	ug/L	0.15	J
5/10/2016	SWMC-06	1,4-Dioxane		200	ug/L	57	U
5/10/2016	SWMC-06	Acetone		4.4	ug/L	1.9	J
5/10/2016	SWMC-06	Arsenic		15	ug/L	4.4	U
5/10/2016	SWMC-06	Benzene		1	ug/L	0.16	U
5/10/2016	SWMC-06	Bromodichloromethane		1	ug/L	0.17	U
5/10/2016	SWMC-06	Bromoform		1	ug/L	0.19	U
5/10/2016	SWMC-06	Cadmium		0.75	ug/L	0.45	J
5/10/2016	SWMC-06	Carbon Tetrachloride		1	ug/L	0.19	U
5/10/2016	SWMC-06	Chlorobenzene		1	ug/L	0.17	U
5/10/2016	SWMC-06	Chloroform		1	ug/L	0.16	U

Sample Date	Master Loc	Parameter Name	Fraction	Result	Units	MDL	Flag
5/10/2016	SWMC-06	cis-1,2-Dichloroethene		1	ug/L	0.15	U
5/10/2016	SWMC-06	Dibromochloromethane		1	ug/L	0.17	U
5/10/2016	SWMC-06	Ethylbenzene		1	ug/L	0.16	U
5/10/2016	SWMC-06	Iron		46	ug/L	22	J B
5/10/2016	SWMC-06	Methylene Chloride		1	ug/L	0.32	U
5/10/2016	SWMC-06	Naphthalene		1	ug/L	0.22	U
5/10/2016	SWMC-06	Nitrogen, Nitrate		120	ug/L	42	J
5/10/2016	SWMC-06	Nitrogen, Nitrite		500	ug/L	49	U
5/10/2016	SWMC-06	Tetrachloroethene		1	ug/L	0.2	U
5/10/2016	SWMC-06	Toluene		1	ug/L	0.17	U
5/10/2016	SWMC-06	Trans-1,2-Dichloroethene		0.5	ug/L	0.15	U
5/10/2016	SWMC-06	Trichloroethene		1	ug/L	0.16	U
5/10/2016	SWMC-06	Vinyl Chloride		2	ug/L	0.1	U
5/10/2016	SWMC-07	1,1,1-Trichloroethane		1	ug/L	0.16	U
5/10/2016	SWMC-07	1,1,2,2-Tetrachloroethane		1	ug/L	0.21	U
5/10/2016	SWMC-07	1,1,2-Trichloroethane		1	ug/L	0.27	U
5/10/2016	SWMC-07	1,1-Dichloroethane		1	ug/L	0.22	U
5/10/2016	SWMC-07	1,1-Dichloroethene		1	ug/L	0.23	U
5/10/2016	SWMC-07	1,2-Dichloroethane		1	ug/L	0.13	U
5/10/2016	SWMC-07	1,2-Dichloropropane		1	ug/L	0.18	U
5/10/2016	SWMC-07	1,4-Dioxane		0.53	ug/L	0.15	J
5/10/2016	SWMC-07	1,4-Dioxane		200	ug/L	57	U
5/10/2016	SWMC-07	Acetone		2.3	ug/L	1.9	J
5/10/2016	SWMC-07	Arsenic		15	ug/L	4.4	U
5/10/2016	SWMC-07	Benzene		1	ug/L	0.16	U
5/10/2016	SWMC-07	Bromodichloromethane		1	ug/L	0.17	U
5/10/2016	SWMC-07	Bromoform		1	ug/L	0.19	U
5/10/2016	SWMC-07	Cadmium		5	ug/L	0.45	U
5/10/2016	SWMC-07	Carbon Tetrachloride		1	ug/L	0.19	U

Sample Date	Master Loc	Parameter Name	Fraction	Result	Units	MDL	Flag
5/10/2016	SWMC-07	Chlorobenzene		1	ug/L	0.17	U
5/10/2016	SWMC-07	Chloroform		1	ug/L	0.16	U
5/10/2016	SWMC-07	cis-1,2-Dichloroethene		1	ug/L	0.15	U
5/10/2016	SWMC-07	Dibromochloromethane		1	ug/L	0.17	U
5/10/2016	SWMC-07	Ethylbenzene		1	ug/L	0.16	U
5/10/2016	SWMC-07	Iron		45	ug/L	22	J B
5/10/2016	SWMC-07	Methylene Chloride		1	ug/L	0.32	U
5/10/2016	SWMC-07	Naphthalene		1	ug/L	0.22	U
5/10/2016	SWMC-07	Nitrogen, Nitrate		110	ug/L	42	J
5/10/2016	SWMC-07	Nitrogen, Nitrite		500	ug/L	49	U
5/10/2016	SWMC-07	Tetrachloroethene		1	ug/L	0.2	U
5/10/2016	SWMC-07	Toluene		1	ug/L	0.17	U
5/10/2016	SWMC-07	Trans-1,2-Dichloroethene		0.5	ug/L	0.15	U
5/10/2016	SWMC-07	Trichloroethene		1	ug/L	0.16	U
5/10/2016	SWMC-07	Vinyl Chloride		2	ug/L	0.1	U
5/9/2016	SW-5	1,1,1-Trichloroethane		1	ug/L	0.16	U
5/9/2016	SW-5	1,1,2,2-Tetrachloroethane		1	ug/L	0.21	U
5/9/2016	SW-5	1,1,2-Trichloroethane		1	ug/L	0.27	U
5/9/2016	SW-5	1,1-Dichloroethane		1	ug/L	0.22	U
5/9/2016	SW-5	1,1-Dichloroethene		1	ug/L	0.23	U
5/9/2016	SW-5	1,2-Dichloroethane		1	ug/L	0.13	U
5/9/2016	SW-5	1,2-Dichloropropane		1	ug/L	0.18	U
5/9/2016	SW-5	1,4-Dioxane		0.5	ug/L	0.15	J
5/9/2016	SW-5	1,4-Dioxane		200	ug/L	57	U
5/9/2016	SW-5	Acetone		3.3	ug/L	1.9	J
5/9/2016	SW-5	Arsenic		15	ug/L	4.4	U
5/9/2016	SW-5	Benzene		1	ug/L	0.16	U
5/9/2016	SW-5	Bromodichloromethane		1	ug/L	0.17	U
5/9/2016	SW-5	Bromoform		1	ug/L	0.19	U

Sample Date	Master Loc	Parameter Name	Fraction	Result	Units	MDL	Flag
5/9/2016	SW-5	Cadmium		5	ug/L	0.45	U
5/9/2016	SW-5	Carbon Tetrachloride		1	ug/L	0.19	U
5/9/2016	SW-5	Chlorobenzene		1	ug/L	0.17	U
5/9/2016	SW-5	Chloroform		1	ug/L	0.16	U
5/9/2016	SW-5	cis-1,2-Dichloroethene		1	ug/L	0.15	U
5/9/2016	SW-5	Dibromochloromethane		1	ug/L	0.17	U
5/9/2016	SW-5	Ethylbenzene		1	ug/L	0.16	U
5/9/2016	SW-5	Iron		37	ug/L	22	J B
5/9/2016	SW-5	Methylene Chloride		1	ug/L	0.32	U
5/9/2016	SW-5	Naphthalene		1	ug/L	0.22	U
5/9/2016	SW-5	Nitrogen, Nitrate		810	ug/L	42	
5/9/2016	SW-5	Nitrogen, Nitrite		500	ug/L	49	U
5/9/2016	SW-5	Tetrachloroethene		1	ug/L	0.2	U
5/9/2016	SW-5	Toluene		1	ug/L	0.17	U
5/9/2016	SW-5	Trans-1,2-Dichloroethene		0.5	ug/L	0.15	U
5/9/2016	SW-5	Trichloroethene		1	ug/L	0.16	U
5/9/2016	SW-5	Vinyl Chloride		2	ug/L	0.1	U
5/9/2016	SWMC-01	1,1,1-Trichloroethane		1	ug/L	0.16	U
5/9/2016	SWMC-01	1,1,2,2-Tetrachloroethane		1	ug/L	0.21	U
5/9/2016	SWMC-01	1,1,2-Trichloroethane		1	ug/L	0.27	U
5/9/2016	SWMC-01	1,1-Dichloroethane		1	ug/L	0.22	U
5/9/2016	SWMC-01	1,1-Dichloroethene		1	ug/L	0.23	U
5/9/2016	SWMC-01	1,2-Dichloroethane		1	ug/L	0.13	U
5/9/2016	SWMC-01	1,2-Dichloropropane		1	ug/L	0.18	U
5/9/2016	SWMC-01	1,4-Dioxane		0.46	ug/L	0.15	J
5/9/2016	SWMC-01	1,4-Dioxane		200	ug/L	57	U
5/9/2016	SWMC-01	Acetone		4.5	ug/L	1.9	J
5/9/2016	SWMC-01	Arsenic		15	ug/L	4.4	U
5/9/2016	SWMC-01	Benzene		1	ug/L	0.16	U

Sample Date	Master Loc	Parameter Name	Fraction	Result	Units	MDL	Flag
5/9/2016	SWMC-01	Bromodichloromethane		1	ug/L	0.17	U
5/9/2016	SWMC-01	Bromoform		1	ug/L	0.19	U
5/9/2016	SWMC-01	Cadmium		5	ug/L	0.45	U
5/9/2016	SWMC-01	Carbon Tetrachloride		1	ug/L	0.19	U
5/9/2016	SWMC-01	Chlorobenzene		1	ug/L	0.17	U
5/9/2016	SWMC-01	Chloroform		1	ug/L	0.16	U
5/9/2016	SWMC-01	cis-1,2-Dichloroethene		1	ug/L	0.15	U
5/9/2016	SWMC-01	Dibromochloromethane		1	ug/L	0.17	U
5/9/2016	SWMC-01	Ethylbenzene		1	ug/L	0.16	U
5/9/2016	SWMC-01	Iron		49	ug/L	22	J B
5/9/2016	SWMC-01	Methylene Chloride		1	ug/L	0.32	U
5/9/2016	SWMC-01	Naphthalene		1	ug/L	0.22	U
5/9/2016	SWMC-01	Nitrogen, Nitrate		380	ug/L	42	J
5/9/2016	SWMC-01	Nitrogen, Nitrite		500	ug/L	49	U
5/9/2016	SWMC-01	Tetrachloroethene		1	ug/L	0.2	U
5/9/2016	SWMC-01	Toluene		1	ug/L	0.17	U
5/9/2016	SWMC-01	Trans-1,2-Dichloroethene		0.5	ug/L	0.15	U
5/9/2016	SWMC-01	Trichloroethene		1	ug/L	0.16	U
5/9/2016	SWMC-01	Vinyl Chloride		2	ug/L	0.1	U
5/9/2016	SWMC-03	1,1,1-Trichloroethane		1	ug/L	0.16	U
5/9/2016	SWMC-03	1,1,2,2-Tetrachloroethane		1	ug/L	0.21	U
5/9/2016	SWMC-03	1,1,2-Trichloroethane		1	ug/L	0.27	U
5/9/2016	SWMC-03	1,1-Dichloroethane		1	ug/L	0.22	U
5/9/2016	SWMC-03	1,1-Dichloroethene		1	ug/L	0.23	U
5/9/2016	SWMC-03	1,2-Dichloroethane		1	ug/L	0.13	U
5/9/2016	SWMC-03	1,2-Dichloropropane		1	ug/L	0.18	U
5/9/2016	SWMC-03	1,4-Dioxane		0.49	ug/L	0.15	J
5/9/2016	SWMC-03	1,4-Dioxane		200	ug/L	57	U
5/9/2016	SWMC-03	Acetone		4.4	ug/L	1.9	J

Sample Date	Master Loc	Parameter Name	Fraction	Result	Units	MDL	Flag
5/9/2016	SWMC-03	Arsenic		4.4	ug/L	4.4	J
5/9/2016	SWMC-03	Benzene		1	ug/L	0.16	U
5/9/2016	SWMC-03	Bromodichloromethane		1	ug/L	0.17	U
5/9/2016	SWMC-03	Bromoform		1	ug/L	0.19	U
5/9/2016	SWMC-03	Cadmium		1	ug/L	0.45	J
5/9/2016	SWMC-03	Carbon Tetrachloride		1	ug/L	0.19	U
5/9/2016	SWMC-03	Chlorobenzene		1	ug/L	0.17	U
5/9/2016	SWMC-03	Chloroform		1	ug/L	0.16	U
5/9/2016	SWMC-03	cis-1,2-Dichloroethene		1	ug/L	0.15	U
5/9/2016	SWMC-03	Dibromochloromethane		1	ug/L	0.17	U
5/9/2016	SWMC-03	Ethylbenzene		1	ug/L	0.16	U
5/9/2016	SWMC-03	Iron		73	ug/L	22	J B
5/9/2016	SWMC-03	Methylene Chloride		1	ug/L	0.32	U
5/9/2016	SWMC-03	Naphthalene		1	ug/L	0.22	U
5/9/2016	SWMC-03	Nitrogen, Nitrate		340	ug/L	42	J
5/9/2016	SWMC-03	Nitrogen, Nitrite		500	ug/L	49	U
5/9/2016	SWMC-03	Tetrachloroethene		1	ug/L	0.2	U
5/9/2016	SWMC-03	Toluene		1	ug/L	0.17	U
5/9/2016	SWMC-03	Trans-1,2-Dichloroethene		0.5	ug/L	0.15	U
5/9/2016	SWMC-03	Trichloroethene		1	ug/L	0.16	U
5/9/2016	SWMC-03	Vinyl Chloride		2	ug/L	0.1	U
5/9/2016	SWMC-04	1,1,1-Trichloroethane		1	ug/L	0.16	U
5/9/2016	SWMC-04	1,1,2,2-Tetrachloroethane		1	ug/L	0.21	U
5/9/2016	SWMC-04	1,1,2-Trichloroethane		1	ug/L	0.27	U
5/9/2016	SWMC-04	1,1-Dichloroethane		1	ug/L	0.22	U
5/9/2016	SWMC-04	1,1-Dichloroethene		1	ug/L	0.23	U
5/9/2016	SWMC-04	1,2-Dichloroethane		1	ug/L	0.13	U
5/9/2016	SWMC-04	1,2-Dichloropropane		1	ug/L	0.18	U
5/9/2016	SWMC-04	1,4-Dioxane		200	ug/L	57	U

Sample Date	Master Loc	Parameter Name	Fraction	Result	Units	MDL	Flag
5/9/2016	SWMC-04	1,4-Dioxane		3.1	ug/L	0.15	
5/9/2016	SWMC-04	Acetone		10	ug/L	1.9	U
5/9/2016	SWMC-04	Arsenic		15	ug/L	4.4	U
5/9/2016	SWMC-04	Benzene		1	ug/L	0.16	U
5/9/2016	SWMC-04	Bromodichloromethane		1	ug/L	0.17	U
5/9/2016	SWMC-04	Bromoform		1	ug/L	0.19	U
5/9/2016	SWMC-04	Cadmium		0.84	ug/L	0.45	J
5/9/2016	SWMC-04	Carbon Tetrachloride		1	ug/L	0.19	U
5/9/2016	SWMC-04	Chlorobenzene		1	ug/L	0.17	U
5/9/2016	SWMC-04	Chloroform		1	ug/L	0.16	U
5/9/2016	SWMC-04	cis-1,2-Dichloroethene		1	ug/L	0.15	U
5/9/2016	SWMC-04	Dibromochloromethane		1	ug/L	0.17	U
5/9/2016	SWMC-04	Ethylbenzene		1	ug/L	0.16	U
5/9/2016	SWMC-04	Iron		28	ug/L	22	J B
5/9/2016	SWMC-04	Methylene Chloride		1	ug/L	0.32	U
5/9/2016	SWMC-04	Naphthalene		1	ug/L	0.22	U
5/9/2016	SWMC-04	Nitrogen, Nitrate		500	ug/L	42	U
5/9/2016	SWMC-04	Nitrogen, Nitrite		500	ug/L	49	U
5/9/2016	SWMC-04	Tetrachloroethene		1	ug/L	0.2	U
5/9/2016	SWMC-04	Toluene		1	ug/L	0.17	U
5/9/2016	SWMC-04	Trans-1,2-Dichloroethene		0.5	ug/L	0.15	U
5/9/2016	SWMC-04	Trichloroethene		1	ug/L	0.16	U
5/9/2016	SWMC-04	Vinyl Chloride		2	ug/L	0.1	U
5/4/2016	SWMC-08	1,1,1-Trichloroethane		1	ug/L	0.16	U
5/4/2016	SWMC-08	1,1,2,2-Tetrachloroethane		1	ug/L	0.21	U
5/4/2016	SWMC-08	1,1,2-Trichloroethane		1	ug/L	0.27	U
5/4/2016	SWMC-08	1,1-Dichloroethane		1	ug/L	0.22	U
5/4/2016	SWMC-08	1,1-Dichloroethene		1	ug/L	0.23	U
5/4/2016	SWMC-08	1,2-Dichloroethane		1	ug/L	0.13	U

Sample Date	Master Loc	Parameter Name	Fraction	Result	Units	MDL	Flag
5/4/2016	SWMC-08	1,2-Dichloropropane		1	ug/L	0.18	U
5/4/2016	SWMC-08	1,4-Dioxane		0.17	ug/L	0.15	J
5/4/2016	SWMC-08	1,4-Dioxane		200	ug/L	57	U
5/4/2016	SWMC-08	Acetone		7	ug/L	1.9	J
5/4/2016	SWMC-08	Arsenic		15	ug/L	4.4	U
5/4/2016	SWMC-08	Benzene		1	ug/L	0.16	U
5/4/2016	SWMC-08	Bromodichloromethane		1	ug/L	0.17	U
5/4/2016	SWMC-08	Bromoform		1	ug/L	0.19	U
5/4/2016	SWMC-08	Cadmium		5	ug/L	0.45	U
5/4/2016	SWMC-08	Carbon Tetrachloride		1	ug/L	0.19	U
5/4/2016	SWMC-08	Chlorobenzene		1	ug/L	0.17	U
5/4/2016	SWMC-08	Chloroform		1	ug/L	0.16	U
5/4/2016	SWMC-08	cis-1,2-Dichloroethene		1	ug/L	0.15	U
5/4/2016	SWMC-08	Dibromochloromethane		1	ug/L	0.17	U
5/4/2016	SWMC-08	Ethylbenzene		1	ug/L	0.16	U
5/4/2016	SWMC-08	Iron		31	ug/L	22	J
5/4/2016	SWMC-08	Methylene Chloride		1	ug/L	0.32	U
5/4/2016	SWMC-08	Naphthalene		1	ug/L	0.22	U
5/4/2016	SWMC-08	Nitrogen, Nitrate		130	ug/L	42	J
5/4/2016	SWMC-08	Nitrogen, Nitrite		500	ug/L	49	U
5/4/2016	SWMC-08	Tetrachloroethene		1	ug/L	0.2	U
5/4/2016	SWMC-08	Toluene		0.24	ug/L	0.17	J
5/4/2016	SWMC-08	Trans-1,2-Dichloroethene		0.5	ug/L	0.15	U
5/4/2016	SWMC-08	Trichloroethene		1	ug/L	0.16	U
5/4/2016	SWMC-08	Vinyl Chloride		2	ug/L	0.1	U
5/4/2016	SWMC-09	1,1,1-Trichloroethane		1	ug/L	0.16	U
5/4/2016	SWMC-09	1,1,2,2-Tetrachloroethane		1	ug/L	0.21	U
5/4/2016	SWMC-09	1,1,2-Trichloroethane		1	ug/L	0.27	U
5/4/2016	SWMC-09	1,1-Dichloroethane		1	ug/L	0.22	U

Sample Date	Master Loc	Parameter Name	Fraction	Result	Units	MDL	Flag
5/4/2016	SWMC-09	1,1-Dichloroethene		1	ug/L	0.23	U
5/4/2016	SWMC-09	1,2-Dichloroethane		1	ug/L	0.13	U
5/4/2016	SWMC-09	1,2-Dichloropropane		1	ug/L	0.18	U
5/4/2016	SWMC-09	1,4-Dioxane		200	ug/L	57	U
5/4/2016	SWMC-09	1,4-Dioxane		0.9	ug/L	0.15	U
5/4/2016	SWMC-09	Acetone		6	ug/L	1.9	J
5/4/2016	SWMC-09	Arsenic		15	ug/L	4.4	U
5/4/2016	SWMC-09	Benzene		1	ug/L	0.16	U
5/4/2016	SWMC-09	Bromodichloromethane		1	ug/L	0.17	U
5/4/2016	SWMC-09	Bromoform		1	ug/L	0.19	U
5/4/2016	SWMC-09	Cadmium		5	ug/L	0.45	U
5/4/2016	SWMC-09	Carbon Tetrachloride		1	ug/L	0.19	U
5/4/2016	SWMC-09	Chlorobenzene		1	ug/L	0.17	U
5/4/2016	SWMC-09	Chloroform		1	ug/L	0.16	U
5/4/2016	SWMC-09	cis-1,2-Dichloroethene		1	ug/L	0.15	U
5/4/2016	SWMC-09	Dibromochloromethane		1	ug/L	0.17	U
5/4/2016	SWMC-09	Ethylbenzene		1	ug/L	0.16	U
5/4/2016	SWMC-09	Iron		33	ug/L	22	J
5/4/2016	SWMC-09	Methylene Chloride		1	ug/L	0.32	U
5/4/2016	SWMC-09	Naphthalene		1	ug/L	0.22	U
5/4/2016	SWMC-09	Nitrogen, Nitrate		120	ug/L	42	J
5/4/2016	SWMC-09	Nitrogen, Nitrite		500	ug/L	49	U
5/4/2016	SWMC-09	Tetrachloroethene		1	ug/L	0.2	U
5/4/2016	SWMC-09	Toluene		0.3	ug/L	0.17	J
5/4/2016	SWMC-09	Trans-1,2-Dichloroethene		0.5	ug/L	0.15	U
5/4/2016	SWMC-09	Trichloroethene		1	ug/L	0.16	U
5/4/2016	SWMC-09	Vinyl Chloride		2	ug/L	0.1	U
4/22/2016	SWMP-1	Chemical Oxygen Demand		46000	ug/L	4100	
4/22/2016	SWMP-1	HEM (Oil and Grease)		4800	ug/L	1500	U

Sample Date	Master Loc	Parameter Name	Fraction	Result	Units	MDL	Flag
4/22/2016	SWMP-1	Total Suspended Solids		26000	ug/L	1100	
7/29/2015	MPOND-01	1,4-Dioxane		0.9	ug/L	0.15	U
7/29/2015	MPOND-02	1,4-Dioxane		0.9	ug/L	0.15	U
7/29/2015	MPOND-03	1,4-Dioxane		0.9	ug/L	0.15	U
7/29/2015	MPOND-04	1,4-Dioxane		0.9	ug/L	0.15	U
7/29/2015	JPOND-02	1,4-Dioxane		0.59	ug/L	0.15	J
7/29/2015	JPOND-01	1,4-Dioxane		0.56	ug/L	0.15	J
5/9/2015	SWMP-1	Chemical Oxygen Demand		31000	ug/L	4100	
5/9/2015	SWMP-1	HEM (Oil and Grease)		1700	ug/L	1600	J
5/9/2015	SWMP-1	Total Suspended Solids		100000	ug/L	1800	
5/13/2014	SWMP-1	Chemical Oxygen Demand		77000	ug/L	4100	
5/13/2014	SWMP-1	HEM (Oil and Grease)		2000	ug/L	1600	J
5/13/2014	SWMP-1	Total Suspended Solids		22000	ug/L	1100	
9/13/2013	SWMP-1	Chemical Oxygen Demand		83000	ug/L	4100	B
9/13/2013	SWMP-1	HEM (Oil and Grease)		2700	ug/L	1400	J B
9/13/2013	SWMP-1	Total Suspended Solids		130000	ug/L	1800	
7/14/2011	SWMP-1	Chemical Oxygen Demand		46000	ug/L	4100	
7/14/2011	SWMP-1	HEM (Oil and Grease)		6600	ug/L	2800	J B
7/14/2011	SWMP-1	pH		7.58	pH Units		
7/14/2011	SWMP-1	Total Suspended Solids		1000000	ug/L	11000	
4/23/2010	SWMP-1	Chemical Oxygen Demand		24000	ug/L	4100	
4/23/2010	SWMP-1	HEM (Oil and Grease)		5600	ug/L	2700	J B
4/23/2010	SWMP-1	Total Suspended Solids		91000	ug/L	1100	
4/19/2009	SWMP-1	Chemical Oxygen Demand		34000	ug/L	4100	
4/19/2009	SWMP-1	HEM (Oil and Grease)		8100	ug/L	1400	
4/19/2009	SWMP-1	Total Suspended Solids		670000	ug/L	5500	Q
8/16/2008	SWMP-1	Chemical Oxygen Demand		25000	ug/L	4100	
8/16/2008	SWMP-1	HEM (Oil and Grease)		3400	ug/L	1400	B J
8/16/2008	SWMP-1	pH		8.58	pH Units		

Sample Date	Master Loc	Parameter Name	Fraction	Result	Units	MDL	Flag
8/16/2008	SWMP-1	Total Suspended Solids		1500000	ug/L	5500	q
4/24/2007	SW1	2,3,7,8-Tetrachlorodibenzodioxin		0.00005	ug/L		
4/24/2007	SW1	Aluminum		4800	ug/L	18	J
4/24/2007	SW1	Aroclor 1260		1	ug/L	0.16	
4/24/2007	SW1	Arsenic		15	ug/L	4.4	
4/24/2007	SW1	Barium		63	ug/L	1	
4/24/2007	SW1	Beryllium		5	ug/L	1.5	
4/24/2007	SW1	Cadmium		5	ug/L	0.45	
4/24/2007	SW1	Chloroform		1	ug/L	0.16	
4/24/2007	SW1	Chromium		4.3	ug/L	2.6	B
4/24/2007	SW1	Cobalt		1.6	ug/L	1.2	B
4/24/2007	SW1	Copper		7.7	ug/L	4.5	B
4/24/2007	SW1	Cyanide, Total		2.8	ug/L	2.4	B
4/24/2007	SW1	Lead		3.4	ug/L	2.6	B
4/24/2007	SW1	Manganese		51	ug/L	1.8	
4/24/2007	SW1	Mercury		0.2	ug/L	0.027	
4/24/2007	SW1	Nickel		40	ug/L	7.8	
4/24/2007	SW1	Silver		10	ug/L	2.8	
4/24/2007	SW1	Toluene		1	ug/L	0.17	
4/24/2007	SW1	Vanadium		12	ug/L	2.5	
4/24/2007	SW1	Zinc		35	ug/L	4.5	
4/24/2007	SW2	2,3,7,8-Tetrachlorodibenzodioxin		0.000038	ug/L		
4/24/2007	SW2	Aluminum		16000	ug/L	18	J
4/24/2007	SW2	Aroclor 1260		1	ug/L	0.16	
4/24/2007	SW2	Arsenic		15	ug/L	4.4	
4/24/2007	SW2	Barium		140	ug/L	1	
4/24/2007	SW2	Beryllium		5	ug/L	1.5	
4/24/2007	SW2	Cadmium		5	ug/L	0.45	

Sample Date	Master Loc	Parameter Name	Fraction	Result	Units	MDL	Flag
4/24/2007	SW2	Chloroform		1	ug/L	0.16	
4/24/2007	SW2	Chromium		16	ug/L	2.6	
4/24/2007	SW2	Cobalt		4.2	ug/L	1.2	B
4/24/2007	SW2	Copper		20	ug/L	4.5	
4/24/2007	SW2	Cyanide, Total		4.5	ug/L	2.4	B
4/24/2007	SW2	Lead		7.4	ug/L	2.6	B
4/24/2007	SW2	Manganese		190	ug/L	1.8	
4/24/2007	SW2	Mercury		0.033	ug/L	0.027	B
4/24/2007	SW2	Nickel		8.5	ug/L	7.8	B
4/24/2007	SW2	Silver		10	ug/L	2.8	
4/24/2007	SW2	Toluene		1	ug/L	0.17	
4/24/2007	SW2	Vanadium		36	ug/L	2.5	
4/24/2007	SW2	Zinc		48	ug/L	4.5	
4/24/2007	SW3	2,3,7,8-Tetrachlorodibenzodioxin		0.000033	ug/L		
4/24/2007	SW3	Aluminum		7300	ug/L	18	J
4/24/2007	SW3	Aroclor 1260		1	ug/L	0.16	
4/24/2007	SW3	Arsenic		15	ug/L	4.4	
4/24/2007	SW3	Barium		130	ug/L	1	
4/24/2007	SW3	Beryllium		5	ug/L	1.5	
4/24/2007	SW3	Cadmium		5	ug/L	0.45	
4/24/2007	SW3	Chloroform		1	ug/L	0.16	
4/24/2007	SW3	Chromium		5.6	ug/L	2.6	B
4/24/2007	SW3	Cobalt		1.9	ug/L	1.2	B
4/24/2007	SW3	Copper		7.3	ug/L	4.5	B
4/24/2007	SW3	Cyanide, Total		2.8	ug/L	2.4	B
4/24/2007	SW3	Lead		4	ug/L	2.6	B
4/24/2007	SW3	Manganese		310	ug/L	1.8	
4/24/2007	SW3	Mercury		0.2	ug/L	0.027	

Sample Date	Master Loc	Parameter Name	Fraction	Result	Units	MDL	Flag
4/24/2007	SW3	Nickel		40	ug/L	7.8	
4/24/2007	SW3	Silver		10	ug/L	2.8	
4/24/2007	SW3	Toluene		1	ug/L	0.17	
4/24/2007	SW3	Vanadium		13	ug/L	2.5	
4/24/2007	SW3	Zinc		22	ug/L	4.5	
7/3/2006	SW1	2,3,7,8-Tetrachlorodibenzodioxin		0.000084	ug/L		
7/3/2006	SW1	Aluminum		390000	ug/L	18	
7/3/2006	SW1	Aroclor 1260		1	ug/L	0.16	
7/3/2006	SW1	Arsenic		78	ug/L	4.4	
7/3/2006	SW1	Barium		2600	ug/L	1	
7/3/2006	SW1	Beryllium		17	ug/L	1.5	
7/3/2006	SW1	Cadmium		17	ug/L	0.45	
7/3/2006	SW1	Chloroform		1	ug/L	0.16	
7/3/2006	SW1	Chromium		300	ug/L	2.6	
7/3/2006	SW1	Cobalt		110	ug/L	1.2	
7/3/2006	SW1	Copper		310	ug/L	4.5	
7/3/2006	SW1	Cyanide, Total		10	ug/L	2.4	
7/3/2006	SW1	Lead		240	ug/L	2.6	L
7/3/2006	SW1	Manganese		5300	ug/L	1.8	
7/3/2006	SW1	Mercury		0.28	ug/L	0.027	
7/3/2006	SW1	Nickel		220	ug/L	7.8	
7/3/2006	SW1	Silver		10	ug/L	2.8	
7/3/2006	SW1	Toluene		1	ug/L	0.17	
7/3/2006	SW1	Vanadium		640	ug/L	2.5	
7/3/2006	SW1	Zinc		980	ug/L	4.5	J
7/2/2006	SW2	2,3,7,8-Tetrachlorodibenzodioxin		0.00012	ug/L		
7/2/2006	SW2	Aluminum		9900	ug/L	18	
7/2/2006	SW2	Aroclor 1260		1	ug/L	0.16	

Sample Date	Master Loc	Parameter Name	Fraction	Result	Units	MDL	Flag
7/2/2006	SW2	Arsenic		15	ug/L	4.4	
7/2/2006	SW2	Barium		110	ug/L	1	J
7/2/2006	SW2	Beryllium		5	ug/L	1.5	
7/2/2006	SW2	Cadmium		5	ug/L	0.45	
7/2/2006	SW2	Chloroform		1	ug/L	0.16	
7/2/2006	SW2	Chromium		9.5	ug/L	2.6	B
7/2/2006	SW2	Cobalt		3.8	ug/L	1.2	B
7/2/2006	SW2	Copper		23	ug/L	4.5	
7/2/2006	SW2	Cyanide, Total		10	ug/L	2.4	
7/2/2006	SW2	Lead		5.2	ug/L	2.6	B
7/2/2006	SW2	Manganese		210	ug/L	1.8	
7/2/2006	SW2	Mercury		0.2	ug/L	0.027	
7/2/2006	SW2	Nickel		8.4	ug/L	7.8	B
7/2/2006	SW2	Silver		10	ug/L	2.8	
7/2/2006	SW2	Toluene		1	ug/L	0.17	
7/2/2006	SW2	Vanadium		25	ug/L	2.5	
7/2/2006	SW2	Zinc		62	ug/L	4.5	J
7/2/2006	SW3	2,3,7,8-Tetrachlorodibenzodioxin		0.000086	ug/L		
7/2/2006	SW3	Aluminum		81000	ug/L	18	
7/2/2006	SW3	Aroclor 1260		1	ug/L	0.16	
7/2/2006	SW3	Arsenic		17	ug/L	4.4	
7/2/2006	SW3	Barium		550	ug/L	1	J
7/2/2006	SW3	Beryllium		3.6	ug/L	1.5	B
7/2/2006	SW3	Cadmium		1.9	ug/L	0.45	B
7/2/2006	SW3	Chloroform		1	ug/L	0.16	
7/2/2006	SW3	Chromium		58	ug/L	2.6	
7/2/2006	SW3	Cobalt		22	ug/L	1.2	
7/2/2006	SW3	Copper		66	ug/L	4.5	

Sample Date	Master Loc	Parameter Name	Fraction	Result	Units	MDL	Flag
7/2/2006	SW3	Cyanide, Total		10	ug/L	2.4	
7/2/2006	SW3	Lead		42	ug/L	2.6	
7/2/2006	SW3	Manganese		1300	ug/L	1.8	
7/2/2006	SW3	Mercury		0.034	ug/L	0.027	B
7/2/2006	SW3	Nickel		43	ug/L	7.8	
7/2/2006	SW3	Silver		10	ug/L	2.8	
7/2/2006	SW3	Toluene		1	ug/L	0.17	
7/2/2006	SW3	Vanadium		140	ug/L	2.5	
7/2/2006	SW3	Zinc		240	ug/L	4.5	J
4/26/2006	SWMC-08	1,4-Dioxane		1.6	ug/l	0.5	
4/26/2006	SWMC-08	Bromide		380	ug/L	130	
4/26/2006	SWMC-08	Calcium		51000	ug/L	34	
4/26/2006	SWMC-08	Chloride		87000	ug/L	1300	Q
4/26/2006	SWMC-08	Fluoride		930	ug/L	60	B J
4/26/2006	SWMC-08	Iron		93	ug/L	21	B
4/26/2006	SWMC-08	Magnesium		11000	ug/L	43	
4/26/2006	SWMC-08	Nitrogen, Nitrate		6000	ug/L	42	
4/26/2006	SWMC-08	Nitrogen, Nitrite		280	ug/L	49	B
4/26/2006	SWMC-08	Orthophosphate as P		500	ug/L	190	U
4/26/2006	SWMC-08	Potassium		12000	ug/L	240	
4/26/2006	SWMC-08	Sodium		110000	ug/L	31	J
4/26/2006	SWMC-08	Sulfate		150000	ug/L	1200	Q
4/26/2006	SWMC-09	1,4-Dioxane		1.9	ug/l	0.5	
4/26/2006	SWMC-09	Bromide		330	ug/L	130	
4/26/2006	SWMC-09	Calcium		54000	ug/L	34	
4/26/2006	SWMC-09	Chloride		82000	ug/L	1300	Q
4/26/2006	SWMC-09	Fluoride		1000	ug/L	60	J
4/26/2006	SWMC-09	Iron		620	ug/L	21	
4/26/2006	SWMC-09	Magnesium		10000	ug/L	43	

Sample Date	Master Loc	Parameter Name	Fraction	Result	Units	MDL	Flag
4/26/2006	SWMC-09	Nitrogen, Nitrate		6000	ug/L	42	
4/26/2006	SWMC-09	Nitrogen, Nitrite		250	ug/L	49	B
4/26/2006	SWMC-09	Orthophosphate as P		500	ug/L	190	U
4/26/2006	SWMC-09	Potassium		12000	ug/L	240	
4/26/2006	SWMC-09	Sodium		110000	ug/L	31	J
4/26/2006	SWMC-09	Sulfate		150000	ug/L	1200	Q
4/19/2006	SWMC-03	1,4-Dioxane		9.4	ug/l	0.5	
4/19/2006	SWMC-04	1,4-Dioxane		5.3	ug/l	0.5	
3/30/2006	SWMC-01	1,4-Dioxane		5	ug/l	0.5	U
3/30/2006	SWMC-01	Nitrogen, Nitrate		46	ug/L	42	B
3/30/2006	SWMC-02	1,4-Dioxane		5	ug/l	0.5	U
3/30/2006	SWMC-02	Nitrogen, Nitrate		1000	ug/L	85	U
3/30/2006	SWMC-03	1,4-Dioxane		10	ug/l	0.5	
3/30/2006	SWMC-03	Nitrogen, Nitrate		5800	ug/L	42	
3/30/2006	SWMC-04	1,4-Dioxane		6.2	ug/l	0.5	
3/30/2006	SWMC-04	Nitrogen, Nitrate		860	ug/L	42	
3/30/2006	SWMC-05	1,4-Dioxane		0.51	ug/l	0.5	
3/30/2006	SWMC-05	Nitrogen, Nitrate		330	ug/L	42	B
3/30/2006	SWMC-06	1,4-Dioxane		0.99	ug/l	0.5	
3/30/2006	SWMC-06	Nitrogen, Nitrate		230	ug/L	42	B
3/30/2006	SWMC-07	1,4-Dioxane		4.9	ug/l	0.5	
3/30/2006	SWMC-07	Nitrogen, Nitrate		7600	ug/L	42	
1/25/2006	SW-5	1,4-Dioxane		5	ug/l	0.19	U
1/25/2006	SW-Quincy	1,4-Dioxane		5	ug/l	0.19	U
1/25/2006	SW-WL	1,4-Dioxane		5	ug/l	0.19	U
1/12/2006	SW3A	1,4-Dioxane		79	ug/l	0.5	
1/12/2006	SW3A-DUP	1,4-Dioxane		79	ug/l	0.5	
6/10/2005	SW1	2,3,7,8-Tetrachlorodibenzodioxin		0.00025	ug/L		U

Sample Date	Master Loc	Parameter Name	Fraction	Result	Units	MDL	Flag
6/10/2005	SW1	Aroclor 1260		1	ug/L		U
6/3/2005	SW1	Aluminum	Dissolved	100	ug/L		U
6/3/2005	SW1	Aluminum	Total	9600	ug/L		
6/3/2005	SW1	Arsenic	Total	15	ug/L		U
6/3/2005	SW1	Arsenic	Dissolved	10	ug/L		U
6/3/2005	SW1	Barium	Total	100	ug/L		
6/3/2005	SW1	Barium	Dissolved	17	ug/L		
6/3/2005	SW1	Beryllium	Total	0.57	ug/L		B
6/3/2005	SW1	Beryllium	Dissolved	5	ug/L		U
6/3/2005	SW1	Cadmium	Dissolved	5	ug/L		U
6/3/2005	SW1	Cadmium	Total	5	ug/L		U
6/3/2005	SW1	Chloroform		1	ug/L		U
6/3/2005	SW1	Chromium	Total	7.2	ug/L		B
6/3/2005	SW1	Chromium	Dissolved	10	ug/L		U
6/3/2005	SW1	Cobalt	Total	3	ug/L		B
6/3/2005	SW1	Cobalt	Dissolved	10	ug/L		U
6/3/2005	SW1	Copper	Total	9	ug/L		B
6/3/2005	SW1	Copper	Dissolved	20	ug/L		U
6/3/2005	SW1	Cyanide, Total		10	ug/L		U
6/3/2005	SW1	Lead	Dissolved	3	ug/L		U
6/3/2005	SW1	Lead	Total	5.7	ug/L		
6/3/2005	SW1	Manganese	Dissolved	120	ug/L		
6/3/2005	SW1	Manganese	Total	270	ug/L		
6/3/2005	SW1	Mercury	Total	0.2	ug/L		U
6/3/2005	SW1	Mercury	Dissolved	0.2	ug/L		U
6/3/2005	SW1	Nickel	Dissolved	1.8	ug/L		B
6/3/2005	SW1	Nickel	Total	7.6	ug/L		B
6/3/2005	SW1	Silver	Dissolved	10	ug/L		U
6/3/2005	SW1	Silver	Total	10	ug/L		U

Sample Date	Master Loc	Parameter Name	Fraction	Result	Units	MDL	Flag
6/3/2005	SW1	Toluene		1	ug/L		U
6/3/2005	SW1	Vanadium	Dissolved	10	ug/L		U
6/3/2005	SW1	Vanadium	Total	19	ug/L		
6/3/2005	SW1	Zinc	Dissolved	140	ug/L		
6/3/2005	SW1	Zinc	Total	600	ug/L		
6/3/2005	SW2	2,3,7,8-Tetrachlorodibenzodioxin		0.00055	ug/L		U
6/3/2005	SW2	Aluminum	Dissolved	23	ug/L		B
6/3/2005	SW2	Aluminum	Total	33000	ug/L		
6/3/2005	SW2	Aroclor 1260		1	ug/L		U
6/3/2005	SW2	Arsenic	Total	7.6	ug/L		B
6/3/2005	SW2	Arsenic	Dissolved	10	ug/L		U
6/3/2005	SW2	Barium	Total	450	ug/L		
6/3/2005	SW2	Barium	Dissolved	17	ug/L		
6/3/2005	SW2	Beryllium	Total	2.5	ug/L		B
6/3/2005	SW2	Beryllium	Dissolved	5	ug/L		U
6/3/2005	SW2	Cadmium	Total	1.9	ug/L		B
6/3/2005	SW2	Cadmium	Dissolved	5	ug/L		U
6/3/2005	SW2	Chloroform		1	ug/L		U
6/3/2005	SW2	Chromium	Dissolved	10	ug/L		U
6/3/2005	SW2	Chromium	Total	38	ug/L		
6/3/2005	SW2	Cobalt	Dissolved	10	ug/L		U
6/3/2005	SW2	Cobalt	Total	15	ug/L		
6/3/2005	SW2	Copper	Dissolved	10	ug/L		B
6/3/2005	SW2	Copper	Total	74	ug/L		
6/3/2005	SW2	Cyanide, Total		10	ug/L		U
6/3/2005	SW2	Lead	Dissolved	3	ug/L		U
6/3/2005	SW2	Lead	Total	49	ug/L		
6/3/2005	SW2	Manganese	Dissolved	9.3	ug/L		B

Sample Date	Master Loc	Parameter Name	Fraction	Result	Units	MDL	Flag
6/3/2005	SW2	Manganese	Total	990	ug/L		
6/3/2005	SW2	Mercury	Total	0.12	ug/L		B
6/3/2005	SW2	Mercury	Dissolved	0.2	ug/L		U
6/3/2005	SW2	Nickel	Total	33	ug/L		B
6/3/2005	SW2	Nickel	Dissolved	2.1	ug/L		B
6/3/2005	SW2	Silver	Dissolved	10	ug/L		U
6/3/2005	SW2	Silver	Total	10	ug/L		U
6/3/2005	SW2	Toluene		1	ug/L		U
6/3/2005	SW2	Vanadium	Dissolved	5.6	ug/L		B
6/3/2005	SW2	Vanadium	Total	81	ug/L		
6/3/2005	SW2	Zinc	Dissolved	20	ug/L		U
6/3/2005	SW2	Zinc	Total	210	ug/L		
6/3/2005	SW3	2,3,7,8-Tetrachlorodibenzodioxin		0.00037	ug/L		U
6/3/2005	SW3	Aluminum	Dissolved	100	ug/L		U
6/3/2005	SW3	Aluminum	Total	35000	ug/L		
6/3/2005	SW3	Aroclor 1260		1	ug/L		U
6/3/2005	SW3	Arsenic	Total	7.2	ug/L		B
6/3/2005	SW3	Arsenic	Dissolved	10	ug/L		U
6/3/2005	SW3	Barium	Total	300	ug/L		
6/3/2005	SW3	Barium	Dissolved	50	ug/L		
6/3/2005	SW3	Beryllium	Total	2.5	ug/L		B
6/3/2005	SW3	Beryllium	Dissolved	0.44	ug/L		B
6/3/2005	SW3	Cadmium	Total	1.3	ug/L		B
6/3/2005	SW3	Cadmium	Dissolved	5	ug/L		U
6/3/2005	SW3	Chloroform		1	ug/L		U
6/3/2005	SW3	Chromium	Dissolved	10	ug/L		U
6/3/2005	SW3	Chromium	Total	28	ug/L		
6/3/2005	SW3	Cobalt	Dissolved	1	ug/L		B

Sample Date	Master Loc	Parameter Name	Fraction	Result	Units	MDL	Flag
6/3/2005	SW3	Cobalt	Total	14	ug/L		
6/3/2005	SW3	Copper	Dissolved	20	ug/L		U
6/3/2005	SW3	Copper	Total	45	ug/L		
6/3/2005	SW3	Cyanide, Total		10	ug/L		U
6/3/2005	SW3	Lead	Dissolved	3	ug/L		U
6/3/2005	SW3	Lead	Total	24	ug/L		
6/3/2005	SW3	Manganese	Total	880	ug/L		
6/3/2005	SW3	Manganese	Dissolved	110	ug/L		
6/3/2005	SW3	Mercury	Total	0.058	ug/L		B
6/3/2005	SW3	Mercury	Dissolved	0.2	ug/L		U
6/3/2005	SW3	Nickel	Total	26	ug/L		B
6/3/2005	SW3	Nickel	Dissolved	5.3	ug/L		B
6/3/2005	SW3	Silver	Total	10	ug/L		U
6/3/2005	SW3	Silver	Dissolved	10	ug/L		U
6/3/2005	SW3	Toluene		1	ug/L		U
6/3/2005	SW3	Vanadium	Dissolved	10	ug/L		U
6/3/2005	SW3	Vanadium	Total	68	ug/L		
6/3/2005	SW3	Zinc	Dissolved	5.7	ug/L		B
6/3/2005	SW3	Zinc	Total	170	ug/L		
8/18/2004	SW1	Aluminum	Dissolved	100	ug/L		U
8/18/2004	SW1	Aluminum	Total	80000	ug/L		
8/18/2004	SW1	Barium	Dissolved	19	ug/L		
8/18/2004	SW1	Barium	Total	520	ug/L		
8/18/2004	SW1	Cadmium	Dissolved	5	ug/L		U
8/18/2004	SW1	Cadmium	Total	5	ug/L		U
8/18/2004	SW1	Chromium	Dissolved	10	ug/L		U
8/18/2004	SW1	Chromium	Total	61	ug/L		
8/18/2004	SW1	Copper	Dissolved	3	ug/L		B
8/18/2004	SW1	Copper	Total	64	ug/L		

Sample Date	Master Loc	Parameter Name	Fraction	Result	Units	MDL	Flag
8/18/2004	SW1	Lead	Dissolved	3	ug/L		U
8/18/2004	SW1	Lead	Total	51	ug/L		
8/18/2004	SW1	Nickel	Dissolved	40	ug/L		U
8/18/2004	SW1	Nickel	Total	47	ug/L		
8/18/2004	SW2	Aluminum	Dissolved	100	ug/L		U
8/18/2004	SW2	Aluminum	Total	13000	ug/L		
8/18/2004	SW2	Barium	Dissolved	15	ug/L		
8/18/2004	SW2	Barium	Total	130	ug/L		
8/18/2004	SW2	Cadmium	Dissolved	5	ug/L		U
8/18/2004	SW2	Cadmium	Total	5	ug/L		U
8/18/2004	SW2	Chromium	Dissolved	10	ug/L		U
8/18/2004	SW2	Chromium	Total	13	ug/L		
8/18/2004	SW2	Copper	Dissolved	6	ug/L		B
8/18/2004	SW2	Copper	Total	23	ug/L		
8/18/2004	SW2	Lead	Dissolved	3	ug/L		U
8/18/2004	SW2	Lead	Total	12	ug/L		
8/18/2004	SW2	Nickel	Total	10	ug/L		B
8/18/2004	SW2	Nickel	Dissolved	40	ug/L		U
8/18/2004	SW3	Aluminum	Dissolved	100	ug/L		U
8/18/2004	SW3	Aluminum	Total	11000	ug/L		
8/18/2004	SW3	Barium	Dissolved	80	ug/L		
8/18/2004	SW3	Barium	Total	140	ug/L		
8/18/2004	SW3	Cadmium	Dissolved	5	ug/L		U
8/18/2004	SW3	Cadmium	Total	5	ug/L		U
8/18/2004	SW3	Chromium	Total	8.7	ug/L		B
8/18/2004	SW3	Chromium	Dissolved	10	ug/L		U
8/18/2004	SW3	Copper	Dissolved	4.8	ug/L		B
8/18/2004	SW3	Copper	Total	14	ug/L		
8/18/2004	SW3	Lead	Dissolved	3	ug/L		U

Sample Date	Master Loc	Parameter Name	Fraction	Result	Units	MDL	Flag
8/18/2004	SW3	Lead	Total	7.4	ug/L		
8/18/2004	SW3	Nickel	Dissolved	6.6	ug/L		B
8/18/2004	SW3	Nickel	Total	15	ug/L		B
7/22/2004	SW1	2,3,7,8-Tetrachlorodibenzodioxin	Total	0.00084	ug/L		U
7/22/2004	SW1	Aluminum	Total	130000	ug/L		
7/22/2004	SW1	Aroclor 1260	Total	1	ug/L		U
7/22/2004	SW1	Arsenic	Total	27	ug/L		
7/22/2004	SW1	Barium	Total	730	ug/L		J
7/22/2004	SW1	Beryllium	Total	5.2	ug/L		
7/22/2004	SW1	Cadmium	Total	1.8	ug/L		B
7/22/2004	SW1	Chloroform	Total	1	ug/L		U
7/22/2004	SW1	Chromium	Total	100	ug/L		
7/22/2004	SW1	Cobalt	Total	36	ug/L		J
7/22/2004	SW1	Copper	Total	78	ug/L		
7/22/2004	SW1	Cyanide, Total	Total	3.6	ug/L		B
7/22/2004	SW1	Lead	Total	71	ug/L		
7/22/2004	SW1	Manganese	Total	1600	ug/L		J
7/22/2004	SW1	Mercury	Total	0.13	ug/L		B J
7/22/2004	SW1	Nickel	Total	73	ug/L		
7/22/2004	SW1	Silver	Total	1.8	ug/L		B J
7/22/2004	SW1	Toluene	Total	1	ug/L		U
7/22/2004	SW1	Vanadium	Total	230	ug/L		
7/22/2004	SW1	Zinc	Total	340	ug/L		
7/22/2004	SW2	2,3,7,8-Tetrachlorodibenzodioxin	Total	0.000065	ug/L		U
7/22/2004	SW2	Aluminum	Total	38000	ug/L		
7/22/2004	SW2	Aroclor 1260	Total	1	ug/L		U
7/22/2004	SW2	Arsenic	Total	9.5	ug/L		B
7/22/2004	SW2	Barium	Total	390	ug/L		J

Sample Date	Master Loc	Parameter Name	Fraction	Result	Units	MDL	Flag
7/22/2004	SW2	Beryllium	Total	1.8	ug/L		B
7/22/2004	SW2	Cadmium	Total	0.75	ug/L		B
7/22/2004	SW2	Chloroform	Total	1	ug/L		U
7/22/2004	SW2	Chromium	Total	45	ug/L		
7/22/2004	SW2	Cobalt	Total	16	ug/L		J
7/22/2004	SW2	Copper	Total	67	ug/L		
7/22/2004	SW2	Cyanide, Total	Total	3.6	ug/L		B
7/22/2004	SW2	Lead	Total	41	ug/L		
7/22/2004	SW2	Manganese	Total	830	ug/L		J
7/22/2004	SW2	Mercury	Total	0.14	ug/L		B J
7/22/2004	SW2	Nickel	Total	32	ug/L		B
7/22/2004	SW2	Silver	Total	2.5	ug/L		B J
7/22/2004	SW2	Toluene	Total	1	ug/L		U
7/22/2004	SW2	Vanadium	Total	95	ug/L		
7/22/2004	SW2	Zinc	Total	220	ug/L		
7/22/2004	SW3	2,3,7,8-Tetrachlorodibenzodioxin	Total	0.00013	ug/L		U
7/22/2004	SW3	Aluminum	Total	320000	ug/L		
7/22/2004	SW3	Aroclor 1260	Total	1	ug/L		U
7/22/2004	SW3	Arsenic	Total	42	ug/L		
7/22/2004	SW3	Barium	Total	2300	ug/L		J
7/22/2004	SW3	Beryllium	Total	13	ug/L		
7/22/2004	SW3	Cadmium	Total	15	ug/L		
7/22/2004	SW3	Chloroform	Total	1	ug/L		U
7/22/2004	SW3	Chromium	Total	250	ug/L		
7/22/2004	SW3	Cobalt	Total	100	ug/L		J
7/22/2004	SW3	Copper	Total	400	ug/L		
7/22/2004	SW3	Cyanide, Total	Total	10	ug/L		U
7/22/2004	SW3	Lead	Total	230	ug/L		

Sample Date	Master Loc	Parameter Name	Fraction	Result	Units	MDL	Flag
7/22/2004	SW3	Manganese	Total	4100	ug/L		J
7/22/2004	SW3	Mercury	Total	0.15	ug/L		B J
7/22/2004	SW3	Nickel	Total	160	ug/L		
7/22/2004	SW3	Silver	Total	5.7	ug/L		B J
7/22/2004	SW3	Toluene	Total	1	ug/L		U
7/22/2004	SW3	Vanadium	Total	630	ug/L		
7/22/2004	SW3	Zinc	Total	930	ug/L		
8/30/2003	SW1	Aluminum	Total	7900	ug/L		J
8/30/2003	SW2	Aluminum	Total	18000	ug/L		J
8/30/2003	SW3	Aluminum	Total	130000	ug/L		J
7/26/2003	SW2	Aluminum	Total	17000	ug/L		
7/26/2003	SW2	Arsenic	Total	15	ug/L		U
7/26/2003	SW2	Barium	Total	200	ug/L		
7/26/2003	SW2	Beryllium	Total	1.8	ug/L		B J
7/26/2003	SW2	Cadmium	Total	5	ug/L		U
7/26/2003	SW2	Chromium	Total	22	ug/L		
7/26/2003	SW2	Cobalt	Total	7.3	ug/L		B
7/26/2003	SW2	Copper	Total	43	ug/L		J
7/26/2003	SW2	Lead	Total	20	ug/L		
7/26/2003	SW2	Manganese	Total	430	ug/L		
7/26/2003	SW2	Mercury	Total	0.045	ug/L		B
7/26/2003	SW2	Nickel	Total	18	ug/L		B
7/26/2003	SW2	Silver	Total	0.84	ug/L		B
7/26/2003	SW2	Vanadium	Total	50	ug/L		
7/26/2003	SW2	Zinc	Total	99	ug/L		
5/15/2003	WASTE PIT DECON PAD SURFACE WATER	2,3,7,8- Tetrachlorodibenzodioxin		0.00011	ug/L		U

Sample Date	Master Loc	Parameter Name	Fraction	Result	Units	MDL	Flag
5/15/2003	WASTE PIT DECON PAD SURFACE WATER	Aluminum		1500	ug/L		J
5/15/2003	WASTE PIT DECON PAD SURFACE WATER	Aroclor 1260		1	ug/L		U
5/15/2003	WASTE PIT DECON PAD SURFACE WATER	Arsenic		10	ug/L		U
5/15/2003	WASTE PIT DECON PAD SURFACE WATER	Barium		170	ug/L		
5/15/2003	WASTE PIT DECON PAD SURFACE WATER	Beryllium		2	ug/L		U
5/15/2003	WASTE PIT DECON PAD SURFACE WATER	Cadmium		5	ug/L		U
5/15/2003	WASTE PIT DECON PAD SURFACE WATER	Chloroform		1	ug/L		U
5/15/2003	WASTE PIT DECON PAD SURFACE WATER	Chromium		25	ug/L		
5/15/2003	WASTE PIT DECON PAD	Cobalt		2	ug/L		B

Sample Date	Master Loc	Parameter Name	Fraction	Result	Units	MDL	Flag
	SURFACE WATER						
5/15/2003	WASTE PIT DECON PAD SURFACE WATER	Copper		12	ug/L		B
5/15/2003	WASTE PIT DECON PAD SURFACE WATER	Cyanide, Total		5	ug/L		B
5/15/2003	WASTE PIT DECON PAD SURFACE WATER	Lead		3	ug/L		U
5/15/2003	WASTE PIT DECON PAD SURFACE WATER	Manganese		4	ug/L		B
5/15/2003	WASTE PIT DECON PAD SURFACE WATER	Mercury		0.2	ug/L		U
5/15/2003	WASTE PIT DECON PAD SURFACE WATER	Nickel		40	ug/L		U
5/15/2003	WASTE PIT DECON PAD SURFACE WATER	Silver		10	ug/L		U
5/15/2003	WASTE PIT DECON PAD SURFACE WATER	Toluene		1	ug/L		U

Sample Date	Master Loc	Parameter Name	Fraction	Result	Units	MDL	Flag
5/15/2003	WASTE PIT DECON PAD SURFACE WATER	Vanadium		24	ug/L		
5/15/2003	WASTE PIT DECON PAD SURFACE WATER	Zinc		12	ug/L		B
4/24/2003	SW3	2,3,7,8- Tetrachlorodibenzodioxin	Total	0.00016	ug/L		U
4/24/2003	SW3	Aluminum	Total	65000	ug/L		
4/24/2003	SW3	Aluminum	Total	13000	ug/L		
4/24/2003	SW3	Aroclor 1260	Total	1	ug/L		U
4/24/2003	SW3	Arsenic	Total	12	ug/L		
4/24/2003	SW3	Barium	Total	720	ug/L		
4/24/2003	SW3	Beryllium	Total	1.3	ug/L		B
4/24/2003	SW3	Cadmium	Total	5	ug/L		U
4/24/2003	SW3	Chloroform	Total	1	ug/L		U
4/24/2003	SW3	Chromium	Total	49	ug/L		
4/24/2003	SW3	Cobalt	Total	25	ug/L		
4/24/2003	SW3	Copper	Total	86	ug/L		
4/24/2003	SW3	Cyanide, Total	Total	10	ug/L		U
4/24/2003	SW3	Lead	Total	47	ug/L		J
4/24/2003	SW3	Manganese	Total	1300	ug/L		
4/24/2003	SW3	Mercury	Total	0.2	ug/L		U
4/24/2003	SW3	Nickel	Total	42	ug/L		
4/24/2003	SW3	Silver	Total	1.4	ug/L		B
4/24/2003	SW3	Toluene	Total	1	ug/L		U
4/24/2003	SW3	Vanadium	Total	130	ug/L		
4/24/2003	SW3	Zinc	Total	220	ug/L		

Sample Date	Master Loc	Parameter Name	Fraction	Result	Units	MDL	Flag
4/23/2003	SW1	2,3,7,8-Tetrachlorodibenzodioxin	Total	0.00051	ug/L		U
4/23/2003	SW1	Aluminum	Total	39000	ug/L		
4/23/2003	SW1	Aluminum	Total	8200	ug/L		
4/23/2003	SW1	Aroclor 1260	Total	1	ug/L		U
4/23/2003	SW1	Arsenic	Total	7.4	ug/L		B
4/23/2003	SW1	Barium	Total	340	ug/L		
4/23/2003	SW1	Beryllium	Total	2	ug/L		U
4/23/2003	SW1	Cadmium	Total	5	ug/L		U
4/23/2003	SW1	Chloroform	Total	1	ug/L		U
4/23/2003	SW1	Chromium	Total	29	ug/L		
4/23/2003	SW1	Cobalt	Total	12	ug/L		
4/23/2003	SW1	Copper	Total	48	ug/L		
4/23/2003	SW1	Cyanide, Total	Total	10	ug/L		U
4/23/2003	SW1	Lead	Total	38	ug/L		J
4/23/2003	SW1	Manganese	Total	560	ug/L		
4/23/2003	SW1	Mercury	Total	0.2	ug/L		U
4/23/2003	SW1	Nickel	Total	25	ug/L		B
4/23/2003	SW1	Silver	Total	10	ug/L		U
4/23/2003	SW1	Toluene	Total	1	ug/L		U
4/23/2003	SW1	Vanadium	Total	78	ug/L		
4/23/2003	SW1	Zinc	Total	210	ug/L		
4/23/2003	SW2	2,3,7,8-Tetrachlorodibenzodioxin	Total	0.00011	ug/L		U
4/23/2003	SW2	Aluminum	Total	39000	ug/L		
4/23/2003	SW2	Aluminum	Total	9100	ug/L		
4/23/2003	SW2	Aroclor 1260	Total	1	ug/L		U
4/23/2003	SW2	Arsenic	Total	7.5	ug/L		B
4/23/2003	SW2	Barium	Total	320	ug/L		
4/23/2003	SW2	Beryllium	Total	2	ug/L		U

Sample Date	Master Loc	Parameter Name	Fraction	Result	Units	MDL	Flag
4/23/2003	SW2	Cadmium	Total	5	ug/L		U
4/23/2003	SW2	Chloroform	Total	1	ug/L		U
4/23/2003	SW2	Chromium	Total	37	ug/L		
4/23/2003	SW2	Cobalt	Total	11	ug/L		
4/23/2003	SW2	Copper	Total	64	ug/L		
4/23/2003	SW2	Cyanide, Total	Total	10	ug/L		U
4/23/2003	SW2	Lead	Total	38	ug/L		J
4/23/2003	SW2	Manganese	Total	650	ug/L		
4/23/2003	SW2	Mercury	Total	0.2	ug/L		U
4/23/2003	SW2	Nickel	Total	29	ug/L		B
4/23/2003	SW2	Silver	Total	1.4	ug/L		B
4/23/2003	SW2	Toluene	Total	1	ug/L		U
4/23/2003	SW2	Vanadium	Total	77	ug/L		
4/23/2003	SW2	Zinc	Total	180	ug/L		
7/9/2001	SW2	2,3,7,8-Tetrachlorodibenzodioxin	Total	0.00012	ug/L		U
7/9/2001	SW2	Aluminum	Total	10400	ug/L		
7/9/2001	SW2	Aroclor 1260	Total	1	ug/L		U
7/9/2001	SW2	Arsenic	Total	10	ug/L		U
7/9/2001	SW2	Barium	Total	98.6	ug/L		
7/9/2001	SW2	Beryllium	Total	2	ug/L		U
7/9/2001	SW2	Cadmium	Total	5	ug/L		U
7/9/2001	SW2	Chloroform	Total	1	ug/L		U
7/9/2001	SW2	Chromium	Total	8.8	ug/L		B
7/9/2001	SW2	Cobalt	Total	2.8	ug/L		B
7/9/2001	SW2	Copper	Total	28.4	ug/L		
7/9/2001	SW2	Cyanide, Total	Total	7.9	ug/L		B
7/9/2001	SW2	Lead	Total	11.9	ug/L		
7/9/2001	SW2	Manganese	Total	152	ug/L		

Sample Date	Master Loc	Parameter Name	Fraction	Result	Units	MDL	Flag
7/9/2001	SW2	Mercury	Total	0.2	ug/L		U
7/9/2001	SW2	Nickel	Total	6.6	ug/L		B
7/9/2001	SW2	Silver	Total	10	ug/L		U
7/9/2001	SW2	Toluene	Total	1	ug/L		U
7/9/2001	SW2	Vanadium	Total	28.2	ug/L		
7/9/2001	SW2	Zinc	Total	46.9	ug/L		
7/9/2001	SW3	2,3,7,8-Tetrachlorodibenzodioxin	Total	0.00016	ug/L		U
7/9/2001	SW3	Aluminum	Total	6500	ug/L		
7/9/2001	SW3	Aroclor 1260	Total	1	ug/L		U
7/9/2001	SW3	Arsenic	Total	10	ug/L		U
7/9/2001	SW3	Barium	Total	78.1	ug/L		
7/9/2001	SW3	Beryllium	Total	2	ug/L		U
7/9/2001	SW3	Cadmium	Total	5	ug/L		U
7/9/2001	SW3	Chloroform	Total	1	ug/L		U
7/9/2001	SW3	Chromium	Total	10	ug/L		U
7/9/2001	SW3	Cobalt	Total	1.6	ug/L		B
7/9/2001	SW3	Copper	Total	11.3	ug/L		B
7/9/2001	SW3	Cyanide, Total	Total	5.2	ug/L		B
7/9/2001	SW3	Lead	Total	4.1	ug/L		
7/9/2001	SW3	Manganese	Total	92.9	ug/L		
7/9/2001	SW3	Mercury	Total	0.2	ug/L		U
7/9/2001	SW3	Nickel	Total	40	ug/L		
7/9/2001	SW3	Silver	Total	10	ug/L		U
7/9/2001	SW3	Toluene	Total	1	ug/L		U
7/9/2001	SW3	Vanadium	Total	15.9	ug/L		
7/9/2001	SW3	Zinc	Total	18.8	ug/L		B
8/23/2000	SW1	2,3,7,8-Tetrachlorodibenzodioxin	Total	0.00096	ug/L		U
8/23/2000	SW1	Aluminum	Total	36.7	ug/L		J

Sample Date	Master Loc	Parameter Name	Fraction	Result	Units	MDL	Flag
8/23/2000	SW1	Aroclor 1260	Total	1	ug/L		U
8/23/2000	SW1	Arsenic	Total	10	ug/L		U
8/23/2000	SW1	Barium	Total	37.2	ug/L		
8/23/2000	SW1	Beryllium	Total	2	ug/L		U
8/23/2000	SW1	Cadmium	Total	5	ug/L		U
8/23/2000	SW1	Chloroform	Total	1	ug/L		U
8/23/2000	SW1	Chromium	Total	10	ug/L		U
8/23/2000	SW1	Cobalt	Total	10	ug/L		U
8/23/2000	SW1	Copper	Total	20	ug/L		U
8/23/2000	SW1	Cyanide, Total	Total	10	ug/L		U
8/23/2000	SW1	Lead	Total	3	ug/L		U
8/23/2000	SW1	Manganese	Total	10	ug/L		U
8/23/2000	SW1	Mercury	Total	0.2	ug/L		U
8/23/2000	SW1	Nickel	Total	7.3	ug/L		J
8/23/2000	SW1	Silver	Total	10	ug/L		U
8/23/2000	SW1	Toluene	Total	1	ug/L		U
8/23/2000	SW1	Vanadium	Total	10	ug/L		U
8/23/2000	SW1	Zinc	Total	3.6	ug/L		J
8/23/2000	SW2	2,3,7,8-Tetrachlorodibenzodioxin	Total	0.0011	ug/L		U
8/23/2000	SW2	Aluminum	Total	113	ug/L		
8/23/2000	SW2	Aroclor 1260	Total	1	ug/L		U
8/23/2000	SW2	Arsenic	Total	10	ug/L		U
8/23/2000	SW2	Barium	Total	27.7	ug/L		
8/23/2000	SW2	Beryllium	Total	2	ug/L		U
8/23/2000	SW2	Cadmium	Total	5	ug/L		U
8/23/2000	SW2	Chloroform	Total	5	ug/L		U
8/23/2000	SW2	Chromium	Total	10	ug/L		U
8/23/2000	SW2	Cobalt	Total	10	ug/L		U

Sample Date	Master Loc	Parameter Name	Fraction	Result	Units	MDL	Flag
8/23/2000	SW2	Copper	Total	10.7	ug/L		J
8/23/2000	SW2	Cyanide, Total	Total	33	ug/L		
8/23/2000	SW2	Lead	Total	3	ug/L		U
8/23/2000	SW2	Manganese	Total	17.7	ug/L		
8/23/2000	SW2	Mercury	Total	0.2	ug/L		U
8/23/2000	SW2	Nickel	Total	40	ug/L		U
8/23/2000	SW2	Silver	Total	10	ug/L		U
8/23/2000	SW2	Toluene	Total	5	ug/L		U
8/23/2000	SW2	Vanadium	Total	5.9	ug/L		J
8/23/2000	SW2	Zinc	Total	13.8	ug/L		J
7/30/1999	SW1	2,3,7,8-Tetrachlorodibenzodioxin	Total	0.00029	ug/L		U
7/30/1999	SW1	Acrylonitrile	Total	20	ug/L		U
7/30/1999	SW1	Aluminum	Total	100	ug/L		U
7/30/1999	SW1	Aroclor 1260	Total	1	ug/L		U
7/30/1999	SW1	Arsenic	Total	10	ug/L		U
7/30/1999	SW1	Barium	Total	70.8	ug/L		
7/30/1999	SW1	Beryllium	Total	2	ug/L		U
7/30/1999	SW1	Cadmium	Total	5	ug/L		U
7/30/1999	SW1	Chloride	Total	3500	ug/L		
7/30/1999	SW1	Chloroform	Total	1	ug/L		U
7/30/1999	SW1	Chromium	Total	10	ug/L		U
7/30/1999	SW1	Cobalt	Total	10	ug/L		U
7/30/1999	SW1	Copper	Total	3.9	ug/L		J
7/30/1999	SW1	Cyanide, Total	Total	10	ug/L		U
7/30/1999	SW1	Fluoride	Total	910	ug/L		J
7/30/1999	SW1	Lead	Total	3	ug/L		U
7/30/1999	SW1	Manganese	Total	10	ug/L		U
7/30/1999	SW1	Mercury	Total	0.2	ug/L		U

Sample Date	Master Loc	Parameter Name	Fraction	Result	Units	MDL	Flag
7/30/1999	SW1	Nickel	Total	40	ug/L		U
7/30/1999	SW1	Nitrogen, Nitrite	Total	120	ug/L		
7/30/1999	SW1	Orthophosphate as P	Total	500	ug/L		U
7/30/1999	SW1	Silver	Total	10	ug/L		U
7/30/1999	SW1	Sulfate	Total	41400	ug/L		
7/30/1999	SW1	Toluene	Total	1	ug/L		U
7/30/1999	SW1	Vanadium	Total	6.3	ug/L		J
7/30/1999	SW1	Zinc	Total	2.9	ug/L		J
7/30/1999	SW2	2,3,7,8-Tetrachlorodibenzodioxin	Total	0.00019	ug/L		U
7/30/1999	SW2	Acrylonitrile	Total	20	ug/L		U
7/30/1999	SW2	Aluminum	Total	100	ug/L		U
7/30/1999	SW2	Aroclor 1260	Total	1	ug/L		U
7/30/1999	SW2	Arsenic	Total	10	ug/L		U
7/30/1999	SW2	Barium	Total	41.4	ug/L		
7/30/1999	SW2	Beryllium	Total	2	ug/L		U
7/30/1999	SW2	Cadmium	Total	5	ug/L		U
7/30/1999	SW2	Chloride	Total	16400	ug/L		
7/30/1999	SW2	Chloroform	Total	1	ug/L		U
7/30/1999	SW2	Chromium	Total	10	ug/L		U
7/30/1999	SW2	Cobalt	Total	10	ug/L		U
7/30/1999	SW2	Copper	Total	4.8	ug/L		J
7/30/1999	SW2	Cyanide, Total	Total	10	ug/L		U
7/30/1999	SW2	Fluoride	Total	1200	ug/L		
7/30/1999	SW2	Lead	Total	3	ug/L		U
7/30/1999	SW2	Manganese	Total	10.7	ug/L		
7/30/1999	SW2	Mercury	Total	0.2	ug/L		U
7/30/1999	SW2	Nickel	Total	40	ug/L		U
7/30/1999	SW2	Nitrogen, Nitrite	Total	1600	ug/L		

Sample Date	Master Loc	Parameter Name	Fraction	Result	Units	MDL	Flag
7/30/1999	SW2	Orthophosphate as P	Total	500	ug/L		U
7/30/1999	SW2	Silver	Total	10	ug/L		U
7/30/1999	SW2	Sulfate	Total	229000	ug/L		
7/30/1999	SW2	Toluene	Total	1	ug/L		U
7/30/1999	SW2	Vanadium	Total	1.7	ug/L		J
7/30/1999	SW2	Zinc	Total	6.9	ug/L		J
7/30/1999	SW3	2,3,7,8-Tetrachlorodibenzodioxin	Total	0.00019	ug/L		U
7/30/1999	SW3	Acrylonitrile	Total	20	ug/L		U
7/30/1999	SW3	Aluminum	Total	100	ug/L		U
7/30/1999	SW3	Aroclor 1260	Total	1	ug/L		U
7/30/1999	SW3	Arsenic	Total	10	ug/L		U
7/30/1999	SW3	Barium	Total	49.6	ug/L		
7/30/1999	SW3	Beryllium	Total	2	ug/L		U
7/30/1999	SW3	Cadmium	Total	5	ug/L		U
7/30/1999	SW3	Chloride	Total	521000	ug/L		
7/30/1999	SW3	Chloroform	Total	1	ug/L		U
7/30/1999	SW3	Chromium	Total	10	ug/L		U
7/30/1999	SW3	Cobalt	Total	10	ug/L		U
7/30/1999	SW3	Copper	Total	2.2	ug/L		J
7/30/1999	SW3	Cyanide, Total	Total	10	ug/L		U
7/30/1999	SW3	Fluoride	Total	1000	ug/L		J
7/30/1999	SW3	Lead	Total	2.1	ug/L		J
7/30/1999	SW3	Manganese	Total	26	ug/L		
7/30/1999	SW3	Mercury	Total	0.2	ug/L		U
7/30/1999	SW3	Nickel	Total	10.8	ug/L		J
7/30/1999	SW3	Nitrogen, Nitrite	Total	15500	ug/L		
7/30/1999	SW3	Orthophosphate as P	Total	500	ug/L		U
7/30/1999	SW3	Silver	Total	10	ug/L		U

Sample Date	Master Loc	Parameter Name	Fraction	Result	Units	MDL	Flag
7/30/1999	SW3	Sulfate	Total	1280000	ug/L		
7/30/1999	SW3	Toluene	Total	0.12	ug/L		J
7/30/1999	SW3	Vanadium	Total	2.7	ug/L		J
7/30/1999	SW3	Zinc	Total	10.9	ug/L		J
8/25/1998	SW1	2,3,7,8-Tetrachlorodibenzodioxin	Total	0.002	ug/L		U
8/25/1998	SW1	Acrylonitrile	Total	20	ug/L		U
8/25/1998	SW1	Aluminum	Total	100	ug/L		U
8/25/1998	SW1	Aroclor 1260	Total	1.3	ug/L		U
8/25/1998	SW1	Arsenic	Total	10	ug/L		U
8/25/1998	SW1	Barium	Total	55	ug/L		
8/25/1998	SW1	Beryllium	Total	2	ug/L		U
8/25/1998	SW1	Cadmium	Total	5	ug/L		U
8/25/1998	SW1	Chloride	Total	5000	ug/L		
8/25/1998	SW1	Chloroform	Total	1	ug/L		U
8/25/1998	SW1	Chromium	Total	10	ug/L		U
8/25/1998	SW1	Cobalt	Total	10	ug/L		U
8/25/1998	SW1	Copper	Total	4	ug/L		J
8/25/1998	SW1	Cyanide, Total	Total	10	ug/L		U
8/25/1998	SW1	Fluoride	Total	1000	ug/L		
8/25/1998	SW1	Lead	Total	3	ug/L		U
8/25/1998	SW1	Manganese	Total	10	ug/L		U
8/25/1998	SW1	Mercury	Total	2	ug/L		U
8/25/1998	SW1	Nickel	Total	40	ug/L		U
8/25/1998	SW1	Nitrogen, Nitrite	Total	1800	ug/L		
8/25/1998	SW1	Orthophosphate as P	Total	64	ug/L		
8/25/1998	SW1	Silver	Total	10	ug/L		U
8/25/1998	SW1	Sulfate	Total	115000	ug/L		
8/25/1998	SW1	Toluene	Total	1	ug/L		U

Sample Date	Master Loc	Parameter Name	Fraction	Result	Units	MDL	Flag
8/25/1998	SW1	Vanadium	Total	4.6	ug/L		J
8/25/1998	SW1	Zinc	Total	20	ug/L		U
8/25/1998	SW2	2,3,7,8-Tetrachlorodibenzodioxin	Total	0.00055	ug/L		U
8/25/1998	SW2	Acrylonitrile	Total	20	ug/L		U
8/25/1998	SW2	Aluminum	Total	100	ug/L		U
8/25/1998	SW2	Aroclor 1260	Total	1	ug/L		U
8/25/1998	SW2	Arsenic	Total	10	ug/L		U
8/25/1998	SW2	Barium	Total	34	ug/L		
8/25/1998	SW2	Beryllium	Total	2	ug/L		U
8/25/1998	SW2	Cadmium	Total	5	ug/L		U
8/25/1998	SW2	Chloride	Total	5000	ug/L		
8/25/1998	SW2	Chloroform	Total	1	ug/L		U
8/25/1998	SW2	Chromium	Total	10	ug/L		U
8/25/1998	SW2	Cobalt	Total	10	ug/L		U
8/25/1998	SW2	Copper	Total	5.8	ug/L		J
8/25/1998	SW2	Cyanide, Total	Total	10	ug/L		U
8/25/1998	SW2	Fluoride	Total	970	ug/L		
8/25/1998	SW2	Lead	Total	3	ug/L		U
8/25/1998	SW2	Manganese	Total	90	ug/L		U
8/25/1998	SW2	Mercury	Total	2	ug/L		U
8/25/1998	SW2	Nickel	Total	40	ug/L		U
8/25/1998	SW2	Nitrogen, Nitrite	Total	690	ug/L		
8/25/1998	SW2	Orthophosphate as P	Total	76	ug/L		
8/25/1998	SW2	Silver	Total	10	ug/L		U
8/25/1998	SW2	Sulfate	Total	117000	ug/L		
8/25/1998	SW2	Toluene	Total	1	ug/L		U
8/25/1998	SW2	Vanadium	Total	10	ug/L		U
8/25/1998	SW2	Zinc	Total	20	ug/L		U

Sample Date	Master Loc	Parameter Name	Fraction	Result	Units	MDL	Flag
8/25/1998	SW3	2,3,7,8-Tetrachlorodibenzodioxin	Total	0.00091	ug/L		U
8/25/1998	SW3	Acrylonitrile	Total	20	ug/L		U
8/25/1998	SW3	Aluminum	Total	100	ug/L		U
8/25/1998	SW3	Aroclor 1260	Total	1	ug/L		U
8/25/1998	SW3	Arsenic	Total	10	ug/L		U
8/25/1998	SW3	Barium	Total	67	ug/L		
8/25/1998	SW3	Beryllium	Total	2	ug/L		U
8/25/1998	SW3	Cadmium	Total	5	ug/L		U
8/25/1998	SW3	Chloride	Total	373000	ug/L		
8/25/1998	SW3	Chloroform	Total	1	ug/L		U
8/25/1998	SW3	Chromium	Total	10	ug/L		U
8/25/1998	SW3	Cobalt	Total	10	ug/L		U
8/25/1998	SW3	Copper	Total	4.2	ug/L		J
8/25/1998	SW3	Cyanide, Total	Total	10	ug/L		U
8/25/1998	SW3	Fluoride	Total	440	ug/L		J
8/25/1998	SW3	Lead	Total	3	ug/L		U
8/25/1998	SW3	Manganese	Total	90	ug/L		
8/25/1998	SW3	Mercury	Total	2	ug/L		U
8/25/1998	SW3	Nickel	Total	40	ug/L		U
8/25/1998	SW3	Nitrogen, Nitrite	Total	13200	ug/L		
8/25/1998	SW3	Orthophosphate as P	Total	80	ug/L		
8/25/1998	SW3	Silver	Total	10	ug/L		U
8/25/1998	SW3	Sulfate	Total	944000	ug/L		
8/25/1998	SW3	Toluene	Total	1	ug/L		U
8/25/1998	SW3	Vanadium	Total	10	ug/L		U
8/25/1998	SW3	Zinc	Total	20	ug/L		U
6/16/1997	SW1	2,3,7,8-Tetrachlorodibenzodioxin	Total	0.00032	ug/L		U
6/16/1997	SW1	Aluminum	Total	7500	ug/L		

Sample Date	Master Loc	Parameter Name	Fraction	Result	Units	MDL	Flag
6/16/1997	SW1	Antimony	Total	22.3	ug/L		U
6/16/1997	SW1	Aroclor 1260	Total	0.97	ug/L		U
6/16/1997	SW1	Arsenic	Total	5.3	ug/L		U
6/16/1997	SW1	Barium	Total	1030	ug/L		
6/16/1997	SW1	Beryllium	Total	8.1	ug/L		
6/16/1997	SW1	Boron	Total	62	ug/L		J
6/16/1997	SW1	Cadmium	Total	4.8	ug/L		U
6/16/1997	SW1	Calcium	Total	308000	ug/L		
6/16/1997	SW1	Chloride	Total	14000	ug/L		
6/16/1997	SW1	Chloroform	Total	0.2	ug/L		J
6/16/1997	SW1	Chromium	Total	4.1	ug/L		U
6/16/1997	SW1	Cobalt	Total	43.9	ug/L		J
6/16/1997	SW1	Copper	Total	59.7	ug/L		
6/16/1997	SW1	Cyanide, Total	Total	10	ug/L		U
6/16/1997	SW1	Fluoride	Total	480	ug/L		J
6/16/1997	SW1	Iron	Total	1850	ug/L		
6/16/1997	SW1	Lead	Total	53	ug/L		
6/16/1997	SW1	Magnesium	Total	24000	ug/L		
6/16/1997	SW1	Manganese	Total	2760	ug/L		
6/16/1997	SW1	Mercury	Total	0.2	ug/L		U
6/16/1997	SW1	Nickel	Total	33.2	ug/L		J
6/16/1997	SW1	Nitrogen, Nitrate plus Nitrite	Total	290	ug/L		
6/16/1997	SW1	Orthophosphate as P	Total	100	ug/L		J
6/16/1997	SW1	Potassium	Total	8450	ug/L		
6/16/1997	SW1	Selenium	Total	4.5	ug/L		U
6/16/1997	SW1	Silver	Total	2.4	ug/L		U
6/16/1997	SW1	Sodium	Total	36800	ug/L		
6/16/1997	SW1	Sulfate	Total	59600	ug/L		
6/16/1997	SW1	Thallium	Total	5.2	ug/L		U

Sample Date	Master Loc	Parameter Name	Fraction	Result	Units	MDL	Flag
6/16/1997	SW1	Toluene	Total	1	ug/L		U
6/16/1997	SW1	Vanadium	Total	78.5	ug/L		
6/16/1997	SW1	Zinc	Total	97	ug/L		
6/16/1997	SW2	2,3,7,8-Tetrachlorodibenzodioxin	Total	0.00043	ug/L		U
6/16/1997	SW2	Aluminum	Total	1880	ug/L		
6/16/1997	SW2	Antimony	Total	22.3	ug/L		U
6/16/1997	SW2	Aroclor 1260	Total	0.94	ug/L		U
6/16/1997	SW2	Arsenic	Total	5.3	ug/L		U
6/16/1997	SW2	Barium	Total	218	ug/L		
6/16/1997	SW2	Beryllium	Total	1.2	ug/L		U
6/16/1997	SW2	Boron	Total	31.2	ug/L		J
6/16/1997	SW2	Cadmium	Total	4.8	ug/L		U
6/16/1997	SW2	Calcium	Total	77000	ug/L		
6/16/1997	SW2	Chloride	Total	3300	ug/L		
6/16/1997	SW2	Chloroform	Total	1	ug/L		U
6/16/1997	SW2	Chromium	Total	4.1	ug/L		U
6/16/1997	SW2	Cobalt	Total	7.6	ug/L		J
6/16/1997	SW2	Copper	Total	21.1	ug/L		J
6/16/1997	SW2	Cyanide, Total	Total	10	ug/L		U
6/16/1997	SW2	Fluoride	Total	380	ug/L		J
6/16/1997	SW2	Iron	Total	743	ug/L		
6/16/1997	SW2	Lead	Total	13.9	ug/L		
6/16/1997	SW2	Magnesium	Total	6890	ug/L		
6/16/1997	SW2	Manganese	Total	446	ug/L		
6/16/1997	SW2	Mercury	Total	0.2	ug/L		U
6/16/1997	SW2	Nickel	Total	12.9	ug/L		U
6/16/1997	SW2	Nitrogen, Nitrate plus Nitrite	Total	450	ug/L		
6/16/1997	SW2	Orthophosphate as P	Total	180	ug/L		J

Sample Date	Master Loc	Parameter Name	Fraction	Result	Units	MDL	Flag
6/16/1997	SW2	Potassium	Total	5140	ug/L		
6/16/1997	SW2	Selenium	Total	4.5	ug/L		U
6/16/1997	SW2	Silver	Total	2.4	ug/L		U
6/16/1997	SW2	Sodium	Total	11800	ug/L		
6/16/1997	SW2	Sulfate	Total	69600	ug/L		
6/16/1997	SW2	Thallium	Total	5.5	ug/L		J
6/16/1997	SW2	Toluene	Total	1	ug/L		U
6/16/1997	SW2	Vanadium	Total	13.1	ug/L		J
6/16/1997	SW2	Zinc	Total	58.4	ug/L		
6/16/1997	SW3	2,3,7,8-Tetrachlorodibenzodioxin	Total	0.0006	ug/L		U
6/16/1997	SW3	Aluminum	Total	2140	ug/L		
6/16/1997	SW3	Antimony	Total	22.3	ug/L		U
6/16/1997	SW3	Aroclor 1260	Total	0.96	ug/L		U
6/16/1997	SW3	Arsenic	Total	5.3	ug/L		U
6/16/1997	SW3	Barium	Total	132	ug/L		J
6/16/1997	SW3	Beryllium	Total	1.2	ug/L		U
6/16/1997	SW3	Boron	Total	53.8	ug/L		J
6/16/1997	SW3	Cadmium	Total	4.8	ug/L		U
6/16/1997	SW3	Calcium	Total	88300	ug/L		
6/16/1997	SW3	Chloride	Total	9900	ug/L		
6/16/1997	SW3	Chloroform	Total	1	ug/L		U
6/16/1997	SW3	Chromium	Total	4.1	ug/L		U
6/16/1997	SW3	Cobalt	Total	5.2	ug/L		J
6/16/1997	SW3	Copper	Total	18	ug/L		J
6/16/1997	SW3	Cyanide, Total	Total	348	ug/L		
6/16/1997	SW3	Fluoride	Total	920	ug/L		J
6/16/1997	SW3	Iron	Total	770	ug/L		
6/16/1997	SW3	Lead	Total	10.1	ug/L		

Sample Date	Master Loc	Parameter Name	Fraction	Result	Units	MDL	Flag
6/16/1997	SW3	Magnesium	Total	11900	ug/L		
6/16/1997	SW3	Manganese	Total	309	ug/L		
6/16/1997	SW3	Mercury	Total	0.2	ug/L		U
6/16/1997	SW3	Nickel	Total	12.9	ug/L		U
6/16/1997	SW3	Nitrogen, Nitrate plus Nitrite	Total	27	ug/L		J
6/16/1997	SW3	Orthophosphate as P	Total	110	ug/L		J
6/16/1997	SW3	Potassium	Total	5250	ug/L		
6/16/1997	SW3	Selenium	Total	4.5	ug/L		U
6/16/1997	SW3	Silver	Total	2.4	ug/L		U
6/16/1997	SW3	Sodium	Total	37400	ug/L		
6/16/1997	SW3	Sulfate	Total	195000	ug/L		
6/16/1997	SW3	Thallium	Total	5.2	ug/L		U
6/16/1997	SW3	Toluene	Total	1	ug/L		U
6/16/1997	SW3	Vanadium	Total	9.9	ug/L		J
6/16/1997	SW3	Zinc	Total	23	ug/L		
5/13/1986	DI012	Aluminum		395	UG/L		
5/13/1986	DI012	Aroclor 1260		1	UG/L		U
5/13/1986	DI012	Arsenic		10	UG/L		U
5/13/1986	DI012	Barium		42	UG/L		
5/13/1986	DI012	Beryllium		1	UG/L		U
5/13/1986	DI012	bis(2-Ethylhexyl)phthalate		10	UG/L		U
5/13/1986	DI012	Cadmium		5	UG/L		U
5/13/1986	DI012	Carbon Disulfide		5	UG/L		U
5/13/1986	DI012	Chloroform		5	UG/L		U
5/13/1986	DI012	Chromium		5	UG/L		U
5/13/1986	DI012	Cobalt		7	UG/L		U
5/13/1986	DI012	Copper		3	UG/L		U
5/13/1986	DI012	Cyanide, Total		10	UG/L		U
5/13/1986	DI012	Lead		5	UG/L		U

Sample Date	Master Loc	Parameter Name	Fraction	Result	Units	MDL	Flag
5/13/1986	DI012	Manganese		1790	UG/L		J
5/13/1986	DI012	Mercury		0.2	UG/L		U
5/13/1986	DI012	Nickel		6	UG/L		U
5/13/1986	DI012	Silver		3	UG/L		U
5/13/1986	DI012	Toluene		5	UG/L		U
5/13/1986	DI012	Vanadium		5	UG/L		U
5/13/1986	DI012	Zinc		7	UG/L		
4/14/1986	DI004	Aluminum		3090	UG/L		
4/14/1986	DI004	Aroclor 1260		1	UG/L		U
4/14/1986	DI004	Arsenic		10	UG/L		U
4/14/1986	DI004	Barium		67	UG/L		
4/14/1986	DI004	Beryllium		1	UG/L		U
4/14/1986	DI004	bis(2-Ethylhexyl)phthalate		10	UG/L		U
4/14/1986	DI004	Cadmium		5	UG/L		U
4/14/1986	DI004	Carbon Disulfide		5	UG/L		U
4/14/1986	DI004	Chloroform		5	UG/L		U
4/14/1986	DI004	Chromium		5	UG/L		U
4/14/1986	DI004	Cobalt		7	UG/L		U
4/14/1986	DI004	Copper		4.3	UG/L		
4/14/1986	DI004	Cyanide, Total		14	UG/L		
4/14/1986	DI004	Lead		5	UG/L		U
4/14/1986	DI004	Manganese		187	UG/L		
4/14/1986	DI004	Mercury		0.2	UG/L		U
4/14/1986	DI004	Nickel		6	UG/L		U
4/14/1986	DI004	Silver		3	UG/L		U
4/14/1986	DI004	Toluene		5	UG/L		U
4/14/1986	DI004	Vanadium		10	UG/L		
4/14/1986	DI004	Zinc		170	UG/L		
4/14/1986	DI009	2-Butanone (MEK)		45	UG/L		J

Sample Date	Master Loc	Parameter Name	Fraction	Result	Units	MDL	Flag
4/14/1986	DI009	bis(2-Ethylhexyl)phthalate		20	UG/L		U
4/14/1986	DI009	Carbon Disulfide		5	UG/L		U
4/14/1986	DI009	Chloroform		5	UG/L		U
4/14/1986	DI009	Toluene		5	UG/L		U
4/14/1986	DI010	Aluminum		209	UG/L		
4/14/1986	DI010	Aroclor 1260		1	UG/L		U
4/14/1986	DI010	Arsenic		10	UG/L		U
4/14/1986	DI010	Barium		32	UG/L		
4/14/1986	DI010	Beryllium		1	UG/L		U
4/14/1986	DI010	bis(2-Ethylhexyl)phthalate		13	UG/L		U
4/14/1986	DI010	Cadmium		5	UG/L		U
4/14/1986	DI010	Carbon Disulfide		5	UG/L		U
4/14/1986	DI010	Chloroform		5	UG/L		U
4/14/1986	DI010	Chromium		5	UG/L		U
4/14/1986	DI010	Cobalt		7	UG/L		U
4/14/1986	DI010	Copper		6.7	UG/L		
4/14/1986	DI010	Cyanide, Total		10	UG/L		U
4/14/1986	DI010	Lead		5	UG/L		U
4/14/1986	DI010	Manganese		113	UG/L		
4/14/1986	DI010	Mercury		0.2	UG/L		U
4/14/1986	DI010	Nickel		6	UG/L		U
4/14/1986	DI010	Silver		3	UG/L		U
4/14/1986	DI010	Toluene		5	UG/L		U
4/14/1986	DI010	Vanadium		5	UG/L		U
4/14/1986	DI010	Zinc		13	UG/L		
4/14/1986	DI011	bis(2-Ethylhexyl)phthalate		20	UG/L		U
4/14/1986	DI011	Carbon Disulfide		5	UG/L		U
4/14/1986	DI011	Chloroform		5	UG/L		U
4/14/1986	DI011	Toluene		5	UG/L		U

Sample Date	Master Loc	Parameter Name	Fraction	Result	Units	MDL	Flag
4/14/1986	DI012	2-Butanone (MEK)		10	UG/L		U
4/14/1986	DI012	Aluminum		1691	UG/L		
4/14/1986	DI012	Aroclor 1260		1	UG/L		U
4/14/1986	DI012	Arsenic		10	UG/L		U
4/14/1986	DI012	Barium		101	UG/L		J
4/14/1986	DI012	Beryllium		0.4	UG/L		U
4/14/1986	DI012	bis(2-Ethylhexyl)phthalate		4	UG/L		J
4/14/1986	DI012	Cadmium		4.8	UG/L		U
4/14/1986	DI012	Carbon Disulfide		5	UG/L		U
4/14/1986	DI012	Chloroform		5	UG/L		U
4/14/1986	DI012	Chromium		3	UG/L		J
4/14/1986	DI012	Cobalt		7	UG/L		J
4/14/1986	DI012	Copper		2.6	UG/L		U
4/14/1986	DI012	Cyanide, Total		5	UG/L		U
4/14/1986	DI012	Lead		5	UG/L		U
4/14/1986	DI012	Manganese		3818	UG/L		J
4/14/1986	DI012	Mercury		0.2	UG/L		U
4/14/1986	DI012	Nickel		24	UG/L		U
4/14/1986	DI012	Silver		2.1	UG/L		U
4/14/1986	DI012	Toluene		5	UG/L		U
4/14/1986	DI012	Vanadium		6.5	UG/L		J
4/14/1986	DI012	Zinc		51	UG/L		J
4/14/1986	DI013	2-Butanone (MEK)		10	UG/L		U
4/14/1986	DI013	bis(2-Ethylhexyl)phthalate		20	UG/L		U
4/14/1986	DI013	Carbon Disulfide		5	UG/L		U
4/14/1986	DI013	Chloroform		5	UG/L		U
4/14/1986	DI013	Toluene		5	UG/L		U
2/12/1986	DI004	bis(2-Ethylhexyl)phthalate		20	UG/L		U
2/12/1986	DI004	Carbon Disulfide		5	UG/L		U

Sample Date	Master Loc	Parameter Name	Fraction	Result	Units	MDL	Flag
2/12/1986	DI004	Chloroform		5	UG/L		U
2/12/1986	DI004	Toluene		5	UG/L		U
2/12/1986	DI010	Aluminum			UG/L		
2/12/1986	DI010	Aroclor 1260			UG/L		
2/12/1986	DI010	Arsenic			UG/L		
2/12/1986	DI010	Barium			UG/L		
2/12/1986	DI010	Beryllium			UG/L		
2/12/1986	DI010	bis(2-Ethylhexyl)phthalate		20	UG/L		U
2/12/1986	DI010	Cadmium			UG/L		
2/12/1986	DI010	Carbon Disulfide		5	UG/L		U
2/12/1986	DI010	Chloroform		5	UG/L		U
2/12/1986	DI010	Chromium			UG/L		
2/12/1986	DI010	Cobalt			UG/L		
2/12/1986	DI010	Copper			UG/L		
2/12/1986	DI010	Cyanide, Total			UG/L		
2/12/1986	DI010	Lead			UG/L		
2/12/1986	DI010	Manganese			UG/L		
2/12/1986	DI010	Mercury			UG/L		
2/12/1986	DI010	Nickel			UG/L		
2/12/1986	DI010	Silver			UG/L		
2/12/1986	DI010	Toluene		5	UG/L		U
2/12/1986	DI010	Vanadium			UG/L		
2/12/1986	DI010	Zinc			UG/L		
2/12/1986	DI011	Aluminum		31000	UG/L		
2/12/1986	DI011	Arsenic		10	UG/L		U
2/12/1986	DI011	Barium		430	UG/L		
2/12/1986	DI011	Beryllium		4	UG/L		U
2/12/1986	DI011	Cadmium		7	UG/L		J
2/12/1986	DI011	Chromium		10	UG/L		

Sample Date	Master Loc	Parameter Name	Fraction	Result	Units	MDL	Flag
2/12/1986	DI011	Copper		30	UG/L		J
2/12/1986	DI011	Cyanide, Total		10	UG/L		U
2/12/1986	DI011	Manganese		450	UG/L		
2/12/1986	DI011	Mercury		0.2	UG/L		U
2/12/1986	DI011	Nickel		40	UG/L		U
2/12/1986	DI011	Silver		10	UG/L		U
2/12/1986	DI011	Vanadium		50	UG/L		
2/12/1986	DI011	Zinc		170	UG/L		
2/12/1986	DI012	Aluminum		500	UG/L		
2/12/1986	DI012	Arsenic		10	UG/L		U
2/12/1986	DI012	Barium		110	UG/L		
2/12/1986	DI012	Beryllium		4	UG/L		U
2/12/1986	DI012	Chromium		10	UG/L		U
2/12/1986	DI012	Cyanide, Total		10	UG/L		U
2/12/1986	DI012	Manganese		1330	UG/L		
2/12/1986	DI012	Mercury		0.2	UG/L		U
2/12/1986	DI012	Nickel		40	UG/L		U
2/12/1986	DI012	Silver		10	UG/L		U
2/12/1986	DI012	Vanadium		30	UG/L		U
2/12/1986	DI012	Zinc		100	UG/L		
12/9/1985	DI004	2-Butanone (MEK)		10	UG/L		U
12/9/1985	DI004	Aluminum		187	UG/L		U
12/9/1985	DI004	Arsenic		10	UG/L		U
12/9/1985	DI004	Barium		108	UG/L		J
12/9/1985	DI004	Beryllium		0.4	UG/L		U
12/9/1985	DI004	bis(2-Ethylhexyl)phthalate		40	UG/L		U
12/9/1985	DI004	Cadmium		4.8	UG/L		U
12/9/1985	DI004	Carbon Disulfide		5	UG/L		U
12/9/1985	DI004	Chloroform		5	UG/L		U

Sample Date	Master Loc	Parameter Name	Fraction	Result	Units	MDL	Flag
12/9/1985	DI004	Chromium		3	UG/L		J
12/9/1985	DI004	Cobalt		4	UG/L		U
12/9/1985	DI004	Copper		2.6	UG/L		U
12/9/1985	DI004	Cyanide, Total		5	UG/L		U
12/9/1985	DI004	Lead		5	UG/L		U
12/9/1985	DI004	Manganese		258	UG/L		J
12/9/1985	DI004	Mercury		0.2	UG/L		U
12/9/1985	DI004	Nickel		24	UG/L		U
12/9/1985	DI004	Silver		2.9	UG/L		J
12/9/1985	DI004	Toluene		5	UG/L		U
12/9/1985	DI004	Vanadium		3.8	UG/L		J
12/9/1985	DI004	Zinc		8	UG/L		J
12/9/1985	DI010	2-Butanone (MEK)		10	UG/L		U
12/9/1985	DI010	Aluminum		187	UG/L		U
12/9/1985	DI010	Arsenic		10	UG/L		U
12/9/1985	DI010	Barium		63	UG/L		J
12/9/1985	DI010	Beryllium		0.4	UG/L		U
12/9/1985	DI010	Cadmium		4.8	UG/L		U
12/9/1985	DI010	Carbon Disulfide		5	UG/L		U
12/9/1985	DI010	Chloroform		5	UG/L		U
12/9/1985	DI010	Chromium		6	UG/L		J
12/9/1985	DI010	Cobalt		4	UG/L		U
12/9/1985	DI010	Copper		2.6	UG/L		U
12/9/1985	DI010	Cyanide, Total		5	UG/L		U
12/9/1985	DI010	Lead		5	UG/L		U
12/9/1985	DI010	Manganese		54	UG/L		J
12/9/1985	DI010	Mercury		0.4	UG/L		U
12/9/1985	DI010	Nickel		24	UG/L		U
12/9/1985	DI010	Silver		2.1	UG/L		U

Sample Date	Master Loc	Parameter Name	Fraction	Result	Units	MDL	Flag
12/9/1985	DI010	Toluene		5	UG/L		U
12/9/1985	DI010	Vanadium		4.8	UG/L		J
12/9/1985	DI010	Zinc		73	UG/L		J
12/9/1985	DI011	Aluminum		1150	UG/L		
12/9/1985	DI011	Arsenic		10	UG/L		U
12/9/1985	DI011	Barium		130	UG/L		
12/9/1985	DI011	Beryllium		1	UG/L		U
12/9/1985	DI011	Cadmium		5	UG/L		U
12/9/1985	DI011	Chromium		3	UG/L		U
12/9/1985	DI011	Cobalt		4	UG/L		U
12/9/1985	DI011	Copper		3	UG/L		
12/9/1985	DI011	Lead		5	UG/L		U
12/9/1985	DI011	Manganese		22	UG/L		
12/9/1985	DI011	Mercury		0.2	UG/L		U
12/9/1985	DI011	Nickel		12	UG/L		U
12/9/1985	DI011	Vanadium		2.7	UG/L		
12/9/1985	DI011	Zinc		14	UG/L		
12/9/1985	DI012	Aluminum		400	UG/L		
12/9/1985	DI012	Arsenic		10	UG/L		U
12/9/1985	DI012	Barium		100	UG/L		U
12/9/1985	DI012	Beryllium		4	UG/L		U
12/9/1985	DI012	Cadmium		4	UG/L		U
12/9/1985	DI012	Chromium		10	UG/L		U
12/9/1985	DI012	Cobalt		30	UG/L		
12/9/1985	DI012	Copper		10	UG/L		U
12/9/1985	DI012	Cyanide, Total		10	UG/L		J
12/9/1985	DI012	Manganese		1020	UG/L		
12/9/1985	DI012	Mercury		0.2	UG/L		U
12/9/1985	DI012	Nickel		40	UG/L		U

Sample Date	Master Loc	Parameter Name	Fraction	Result	Units	MDL	Flag
12/9/1985	DI012	Vanadium		30	UG/L		U
12/9/1985	DI012	Zinc		80	UG/L		
12/9/1985	DI013	Aluminum		163	UG/L		
12/9/1985	DI013	Arsenic		10	UG/L		U
12/9/1985	DI013	Barium		242	UG/L		
12/9/1985	DI013	Beryllium		1	UG/L		U
12/9/1985	DI013	Cadmium		5	UG/L		U
12/9/1985	DI013	Chromium		3	UG/L		U
12/9/1985	DI013	Cobalt		4	UG/L		U
12/9/1985	DI013	Copper		5.6	UG/L		
12/9/1985	DI013	Cyanide, Total		8	UG/L		U
12/9/1985	DI013	Lead		25	UG/L		U
12/9/1985	DI013	Manganese		20	UG/L		
12/9/1985	DI013	Mercury		0.2	UG/L		U
12/9/1985	DI013	Nickel		12	UG/L		U
12/9/1985	DI013	Silver		6	UG/L		U
12/9/1985	DI013	Vanadium		2	UG/L		U
12/9/1985	DI013	Zinc		10	UG/L		
10/9/1985	DI004	Aluminum		200	UG/L		U
10/9/1985	DI004	Arsenic		10	UG/L		U
10/9/1985	DI004	Barium		110	UG/L		
10/9/1985	DI004	Beryllium		4	UG/L		U
10/9/1985	DI004	Chromium		10	UG/L		U
10/9/1985	DI004	Cyanide, Total		10	UG/L		U
10/9/1985	DI004	Manganese		300	UG/L		
10/9/1985	DI004	Mercury		0.2	UG/L		U
10/9/1985	DI004	Nickel		40	UG/L		U
10/9/1985	DI004	Silver		10	UG/L		U
10/9/1985	DI004	Vanadium		30	UG/L		U

Sample Date	Master Loc	Parameter Name	Fraction	Result	Units	MDL	Flag
10/9/1985	DI004	Zinc		90	UG/L		
10/9/1985	DI010	Aluminum		600	UG/L		
10/9/1985	DI010	Arsenic		10	UG/L		U
10/9/1985	DI010	Barium		110	UG/L		
10/9/1985	DI010	Beryllium		4	UG/L		U
10/9/1985	DI010	Chromium		10	UG/L		U
10/9/1985	DI010	Cyanide, Total		10	UG/L		U
10/9/1985	DI010	Manganese		210	UG/L		
10/9/1985	DI010	Mercury		0.2	UG/L		U
10/9/1985	DI010	Nickel		40	UG/L		U
10/9/1985	DI010	Silver		10	UG/L		U
10/9/1985	DI010	Vanadium		30	UG/L		U
10/9/1985	DI010	Zinc		90	UG/L		
10/9/1985	DI012	Aluminum		69	UG/L		
10/9/1985	DI012	Arsenic		10	UG/L		U
10/9/1985	DI012	Barium		30	UG/L		J
10/9/1985	DI012	Beryllium		1	UG/L		U
10/9/1985	DI012	Cadmium		4	UG/L		U
10/9/1985	DI012	Chromium		3	UG/L		U
10/9/1985	DI012	Cobalt		4.9	UG/L		
10/9/1985	DI012	Copper		9.5	UG/L		
10/9/1985	DI012	Cyanide, Total		8	UG/L		U
10/9/1985	DI012	Lead		50	UG/L		U
10/9/1985	DI012	Manganese		404	UG/L		
10/9/1985	DI012	Mercury		0.2	UG/L		U
10/9/1985	DI012	Nickel		34	UG/L		
10/9/1985	DI012	Vanadium		1.6	UG/L		
10/9/1985	DI012	Zinc		78	UG/L		
8/7/1985	DI004	Aluminum		200	UG/L		U

Sample Date	Master Loc	Parameter Name	Fraction	Result	Units	MDL	Flag
8/7/1985	DI004	Arsenic		10	UG/L		U
8/7/1985	DI004	Barium		100	UG/L		U
8/7/1985	DI004	Beryllium		4	UG/L		U
8/7/1985	DI004	Cadmium		4	UG/L		U
8/7/1985	DI004	Chromium		10	UG/L		U
8/7/1985	DI004	Cobalt		30	UG/L		U
8/7/1985	DI004	Copper		10	UG/L		U
8/7/1985	DI004	Cyanide, Total		20	UG/L		J
8/7/1985	DI004	Manganese		260	UG/L		
8/7/1985	DI004	Mercury		4.1	UG/L		
8/7/1985	DI004	Nickel		40	UG/L		U
8/7/1985	DI004	Silver		10	UG/L		U
8/7/1985	DI004	Vanadium		30	UG/L		U
8/7/1985	DI004	Zinc		50	UG/L		
8/7/1985	DI010	Aluminum		1200	UG/L		
8/7/1985	DI010	Arsenic		10	UG/L		U
8/7/1985	DI010	Barium		100	UG/L		U
8/7/1985	DI010	Beryllium		4	UG/L		U
8/7/1985	DI010	Cadmium		4	UG/L		U
8/7/1985	DI010	Chromium		10	UG/L		U
8/7/1985	DI010	Cobalt		30	UG/L		U
8/7/1985	DI010	Copper		10	UG/L		U
8/7/1985	DI010	Cyanide, Total		20	UG/L		J
8/7/1985	DI010	Manganese		200	UG/L		
8/7/1985	DI010	Mercury		0.2	UG/L		U
8/7/1985	DI010	Nickel		40	UG/L		U
8/7/1985	DI010	Silver		10	UG/L		U
8/7/1985	DI010	Vanadium		30	UG/L		U
8/7/1985	DI010	Zinc		60	UG/L		

Sample Date	Master Loc	Parameter Name	Fraction	Result	Units	MDL	Flag
8/7/1985	DI012	2-Butanone (MEK)		10	UG/L		U
8/7/1985	DI012	Aluminum		4450	UG/L		
8/7/1985	DI012	Aroclor 1260		1	UG/L		U
8/7/1985	DI012	Arsenic		10	UG/L		U
8/7/1985	DI012	Barium		120	UG/L		
8/7/1985	DI012	Beryllium		1	UG/L		U
8/7/1985	DI012	bis(2-Ethylhexyl)phthalate		20	UG/L		U
8/7/1985	DI012	Cadmium		5	UG/L		U
8/7/1985	DI012	Carbon Disulfide		5	UG/L		U
8/7/1985	DI012	Chloroform		5	UG/L		U
8/7/1985	DI012	Chromium		3.5	UG/L		
8/7/1985	DI012	Cobalt		4	UG/L		U
8/7/1985	DI012	Copper		4.8	UG/L		
8/7/1985	DI012	Cyanide, Total		8	UG/L		U
8/7/1985	DI012	Manganese		1600	UG/L		
8/7/1985	DI012	Mercury		0.2	UG/L		U
8/7/1985	DI012	Nickel		12	UG/L		U
8/7/1985	DI012	Silver		10	UG/L		U
8/7/1985	DI012	Toluene		5	UG/L		U
8/7/1985	DI012	Vanadium		7.2	UG/L		
8/7/1985	DI012	Zinc		73	UG/L		J
7/10/1985	DI004	Aluminum		22	UG/L		U
7/10/1985	DI004	Barium		169	UG/L		J
7/10/1985	DI004	Beryllium		1	UG/L		U
7/10/1985	DI004	Cadmium		4	UG/L		U
7/10/1985	DI004	Chromium		3	UG/L		U
7/10/1985	DI004	Cobalt		3	UG/L		U
7/10/1985	DI004	Copper		4.4	UG/L		
7/10/1985	DI004	Cyanide, Total		55.9	UG/L		J

Sample Date	Master Loc	Parameter Name	Fraction	Result	Units	MDL	Flag
7/10/1985	DI004	Lead		5	UG/L		U
7/10/1985	DI004	Manganese		2470	UG/L		
7/10/1985	DI004	Mercury		0.64	UG/L		
7/10/1985	DI004	Nickel		11	UG/L		U
7/10/1985	DI004	Vanadium		1	UG/L		U
7/10/1985	DI004	Zinc		218	UG/L		
7/10/1985	DI010	2-Butanone (MEK)		10	UG/L		U
7/10/1985	DI010	Aluminum		270	UG/L		
7/10/1985	DI010	Aroclor 1260		5	UG/L		U
7/10/1985	DI010	Arsenic		10	UG/L		
7/10/1985	DI010	Barium		120	UG/L		
7/10/1985	DI010	Beryllium		1	UG/L		U
7/10/1985	DI010	bis(2-Ethylhexyl)phthalate		5	UG/L		U
7/10/1985	DI010	Cadmium		4	UG/L		U
7/10/1985	DI010	Carbon Disulfide		5	UG/L		U
7/10/1985	DI010	Chloroform		5	UG/L		U
7/10/1985	DI010	Chromium		5	UG/L		U
7/10/1985	DI010	Cobalt		4	UG/L		
7/10/1985	DI010	Copper		5	UG/L		
7/10/1985	DI010	Cyanide, Total		10	UG/L		U
7/10/1985	DI010	Lead		25	UG/L		U
7/10/1985	DI010	Manganese		2600	UG/L		
7/10/1985	DI010	Mercury		0.1	UG/L		U
7/10/1985	DI010	Nickel		10	UG/L		U
7/10/1985	DI010	Silver		3	UG/L		U
7/10/1985	DI010	Toluene		5	UG/L		U
7/10/1985	DI010	Vanadium		5	UG/L		
7/10/1985	DI010	Zinc		6	UG/L		
7/10/1985	DI012	Aluminum		287	UG/L		

Sample Date	Master Loc	Parameter Name	Fraction	Result	Units	MDL	Flag
7/10/1985	DI012	Arsenic		10	UG/L		U
7/10/1985	DI012	Barium		68	UG/L		
7/10/1985	DI012	Cadmium		5	UG/L		U
7/10/1985	DI012	Chromium		3	UG/L		U
7/10/1985	DI012	Cobalt		4	UG/L		U
7/10/1985	DI012	Copper		4.1	UG/L		
7/10/1985	DI012	Cyanide, Total		38	UG/L		J
7/10/1985	DI012	Lead		50	UG/L		U
7/10/1985	DI012	Manganese		1200	UG/L		
7/10/1985	DI012	Mercury		0.2	UG/L		U
7/10/1985	DI012	Nickel		12	UG/L		U
7/10/1985	DI012	Silver		10	UG/L		U
7/10/1985	DI012	Vanadium		2	UG/L		U
7/10/1985	DI012	Zinc		28	UG/L		
5/31/1985	DI004	Aluminum		438	UG/L		
5/31/1985	DI004	Arsenic		10	UG/L		U
5/31/1985	DI004	Barium		163	UG/L		
5/31/1985	DI004	Cadmium		5	UG/L		U
5/31/1985	DI004	Chromium		3	UG/L		U
5/31/1985	DI004	Cobalt		4	UG/L		U
5/31/1985	DI004	Copper		2	UG/L		U
5/31/1985	DI004	Cyanide, Total		8	UG/L		U
5/31/1985	DI004	Lead		50	UG/L		U
5/31/1985	DI004	Manganese		2070	UG/L		
5/31/1985	DI004	Mercury		0.2	UG/L		U
5/31/1985	DI004	Vanadium		2	UG/L		U
5/31/1985	DI004	Zinc		57	UG/L		
5/31/1985	DI010	Aluminum		123	UG/L		
5/31/1985	DI010	Barium		98	UG/L		J

Sample Date	Master Loc	Parameter Name	Fraction	Result	Units	MDL	Flag
5/31/1985	DI010	Beryllium		1	UG/L		U
5/31/1985	DI010	Cadmium		4	UG/L		U
5/31/1985	DI010	Chromium		3	UG/L		U
5/31/1985	DI010	Cobalt		4.4	UG/L		
5/31/1985	DI010	Copper		3	UG/L		U
5/31/1985	DI010	Cyanide, Total		495	UG/L		J
5/31/1985	DI010	Lead		5	UG/L		U
5/31/1985	DI010	Manganese		2190	UG/L		
5/31/1985	DI010	Mercury		0.2	UG/L		U
5/31/1985	DI010	Nickel		11	UG/L		
5/31/1985	DI010	Vanadium		2.5	UG/L		
5/31/1985	DI010	Zinc		211	UG/L		
5/31/1985	DI012	Aluminum		2230	UG/L		
5/31/1985	DI012	Arsenic		10	UG/L		U
5/31/1985	DI012	Barium		88	UG/L		
5/31/1985	DI012	Beryllium		1	UG/L		U
5/31/1985	DI012	Cadmium		5	UG/L		U
5/31/1985	DI012	Chromium		3	UG/L		U
5/31/1985	DI012	Cobalt		4.6	UG/L		
5/31/1985	DI012	Copper		5.1	UG/L		
5/31/1985	DI012	Lead		5	UG/L		U
5/31/1985	DI012	Manganese		262	UG/L		
5/31/1985	DI012	Mercury		0.2	UG/L		U
5/31/1985	DI012	Nickel		12	UG/L		U
5/31/1985	DI012	Silver		10	UG/L		U
5/31/1985	DI012	Vanadium		5.6	UG/L		
5/31/1985	DI012	Zinc		24	UG/L		
5/20/1985	DI004	Aluminum		270	UG/L		
5/20/1985	DI004	Arsenic		10	UG/L		U

Sample Date	Master Loc	Parameter Name	Fraction	Result	Units	MDL	Flag
5/20/1985	DI004	Barium		48	UG/L		
5/20/1985	DI004	Beryllium		1	UG/L		U
5/20/1985	DI004	Cadmium		5	UG/L		U
5/20/1985	DI004	Chromium		3	UG/L		U
5/20/1985	DI004	Cobalt		4	UG/L		U
5/20/1985	DI004	Copper		2.8	UG/L		
5/20/1985	DI004	Lead		5	UG/L		U
5/20/1985	DI004	Manganese		42	UG/L		
5/20/1985	DI004	Mercury		0.2	UG/L		U
5/20/1985	DI004	Nickel		12	UG/L		U
5/20/1985	DI004	Vanadium		2	UG/L		U
5/20/1985	DI004	Zinc		5.6	UG/L		
5/20/1985	DI010	Aluminum		608	UG/L		
5/20/1985	DI010	Arsenic		10	UG/L		U
5/20/1985	DI010	Barium		82	UG/L		
5/20/1985	DI010	Beryllium		1	UG/L		U
5/20/1985	DI010	Cadmium		5	UG/L		U
5/20/1985	DI010	Chromium		3	UG/L		U
5/20/1985	DI010	Cobalt		4	UG/L		U
5/20/1985	DI010	Copper		4.6	UG/L		
5/20/1985	DI010	Lead		5	UG/L		U
5/20/1985	DI010	Manganese		48	UG/L		
5/20/1985	DI010	Mercury		0.2	UG/L		U
5/20/1985	DI010	Nickel		12	UG/L		U
5/20/1985	DI010	Vanadium		3	UG/L		
5/20/1985	DI010	Zinc		26	UG/L		
5/20/1985	DI012	Aluminum		2290	UG/L		
5/20/1985	DI012	Arsenic		10	UG/L		U
5/20/1985	DI012	Barium		86	UG/L		

Sample Date	Master Loc	Parameter Name	Fraction	Result	Units	MDL	Flag
5/20/1985	DI012	Beryllium		1	UG/L		U
5/20/1985	DI012	Cadmium		5	UG/L		U
5/20/1985	DI012	Chromium		3	UG/L		U
5/20/1985	DI012	Cobalt		4	UG/L		U
5/20/1985	DI012	Copper		6	UG/L		
5/20/1985	DI012	Lead		5	UG/L		U
5/20/1985	DI012	Manganese		253	UG/L		
5/20/1985	DI012	Mercury		0.2	UG/L		U
5/20/1985	DI012	Nickel		12	UG/L		U
5/20/1985	DI012	Silver		10	UG/L		U
5/20/1985	DI012	Vanadium		3.9	UG/L		
5/20/1985	DI012	Zinc		14	UG/L		
1/20/1900*	DI004	Nickel		12	UG/L		U

**The 1900 reference is in error but preserved in this table as represented in the referenced database.*